COAL MINE COMPENSATION RATING BUREAU
OF PENNSYLVANIA

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EXECUTIVE DIRECTOR

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November 17, 2023

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

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

RE: Proposal CM-3-2023
Revised Loss Costs for Traumatic, State Occupational Disease
And Federal Occupational Disease
To Be Effective: April 1, 2024

Dear 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 -8.4%. By coverage, the proposal requests a change of -13.9% for Traumatic, a change of 6.8% for State Occupational Disease ("SOD") and a change of 12.2% for Federal Occupational Disease ("FOD").

The Proposed Traumatic Loss Costs are decreasing overall by $0.70 from $5.03 to $4.33. 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 2022) changed by -1.6% and
  - The other factors changed between 0.1% and 0.6%.
- Indemnity Loss Trend Annual Factor decreased from 0.0% to -0.3%.
- 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 -2.4% to -0.8% for older to newer Accident Years respectively.
- Medical Loss Development Factors changed modestly
  - The first to ultimate factor (i.e., for Accident Year 2022) changed by -1.4%.
  - The other factors changed between 0.2% to 1.3%.
- Medical Loss Trend Annual Factor changed from 2.4% to 1.5%. The HB 1846 Adjustment Factors are all now unity. On a combined basis, the Medical Loss Trend Factors changed from -5.8% to -2.4% from older to newer Accident Years respectively.

- The replacement of Accident Year 2017 experience with Accident Year 2022 experience in the five (5) year Traumatic Loss Cost analysis.
    - For the April 1, 2023 filing, the Accident Year 2017 Loss Cost was estimated to be $6.38.
    - For the April 1, 2024 filing, the Accident Year 2022 Loss Cost is estimated to be $3.04 with Indemnity and Medical decreasing by 48% and 59% respectively.

The Proposed SOD Loss Costs are increasing overall by $0.05 from $0.73 to $0.78. The overall experience is being driven by the following considerations:

- For all classes combined, claim frequency changed by -0.3%.
- For all classes combined, claim severity changed by 8.4%.

The Proposed FOD Loss Costs are increasing overall by $0.10 from $0.82 to $0.92. The overall experience is being driven by the following considerations:

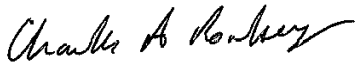
- For all classes combined, Basic claim frequency changed by 10.1%.
- For all classes combined, Excess claim frequency changed by -1.1%.
- For all classes combined, Basic claim severity changed by 4.8%.
- For all classes combined, Excess claim severity changed by 6.9%.

This Proposal consists of this cover letter, the enclosed Actuarial Report with Appendices A, B and C 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 revised from last year's filing with changes discussed in Appendix C to the Actuarial Report and also 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, 2024. 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, 2024 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, 2024 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, 2024.

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 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.
- Appendices
  - 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.
  - Appendix C discusses changes to the filing exhibits from the prior filing.

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, 2024, 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	$ 5.03	$ 4.33	-13.9%
SOD	0.73	0.78	6.8%
FOD (Basic & Excess)	0.82	0.92	12.2%
Total	$6.58	$6.03	-8.4%

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 $5.03 based on 2022 payroll distribution. The Proposed level is $4.33 or a change of -13.9%.

The key drivers of the change to Traumatic Loss Costs can be identified by comparing Exhibit V-B Page 1 for the April 1, 2024 filing to the April 1, 2023 filing. These drivers include:

- Indemnity Loss Development Factors changed modestly
  - The first to ultimate factor (i.e., for Accident Year 2022) changed by -1.6% and
  - The other factors changed between 0.1% and 0.6%.
- Indemnity Loss Trend Annual Factor decreased from 0.0% to -0.3%.
- 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 -2.4% to -0.8% for older to newer Accident Years respectively.
- Medical Loss Development Factors changed modestly
  - The first to ultimate factor (i.e., for Accident Year 2022) changed by -1.4%.
  - The other factors changed between 0.2% to 1.3%.
- Medical Loss Trend Annual Factor decreased from 2.4% to 1.5%. The HB 1846 Adjustment Factors are all now unity. On a combined basis, the Medical Loss Trend Factors changed from -5.8% to -2.4% from older to newer Accident Years respectively.
- The replacement of Accident Year 2017 experience with Accident Year 2022 experience in the five (5) year Traumatic Loss Cost analysis.

- For the April 1, 2023 filing, the Accident Year 2017 Loss Cost was estimated to be $6.38.
- For the April 1, 2024 filing, the Accident Year 2022 Loss Cost is estimated to be $3.04 with Indemnity and Medical decreasing by 48% and 59% respectively.

These drivers generally decrease the Indemnity indication and the Medical indication. The Indemnity indication changed by -16.8%, from $3.22 to $2.68; while the Medical indication changed by -19.5%, from $1.90 to $1.53. Prior to the application of credibility and capping changes at +/- 25% by class, the Total Traumatic indication changed by -17.8%, from $5.12 to $4.21. 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 -15.3%. 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 Surface class given the indicated change.

State Occupational Disease (SOD) Loss Costs

The Current State Occupational Disease Loss Cost for all classes combined is $0.73 based on 2022 payroll distribution. The Proposed level is $0.78 or a change of 6.8%.

The key drivers of this change can be identified by comparing Exhibit III for the April 1, 2024 filing to the April 1, 2023 filing. These drivers include:

- For all classes combined, claim frequency changed by -0.3%. By class, frequency changes varied from -11.0% to 7.9%.
- For all classes combined, claim severity changed by 8.4%. By class, severity changes varied from 6.5% to 11.5%.
- 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 $0.82 based on 2022 payroll distribution. The Proposed level is $0.92 or a change of 12.2%.

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	$ 0.68	$ 0.77	+13.2%
Excess	0.14	0.15	+7.1%
Total	$0.82	$0.92	+12.2%

The Proposed Loss Costs are shown in Column (5) of Exhibit IV 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. 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 from the prior filing as weights.

The key drivers of this change can be identified by comparing Exhibit IV for the April 1, 2024 filing to the April 1, 2023 filing. These drivers include:

- For all classes combined, Basic claim frequency changed by 10.1%.
- For all classes combined, Excess claim frequency changed by -1.1%.
- For all classes combined, Basic claim severity changed by 4.8%.
- For all classes combined, Excess claim severity changed by 6.9%.
- 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 0.0002 to 0.0003. (See Exhibit XI.) Although Exhibit I-B shows calculations that make provision for this load to our Manual Loss Costs, we note that given the magnitude of this value and the number of significant digits that are carried in our Loss Costs, this calculation does not change our Loss Cost values for this filing.
- The Employer Assessment Factor changed from 2.89% (or 0.0289) to 2.42% (or 0.0242). (See Exhibit XI.) 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 $0.16 based on 2022 Payroll weights to $0.19. (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 $0.05 to $0.06,
    - The provision for Auger changed from $0.12 to $0.15 and
    - The provision for Underground Classes changed from $0.27 to $0.33.
- The Experience Rating Plan parameters require a change to the Off-Balance Factor from 1.0081 to 1.0455. 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 1.0002 to 1.0000. (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 1.0228 to 1.0245. (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. The Exhibit X series documents that the payroll for the Coke Class decreased significantly from 2019 to 2020 from $4,466,971 to $313,587, then subsequently decreased to $0 for 2021 and remained at $0 for 2022. The CMCRB understands that this is related to the closing of the last commercially insured Coke operation in Pennsylvania during early 2020.

Generally, the CMCRB continues to believe that it is appropriate to limit large losses at $1,250,000 in the preparation of data for trend analyses. The April 1, 2024 Filing is like the April 1, 2023 and April 1, 2022 Filings in that there are not any claims that exceed this limit. The CMCRB intends to document any such claims on pages in the Exhibit V-E series going forward and notes that such claims were documented in the Exhibit V-J series of prior filings.

Concerning various pages in the Exhibit VI series, the CMCRB notes that between the April 1, 2023 Filing and April 1, 2024 Filing (current filing), one of the CMCRB's member companies submitted revised statistical reports for losses that were (or should have been) included in prior filings. This company 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 2001 through 2011 for both Indemnity and Medical Incurred and Paid Losses as well as claim counts. This company was involved in a similar restatement for Accident Years 2010 through 2019 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 related exhibits from the April 1, 2023 Filing.

Concerning Exhibit XII-D, the Selected (Factor) Change approach was expanded from a single factor that was applied to all projection periods to an array of factors that can be selected separately for the first, second, third and subsequent projections periods. This approach is like the approach that has been used on Exhibit VIII-D since the April 1, 2012 Filing. This revised approach allows the Selected Factor(s) for the next period(s) to be able to reflect on current economic projections and budgetary news and the Selected Factor for subsequent periods to be able to reflect more on the historical data observations and averages.

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 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

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.

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, 2024 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. This page shows the selected Traumatic Annual Trend Factors separately for Indemnity and Medical losses that are derived from Exhibit V-D, Pages 1 and 2. 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, the other changes include HB 1846 of 2014 and HB 1840 (or Act 111 of 2018). Concerning the factors related to HB 1846, refer to Appendix A to this report. Concerning the factors related to HB 1840, refer to Appendix B to this report.

D. These pages show the derivation of the Traumatic Loss Trend factors.
   - Page 1 – Indemnity and Funeral Loss Ratio Trend
   - Page 2 – Medical (all claims) Loss Ratio Trend
   - Page 3 – Indemnity and Funeral Claim Frequency Trend
   - Page 4 – Indemnity and Funeral Loss Severity Trend
   - Page 5 – Medical (all claims) Loss Severity Trend

   Each of the pages in this series displays the following information:
   - The data that serves as the basis for the various trend estimations
   - Eight different geometric mean estimates each beginning and ending with the years as indicated
   - Eight different regression estimates each beginning and ending with the years as indicated
   - Actual results over three different time spans (i.e., 3-year, 5-year, and 9-year) on both straight and weighted average bases.
   - Trended (and adjusted) results over three different time spans (i.e., 3-year, 5-year, and 9-year) on both straight and weighted average bases.

   The Bureau notes that these pages (i.e., the Traumatic Trend Exhibits) were significantly revised between the April 1, 2023 Loss Cost Filing and the April 1, 2024 Loss Cost Filing. The Bureau lists the most important considerations in this transition below:

- The revised exhibits are consistent with the Bureau's considerations and approach since the April 1, 2019 Filing.
- For the years under consideration, regression estimates and geometric average estimates are still calculated.
- The averaging of regression estimates and geometric averages was deleted with other averages added as indicated.
- Several estimates were retained:
    - Estimates using the most recent 8 & 9 Accident Years (AYs.)
    - Estimates using the recent 7 & 8 AYs before the most recent AY.
- Several estimates were added:
    - Estimates using the most recent 6 & 7 AYs.
    - Estimates using the recent 5 & 6 AYs before the most recent AY.
- Several estimates were deleted:
    - Estimates using the Geometric Average of 3-year Moving Average.
    - Estimates using the most recent 10 AYs.
    - Estimates using the recent 9 AYs before the most recent AY.

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. This is not a new observation, but one that deserves mention.

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-C 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 -0.50%. This selection results in 3-year and 9-year weighted average trended Claim Frequencies of about 10.2 which are just higher than the 5-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 0.25%. This selection results in 3-year and 5-year trended averages that are both about $50,000. Although lower than the 9-year trended 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 2.0%. This selection results in 5-year and 9-year trended averages that are about $10,700. Although higher than the 3-year trended average, 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

- 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 0.9950 (i.e., the selected -0.50% Claim Frequency Trend) and 1.0025 (i.e., the selected 0.25% Indemnity Severity Trend) which equals 0.997 (or -0.3%).
- Similarly, the CMCRB's implied Medical Loss Ratio Trend is the product of 0.9950 (i.e., the selected -0.50% Claim Frequency Trend) and 1.020 (i.e., the selected 2.0% Medical Severity Trend) which equals 1.015 (or 1.5%).

E. Page 1 provides a summary of the Traumatic Indemnity and Funeral Losses. Page 2 provides a summary of the Traumatic Medical (all claims) Losses. The data on these pages support calculations on the Exhibit V-D pages.

Customarily, on these pages, individual Traumatic claims that exceed $1,250,000 after loss development are limited and 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, 2024 Filing, there weren't any claims that exceeded the noted threshold.

F. 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-G Page 1 and V-H Page 1 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) -1.6%,
- 2:3 (2nd report to ultimate) 0.3%,
- 3:4 (3rd report to ultimate) 0.1%,
- 4:5 (4th report to ultimate) 0.6%,
- 5:6 (5th report to ultimate) 0.4% and
- 6th report to ultimate and beyond in the range of 0.1% to 0.4%.

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

- 1:2 (1st report to ultimate) -1.4%,
- 2:3 (2nd report to ultimate) 0.2%,
- 3:4 (3rd report to ultimate) 1.3%,
- 4:5 (4th report to ultimate) 1.1%,
- 5:6 (5th report to ultimate) 1.0% and
- 6th report to ultimate and beyond in the range of -0.8% to 0.8%.

G. 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 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. Like 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 15.03090, producing an average of 1.00206.
- 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 1.00206, so
  y (12) = 1.00206.
- 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) = 1.00206 = x - (a) (12) and
  y (29) = 1.0001 = x - (a) (29).
- The solution for this system of equations was found to be:
  a = 0.0001153 and
  x = 1.0028500.
- Given these values, y (5) is determined to be 1.0029 = 1.00344 – (0.0001153)(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 0.0001153.
- 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 2 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-G Page 1. The PCRB Age-to-Age Factors are also compared to the CMCRB Age-to-Age Factors on V-F Page 1.

H. 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 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. Like 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 1.0022922. (There are 17 factors from t=3 to t=19 so the geometric mean is (0.9815 x 1.0173 x …. x 1.0018) ^ (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 1.0397.
- 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) = 1.0022922.
- These conditions result in the following system of equations:

  $$y(11) = 1.0022922 = (x)(a^{8}) \text{ and}$$
  $$y(38) = 1.0001 = (x)(a^{35}).$$
- The solution for this system of equations was found to be:

  $$a = 0.999919 \text{ and}$$
  $$x = 1.00294.$$
- At this point, the value 1.00294 (displayed as 1.0029) is entered on Line 3 (for Period 3) of Column 6. The Factor for Period 4 is obtained as (1.00294) times (0.999919). 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 1.0397 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 2 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-H Page 1. The PCRB Age-to-Age Factors are compared to the CMCRB Age-to-Age Factors on V-F Page 2.

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. The CMCRB notes that all the years under consideration in these exhibits (i.e., 1998 through 2022) are expected to be fully reported on post-Act 44 and post-Act 57 levels and that the related calculations and adjustments are no longer shown on these pages.

A. This page displays Reported Traumatic Indemnity Incurred Losses 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).

B. This page displays Reported Traumatic Medical Incurred Losses 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).

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 (i.e., the Average of Middle Four), 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. 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 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 Page 1 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 Page 2. 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 Page 2 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 display SOD Reported Claims for the Four (4) Major Classifications. Page 5 displays SOD Reported Claims for the six (6) Other Classifications combined. Page 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 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 begin by displaying the Sub-total of individual claim detail from Exhibit IX-A by claim 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 2022 (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, 2024 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. 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 VIII-B-1 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 VIII-B-1 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 VIII-B-1 Page 5. The currently Approved FOD Excess Claim Frequencies are developed in Exhibit VIII-B-1 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 or Estimated Miner Years as weights as indicated.

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 display FOD Basic Reported Claims for the Four (4) Major Classifications. Page 5 displays FOD Basic Reported Claims for the six (6) Other Classifications combined. Page 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 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 since 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 2022. 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 <u>floor</u> 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 1.0754% to 1.0428%.

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 discussion. 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. Although Exhibit I-B shows calculations that make provision for this load to our Manual Loss Costs, we note that given the magnitude of this value and the number of significant digits that are carried in our Loss Costs, this calculation does not change our Loss Cost values for this filing. We note that this result is typical.

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 limits 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 credibility table that was utilized from April 1, 2004 through March 31, 2024 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 1.0455. 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

Introduction – Risk or Uncertainty

The CMCRB offers the following disclosures (i.e., potential constraints or limitations) concerning the conclusions in this report specifically related to potential risk or uncertainty. The Proposed Loss Costs do not include any provision for the risk 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 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.

Coal Miner Demographic Changes

The CMCRB believes that one potential source of instability in Traumatic Claim Frequencies (and possible 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 has continued into at least 2022 where older, more experienced miners are being replaced by younger, less experienced miners and that there is greater competition for coal miners due to labor shortages in this industry resulting in miners moving from employer to employer. 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.

New Insureds

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.

Novel Coronavirus (or SARS-CoV-2) and Covid-19

The CMCRB wants to acknowledge that the data for this filing spans a time period generally understood to include the presence of the coronavirus (SARS CoV-2 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 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 or loads related to the coronavirus 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 or loads related to these potential concerns in this filing.

FOD Claiming Activity

Beginning with the April 1, 2016 Loss Cost Filing, the CMCRB noted receiving concerning anecdotal reports about claiming activities related to FOD coverage.

- Some reports note that claiming activity was increasing with more reported and awarded claims. Other reports indicate that federal agencies were visiting areas where mining activity had slowed to encourage claim filing.
- The CMCRB remains concerned about the Award Ratio associated with Federal Basic claims in its filing for Pennsylvania in light of Award Ratios associated with these claims outside of Pennsylvania. The CMCRB intends to continue exploring whether or not the ten years that it uses to determine Award Ratios remains appropriate.

- The CMCRB also maintains concerns about claim development. The CMCRB notes that it receives reports of Awarded claims beyond 20th report level, but does not directly include claim development beyond 20th report level.

Coal Market Outlook

The CMCRB notes that recent reports on the long-term economic outlook for coal mine operators continues to be very negative. The CMCRB also continues to hear reports of slowing and closing of coal mining operations and closings of coal fired power plants. The CMCRB has also received anecdotal reports that "plaintiff" attorneys are advertising in depressed coal mining areas to encourage "out-of-work" miners to file workers compensation claims. The CMCRB remains concerned about the potential impact these activities may have on claim frequencies and/or severities and the associated trend estimates in our filings.

Catastrophe Losses

The CMCRB notes that Catastrophe Losses (i.e., individual claims where on-level losses exceed $1,250,000) have declined significantly in the last 9 or 10 years. Since the CMCRB does not have an explanation for this decline, the CMCRB finds this to be another potential limitation.

Aggregate Experience to Individual Insurers or Insureds

Additionally, the CMCRB believes that the conclusions in this report are consistent with the combined experience of all carriers in the CMCRB's database. Data by carrier or insured is not disclosed in the filing to protect the proprietary and trade secret information of these entities. That said, 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:

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Actuarial Report – Appendix A
Consideration of House Bill 1846 of 2014 (HB 1846)
Regarding the CMCRB's April 1, 2024 Loss Cost Filing

The CMCRB notes that this version of this Appendix is consistent with the version of this Appendix that was submitted with the April 1, 2023 Loss Cost Filing, but that it is different from prior versions included with earlier filings. 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, 2024 Loss Cost Filing, the CMCRB notes that each of the five years (i.e., 2018 – 2022) 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 were part of this Appendix for 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, 2024 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, 2023 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, 2023 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, 2024 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 2022. The CMCRB assumed that 100% of Outstanding Losses for Calendar Year 2022 reflected the new law level since Calendar Year 2022 reports were to be valued as of April 30, 2023.

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-381, April 1, 2023 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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1st	1.0159	1.0159	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000	1.0000
2nd	1.0159	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000	1.0000	
3rd	1.0159	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000	1.0000		
4th	1.0159	1.0159	1.0129	1.0000	1.0000	1.0000	1.0000			
5th	1.0159	1.0129	1.0000	1.0000	1.0000	1.0000				
6th	1.0129	1.0000	1.0000	1.0000	1.0000					
7th	1.0000	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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
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 04-30-2023 from Exhibit VI-D:

Report	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	1,862,374
2	4,482,404	7,425,208	6,101,619	5,231,352	5,437,686	5,148,691	6,047,363	5,373,349	4,387,625	
3	6,081,014	10,827,506	7,651,201	6,950,711	7,418,658	6,860,470	6,799,224	7,070,255		
4	6,502,458	11,747,478	9,380,121	8,203,041	8,254,560	7,235,896	7,265,118			
5	6,652,885	12,208,353	10,671,950	8,356,903	9,169,543	7,965,018				
6	7,003,338	12,232,461	10,663,121	8,518,921	9,835,135					
7	7,421,020	12,388,158	10,912,322	8,580,831						
8	7,504,122	12,388,158	11,432,649							
9	7,582,900	12,388,158								
10	7,643,756									

Traumatic Indemnity Reported Incurred Losses as of 04-30-2023 from Exhibit VI-A:

7,807,196	12,388,158	12,304,028	9,116,313	10,964,733	8,484,747	7,825,187	7,826,531	5,589,383	2,994,770

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

1.0235	1.0259	1.0285	1.0312	1.0340	1.0369	1.0703	1.0914	1.2328	1.8444

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

7,990,665	12,709,011	12,654,693	9,400,742	11,337,534	8,797,834	8,375,298	8,541,876	6,890,591	5,523,554

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

Report	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average	Average Ex Hi/Lo	Selected Incremental	Selected Cumulative
1	23.77%	31.59%	21.07%	26.77%	23.52%	24.97%	30.25%	30.60%	34.35%	33.72%	28.06%	28.15%	28.00%	28.00%
2	56.10%	58.42%	48.22%	55.65%	47.96%	58.52%	72.20%	62.91%	63.68%		58.18%	57.64%	30.00%	58.00%
3	76.10%	85.20%	60.46%	73.94%	65.43%	77.98%	81.18%	82.77%			75.38%	76.23%	18.00%	76.00%
4	81.38%	92.43%	74.12%	87.26%	72.81%	82.25%	86.74%				82.43%	82.35%	6.00%	82.00%
5	83.26%	96.06%	84.33%	88.90%	80.88%	90.53%					87.33%	86.76%	5.00%	87.00%
6	87.64%	96.25%	84.26%	90.62%	86.75%						89.10%	88.34%	2.00%	89.00%
7	92.87%	97.48%	86.23%	91.28%							91.97%	92.08%	3.00%	92.00%
8	93.91%	97.48%	90.34%								93.91%	93.91%	2.00%	94.00%
9	94.90%	97.48%									96.19%	96.19%	2.00%	96.00%
10	95.66%										95.66%	95.66%	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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Selected Incremental Paid Losses	Cumulative Paid Losses	Outstanding Losses
1st	0.2800	0.2800	0.2800	0.2800	0.2800	0.2800	0.2800	0.2800	0.2800	0.2800	28.00%	28.00%	72.00%
2nd	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000		30.00%	58.00%	42.00%
3rd	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800			18.00%	76.00%	24.00%
4th	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600				6.00%	82.00%	18.00%
5th	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500					5.00%	87.00%	13.00%
6th	0.0200	0.0200	0.0200	0.0200	0.0200						2.00%	89.00%	11.00%
7th	0.0300	0.0300	0.0300	0.0300							3.00%	92.00%	8.00%
8th	0.0200	0.0200	0.0200								2.00%	94.00%	6.00%
9th	0.0200	0.0200									2.00%	96.00%	4.00%
10th	0.0400										4.00%	100.00%	0.00%

1)	1.0000	0.9600	0.9400	0.9200	0.8900	0.8700	0.8200	0.7600	0.5800	0.2800
2)	0.0000	0.0400	0.0600	0.0800	0.1100	0.1300	0.1800	0.2400	0.4200	0.7200
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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Selected Incremental Paid Losses	Cumulative Paid Losses	Outstanding Losses
1st	0.2845	0.2845	0.2845	0.2845	0.2845	0.2836	0.2800	0.2800	0.2800	0.2800	28.00%	28.00%	72.00%
2nd	0.3048	0.3048	0.3048	0.3048	0.3039	0.3000	0.3000	0.3000	0.3000		30.00%	58.00%	42.00%
3rd	0.1829	0.1829	0.1829	0.1823	0.1800	0.1800	0.1800	0.1800			18.00%	76.00%	24.00%
4th	0.0610	0.0610	0.0608	0.0600	0.0600	0.0600	0.0600				6.00%	82.00%	18.00%
5th	0.0508	0.0506	0.0500	0.0500	0.0500	0.0500					5.00%	87.00%	13.00%
6th	0.0203	0.0200	0.0200	0.0200	0.0200						2.00%	89.00%	11.00%
7th	0.0300	0.0300	0.0300	0.0300							3.00%	92.00%	8.00%
8th	0.0200	0.0200	0.0200								2.00%	94.00%	6.00%
9th	0.0200	0.0200									2.00%	96.00%	4.00%
10th	0.0400										4.00%	100.00%	0.00%

1)	1.0141	0.9737	0.9529	0.9316	0.8983	0.8736	0.8200	0.7600	0.5800	0.2800
2)	0.0000	0.0400	0.0600	0.0800	0.1100	0.1300	0.1800	0.2400	0.4200	0.7200
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	0.0600	0.0800	0.1100	0.1300	0.1800	0.2400	0.4200	0.7200
5)	1.0141	1.0137	1.0129	1.0116	1.0083	1.0036	1.0000	1.0000	1.0000	1.0000

Accident Year	Adjustment Factor
2013	1.0141
2014	1.0137
2015	1.0129
2016	1.0116
2017	1.0083
2018	1.0036
2019	1.0000
2020	1.0000
2021	1.0000
2022	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 2022 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)

Actuarial Report – Appendix C
Filing Exhibit Changes from the Filing for April 1, 2023
to the Filing for April 1, 2024

The Bureau made numerous changes to filing exhibits as noted both generally and specifically below. While the Bureau notes that the changes mentioned below do not materially alter the Bureau's longstanding methodology and approach, the Bureau provides the following explanation to help the reader of this filing navigate this transition.

General Explanations

The Bureau made several types of non-substantive, housekeeping changes to the Filing Exhibits:

1) To standardize exhibit numbering and referencing, for example
    a. Exhibit VII-B-1-A was relabeled Exhibit VII-B-1 Page 1.
    b. Reference to Exhibit X-B-2 was revised to Exhibit X-B Page 2.
2) To reorganize exhibit placement, for example
    a. Exhibit IV-B series was relabeled as the Exhibit VIII-B-1 series.
3) To allow larger printing on some exhibits, for example
    a. In Exhibit IX-B, some pages were expanded to a second page.
    b. In Exhibit VII-E series, claim detail was deleted since only summary data is necessary. (The details are still on the Exhibit IX-A pages.)
4) To eliminate exhibits and calculations that are no longer necessary, for example
    a. On Exhibit IX-A, the Act 44 Factor has been unity for some time, so this column and the associated calculation were deleted.
    b. In the Exhibit VI-A series, several exhibits were deleted because the Act 44 and Act 57 law adjustments are no longer necessary since the data in recent filings is all reported on a post-law level basis.

The Bureau also made changes to Filing Exhibits to be consistent with the Bureau's practices concerning the Traumatic Loss Trend analyses and selections.

1) For the April 1, 2023 Filing, the Bureau displayed trend estimates on 18 different pages and one summary page.
2) For the April 1, 2024 Filing, the Bureau now displays trend estimates on 5 different pages, deleting and adding estimates accordingly.

Specific Explanations

Exhibit I, II, III

- Minor housekeeping changes were made.

Exhibit IV

- Exhibit IV was previously Exhibit IV-A.
- Minor housekeeping changes were made.

Exhibit IV-B

- Prior Exhibit IV-B series relabeled to VIII-B-1.
- Minor housekeeping changes were made.

Exhibit V-A, V-B

- Minor housekeeping changes were made.

Exhibit V-C

- Exhibit was previously Exhibit V-F.

Exhibit V-D

- Pages 1 and 2 are new pages that display loss ratio trend estimates.
- Pages 3, 4 and 5 were previously Exhibit V-I Summary Pages 1, 2 and 4.

Exhibit V-E

- Exhibit was previously Exhibit V-H (and V-J, as needed).

Exhibit V-F

- Exhibit was previously Exhibit V-C.

Exhibit V-G

- Exhibit was previously Exhibit V-D Pages 2 and 3 (or V-D-2 and V-D-3).

Exhibit V-H

- Exhibit was previously Exhibit V-E Pages 2 and 3 (or V-E-2 and V-E-3).

Prior Exhibit V series pages that have been deleted:

- Exhibit V-D-1 (VI-A-4) and V-E-1 (VI-B-4)
- Exhibit V-G
- Exhibit V-I Summary Pages 3, 5 and 6
- Exhibit V-I Est 01 - 06 (all pages)
- Exhibit V-I Est 07 - 12 (all pages)
- Exhibit V-K

Exhibit VI-A

- Exhibit VI-A was previously Exhibit VI-A Page 4.
- All other pages in this series were deleted since the Act 57 law and settlement adjustment factors and calculations are no longer necessary since the data in the filing is reported on a post-law level basis.

Exhibit VI-B

- Exhibit VI-B was previously Exhibit VI-B Page 4.
- All other pages in this series were deleted since the Act 44 law and settlement adjustment factors and calculations are no longer necessary since the data in the filing is reported on a post-law level basis.

Exhibit VI-C

- All pages were relabeled (e.g., VI-C-1 was relabeled VI-C Page 1).

Exhibit VI-D

- The prior Exhibit VI-D page was deleted since it was related to Act 44 adjustment factors that are no longer necessary.
- The current Exhibit VI-D was previously Exhibit VI-E.

Exhibit VII-A

- No changes.

Exhibit VII-B-1, VII-B-2, VII-C

- Minor housekeeping changes were made.

Exhibit VII-D

- No changes. (Omitted – Reserved for future use.)

Exhibit VII-E

- The list of claim detail was deleted from the top of section a on each page.
- The subtotal of counts and values are now directly calculated on and drawn from Exhibit IX-A. Eliminating the claim detail allows for a larger font size on these pages while the calculations remain unchanged. The claim detail is still on the Exhibit IX-A pages.

Exhibit VII-F

- No changes. (Omitted – Reserved for future use.)

Exhibit VII-G

- Minor housekeeping changes were made.

Exhibit VII-H

- No changes.

Exhibit VII-I

- No changes. (Omitted – Reserved for future use.)

Exhibit VII-J

- No changes.

Exhibit VII-K

- No changes. (Omitted – Reserved for future use.)

Exhibit VII-L

- Minor housekeeping changes were made.

Exhibit VIII-A

- No changes.

Exhibit VIII-B-1

- Exhibit VIII-B-1 series was previously the Exhibit IV-B series.

Exhibit VIII-B-2, VIII-C

- Minor housekeeping changes were made.

Exhibit VIII-D

- No changes.

Exhibit VIII-E

- No changes. (Omitted – Reserved for future use.)

Exhibit VIII-F

- Minor housekeeping changes were made.

Exhibit IX-A

- The "Act 44 Factor" and "Act 44 Med." columns were deleted as unnecessary.
- The Medical Bef. Act 44 column was relabeled Medical.
- The Medical Plus State column was added as the sum of State Benefit and Medical columns.
- The Medical Plus State column was added under the All Permanent Partial Scenario (All PP) as the sum of the State Benefit (All PP) and Medical columns.
- Three rows of subtotals were added to the bottom of these pages to facilitate the deletion of claim detail from the Exhibit VII-E pages.
- Two rows of totals were deleted from the bottom of these pages because the new columns rendered them unnecessary.

Exhibit IX-B

- Pages 2 and 4 were expanded to a second page to allow for a larger font size on these pages while the calculations remain unchanged.

Exhibit X

- Minor housekeeping changes were made.

Exhibit XI

- No changes.

Exhibit XII

- A, B and E – Minor housekeeping changes were made.
- C – The Paid Medical, O/S Medical, Act 44 Factor and Medical w/ Trend & Act 44 Factor columns were deleted since the Act 44 adjustment factors are no longer necessary.
- D – The Selected (Factor) Change approach was expanded from a single factor that was applied to all projection periods to an array of factors that can be selected separately for the first, second, third and subsequent projections periods. This approach is like the approach that has been used on Exhibit VIII-D since the April 1, 2012 Filing. This revised approach allows the Selected Factor(s) for the next period(s) to be able to reflect current economic projections and budgetary news and the Selected Factor for subsequent periods to be able to reflect more on the historical data observations and averages.

Exhibit XIII-A

- Minor housekeeping changes were made.

Exhibit XIII-B, XIII-C, XIV

- No changes.

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

	2022 Developed Payroll	(1) Approved Loss Cost Manual	(2) Proposed Loss Cost Manual	(3) Percent Change
Underground Anthracite:				
Traumatic (1010)	$63,653	$17.53	$14.98	-14.5%
State O.D. (1011)	63,653	19.97	20.79	4.1%
*Federal Basic/Ex (0160)	63,653	14.19	17.74	25.0%
Total	xx	51.69	53.51	3.5%
Underground Bituminous:				
Traumatic (1001)	$135,401,635	$7.16	$6.28	-12.3%
State O.D. (1002)	135,401,635	0.73	0.79	8.2%
*Federal Basic/Ex (0158)	135,401,635	0.93	1.12	20.4%
Total	xx	8.82	8.19	-7.1%
Surface Anthracite:				
Traumatic (1012)	$27,892,217	$6.33	$4.78	-24.5%
State O.D. (1016)	27,892,217	0.94	0.90	-4.3%
*Federal Basic/Ex (0153)	24,559,529	1.63	1.59	-2.5%
Total	xx	8.90	7.27	-18.3%
Surface Bituminous:				
Traumatic (1014)	$33,074,473	$1.26	$1.07	-15.1%
State O.D. (1013)	33,074,473	0.49	0.61	25.0%
*Federal Basic/Ex (0156)	33,578,482	0.83	0.84	1.2%
Total	xx	2.58	2.52	-2.3%
Four Standard Classifications:				
Traumatic	$196,431,978	$6.05	$5.19	-14.2%
State O.D.	196,431,978	0.73	0.78	6.8%
*Federal Basic/Ex	193,603,299	1.01	1.14	12.9%
Total	xx	7.79	7.11	-8.7%

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

Sources: Payroll from Exhibit X-A
Column (1) Loss Costs (Approved 4/1/2023) - Exhibit X-B, Page 2
Column (2) Proposed - Exhibit I-B, Pages 1 and 2
Column (3) Traumatic Column (2) / Column (1)
OD Exhibit III and IV

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

		2022 Developed Payroll	(1) Approved Loss Cost Manual	(2) Proposed Loss Cost Manual	(3) Percent Change
Coke:					
	Traumatic (1469)	-	$4.60	$4.45	-3.3%
	State O.D. (1017)	-	0.09	0.09	0.0%
	*Federal Basic/Ex (0154)	-	0.09	0.10	11.1%
	Total	xx	4.78	4.64	-2.9%
Auger:					
	Traumatic (1015)	$222,909	$6.34	$6.14	-3.2%
	State O.D. (1019)	222,909	0.18	0.19	5.6%
	*Federal Basic/Ex (0157)	222,909	0.39	0.41	5.1%
	Total	xx	6.91	6.74	-2.5%
Co-Gen Anthracite:					
	Traumatic (1021)	$8,646,476	$7.77	$6.53	-16.0%
	State O.D. (1022)	8,646,476	0.42	0.49	16.7%
	*Federal Basic/Ex (0181)	7,763,788	0.37	0.37	0.0%
	Total	xx	8.56	7.39	-13.7%
Co-Gen Bituminous:					
	Traumatic (1023)	$17,306,049	$1.30	$1.34	3.1%
	State O.D. (1024)	17,306,049	0.19	0.19	0.0%
	*Federal Basic/Ex (0182)	17,306,049	0.24	0.25	4.2%
	Total	xx	1.73	1.78	2.9%
Prep Plant Anthracite:					
	Traumatic (1025)	$16,007,792	$2.78	$2.62	-5.8%
	State O.D. (1026)	16,007,792	2.87	2.98	3.8%
	*Federal Basic/Ex (0183)	14,512,871	0.81	0.81	0.0%
	Total	xx	6.46	6.41	-0.8%
Prep Plant Bituminous:					
	Traumatic (1027)	$41,084,218	$2.06	$1.67	-18.9%
	State O.D. (1028)	41,084,218	0.19	0.21	10.5%
	*Federal Basic/Ex (0184)	41,085,799	0.25	0.31	24.0%
	Total	xx	2.50	2.19	-12.4%
Other Classifications:					
	Traumatic	$83,267,444	$2.64	$2.31	-12.5%
	State O.D.	83,267,444	0.73	0.77	5.5%
	*Federal Basic/Ex	80,891,416	0.36	0.40	11.1%
	Total	xx	3.73	3.48	-6.7%
Grand Total:					
	Traumatic	$279,699,422	$5.03	$4.33	-13.9%
	State O.D.	279,699,422	0.73	0.78	6.8%
	*Federal Basic/Ex	274,494,715	0.82	0.92	12.2%
	Total	xx	6.58	6.03	-8.4%

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

Sources: Payroll from Exhibit X-A
Column (1) Loss Costs (Approved 4/1/2023) - Exhibit X-B, Page 2
Column (2) Proposed - Exhibit I-B, Pages 1 and 2
Column (3) Traumatic Column (2) / Column (1)
OD Exhibit III and IV

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

	2022 Developed Payroll	(1) Approved Unloaded Manual	(2) Indicated Unloaded Manual	(3) Proposed Unloaded Manual	(4) Percent Change
Underground Anthracite:					
Traumatic (1010)	$63,653	$16.87	$14.29	$14.29	-15.3%
State O.D. (1011)	63,653	19.97	20.79	20.79	4.1%
*Federal Basic/Ex (0160)	63,653	14.19	27.67	17.74	25.0%
Total	xx	51.03	62.75	52.82	3.5%
Underground Bituminous:					
Traumatic (1001)	$135,401,635	$6.73	$5.80	$5.80	-13.8%
State O.D. (1002)	135,401,635	0.73	0.79	0.79	8.2%
*Federal Basic/Ex (0158)	135,401,635	0.93	1.12	1.12	20.4%
Total	xx	8.39	7.71	7.71	-8.1%
Surface Anthracite:					
Traumatic (1012)	$27,892,217	$6.14	$4.05	$4.61	-24.9%
State O.D. (1016)	27,892,217	0.94	0.90	0.90	-4.3%
*Federal Basic/Ex (0153)	24,559,529	1.63	1.59	1.59	-2.5%
Total	xx	8.71	6.54	7.10	-18.5%
Surface Bituminous:					
Traumatic (1014)	$33,074,473	$1.18	$0.98	$0.98	-16.9%
State O.D. (1013)	33,074,473	0.49	0.65	0.61	25.0%
*Federal Basic/Ex (0156)	33,578,482	0.83	0.84	0.84	1.2%
Total	xx	2.50	2.47	2.43	-2.8%
Four Standard Classifications:					
Traumatic	$196,431,978	$5.72	$4.74	$4.82	-15.7%
State O.D.	196,431,978	0.73	0.79	0.78	6.8%
*Federal Basic/Ex	193,603,299	1.01	1.14	1.14	12.9%
Total	xx	7.46	6.67	6.74	-9.7%

*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, 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, col(7) (Federal O.D. After Adm/Law)
Column (4) Exhibit II, III or IV

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

	2022 Developed Payroll	(1) Approved Unloaded Manual	(2) Indicated Unloaded Manual	(3) Proposed Unloaded Manual	(4) Percent Change
Coke:					
Traumatic (1469)	-	$4.45	$4.28	$4.28	-3.8%
State O.D. (1017)	-	0.09	0.09	0.09	0.0%
*Federal Basic/Ex (0154)	-	0.09	0.10	0.10	11.1%
Total	xx	4.63	4.47	4.47	-3.5%
Auger:					
Traumatic (1015)	$222,909	$6.08	$5.84	$5.84	-3.9%
State O.D. (1019)	222,909	0.18	0.19	0.19	5.6%
*Federal Basic/Ex (0157)	222,909	0.39	0.41	0.41	5.1%
Total	xx	6.65	6.44	6.44	-3.2%
Co-Gen Anthracite:					
Traumatic (1021)	$8,646,476	$7.55	$6.31	$6.31	-16.4%
State O.D. (1022)	8,646,476	0.42	0.49	0.49	16.7%
*Federal Basic/Ex (0181)	7,763,788	0.37	0.37	0.37	0.0%
Total	xx	8.34	7.17	7.17	-14.0%
Co-Gen Bituminous:					
Traumatic (1023)	$17,306,049	$1.22	$1.25	$1.25	2.5%
State O.D. (1024)	17,306,049	0.19	0.19	0.19	0.0%
*Federal Basic/Ex (0182)	17,306,049	0.24	0.25	0.25	4.2%
Total	xx	1.65	1.69	1.69	2.4%
Prep Plant Anthracite:					
Traumatic (1025)	$16,007,792	$2.67	$2.50	$2.50	-6.4%
State O.D. (1026)	16,007,792	2.87	2.98	2.98	3.8%
*Federal Basic/Ex (0183)	14,512,871	0.81	0.81	0.81	0.0%
Total	xx	6.35	6.29	6.29	-0.9%
Prep Plant Bituminous:					
Traumatic (1027)	$41,084,218	$1.96	$1.57	$1.57	-19.9%
State O.D. (1028)	41,084,218	0.19	0.21	0.21	10.5%
*Federal Basic/Ex (0184)	41,085,799	0.25	0.31	0.31	24.0%
Total	xx	2.40	2.09	2.09	-12.9%
Other Classifications:					
Traumatic	$83,267,444	$2.53	$2.19	$2.19	-13.4%
State O.D.	83,267,444	0.73	0.77	0.77	5.5%
*Federal Basic/Ex	80,891,416	0.36	0.40	0.40	11.1%
Total	xx	3.62	3.36	3.36	-7.2%
Grand Total:					
Traumatic	$279,699,422	$4.77	$3.98	$4.04	-15.3%
State O.D.	279,699,422	0.73	0.78	0.78	6.8%
*Federal Basic/Ex	274,494,715	0.82	0.92	0.92	12.2%
Total	xx	6.32	5.68	5.74	-9.2%

*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, 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, col(7) (Federal O.D. After Adm/Law)
Column (4) Exhibit II, III or IV

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%(Exhibit IV).

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 unloaded loss cost limited to -25%(Exhibit II).
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%(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 Loss Cost.
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 4-1-2024

	2022 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)	$63,653	$14.29	$0.33	$14.62	$14.98	$14.98
State O.D. (1011)	63,653	20.79				20.79
*Federal Basic/Ex (0160)	63,653	17.74				17.74
Total	xx	52.82				53.51
Underground Bituminous:						
Traumatic (1001)	$135,401,635	$5.80	$0.33	$6.13	$6.28	$6.28
State O.D. (1002)	135,401,635	0.79				0.79
*Federal Basic/Ex (0158)	135,401,635	1.12				1.12
Total	xx	7.71				8.19
Surface Anthracite:						
Traumatic (1012)	$27,892,217	$4.61	$0.06	$4.67	$4.78	$4.78
State O.D. (1016)	27,892,217	0.90				0.90
*Federal Basic/Ex (0153)	24,559,529	1.59				1.59
Total	xx	7.10				7.27
Surface Bituminous:						
Traumatic (1014)	$33,074,473	$0.98	$0.06	$1.04	$1.07	$1.07
State O.D. (1013)	33,074,473	0.61				0.61
*Federal Basic/Ex (0156)	33,578,482	0.84				0.84
Total	xx	2.43				2.52
Four Standard Classifications:						
Traumatic	$196,431,978	$4.82	$0.25	$5.07	$5.19	$5.19
State O.D.	196,431,978	0.78				0.78
*Federal Basic/Ex	193,603,299	1.14				1.14
Total	xx	6.74				7.11

*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	1.0000
Exhibit XIV-B	Safety Rating	1.0245
	Combined	1.0245

(5)(b) Loss-based Assessment factor in present rates
applied to Traumatic & State OD loss costs =1.0003

Coal Mine Compensation Rating Bureau
Manual Loss Cost Loaded (after Capping)
For Catastrophe, Off-Balances, and Assessment
Proposed to Become Effective 4-1-2024

	2022 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)	-	$4.28	$0.06	$4.34	$4.45	$4.45
State O.D. (1017)	-	0.09				0.09
*Federal Basic/Ex (0154)	-	0.10				0.10
Total	xx	4.47				4.64
Auger:						
Traumatic (1015)	$222,909	$5.84	$0.15	$5.99	$6.14	$6.14
State O.D. (1019)	222,909	0.19				0.19
*Federal Basic/Ex (0157)	222,909	0.41				0.41
Total	xx	6.44				6.74
Co-Gen Anthracite:						
Traumatic (1021)	$8,646,476	$6.31	$0.06	$6.37	$6.53	$6.53
State O.D. (1022)	8,646,476	0.49				0.49
*Federal Basic/Ex (0181)	7,763,788	0.37				0.37
Total	xx	7.17				7.39
Co-Gen Bituminous:						
Traumatic (1023)	$17,306,049	$1.25	$0.06	$1.31	$1.34	$1.34
State O.D. (1024)	17,306,049	0.19				0.19
*Federal Basic/Ex (0182)	17,306,049	0.25				0.25
Total	xx	1.69				1.78
Prep Plant Anthracite:						
Traumatic (1025)	$16,007,792	$2.50	$0.06	$2.56	$2.62	$2.62
State O.D. (1026)	16,007,792	2.98				2.98
*Federal Basic/Ex (0183)	14,512,871	0.81				0.81
Total	xx	6.29				6.41
Prep Plant Bituminous:						
Traumatic (1027)	$41,084,218	$1.57	$0.06	$1.63	$1.67	$1.67
State O.D. (1028)	41,084,218	0.21				0.21
*Federal Basic/Ex (0184)	41,085,799	0.31				0.31
Total	xx	2.09				2.19
Other Classifications:						
Traumatic	$83,267,444	$2.19	$0.06	$2.25	$2.31	$2.31
State O.D.	$83,267,444	0.77				0.77
*Federal Basic/Ex	80,891,416	0.40				0.40
Total	xx	3.36				3.48
Grand Total:						
Traumatic	$279,699,422	$4.04	$0.19	$4.23	$4.33	$4.33
State O.D.	279,699,422	0.78				0.78
*Federal Basic/Ex	274,494,715	0.92				0.92
Total	xx	5.74				6.03

*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	1.0000
Exhibit XIV-B	Safety Rating	1.0245
	Combined	1.0245

(5)(b) Loss-based Assessment factor in present rates
applied to Traumatic & State OD loss costs =1.0003

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

Exhibit II

Classification		Code	(1) 2022 Developed Payroll	(2) Approved Unloaded Loss Cost (Eff 4/01/2023)	(3) Indicated Unloaded Loss Cost	(4) Proposed Unloaded Loss Cost	(5) Percent Change
Underground:	Anthracite	1010	63,653	16.87	14.29	14.29	-15.3%
	Bituminous	1001	135,401,635	6.73	5.80	5.80	-13.8%
Surface:	Anthracite	1012	27,892,217	6.14	4.05	4.61	-24.9%
	Bituminous	1014	33,074,473	1.18	0.98	0.98	-16.9%
Four Standard Classes			196,431,978	5.72	4.74	4.82	-15.7%
Other Classes	Coke	1469	-	4.45	4.28	4.28	-3.8%
	Auger	1015	222,909	6.08	5.84	5.84	-3.9%
Co-Gen:	Anthracite	1021	8,646,476	7.55	6.31	6.31	-16.4%
	Bituminous	1023	17,306,049	1.22	1.25	1.25	2.5%
Prep Plants:	Anthracite	1025	16,007,792	2.67	2.50	2.50	-6.4%
	Bituminous	1027	41,084,218	1.96	1.57	1.57	-19.9%
Other Classes			83,267,444	2.53	2.19	2.19	-13.4%
All Classes Combined			279,699,422	4.77	3.98	4.04	-15.3%

Sources: Column (1) Exhibit X-A, Page 1
Column (2) Exhibit V-A, Page 1
Column (3) Exhibit V-A, Page 1
Column (4) Exhibit V-A, Page 1
Column (5) = [Column (4) divided by Column (2)] minus 1

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE LOSS COST

Exhibit III

Classification	(1) 2022 Developed Payroll	(2) Approved Unloaded Loss Cost	(3) Indicated 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	$63,653	$19.97	0.234854	$885,304	$20.79	4.1%	4.1%	$20.79
1002 Bituminous	$135,401,635	$0.73	0.023559	$336,265	0.79	8.2%	8.2%	0.79
Surface								
1016 Anthracite	$27,892,217	$0.94	0.014374	$627,611	0.90	-4.3%	-4.3%	0.90
1013 Bituminous	$33,074,473	0.49	0.014448	$446,915	0.65	32.7%	25.0%	0.61
Four Standard Classes	$196,431,978	$0.73			$0.79	8.2%	6.8%	$0.78
1017 Coke	$ -	0.09	0.002097	446,915	0.09	0.0%	0.0%	0.09
1019 Auger	$222,909	0.18	0.004252	446,915	0.19	5.6%	5.6%	0.19
Co-Gen								
1022 Anthracite	$8,646,476	0.42	0.007744	627,611	0.49	16.7%	16.7%	0.49
1024 Bituminous	$17,306,049	0.19	0.004298	446,915	0.19	0.0%	0.0%	0.19
Prep Plant								
1026 Anthracite	$16,007,792	2.87	0.047486	627,611	2.98	3.8%	3.8%	2.98
1028 Bituminous	$41,084,218	0.19	0.004723	446,915	0.21	10.5%	10.5%	0.21
Other Classes	$83,267,444	$0.73			$0.77	5.5%	5.5%	$0.77
All Classes Combined	$279,699,422	$0.73			$0.78	6.8%	6.8%	$0.78

Sources: Column (1): Exhibit X-A, Page 2
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

Exhibit IV

Classification		(1) 2022 Developed Payroll	(2) Approved Unloaded Loss Cost	(3) 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			0.466299	566,933	26.44			
	Excess			0.084358	146,110	1.23			
	Total	$63,653	$14.19			27.67	95.0%	$ 17.74	25.0%
Bituminous:	Basic			0.021539	415,396	0.89			
	Excess			0.008511	274,548	0.23			
	Total	$135,401,635	$0.93			1.12	20.4%	$ 1.12	20.4%
Surface									
Anthracite:	Basic			0.037288	410,552	1.53			
	Excess			0.006786	83,508	0.06			
	Total	$24,559,529	$1.63			1.59	-2.5%	$ 1.59	-2.5%
Bituminous:	Basic			0.018773	390,601	0.73			
	Excess			0.004639	230,497	0.11			
	Total	$33,578,482	$0.83			0.84	1.2%	$ 0.84	1.2%
Four Standard Classes	Basic					0.95			
	Excess					0.19			
	Total	$193,603,299	$1.01			1.14	12.9%	$ 1.14	12.9%
Coke	Basic			0.002051	390,601	0.08			
	Excess			0.000809	230,497	0.02			
	Total	$ -	$0.09			0.10	11.1%	$ 0.10	11.1%
Auger	Basic			0.009584	390,601	0.37			
	Excess			0.001724	230,497	0.04			
	Total	$222,909	$0.39			0.41	5.1%	$ 0.41	5.1%
Co-Gen									
Anthracite:	Basic			0.008558	410,552	0.35			
	Excess			0.002554	83,508	0.02			
	Total	$7,763,788	$0.37			0.37	0.0%	$ 0.37	0.0%
Bituminous:	Basic			0.005518	390,601	0.22			
	Excess			0.001480	230,497	0.03			
	Total	$17,306,049	$0.24			0.25	4.2%	$ 0.25	4.2%
Prep Plants									
Anthracite:	Basic			0.015724	410,552	0.65			
	Excess			0.018790	83,508	0.16			
	Total	$14,512,871	$0.81			0.81	0.0%	$ 0.81	0.0%
Bituminous:	Basic			0.006860	390,601	0.27			
	Excess			0.001541	230,497	0.04			
	Total	$41,085,799	$0.25			0.31	24.0%	$ 0.31	24.0%
Other Classes	Basic					0.34			
	Excess					0.06			
	Total	$80,891,416	$0.36			0.40	11.1%	$ 0.40	11.1%
All Classes Combined	Basic					0.77			
	Excess					0.15			
	Total	$274,494,715	$0.82			0.92	12.2%	$ 0.92	12.2%

Sources: Column (1): Exhibit X-A, Page 3
Column (2): Exhibit X-B, Page 2
Column (3): Exhibit VIII-B-1, Page 1 col. (10) (Basic) and Exhibit VIII-B-1, 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
Traumatic Loss and Classification Credibility

Classification	Code	(1) 5 Year Payroll	2022 Payroll	(2) Loss Cost/Unloaded Approved (Eff 4/01/2023)	(3) Approved on Level	(4) Indicated (Eff 04/01/2024)	(5) Credibility Five Year Expected Losses	(6) Credibility Credibility Factor	(7) Indicated w/ Credibility Indicated Loss Cost	(8) Indicated Change	(9) Proposed Change after Limitation	(10) Proposed Loss Cost	(11) Proposed Change Excluding Trend
Underground: Bituminous	1001	$762,361,835	$135,401,635	6.73	6.76	5.80	51,306,951	1.00	5.80	-13.8%	-13.8%	5.80	-14.2%
Surface: Anthracite	1012	$117,482,725	$27,892,217	6.14	6.16	4.05	7,213,439	1.00	4.05	-34.0%	-25.0%	4.61	-25.2%
Bituminous	1014	$160,132,186	$33,074,473	1.18	1.18	0.98	1,889,560	1.00	0.98	-16.9%	-16.9%	0.98	-17.3%
Three Major Classifications		$1,039,976,746	$196,368,325	5.81	5.83	4.86	60,409,950						
Coke	1469	$9,265,302	$0	4.45	4.47	4.07	412,306	0.47	4.28	-3.8%	-3.8%	4.28	-4.2%
Co-Gen: Anthracite	1021	$44,470,861	$8,646,476	7.55	7.58	6.31	3,357,550	1.00	6.31	-16.4%	-16.4%	6.31	-16.8%
Bituminous	1023	$64,129,553	$17,306,049	1.22	1.22	1.26	782,381	0.64	1.25	2.5%	2.5%	1.25	2.1%
Prep Plants: Anthracite	1025	$63,951,211	$16,007,792	2.67	2.68	2.49	1,707,497	0.95	2.50	-6.4%	-6.4%	2.50	-6.7%
Bituminous	1027	$178,717,177	$41,084,218	1.96	1.97	1.57	3,502,857	1.00	1.57	-19.9%	-19.9%	1.57	-20.2%
Auger	1015	$1,954,010	$222,909	6.08	6.10	5.07	118,804	0.25	5.84	-3.9%	-3.9%	5.84	-4.3%
Subtotal (6)		$362,488,114	$83,267,444	2.73	2.74	2.34	9,881,395						
Underground: Anthracite	1010	$958,609	$63,653	16.87	16.94	11.64 a	161,717	0.29	14.29 b	-15.3%	-15.3%	14.29 c	-15.6%
Subtotal (7)		$363,446,723	$83,331,097	2.76	2.77	2.37	10,043,112						
Total (Based on 5-year Payroll)		$1,403,423,469	$279,699,422	5.02	5.04	4.21	$70,453,062		4.22				
Total (Based on 2022 Payroll, see Exhibit II)			$279,699,422	4.77					3.98	-16.6%	-15.3%	4.04	

a Indicated Loss Cost from V-A, Page 2
b Average of Col. (3) and Col. (4)
c Average of Col. (3) and Proposed Loss Cost from V-A, Page 2

Source: (1) Exhibit V-B
(2) Unloaded Loss Cost Current (Eff 4/01/2023) Exhibit X-B, Page 2
(3) = (2) X Trend =(2) X(1.004)
1.004=Weighted average of 1.015 and 0.997
Weights derived from 5 year Medical (21,454,631) and Indemnity (37,596,128) ultimate losses. Exhibit V-B, Page 1
(4) Exhibit V-B except Underground Anthracite, see Exhibit V-A, Page 2
(5) Expected Losses = Column (1) times Column (2) divided by 100
(6) Factor Z = [(5) divided by 1,889,560]^(1/2) Capped at 1.00
(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)/1.004/Column(2)-1.000

Calculation of Anthracite Underground Loss Cost

Multiplicative Method (Anthracite: Underground vs. Surface)	Indicated	Proposed
Differential Factor from Study	2.66	2.66
Indicated Anthracite Surface Loss Cost	4.05 *	4.61 *
Indicated Anthracite Underground Loss Cost	10.77	12.26
Comparative Hazard Method #1 (Anthracite vs. Bituminous)		
Differential Factor from Study	2.41	2.41
Indicated Bituminous Underground Loss Cost:	5.80 *	5.80 *
Indicated Anthracite Underground Loss Cost	13.98	13.98
Comparative Hazard Method #2 (Surface vs. Underground)		
Differential Factor from Study	2.51	2.51
Indicated Anthracite Surface Loss Cost:	4.05 *	4.61 *
Indicated Anthracite Underground Loss Cost	10.17	11.57
Average	11.64	12.60

* Souce: Exhibit V-A, Page 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					
2018	8,484,747	1.0369	0.9834	8,651,789	2.83
2019	7,825,187	1.0703	0.9829	8,232,079	2.65
2020	7,826,531	1.0914	0.9858	8,420,581	3.31
2021	5,589,383	1.2328	0.9888	6,813,417	2.70
2022	2,994,770	1.8444	0.9918	5,478,262	1.96
5 Years	$32,720,618			$37,596,128	2.68
Medical					
2018	5,304,146	1.0596	1.1057	6,214,336	2.03
2019	3,922,433	1.0626	1.0894	4,540,594	1.46
2020	3,568,184	1.0657	1.0733	4,081,344	1.61
2021	3,274,862	1.0412	1.0574	3,605,509	1.43
2022	2,773,533	1.0427	1.0418	3,012,848	1.08
5 Years	$18,843,158			$21,454,631	1.53

Indemnity & Medical	(6) Developed Payroll				
2018	306,135,580			14,866,125	4.86
2019	310,590,243			12,772,673	4.11
2020	254,187,589			12,501,925	4.92
2021	252,810,635			10,418,926	4.12
2022	279,699,422			8,491,110	3.04
5 Years	$1,403,423,469			$59,050,759	4.21

Source: (1) Sum of Exhibit V-B, pages 2 and 6 - column (1)
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(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					
2018	7,936,543	1.0369	0.9834	8,092,793	3.44
2019	6,647,315	1.0703	0.9829	6,992,961	2.96
2020	6,336,613	1.0914	0.9858	6,817,575	3.61
2021	5,373,784	1.2328	0.9888	6,550,603	3.58
2022	2,673,260	1.8444	0.9918	4,890,131	2.49
5 Years	$28,967,515			$33,344,063	3.21
Medical					
2018	3,945,001	1.0596	1.1057	4,621,962	1.96
2019	3,525,210	1.0626	1.0894	4,080,771	1.73
2020	2,671,329	1.0657	1.0733	3,055,508	1.62
2021	2,944,627	1.0412	1.0574	3,241,931	1.77
2022	2,031,193	1.0427	1.0418	2,206,455	1.12
5 Years	$15,117,360			$17,206,627	1.65

Indemnity & Medical	(6) Developed Payroll				
2018	235,372,004			12,714,755	5.40
2019	236,420,528			11,073,732	4.68
2020	188,745,658			9,873,083	5.23
2021	183,070,231			9,792,534	5.35
2022	196,368,325			7,096,586	3.61
5 Years	$1,039,976,746			$50,550,690	4.86

Source: (1) Sum of Exhibit V-B, pages 3,4 and 5 - column (1)
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(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					
2018	7,350,300	1.0369	0.9834	7,495,009	4.15
2019	5,837,802	1.0703	0.9829	6,141,355	3.45
2020	5,736,946	1.0914	0.9858	6,172,392	4.44
2021	4,711,445	1.2328	0.9888	5,743,217	4.43
2022	2,162,747	1.8444	0.9918	3,956,261	2.92
5 Years	$25,799,240			$29,508,234	3.87
Medical					
2018	3,541,850	1.0596	1.1057	4,149,630	2.30
2019	3,019,604	1.0626	1.0894	3,495,483	1.97
2020	2,221,982	1.0657	1.0733	2,541,538	1.83
2021	2,494,115	1.0412	1.0574	2,745,933	2.12
2022	1,646,186	1.0427	1.0418	1,788,227	1.32
5 Years	$12,923,737			$14,720,811	1.93

Indemnity & Medical	(6) Developed Payroll				
2018	180,553,142			11,644,639	6.45
2019	177,833,672			9,636,838	5.42
2020	139,028,472			8,713,930	6.27
2021	129,544,914			8,489,150	6.55
2022	135,401,635			5,744,488	4.24
5 Years	$762,361,835			$44,229,045	5.80

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	522,388	1.0369	0.9834	532,672	2.72
2019	492,004	1.0703	0.9829	517,587	2.23
2020	267,792	1.0914	0.9858	288,118	1.28
2021	591,418	1.2328	0.9888	720,934	2.96
2022	468,437	1.8444	0.9918	856,901	3.07
5 Years	$2,342,039			$2,916,212	2.48
Medical					
2018	271,551	1.0596	1.1057	318,149	1.63
2019	326,705	1.0626	1.0894	378,193	1.63
2020	370,725	1.0657	1.0733	424,041	1.89
2021	366,115	1.0412	1.0574	403,080	1.66
2022	294,345	1.0427	1.0418	319,743	1.15
5 Years	$1,629,441			$1,843,206	1.57

Indemnity & Medical	(6) Developed Payroll				
2018	19,576,675			850,821	4.35
2019	23,224,142			895,780	3.86
2020	22,443,061			712,159	3.17
2021	24,346,630			1,124,014	4.62
2022	27,892,217			1,176,644	4.22
5 Years	$117,482,725			$4,759,418	4.05

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	63,855	1.0369	0.9834	65,112	0.18
2019	317,509	1.0703	0.9829	334,019	0.94
2020	331,875	1.0914	0.9858	357,065	1.31
2021	70,921	1.2328	0.9888	86,452	0.30
2022	42,076	1.8444	0.9918	76,969	0.23
5 Years	$826,236			$919,617	0.57
Medical					
2018	131,600	1.0596	1.1057	154,183	0.44
2019	178,901	1.0626	1.0894	207,095	0.59
2020	78,622	1.0657	1.0733	89,929	0.33
2021	84,397	1.0412	1.0574	92,918	0.32
2022	90,662	1.0427	1.0418	98,485	0.30
5 Years	$564,182			$642,610	0.40

Indemnity & Medical	(6) Developed Payroll				
2018	35,242,187			219,295	0.62
2019	35,362,714			541,114	1.53
2020	27,274,125			446,994	1.64
2021	29,178,687			179,370	0.61
2022	33,074,473			175,454	0.53
5 Years	$160,132,186			$1,562,227	0.98

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	548,204	1.0369	0.9834	558,996	0.79
2019	1,177,872	1.0703	0.9829	1,239,118	1.67
2020	1,489,918	1.0914	0.9858	1,603,006	2.45
2021	215,599	1.2328	0.9888	262,814	0.38
2022	321,510	1.8444	0.9918	588,131	0.71
5 Years	$3,753,103			$4,252,065	1.17
Medical					
2018	1,359,145	1.0596	1.1057	1,592,374	2.25
2019	397,223	1.0626	1.0894	459,823	0.62
2020	896,855	1.0657	1.0733	1,025,836	1.57
2021	330,235	1.0412	1.0574	363,578	0.52
2022	742,340	1.0427	1.0418	806,393	0.97
5 Years	$3,725,798			$4,248,004	1.17

Indemnity & Medical	(6) Developed Payroll				
2018	70,763,576			2,151,370	3.04
2019	74,169,715			1,698,941	2.29
2020	65,441,931			2,628,842	4.02
2021	69,740,404			626,392	0.90
2022	83,331,097			1,394,524	1.67
5 Years	$363,446,723			$8,500,069	2.34

Source: (1) Sum of Exhibit V-B, pages 7-13 - column (1)
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(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					
2018	99,871	1.0369	0.9834	101,837	2.27
2019	129,350	1.0703	0.9829	136,076	3.05
2020	0	1.0914	0.9858	0	0.00
2021	0	1.2328	0.9888	0	0.00
2022	0	1.8444	0.9918	0	0.00
5 Years	$229,221			$237,913	2.57
Medical					
2018	110,693	1.0596	1.1057	129,688	2.89
2019	8,215	1.0626	1.0894	9,510	0.21
2020	0	1.0657	1.0733	0	0.00
2021	0	1.0412	1.0574	0	0.00
2022	0	1.0427	1.0418	0	0.00
5 Years	$118,908			$139,198	1.50

Indemnity & Medical	(6) Developed Payroll				
2018	4,484,744			231,525	5.16
2019	4,466,971			145,586	3.26
2020	313,587			0	0.00
2021	0			0	0.00
2022	0			0	0.00
5 Years	$9,265,302			$377,111	4.07

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	0	1.0369	0.9834	0	0.00
2019	0	1.0703	0.9829	0	0.00
2020	88,701	1.0914	0.9858	95,434	24.82
2021	0	1.2328	0.9888	0	0.00
2022	0	1.8444	0.9918	0	0.00
5 Years	$88,701			$95,434	4.88
Medical					
2018	0	1.0596	1.1057	0	0.00
2019	2,299	1.0626	1.0894	2,661	0.49
2020	817	1.0657	1.0733	934	0.24
2021	0	1.0412	1.0574	0	0.00
2022	0	1.0427	1.0418	0	0.00
5 Years	$3,116			$3,595	0.18

Indemnity & Medical	(6) Developed Payroll				
2018	600,138			0	0.00
2019	539,914			2,661	0.49
2020	384,571			96,368	25.06
2021	206,478			0	0.00
2022	222,909			0	0.00
5 Years	$1,954,010			$99,029	5.07

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	93,906	1.0369	0.9834	95,755	0.83
2019	24,221	1.0703	0.9829	25,480	0.31
2020	739,987	1.0914	0.9858	796,154	10.39
2021	298	1.2328	0.9888	363	0.00
2022	28,040	1.8444	0.9918	51,293	0.59
5 Years	$886,452			$969,045	2.18
Medical					
2018	860,201	1.0596	1.1057	1,007,811	8.69
2019	53,068	1.0626	1.0894	61,431	0.75
2020	590,581	1.0657	1.0733	675,516	8.82
2021	45,442	1.0412	1.0574	50,030	0.60
2022	39,803	1.0427	1.0418	43,237	0.50
5 Years	$1,589,095			$1,838,025	4.13

Indemnity & Medical	(6) Developed Payroll				
2018	11,600,891			1,103,566	9.51
2019	8,191,669			86,911	1.06
2020	7,660,069			1,471,670	19.21
2021	8,371,756			50,393	0.60
2022	8,646,476			94,530	1.09
5 Years	$44,470,861			$2,807,070	6.31

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	106,387	1.0369	0.9834	108,481	0.90
2019	4,267	1.0703	0.9829	4,489	0.04
2020	7,540	1.0914	0.9858	8,112	0.08
2021	152,183	1.2328	0.9888	185,510	1.51
2022	36,989	1.8444	0.9918	67,663	0.39
5 Years	$307,366			$374,255	0.58
Medical					
2018	57,361	1.0596	1.1057	67,204	0.56
2019	11,225	1.0626	1.0894	12,994	0.11
2020	21,008	1.0657	1.0733	24,029	0.23
2021	94,485	1.0412	1.0574	104,025	0.85
2022	207,066	1.0427	1.0418	224,933	1.30
5 Years	$391,145			$433,185	0.68

Indemnity & Medical	(6) Developed Payroll				
2018	12,043,297			175,685	1.46
2019	11,818,883			17,483	0.15
2020	10,678,482			32,141	0.30
2021	12,282,842			289,535	2.36
2022	17,306,049			292,596	1.69
5 Years	$64,129,553			$807,440	1.26

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	43,147	1.0369	0.9834	43,996	0.46
2019	173,341	1.0703	0.9829	182,354	1.42
2020	266,982	1.0914	0.9858	287,246	2.29
2021	17,688	1.2328	0.9888	21,562	0.17
2022	94,762	1.8444	0.9918	173,346	1.08
5 Years	$595,920			$708,504	1.11
Medical					
2018	216,536	1.0596	1.1057	253,694	2.63
2019	141,680	1.0626	1.0894	164,008	1.27
2020	125,155	1.0657	1.0733	143,154	1.14
2021	63,080	1.0412	1.0574	69,449	0.54
2022	236,217	1.0427	1.0418	256,599	1.60
5 Years	$782,668			$886,904	1.39

Indemnity & Medical	(6) Developed Payroll				
2018	9,651,288			297,690	3.08
2019	12,873,320			346,362	2.69
2020	12,543,358			430,400	3.43
2021	12,875,453			91,011	0.71
2022	16,007,792			429,945	2.69
5 Years	$63,951,211			$1,595,408	2.49

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	204,893	1.0369	0.9834	208,927	0.65
2019	846,693	1.0703	0.9829	890,719	2.47
2020	386,708	1.0914	0.9858	416,060	1.24
2021	45,430	1.2328	0.9888	55,379	0.15
2022	161,719	1.8444	0.9918	295,829	0.72
5 Years	$1,645,443			$1,866,914	1.04
Medical					
2018	114,354	1.0596	1.1057	133,977	0.42
2019	180,736	1.0626	1.0894	209,219	0.58
2020	159,294	1.0657	1.0733	182,203	0.54
2021	127,228	1.0412	1.0574	140,074	0.39
2022	259,254	1.0427	1.0418	281,624	0.69
5 Years	$840,866			$947,097	0.53

Indemnity & Medical	(6) Developed Payroll				
2018	32,199,872			342,904	1.06
2019	36,099,579			1,099,938	3.05
2020	33,562,164			598,263	1.78
2021	35,771,344			195,453	0.55
2022	41,084,218			577,453	1.41
5 Years	$178,717,177			$2,814,011	1.57

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	0	1.0369	0.9834	0	0.00
2019	0	1.0703	0.9829	0	0.00
2020	0	1.0914	0.9858	0	0.00
2021	0	1.2328	0.9888	0	0.00
2022	0	1.8444	0.9918	0	0.00
5 Years	$0			$0	0.00
Medical					
2018	0	1.0596	1.1057	0	0.00
2019	0	1.0626	1.0894	0	0.00
2020	0	1.0657	1.0733	0	0.00
2021	0	1.0412	1.0574	0	0.00
2022	0	1.0427	1.0418	0	0.00
5 Years	$0			$0	0.00

Indemnity & Medical	(6) Developed Payroll			
2018	183,346		0	0.00
2019	179,379		0	0.00
2020	299,700		0	0.00
2021	232,531		0	0.00
2022	63,653		0	0.00
5 Years	$958,609		-	0.00

Source: (1) CMCRB Database as of 04-30-2023
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(4) (1) times (2) times (3)
(5) (4) divided by (6) times 100
(6) Exhibit X-A, Page 1

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					
2018	548,204	1.0369	0.9834	558,996	0.80
2019	1,177,872	1.0703	0.9829	1,239,118	1.69
2020	1,401,217	1.0914	0.9858	1,507,572	2.33
2021	215,599	1.2328	0.9888	262,814	0.38
2022	321,510	1.8444	0.9918	588,131	0.71
5 Years	$3,664,402			$4,156,631	1.15
Medical					
2018	1,359,145	1.0596	1.1057	1,592,374	2.28
2019	394,924	1.0626	1.0894	457,162	0.62
2020	896,038	1.0657	1.0733	1,024,902	1.58
2021	330,235	1.0412	1.0574	363,578	0.52
2022	742,340	1.0427	1.0418	806,393	0.97
5 Years	$3,722,682			$4,244,409	1.18

Indemnity & Medical	(6) Developed Payroll				
2018	69,980,092			2,151,370	3.07
2019	73,450,422			1,696,280	2.31
2020	64,757,660			2,532,474	3.91
2021	69,301,395			626,392	0.90
2022	83,044,535			1,394,524	1.68
5 Years	$360,534,104			$8,401,040	2.33

Source: (1) Exhibit V-B, page 6 minus page 8,column (1) minus page 13,column (1)
(2) Exhibit V-F, Pages 1 and 2
(3) Exhibit V-C
(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
Traumatic Loss Trend
Indemnity and Medical - All Classes Combined

Exhibit V-C

Trend Factors

Indemnity and Funeral

Annual Percentage Change: -0.3%

Accident Year	Trend Period			Years	Formula	Trend Factor	Freq. Adjt. Factor	HB 1846 Adjt. Factor	HB 1840 Adjt. Factor	Adjt. Trend Factor
2018	7/1/2018	to	4/1/2025	6.75	(1 - 0.003) ^ 6.75	0.9799	1.000	1.0000	1.0036	0.9834
2019	7/1/2019	to	4/1/2025	5.75	(1 - 0.003) ^ 5.75	0.9829	1.000	1.0000	1.0000	0.9829
2020	7/1/2020	to	4/1/2025	4.75	(1 - 0.003) ^ 4.75	0.9858	1.000	1.0000	1.0000	0.9858
2021	7/1/2021	to	4/1/2025	3.75	(1 - 0.003) ^ 3.75	0.9888	1.000	1.0000	1.0000	0.9888
2022	7/1/2022	to	4/1/2025	2.75	(1 - 0.003) ^ 2.75	0.9918	1.000	1.0000	1.0000	0.9918

Medical and Medical Only

Annual Percentage Change: 1.5%

Accident Year	Trend Period			Years	Formula	Trend Factor	Freq. Adjt. Factor	HB 1846 Adjt. Factor	HB 1840 Adjt. Factor	Adjt. Trend Factor
2018	7/1/2018	to	4/1/2025	6.75	(1 + 0.015) ^ 6.75	1.1057	1.000	1.0000	1.0000	1.1057
2019	7/1/2019	to	4/1/2025	5.75	(1 + 0.015) ^ 5.75	1.0894	1.000	1.0000	1.0000	1.0894
2020	7/1/2020	to	4/1/2025	4.75	(1 + 0.015) ^ 4.75	1.0733	1.000	1.0000	1.0000	1.0733
2021	7/1/2021	to	4/1/2025	3.75	(1 + 0.015) ^ 3.75	1.0574	1.000	1.0000	1.0000	1.0574
2022	7/1/2022	to	4/1/2025	2.75	(1 + 0.015) ^ 2.75	1.0418	1.000	1.0000	1.0000	1.0418

Source: Exhibit V-D, Pages 1 and 2 (Selected Trend Factors)

Coal Mine Compensation Rating Bureau

Traumatic Loss Trend - Indemnity and Funeral Claims - All Classes Combined - Loss Ratio Trend

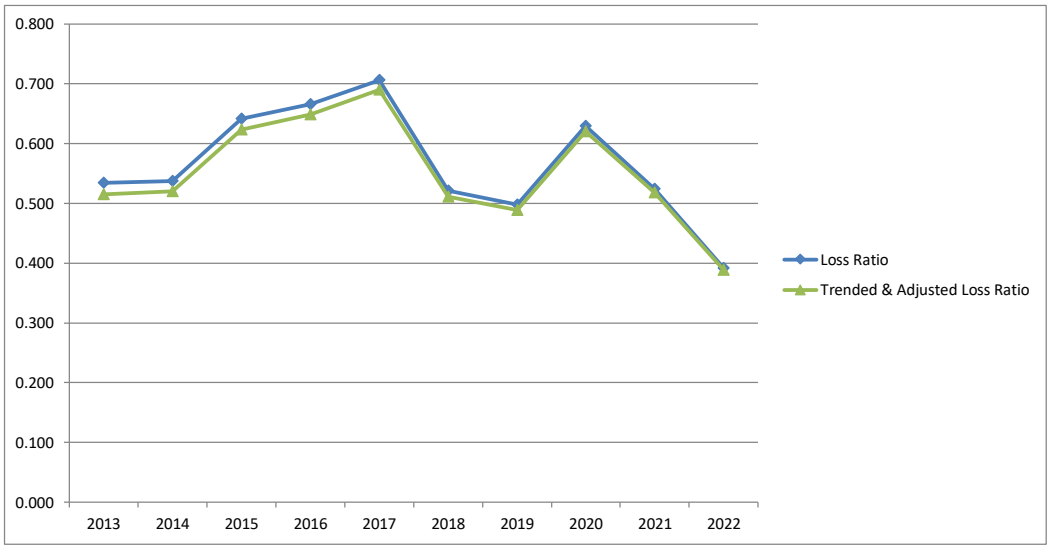
Accident Year	(1) On-Level Loss Cost Premium	(2) Actual Loss Ratio	(3) Adjustment	(4) Adjusted Loss Ratio	(5) Change from Prior Year	(6) Trend Period	(7) Trended & Adjusted Loss Ratio	(8) Change to Trended / Adjusted
2013	14,965,255	0.534	1.000	0.534		11.75	0.515	-3.6%
2014	23,680,400	0.537	1.000	0.537	1.006	10.75	0.520	-3.2%
2015	19,697,188	0.642	1.000	0.642	1.196	9.75	0.623	-3.0%
2016	14,110,553	0.666	1.000	0.666	1.037	8.75	0.649	-2.6%
2017	16,048,791	0.706	1.000	0.706	1.060	7.75	0.690	-2.3%
2018	16,876,924	0.521	1.000	0.521	0.738	6.75	0.511	-1.9%
2019	16,811,373	0.498	1.000	0.498	0.956	5.75	0.489	-1.8%
2020	13,584,176	0.629	1.000	0.629	1.263	4.75	0.620	-1.4%
2021	13,143,053	0.524	1.000	0.524	0.833	3.75	0.518	-1.1%
2022	14,090,524	0.392	1.000	0.392	0.748	2.75	0.389	-0.8%
Source:	X-B-1	V-E-1	Judgement	(2)*(3)			(4)*(1+Sel.)^(6)	(7)/(2) - 1

	Thru 2022	Thru 2021
A) Geometric Mean (2014 -)	-3.9%	-0.3%
B) Geometric Mean (2015 -)	-6.8%	-3.3%
C) Geometric Mean (2016 -)	-8.5%	-4.7%
D) Geometric Mean (2017 -)	-11.1%	-7.2%
E) Regression (2014 -)	-3.8%	-1.7%
F) Regression (2015 -)	-5.8%	-3.8%
G) Regression (2016 -)	-6.9%	-4.4%
H) Regression (2017 -)	-7.4%	-4.0%
Average - All	-6.77%	-3.68%
Average - All, except D & H	-5.94%	-3.05%
Selected Trend (Sel.)	-0.3%	
Selected Trend for 4-1-2023	0.0%	
Number of Indications < Selected:	8	8
Number of Indications > Selected:	0	0

Results - Actual	
9-year avg	0.568
9-year wtd avg	0.569
5-year avg	0.513
5-year wtd avg	0.512
3-year avg	0.515
3-year wtd avg	0.513

Results - w/ Trend & Adjust	
9-year avg	0.557
9-year wtd avg	0.556
5-year avg	0.505
5-year wtd avg	0.504
3-year avg	0.509
3-year wtd avg	0.507

Sel. Freq.	-0.50%
Sel. Sev.	0.25%
Ind. Freq-Sev	-0.3%



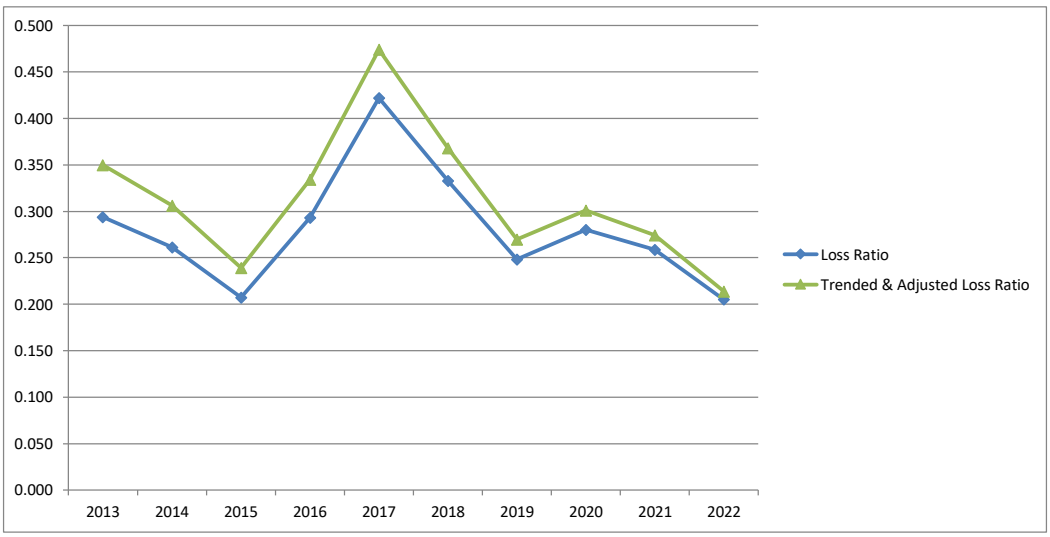
Accident Year	(1) On-Level Loss Cost Premium	(2) Actual Loss Ratio	(3) Adjustment	(4) Adjusted Loss Ratio	(5) Change from Prior Year	(6) Trend Period	(7) Trended & Adjusted Loss Ratio	(8) Change to Trended / Adjusted
2013	14,965,255	0.294	1.000	0.294		11.75	0.350	19.0%
2014	23,680,400	0.261	1.000	0.261	0.888	10.75	0.306	17.2%
2015	19,697,188	0.207	1.000	0.207	0.793	9.75	0.239	15.5%
2016	14,110,553	0.293	1.000	0.293	1.415	8.75	0.334	14.0%
2017	16,048,791	0.422	1.000	0.422	1.440	7.75	0.474	12.3%
2018	16,876,924	0.333	1.000	0.333	0.789	6.75	0.368	10.5%
2019	16,811,373	0.248	1.000	0.248	0.745	5.75	0.270	8.9%
2020	13,584,176	0.280	1.000	0.280	1.129	4.75	0.301	7.5%
2021	13,143,053	0.259	1.000	0.259	0.925	3.75	0.274	5.8%
2022	14,090,524	0.205	1.000	0.205	0.792	2.75	0.214	4.4%
Source:	X-B-1	V-E-2	Judgement	(2)*(3)			(4)*(1+Sel.)^(6)	(7)/(2) - 1

	Thru 2022	Thru 2021
A) Geometric Mean (2014 -)	-3.0%	-0.1%
B) Geometric Mean (2015 -)	-0.1%	3.8%
C) Geometric Mean (2016 -)	-5.8%	-2.4%
D) Geometric Mean (2017 -)	-13.4%	-11.5%
E) Regression (2014 -)	-1.5%	0.9%
F) Regression (2015 -)	-2.6%	0.2%
G) Regression (2016 -)	-7.6%	-5.9%
H) Regression (2017 -)	-11.4%	-10.9%
Average - All	-5.68%	-3.25%
Average - All, except D & H	-3.44%	-0.61%
Selected Trend (Sel.)	1.5%	
Selected Trend for 4-1-2023	2.4%	
Number of Indications < Selected:	8	7
Number of Indications > Selected:	0	1

Results - Actual	
9-year avg	0.279
9-year wtd avg	0.277
5-year avg	0.265
5-year wtd avg	0.267
3-year avg	0.248
3-year wtd avg	0.247

Results - w/ Trend & Adjust	
9-year avg	0.309
9-year wtd avg	0.309
5-year avg	0.285
5-year wtd avg	0.288
3-year avg	0.263
3-year wtd avg	0.262

Sel. Freq.	-0.50%
Sel. Sev.	2.00%
Ind. Freq-Sev	1.5%



Coal Mine Compensation Rating Bureau

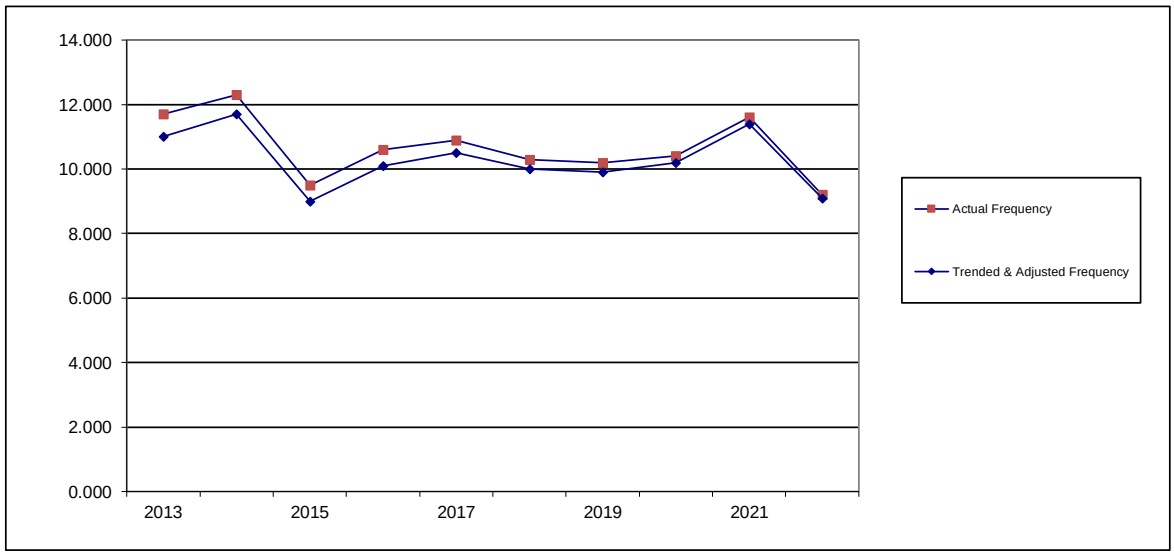
Traumatic Loss Trend - Indemnity and Funeral Claims - All Classes Combined - Frequency Trend

Accident Year	(1) On-Level Loss Cost Premium	(2) Actual Frequency	(3) Adjustment	(4) Adjusted Frequency	(5) Change from Prior Year	(6) Trend Period	(7) Trended & Adjusted Frequency	(8) Change to Trended & Adjusted
2013	14,965,255	11.700	1.000	11.700		11.75	11.000	-6.0%
2014	23,680,400	12.300	1.000	12.300	1.051	10.75	11.700	-4.9%
2015	19,697,188	9.500	1.000	9.500	0.772	9.75	9.000	-5.3%
2016	14,110,553	10.600	1.000	10.600	1.116	8.75	10.100	-4.7%
2017	16,048,791	10.900	1.000	10.900	1.028	7.75	10.500	-3.7%
2018	16,876,924	10.300	1.000	10.300	0.945	6.75	10.000	-2.9%
2019	16,811,373	10.200	1.000	10.200	0.990	5.75	9.900	-2.9%
2020	13,584,176	10.400	1.000	10.400	1.020	4.75	10.200	-1.9%
2021	13,143,053	11.600	1.000	11.600	1.115	3.75	11.400	-1.7%
2022	14,090,524	9.200	1.000	9.200	0.793	2.75	9.100	-1.1%
Source:	X-B-1	V-E-1	Judgement	(2)*(3)			(4)*(1+Sel.)^(6)	(7)/(2) - 1

	Thru 2022	Thru 2021
A) Geometric Mean (2014 -)	-3.6%	-0.8%
B) Geometric Mean (2015 -)	-0.5%	3.4%
C) Geometric Mean (2016 -)	-2.3%	1.8%
D) Geometric Mean (2017 -)	-3.3%	1.6%
E) Regression (2014 -)	-1.1%	-0.2%
F) Regression (2015 -)	0.1%	1.8%
G) Regression (2016 -)	-1.0%	0.9%
H) Regression (2017 -)	-1.3%	1.4%
Average - All	-1.64%	1.22%
Average - All, except D & H	-1.41%	1.14%
Selected Trend (Sel.)	-0.50%	
Selected Trend for 4-1-2023	-1.50%	
Number of Indications < Selected:	6	1
Number of Indications > Selected:	2	7

Results - Actual	
9-year avg	10.556
9-year wtd avg	10.616
5-year avg	10.340
5-year wtd avg	10.317
3-year avg	10.400
3-year wtd avg	10.372

Results - w/ Trend & Adjust	
9-year avg	10.211
9-year wtd avg	10.248
5-year avg	10.120
5-year wtd avg	10.091
3-year avg	10.233
3-year wtd avg	10.207



Coal Mine Compensation Rating Bureau

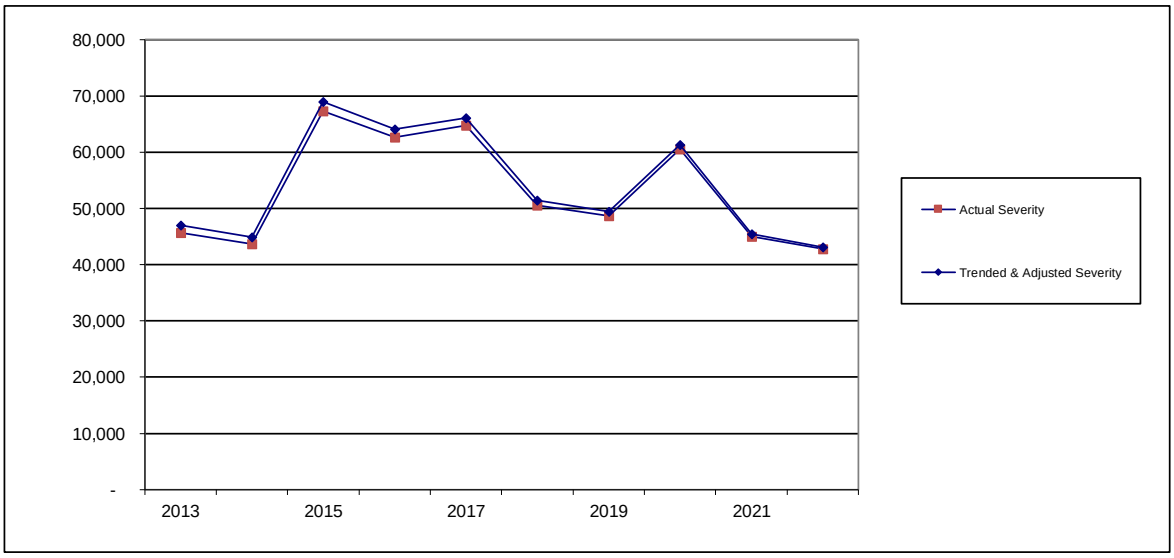
Traumatic Loss Trend - Indemnity and Funeral Claims - All Classes Combined - Severity Trend

Accident Year	(1) On-Level Loss Cost Premium	(2) Actual Severity	(3) Adjustment	(4) Adjusted Severity	(5) Change from Prior Year	(6) Trend Period	(7) Trended & Adjusted Severity	(8) Change to Trended & Adjusted
2013	14,965,255	45,661	1.000	45,661		11.75	47,020	3.0%
2014	23,680,400	43,674	1.000	43,674	0.956	10.75	44,862	2.7%
2015	19,697,188	67,312	1.000	67,312	1.541	9.75	68,971	2.5%
2016	14,110,553	62,672	1.000	62,672	0.931	8.75	64,056	2.2%
2017	16,048,791	64,786	1.000	64,786	1.034	7.75	66,052	2.0%
2018	16,876,924	50,562	1.000	50,562	0.780	6.75	51,421	1.7%
2019	16,811,373	48,694	1.000	48,694	0.963	5.75	49,398	1.4%
2020	13,584,176	60,581	1.000	60,581	1.244	4.75	61,304	1.2%
2021	13,143,053	45,037	1.000	45,037	0.743	3.75	45,461	0.9%
2022	14,090,524	42,818	1.000	42,818	0.951	2.75	43,113	0.7%
Source:	X-B-1	V-E-1	Judgement	(2)*(3)			(4)*(1+Sel.)^(6)	(7)/(2) - 1

	Thru 2022	Thru 2021
A) Geometric Mean (2014 -)	-0.3%	0.4%
B) Geometric Mean (2015 -)	-6.3%	-6.5%
C) Geometric Mean (2016 -)	-6.2%	-6.4%
D) Geometric Mean (2017 -)	-8.0%	-8.7%
E) Regression (2014 -)	-2.7%	-1.6%
F) Regression (2015 -)	-5.8%	-5.4%
G) Regression (2016 -)	-5.9%	-5.3%
H) Regression (2017 -)	-6.1%	-5.3%
Average - All	-5.14%	-4.84%
Average - All, except D & H	-4.51%	-4.12%
Selected Trend (Sel.)	0.25%	
Selected Trend for 4-1-2023	1.50%	
Number of Indications < Selected:	8	7
Number of Indications > Selected:	0	1

Results - Actual	
9-year avg	54,015
9-year wtd avg	53,865
5-year avg	49,538
5-year wtd avg	49,528
3-year avg	49,479
3-year wtd avg	49,444

Results - w/ Trend & Adjust	
9-year avg	54,960
9-year wtd avg	54,855
5-year avg	50,139
5-year wtd avg	50,144
3-year avg	49,959
3-year wtd avg	49,923



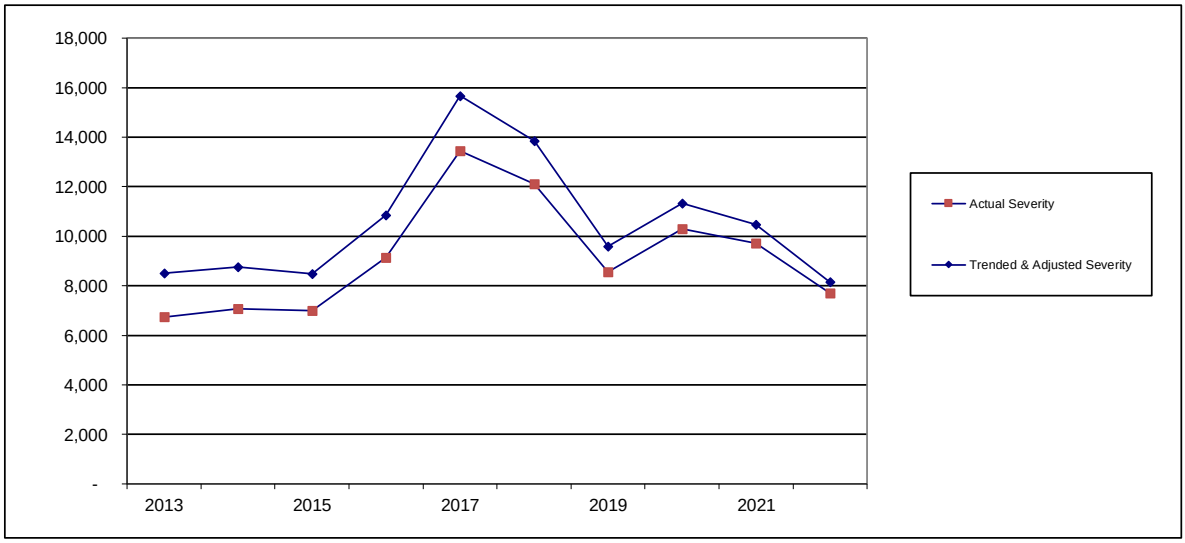
Coal Mine Compensation Rating Bureau
Traumatic Loss Trend - All Medical Claims - All Classes Combined - Severity Trend

Accident Year	(1) On-Level Loss Cost Premium	(2) Actual Severity	(3) Adjustment	(4) Adjusted Severity	(5) Change from Prior Year	(6) Trend Period	(7) Trended & Adjusted Severity	(8) Change to Trended & Adjusted
2013	14,965,255	6,735	1.000	6,735		11.75	8,499	26.2%
2014	23,680,400	7,078	1.000	7,078	1.051	10.75	8,757	23.7%
2015	19,697,188	6,993	1.000	6,993	0.988	9.75	8,482	21.3%
2016	14,110,553	9,135	1.000	9,135	1.306	8.75	10,863	18.9%
2017	16,048,791	13,446	1.000	13,446	1.472	7.75	15,676	16.6%
2018	16,876,924	12,113	1.000	12,113	0.901	6.75	13,845	14.3%
2019	16,811,373	8,558	1.000	8,558	0.707	5.75	9,590	12.1%
2020	13,584,176	10,305	1.000	10,305	1.204	4.75	11,321	9.9%
2021	13,143,053	9,714	1.000	9,714	0.943	3.75	10,463	7.7%
2022	14,090,524	7,712	1.000	7,712	0.794	2.75	8,144	5.6%
Source:	X-B-1	V-E-2	Judgement	(2)*(3)			(4)*(1+Sel.)^(6)	(7)/(2) - 1

	Thru 2022	Thru 2021
A) Geometric Mean (2014 -)	1.1%	4.6%
B) Geometric Mean (2015 -)	1.4%	5.6%
C) Geometric Mean (2016 -)	-2.8%	1.3%
D) Geometric Mean (2017 -)	-10.5%	-7.8%
E) Regression (2014 -)	1.9%	4.7%
F) Regression (2015 -)	-0.2%	2.8%
G) Regression (2016 -)	-4.6%	-2.4%
H) Regression (2017 -)	-8.9%	-7.8%
Average - All	-2.82%	0.14%
Average - All, except D & H	-0.53%	2.78%
Selected Trend (Sel.)	2.0%	
Selected Trend for 4-1-2023	4.0%	
Number of Indications < Selected:	8	4
Number of Indications > Selected:	0	4

Results - Actual	
9-year avg	9,450
9-year wtd avg	9,286
5-year avg	9,680
5-year wtd avg	9,726
3-year avg	9,244
3-year wtd avg	9,220

Results - w/ Trend & Adjust	
9-year avg	10,793
9-year wtd avg	10,674
5-year avg	10,673
5-year wtd avg	10,750
3-year avg	9,976
3-year wtd avg	9,948



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

Year	(1) Indemnity Case Incurred Losses	(2) Loss Dev. Factors	(3) Ultimate Losses	(4)	(5) Loss Cost Premium	(6) Loss Ratio	(7) Annual Loss Ratio Change	(8) Claim Count	(9) Freq. per ($MM)	(10) Annual Freq. Change	(11) Average Loss
2013	7,807,196	1.0235	7,990,665		14,965,255	0.534		175	11.7		45,661
2014	12,388,158	1.0259	12,709,011		23,680,400	0.537	0.6%	291	12.3	5.1%	43,674
2015	12,304,028	1.0285	12,654,693		19,697,188	0.642	19.6%	188	9.5	-22.8%	67,312
2016	9,116,313	1.0312	9,400,742		14,110,553	0.666	3.7%	150	10.6	11.6%	62,672
2017	10,964,733	1.0340	11,337,534		16,048,791	0.706	6.0%	175	10.9	2.8%	64,786
2018	8,484,747	1.0369	8,797,834		16,876,924	0.521	-26.2%	174	10.3	-5.5%	50,562
2019	7,825,187	1.0703	8,375,298		16,811,373	0.498	-4.4%	172	10.2	-1.0%	48,694
2020	7,826,531	1.0914	8,541,876		13,584,176	0.629	26.3%	141	10.4	2.0%	60,581
2021	5,589,383	1.2328	6,890,591		13,143,053	0.524	-16.7%	153	11.6	11.5%	45,037
2022	2,994,770	1.8444	5,523,554		14,090,524	0.392	-25.2%	129	9.2	-20.7%	42,818
Source:	VI-A	V-F-1	(1)*(2)		X-B-1	(3)/(5)		VI-C-1			(3)/(8)

Note: Column (4) is reserved for future use.
This column will be used to indicate years when the Ultimate Losses in Column (3) have been adjusted for individual losses that have exceeded the Selected Catastrophe Limit Threshold. For this filing, we note that the Selected Catastrophe Limit Threshold is $1,250,000 and that there weren't any losses that exceeded this amount.

Coal Mine Compensation Rating Bureau
Traumatic Loss Trend - Medical and Medical Only Losses for All Classes Combined

Year	(1) Case Incurred Losses	(2) Loss Dev. Factors	(3) Ultimate Losses	(4)	(5) Loss Cost Premium	(6) Loss Ratio	(7) Annual Loss Ratio Change	(8) Claim Count	(9)	(10)	(11) Average Loss
2013	4,211,388	1.0459	4,404,691		14,965,255	0.294		654			6,735
2014	5,886,404	1.0485	6,171,895		23,680,400	0.261	-11.2%	872			7,078
2015	3,885,132	1.0512	4,084,051		19,697,188	0.207	-20.7%	584			6,993
2016	3,917,972	1.0539	4,129,151		14,110,553	0.293	41.5%	452			9,135
2017	6,412,954	1.0567	6,776,568		16,048,791	0.422	44.0%	504			13,446
2018	5,304,146	1.0596	5,620,273		16,876,924	0.333	-21.1%	464			12,113
2019	3,922,433	1.0626	4,167,977		16,811,373	0.248	-25.5%	487			8,558
2020	3,568,184	1.0657	3,802,614		13,584,176	0.280	12.9%	369			10,305
2021	3,274,862	1.0412	3,409,786		13,143,053	0.259	-7.5%	351			9,714
2022	2,773,533	1.0427	2,891,963		14,090,524	0.205	-20.8%	375			7,712
Source:	VI-B	V-F-2	(1)*(2)		X-B-1	(3)/(5)		VI-C-(1+2)			(3)/(8)

Note: Column (4) is reserved for future use.
This column will be used to indicate years when the Ultimate Losses in Column (3) have been adjusted for individual losses that have exceeded the Selected Catastrophe Limit Threshold. For this filing, we note that the Selected Catastrophe Limit Threshold is $1,250,000 and that there weren't any losses that exceeded this amount.

Columns (9) and (10) are not used on this page.

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	1.4961	1.3149	0.1812	1.4961	1.4961	0.0000	1.8444
2:3	1.1296	1.0636	0.0660	1.1296	1.1296	0.0000	1.2328
3:4	1.0197	1.0101	0.0096	1.0197	1.0197	0.0000	1.0914
4:5	1.0322	0.9998	0.0324	1.0322	1.0322	0.0000	1.0703
5:6	0.9985	1.0063	-0.0078	1.0029	1.0029	-0.0043	1.0369
6:7	1.0190	1.0032	0.0158	1.0027	1.0027	0.0163	1.0340
7:8	0.9994	1.0023	-0.0029	1.0026	1.0026	-0.0032	1.0312
8:9	1.0055	0.9989	0.0066	1.0025	1.0025	0.0030	1.0285
9:10	0.9988	1.0009	-0.0021	1.0024	1.0024	-0.0036	1.0259
10:11	1.0058	1.0013	0.0045	1.0023	1.0023	0.0035	1.0235
11:12	1.0006	1.0021	-0.0015	1.0022	1.0022	-0.0016	1.0212
12:13	1.0031	1.0016	0.0015	1.0020	1.0020	0.0011	1.0190
13:14	0.9984	1.0004	-0.0020	1.0019	1.0019	-0.0035	1.0169
14:15	0.9988	0.9995	-0.0007	1.0018	1.0018	-0.0030	1.0149
15:16	1.0018	0.9999	0.0019	1.0017	1.0017	0.0001	1.0131
16:17	1.0024	0.9989	0.0035	1.0016	1.0016	0.0008	1.0114
17:18	1.0008	1.0002	0.0006	1.0015	1.0015	-0.0007	1.0098
18:19	0.9978	0.9997	-0.0019	1.0014	1.0014	-0.0036	1.0083
19:20	1.0002	1.0003	-0.0001	1.0012	1.0012	-0.0010	1.0069
20:Ult	xx	1.0054	xx	1.0057	1.0057		1.0057

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

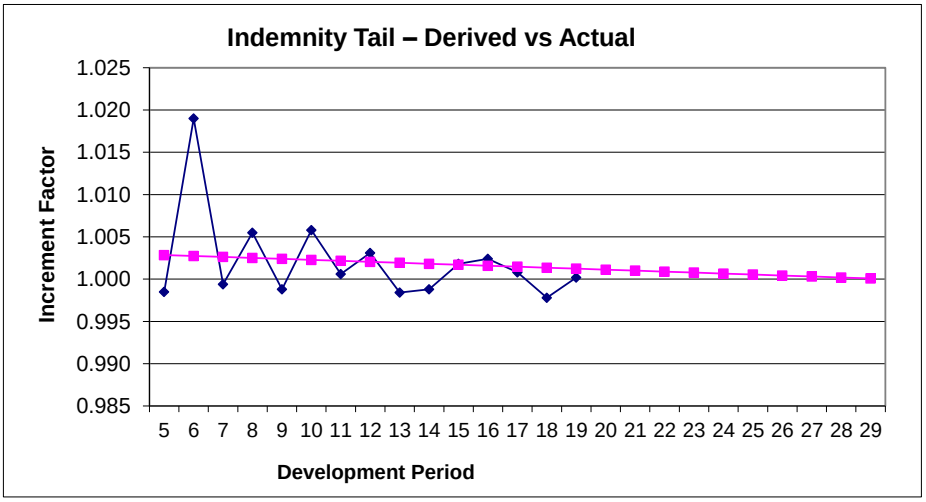
Coal Mine Compensation Rating Bureau
Medical Traumatic Loss Development
Selected Loss Development Factors

(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	1.0014	1.0465	-0.0451	1.0014	1.0014	0.0000	1.0427
2:3	0.9770	1.0099	-0.0329	0.9770	0.9770	0.0000	1.0412
3:4	0.9815	0.9933	-0.0118	1.0029	1.0029	-0.0214	1.0657
4:5	1.0173	0.9946	0.0227	1.0029	1.0029	0.0144	1.0626
5:6	0.9984	1.0041	-0.0057	1.0028	1.0028	-0.0044	1.0596
6:7	1.0202	1.0023	0.0179	1.0027	1.0027	0.0175	1.0567
7:8	0.9954	1.0032	-0.0078	1.0026	1.0026	-0.0072	1.0539
8:9	1.0037	1.0064	-0.0027	1.0025	1.0025	0.0012	1.0512
9:10	1.0062	1.0013	0.0049	1.0025	1.0025	0.0037	1.0485
10:11	1.0075	0.9965	0.0110	1.0024	1.0024	0.0051	1.0459
11:12	1.0054	1.0008	0.0046	1.0023	1.0023	0.0031	1.0434
12:13	1.0043	1.0033	0.0010	1.0022	1.0022	0.0021	1.0410
13:14	1.0089	1.0052	0.0037	1.0021	1.0021	0.0068	1.0387
14:15	1.0039	1.0055	-0.0016	1.0020	1.0020	0.0019	1.0365
15:16	0.9961	1.0008	-0.0047	1.0020	1.0020	-0.0059	1.0344
16:17	0.9886	1.0010	-0.0124	1.0019	1.0019	-0.0133	1.0324
17:18	1.0015	1.0000	0.0015	1.0018	1.0018	-0.0003	1.0305
18:19	1.0000	1.0009	-0.0009	1.0017	1.0017	-0.0017	1.0286
19:20	1.0009	1.0026	-0.0017	1.0016	1.0016	-0.0007	1.0268
20:Ult	xx	1.0343	xx	1.0251	1.0251		1.0251

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

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	1.4961	1.4961	1.8342	1.4961	xx	xx	xx			
2	1.1296	1.1296	1.2260	1.1296	xx	xx	xx			
3	1.0197	1.0197	1.0853	1.0197	xx	xx	xx			
4	1.0322	1.0322	1.0644	1.0322	xx	xx	xx			
5	0.9985	1.0029	1.0311	1.0029	1.0311	1.0029	1.0311			
6	1.0190	1.0027	1.0327	1.0027	1.0282	1.0027	1.0282			
7	0.9994	1.0026	1.0134	1.0026	1.0253	1.0026	1.0253			
8	1.0055	1.0025	1.0141	1.0025	1.0227	1.0025	1.0227			
9	0.9988	1.0024	1.0085	1.0024	1.0201	1.0024	1.0201			
10	1.0058	1.0023	1.0097	1.0023	1.0177	1.0023	1.0177			
11	1.0006	1.0022	1.0039	1.0022	1.0154	1.0022	1.0154			
12	1.0031	1.0020	1.0033	1.0020	1.0132	1.0020	1.0132			
13	0.9984	1.0019	1.0002	1.0019	1.0111	1.0019	1.0111			
14	0.9988	1.0018	1.0018	1.0018	1.0092	1.0018	1.0092			
15	1.0018	1.0017	1.0030	1.0017	1.0074	1.0017	1.0074			
16	1.0024	1.0016	1.0012	1.0016	1.0056	1.0016	1.0056			
17	1.0008	1.0015	0.9988	1.0015	1.0041	1.0015	1.0041			
18	0.9978	1.0014	0.9980	1.0014	1.0026	1.0014	1.0026			
19	1.0002	1.0012	1.0002	1.0012	1.0012	1.0012	1.0012			
20		1.0011						20	1.0011	1.0060
21		1.0010						21	1.0010	1.0049
22		1.0009						22	1.0009	1.0039
23		1.0008						23	1.0008	1.0030
24		1.0007						24	1.0007	1.0022
25		1.0005						25	1.0005	1.0016
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	1.0060
PCRB tail factor	1.0054
Selected Tail Factor	1.0057

Source:

(1) Development Period: e.g."1" = 12 months to 24 months
(2) Exhibit VI-A
(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

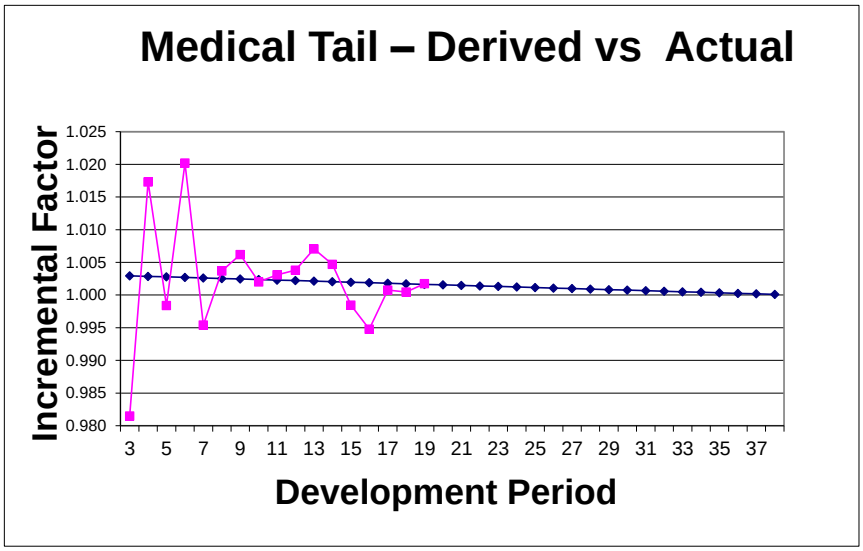
(1) Span of Maturities	(2) Age-to-Age Incurred Loss Factors	(3) Span of Maturities	(4) Cumulative Incurred Loss Factors
1 to 2	1.3149	1 to Ult	1.4421
2 to 3	1.0636	2 to Ult	1.0968
3 to 4	1.0101	3 to Ult	1.0312
4 to 5	0.9998	4 to Ult	1.0209
5 to 6	1.0063	5 to Ult	1.0211
6 to 7	1.0032	6 to Ult	1.0147
7 to 8	1.0023	7 to Ult	1.0114
8 to 9	0.9989	8 to Ult	1.0091
9 to 10	1.0009	9 to Ult	1.0102
10 to 11	1.0013	10 to Ult	1.0093
11 to 12	1.0021	11 to Ult	1.0080
12 to 13	1.0016	12 to Ult	1.0059
13 to 14	1.0004	13 to Ult	1.0043
14 to 15	0.9995	14 to Ult	1.0039
15 to 16	0.9999	15 to Ult	1.0044
16 to 17	0.9989	16 to Ult	1.0045
17 to 18	1.0002	17 to Ult	1.0056
18 to 19	0.9997	18 to Ult	1.0054
19 to 20	1.0003	19 to Ult	1.0057
20 to Ult	1.0054	20 to Ult	1.0054

Source:PCRB Loss Cost Filing effective April 1, 2023 - Exhibit 5, page 5, Selected Incurred LDF

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

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	1.0014		1.0014	1.0172	1.0014	1.0172	20	1.0016	1.0159
2	0.9770		0.9770	1.0158	0.9770	1.0157	21	1.0015	1.0143
3	0.9815		0.9815	1.0397	1.0029	1.0397	22	1.0014	1.0128
4	1.0173		1.0173	1.0593	1.0029	1.0366	23	1.0013	1.0114
5	0.9984		0.9984	1.0413	1.0028	1.0337	24	1.0012	1.0101
6	1.0202		1.0202	1.0429	1.0027	1.0308	25	1.0012	1.0088
7	0.9954		0.9954	1.0223	1.0026	1.0280	26	1.0011	1.0077
8	1.0037		1.0037	1.0270	1.0025	1.0253	27	1.0010	1.0066
9	1.0062		1.0062	1.0232	1.0025	1.0227	28	1.0009	1.0056
10	1.0075	0.9965	1.0020	1.0169	1.0024	1.0202	29	1.0008	1.0047
11	1.0054	1.0008	1.0031	1.0149	1.0023	1.0178	30	1.0007	1.0038
12	1.0043	1.0033	1.0038	1.0118	1.0022	1.0155	31	1.0007	1.0031
13	1.0089	1.0052	1.0071	1.0079	1.0021	1.0133	32	1.0006	1.0024
14	1.0039	1.0055	1.0047	1.0009	1.0020	1.0111	33	1.0005	1.0018
15	0.9961	1.0008	0.9985	0.9962	1.0020	1.0090	34	1.0004	1.0013
16	0.9886	1.0010	0.9948	0.9977	1.0019	1.0071	35	1.0003	1.0009
17	1.0015	1.0000	1.0008	1.0030	1.0018	1.0052	36	1.0003	1.0005
18	1.0000	1.0009	1.0005	1.0022	1.0017	1.0034	37	1.0002	1.0003
19	1.0009	1.0026	1.0018	1.0018	1.0016	1.0016	38	1.0001	1.0001



CMCRB derived tail factor	1.0159
PCRB tail factor	1.0343
Selected	1.0251

Sources: (1) Development period:e.g. "1" =12 months to 24 months
(2) Exhibit VI-B
(3) Exhibit V-H, Page 2
(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.	1.1171
2 to 3	1.0099	2 to Ult.	1.0674
3 to 4	0.9933	3 to Ult.	1.0570
4 to 5	0.9946	4 to Ult.	1.0641
5 to 6	1.0041	5 to Ult.	1.0699
6 to 7	1.0023	6 to Ult.	1.0655
7 to 8	1.0032	7 to Ult.	1.0631
8 to 9	1.0064	8 to Ult.	1.0597
9 to 10	1.0013	9 to Ult.	1.0529
10 to 11	0.9965	10 to Ult.	1.0516
11 to 12	1.0008	11 to Ult.	1.0553
12 to 13	1.0033	12 to Ult.	1.0544
13 to 14	1.0052	13 to Ult.	1.0509
14 to 15	1.0055	14 to Ult.	1.0455
15 to 16	1.0008	15 to Ult.	1.0398
16 to 17	1.0010	16 to Ult.	1.0390
17 to 18	1.0000	17 to Ult.	1.0379
18 to 19	1.0009	18 to Ult.	1.0379
19 to 20	1.0026	19 to Ult.	1.0370
20 to Ult.	1.0343	20 to Ult.	1.0343

Source:PCRB Loss Cost Filing effective April 1, 2023 - Exhibit 5, page 12, Selected Incurred LDF

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

Coal Mine Compensation Rating Bureau **Exhibit VI-A**

Traumatic Loss Development

Incurred Indemnity and Funeral Losses for All Classes Combined

A. Indemnity Reported Incurred Losses as of 04/30/23

Report	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	2,994,770
2	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	6,794,362	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	5,589,383	
3	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	8,305,491	8,518,626	7,346,985	11,807,863	11,511,821	8,660,045	10,100,934	8,442,129	7,903,631	7,826,531		
4	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	5,298,940	6,918,124	8,481,672	9,410,856	7,461,258	12,140,158	11,805,290	9,150,489	9,823,061	8,274,482	7,825,187			
5	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	5,517,865	7,301,176	8,727,774	9,583,245	7,695,409	12,305,882	12,250,034	9,320,369	10,474,304	8,484,747				
6	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	5,543,129	7,158,740	8,746,873	9,748,964	7,652,267	12,243,778	12,225,666	8,714,729	10,964,733					
7	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	5,543,129	7,274,640	8,629,657	10,086,465	7,895,047	12,388,158	12,405,876	9,116,313						
8	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	5,543,129	7,246,831	8,633,154	10,142,992	7,841,081	12,388,158	12,304,028							
9	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	5,543,129	7,433,505	8,633,117	10,249,907	7,807,196	12,388,158								
10	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	5,543,329	7,433,605	8,633,183	10,262,450	7,807,196									
11	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	5,672,972	7,433,720	8,689,023	10,258,851										
12	8,654,986	8,095,907	7,481,862	8,582,610	12,101,118	7,425,395	7,607,614	12,133,479	5,875,552	7,052,471	9,562,275	5,672,972	7,365,256	8,689,023											
13	8,662,379	8,054,458	7,481,735	8,612,926	12,053,898	7,450,178	7,635,038	12,176,584	5,890,328	7,174,716	9,582,515	5,672,972	7,365,256												
14	8,760,619	8,050,069	7,481,735	8,419,199	11,535,171	7,474,462	7,664,364	12,084,066	5,905,903	7,197,251	9,625,081	5,669,336													
15	8,763,703	8,050,069	7,481,735	8,433,117	11,541,679	7,498,496	7,691,631	11,732,109	5,921,413	7,220,222	9,640,690														
16	8,763,787	8,050,069	7,481,735	8,431,001	11,531,779	7,522,284	7,719,127	11,762,018	5,937,066	7,243,427															
17	8,764,731	8,050,069	7,481,735	8,471,584	11,543,628	7,545,908	7,744,908	11,800,415	5,949,180																
18	8,767,395	8,050,069	7,481,735	8,485,139	11,555,724	7,569,113	7,774,121	11,748,789																	
19	8,808,505	8,050,069	7,481,735	8,498,632	11,517,844	7,592,116	7,592,789																		
20	8,772,260	8,050,069	7,481,735	8,511,961	11,517,844	7,615,583																			

B. Annual Loss Development Factors

1:2															1.8485	1.8990	1.6327	1.3369	1.6388	1.4591	1.3938	1.4719	1.5198	1.2716	
2:3														1.2224	1.2210	1.1197	1.0055	1.2370	1.0849	1.1898	1.0833	1.0769	1.0869		
3:4													1.1851	1.0212	1.1047	1.0156	1.0281	1.0255	1.0566	0.9725	0.9801	0.9901			
4:5												1.0413	1.0554	1.0290	1.0183	1.0314	1.0137	1.0377	1.0186	1.0663	1.0254				
5:6											1.0027	1.0046	0.9805	1.0022	1.0173	0.9944	0.9950	0.9980	0.9350	1.0468					
6:7										1.0192	1.0117	1.0000	1.0162	0.9866	1.0346	1.0317	1.0118	1.0147	1.0461						
7:8									1.0027	1.0714	0.9907	1.0000	0.9962	1.0004	1.0056	0.9932	1.0000	0.9918							
8:9								1.0093	1.0231	0.9692	1.0231	1.0000	1.0258	1.0000	1.0105	0.9957	1.0000								
9:10							1.0062	0.9815	1.1072	0.9899	0.9772	1.0000	1.0000	1.0000	1.0012	1.0000									
10:11						0.9874	1.0062	1.0083	1.0088	1.0062	1.0092	1.0234	1.0000	1.0065	0.9996										
11:12					1.0064	1.0034	0.9967	0.9730	0.9791	1.0536	1.0024	1.0000	0.9908	1.0000											
12:13				1.0035	0.9961	1.0033	1.0036	1.0036	1.0025	1.0173	1.0021	1.0000	1.0000												
13:14			1.0000	0.9775	0.9570	1.0033	1.0038	0.9924	1.0026	1.0031	1.0044	0.9994													
14:15		1.0000	1.0000	1.0017	1.0006	1.0032	1.0036	0.9709	1.0026	1.0032	1.0016														
15:16	1.0000	1.0000	1.0000	0.9997	0.9991	1.0032	1.0036	1.0025	1.0026	1.0032															
16:17	1.0001	1.0000	1.0000	1.0048	1.0010	1.0031	1.0033	1.0033	1.0020																
17:18	1.0003	1.0000	1.0000	1.0016	1.0010	1.0031	1.0038	0.9956																	
18:19	1.0047	1.0000	1.0000	1.0016	0.9967	1.0030	0.9767																		
19:20	0.9959	1.0000	1.0000	1.0016	1.0000	1.0031																			

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	1.5472	1.4592	1.5252	1.5377	1.4612	1.4603	1.4961
2:3	1.1327	1.1265	1.1277	1.1356	1.1112	1.1317	1.1296
3:4	1.0380	1.0088	1.0323	1.0277	1.0060	1.0101	1.0197
4:5	1.0337	1.0322	1.0326	1.0321	1.0283	1.0320	1.0322
5:6	0.9977	0.9978	0.9984	0.9993	1.0012	0.9987	0.9985
6:7	1.0173	1.0209	1.0175	1.0175	1.0232	1.0200	1.0190
7:8	1.0052	0.9979	1.0031	0.9987	0.9975	0.9979	0.9994
8:9	1.0057	1.0053	1.0058	1.0077	1.0026	1.0050	1.0055
9:10	1.0063	0.9964	1.0014	0.9974	1.0000	0.9958	0.9988
10:11	1.0056	1.0075	1.0051	1.0056	1.0055	1.0065	1.0058
11:12	1.0005	1.0043	0.9991	0.9974	0.9983	1.0043	1.0006
12:13	1.0032	1.0043	1.0028	1.0023	1.0021	1.0042	1.0031
13:14	0.9944	1.0010	0.9919	0.9978	1.0022	1.0003	0.9984
14:15	0.9987	0.9975	0.9974	1.0016	1.0027	0.9951	0.9988
15:16	1.0014	1.0024	1.0013	1.0014	1.0029	1.0021	1.0018
16:17	1.0020	1.0029	1.0020	1.0018	1.0029	1.0029	1.0024
17:18	1.0007	1.0009	1.0004	1.0010	1.0014	1.0005	1.0008
18:19	0.9975	0.9963	0.9976	1.0003	0.9996	0.9964	0.9978
19:20	1.0001	1.0001	1.0000	1.0004	1.0004	1.0000	1.0002

Source: A. CMCRB Database - Validated 2023-08-03

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

A. Medical Reported Incurred Losses as of 04/30/23

Report	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	2,773,533
2	3,630,642	3,012,839	2,716,963	2,589,253	3,609,439	2,815,985	3,555,290	4,031,513	3,286,804	5,501,458	3,749,858	3,021,621	3,916,265	5,538,417	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	3,274,862	
3	3,628,890	3,186,033	2,818,387	2,646,248	3,762,837	2,801,390	4,147,713	4,161,949	3,511,501	5,575,559	3,709,814	2,897,485	4,168,949	5,669,132	5,483,461	4,087,766	6,053,377	3,954,588	4,193,737	6,137,932	5,309,418	3,791,810	3,568,184		
4	3,720,868	3,057,663	2,836,912	2,629,910	3,890,149	2,766,406	4,166,709	4,249,331	3,418,585	5,635,471	3,804,580	3,025,115	4,414,665	5,644,895	5,463,414	3,996,284	5,884,821	3,843,797	3,910,923	5,926,147	5,220,288	3,922,433			
5	3,709,153	3,188,781	2,885,530	2,816,076	3,874,531	2,923,159	4,131,369	4,143,155	3,401,038	5,766,181	3,837,840	3,032,005	4,624,757	5,709,315	5,576,575	4,133,430	5,893,339	3,928,489	3,857,323	6,122,505	5,304,146				
6	3,761,263	3,178,086	2,937,414	2,896,624	4,191,261	2,912,930	4,080,591	4,299,151	3,370,262	5,878,240	3,842,096	2,995,306	4,497,291	5,690,537	5,522,489	4,158,205	5,892,232	3,898,999	3,747,184	6,412,954					
7	3,760,723	3,133,358	2,927,989	2,822,196	4,257,734	2,914,569	4,185,438	4,349,353	3,381,086	5,858,194	3,811,253	2,995,263	4,479,315	6,268,595	5,515,927	4,286,015	5,884,600	3,895,122	3,917,972						
8	3,791,456	3,171,882	2,921,384	2,789,664	4,345,094	2,910,887	4,192,403	4,411,495	3,382,185	5,970,686	3,599,483	3,035,263	4,359,000	6,268,923	5,504,253	4,267,766	5,884,600	3,885,132							
9	3,741,005	3,236,426	2,952,750	2,782,114	4,156,113	3,104,104	4,197,624	4,410,060	3,507,194	5,832,595	3,608,725	3,185,263	4,335,083	6,269,123	5,542,753	4,211,388	5,886,404								
10	3,777,626	3,357,242	2,950,698	2,879,623	4,175,392	3,138,870	4,216,413	4,363,405	3,729,031	5,858,491	3,619,059	3,185,876	4,336,078	6,269,528	5,696,979	4,211,388									
11	3,861,559	3,353,094	2,948,865	2,963,075	4,182,360	3,135,565	4,384,327	4,433,562	3,802,480	5,957,595	3,627,183	3,117,542	4,337,075	6,218,134	5,888,956										
12	3,843,219	3,409,251	3,021,208	3,005,905	4,218,824	3,245,565	4,366,428	4,419,772	3,748,522	6,067,277	3,633,896	3,186,272	4,337,118	6,220,781											
13	3,868,653	3,531,522	3,021,095	3,012,114	4,215,380	3,247,940	4,379,419	4,729,289	3,748,523	6,063,508	3,570,134	3,157,724	4,338,132												
14	3,851,694	3,532,688	3,020,836	3,143,372	4,241,409	3,250,447	4,535,556	4,729,280	3,748,522	6,078,359	3,628,112	3,157,724													
15	3,851,841	3,533,087	3,080,845	3,237,259	4,245,816	3,253,000	4,543,866	4,782,918	3,748,523	6,086,234	3,628,400														
16	3,852,213	3,539,649	3,080,810	3,220,132	4,012,963	3,198,217	4,564,504	4,891,317	3,748,523	6,104,887															
17	3,838,125	3,539,760	2,872,279	3,006,814	4,019,602	3,201,746	4,583,628	4,843,024	3,748,523																
18	3,835,125	3,534,812	2,872,279	3,017,086	4,027,614	3,205,038	4,603,147	4,845,524																	
19	3,834,626	3,535,783	2,872,279	3,018,743	4,033,642	3,207,315	4,589,348																		
20	3,834,646	3,536,162	2,872,279	3,019,006	4,040,089	3,221,016																			

B. Annual Loss Development Factors

1:2															1.1032	1.1805	1.0226	0.9758	1.1276	0.9425	0.9691	0.8925	1.0555	0.9462	
2:3														1.0236	1.0240	0.9513	0.9508	0.9995	0.9384	1.0081	0.9769	1.0084	0.8862		
3:4													1.0589	0.9957	0.9963	0.9776	0.9722	0.9720	0.9326	0.9655	0.9832	1.0344			
4:5												1.0023	1.0476	1.0114	1.0207	1.0343	1.0014	1.0220	0.9863	1.0331	1.0161				
5:6											1.0011	0.9879	0.9724	0.9967	0.9903	1.0060	0.9998	0.9925	0.9714	1.0474					
6:7										0.9966	0.9920	1.0000	0.9960	1.1016	0.9988	1.0307	0.9987	0.9990	1.0456						
7:8									1.0003	1.0192	0.9444	1.0134	0.9731	1.0001	0.9979	0.9957	1.0000	0.9974							
8:9								0.9997	1.0370	0.9769	1.0026	1.0494	0.9945	1.0000	1.0070	0.9868	1.0003								
9:10							1.0045	0.9894	1.0633	1.0044	1.0029	1.0002	1.0002	1.0001	1.0278	1.0000									
10:11						0.9989	1.0398	1.0161	1.0197	1.0169	1.0022	0.9786	1.0002	0.9918	1.0337										
11:12					1.0087	1.0351	0.9959	0.9969	0.9858	1.0184	1.0019	1.0220	1.0000	1.0004											
12:13				1.0021	0.9992	1.0007	1.0030	1.0700	1.0000	0.9994	0.9825	0.9910	1.0002												
13:14			0.9999	1.0436	1.0062	1.0008	1.0357	1.0000	1.0000	1.0024	1.0162	1.0000													
14:15		1.0001	1.0199	1.0299	1.0010	1.0008	1.0018	1.0113	1.0000	1.0013	1.0001														
15:16	1.0001	1.0019	1.0000	0.9947	0.9452	0.9832	1.0045	1.0227	1.0000	1.0031															
16:17	0.9963	1.0000	0.9323	0.9338	1.0017	1.0011	1.0042	0.9901	1.0000																
17:18	0.9992	0.9986	1.0000	1.0034	1.0020	1.0010	1.0043	1.0005																	
18:19	0.9999	1.0003	1.0000	1.0005	1.0015	1.0007	0.9970																		
19:20	1.0000	1.0001	1.0000	1.0001	1.0016	1.0043																			

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	1.0216	0.9889	1.0159	1.0178	0.9783	0.9831	1.0014
2:3	0.9767	0.9696	0.9788	0.9821	0.9807	0.9719	0.9770
3:4	0.9888	0.9767	0.9873	0.9871	0.9732	0.9751	0.9815
4:5	1.0175	1.0155	1.0180	1.0177	1.0182	1.0159	1.0173
5:6	0.9966	1.0012	0.9988	0.9933	0.9972	1.0041	0.9984
6:7	1.0159	1.0291	1.0171	1.0082	1.0185	1.0297	1.0202
7:8	0.9942	0.9940	0.9953	0.9972	0.9978	0.9947	0.9954
8:9	1.0054	1.0063	1.0022	1.0035	1.0005	1.0038	1.0037
9:10	1.0093	1.0052	1.0086	1.0050	1.0009	1.0061	1.0062
10:11	1.0098	1.0039	1.0110	1.0099	1.0028	1.0062	1.0075
11:12	1.0065	1.0048	1.0058	1.0055	1.0052	1.0049	1.0054
12:13	1.0048	1.0072	1.0058	0.9995	0.9977	1.0084	1.0043
13:14	1.0105	1.0091	1.0099	1.0077	1.0047	1.0089	1.0089
14:15	1.0066	1.0026	1.0058	1.0045	1.0010	1.0028	1.0039
15:16	0.9955	0.9931	0.9963	0.9984	0.9977	0.9948	0.9961
16:17	0.9844	0.9885	0.9867	0.9890	0.9982	0.9902	0.9886
17:18	1.0011	1.0019	1.0012	1.0010	1.0017	1.0019	1.0015
18:19	1.0000	1.0000	0.9999	1.0003	1.0004	0.9999	1.0000
19:20	1.0010	1.0010	1.0010	1.0005	1.0005	1.0010	1.0009

Source: A. CMCRB Database - Validated 2023-08-03

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 04/30/23

Report	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	196	219	203	156	163	193	170	168	175	172	149	258	161	140	163	152	156	131	137	116
2	196	227	228	163	164	206	193	177	183	198	171	287	181	147	172	171	170	139	150	
3	197	230	229	165	164	203	195	177	189	201	174	290	186	149	175	175	172	140		
4	198	231	230	166	164	205	195	177	191	202	175	291	188	149	174	174	172			
5	199	231	230	166	164	204	195	177	191	202	175	292	188	150	175	174				
6	199	231	230	166	164	204	195	177	191	202	175	291	188	150	175					
7	199	231	230	166	164	204	195	177	191	203	175	291	188	150						
8	199	231	230	166	164	204	195	177	191	203	175	291	188							
9	199	231	230	166	164	204	195	177	191	203	175	291								
10	199	231	230	166	164	204	195	178	191	203	175									
11	199	231	230	166	164	204	195	178	191	203										
12	199	231	230	166	164	204	195	178	191											
13	199	231	230	166	164	204	195	178												
14	199	231	230	166	164	204	195													
15	199	231	230	166	164	204														
16	199	231	230	166	164															
17	199	231	230	166																
18	199	231	230																	
19	199	231																		
20	199																			

B. Annual Claim Count Development Factors

1:2										1.1512	1.1477	1.1124	1.1242	1.0500	1.0552	1.1250	1.0897	1.0611	1.0949
2:3									1.0328	1.0152	1.0175	1.0105	1.0276	1.0136	1.0174	1.0234	1.0118	1.0072	
3:4								1.0000	1.0106	1.0050	1.0057	1.0034	1.0108	1.0000	0.9943	0.9943	1.0000		
4:5							1.0000	1.0000	1.0000	1.0000	1.0000	1.0034	1.0000	1.0067	1.0057	1.0000			
5:6						1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9966	1.0000	1.0000	1.0000				
6:7					1.0000	1.0000	1.0000	1.0000	1.0000	1.0050	1.0000	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	1.0056	1.0000	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	1.1011	1.0793	1.1032	1.1013	1.0752	1.0796	1.0903	1.0903	1.1136	2022	129
2:3	1.0177	1.0168	1.0176	1.0171	1.0166	1.0173	1.0172	1.0172	1.0214	2021	153
3:4	1.0024	1.0005	1.0026	1.0024	0.9994	1.0009	1.0015	1.0020	1.0041	2020	141
4:5	1.0016	1.0026	1.0016	1.0011	1.0023	1.0026	1.0020	1.0015	1.0021	2019	172
5:6	0.9997	0.9994	0.9995	1.0000	1.0000	0.9992	0.9996	1.0005	1.0006	2018	174
6:7	1.0005	1.0008	1.0005	1.0000	1.0000	1.0008	1.0005	1.0001	1.0001	2017	175
7:8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2016	150
8:9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2015	188
9:10	1.0006	1.0009	1.0005	1.0000	1.0000	1.0009	1.0005	1.0000	1.0000	2014	291
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2013	175
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2012	203
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2011	191
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2010	178
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2009	195
15:16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2008	204
16:17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2007	164
17:18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2006	166
18:19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2005	230
19:20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2004	231
										2003	199

Source: A. CMCRB Database - Validated 2023-08-03

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 04/30/23

Report	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	453	516	476	456	488	523	479	559	628	562	472	592	402	295	324	298	320	231	201	246
2	462	524	479	453	494	527	469	560	632	553	477	582	399	304	330	293	316	229	198	
3	461	523	480	451	495	528	469	559	627	553	478	580	397	303	329	290	315	228		
4	461	522	479	450	495	527	469	559	626	553	478	579	396	304	330	290	315			
5	461	522	479	450	495	528	469	559	626	553	478	580	396	302	329	290				
6	461	522	479	450	495	528	469	559	626	553	479	581	396	302	329					
7	461	522	479	450	495	528	469	559	626	552	479	581	396	302						
8	461	522	479	450	495	528	469	559	626	552	479	581	396							
9	461	522	479	450	495	528	469	559	626	552	479	581								
10	461	522	479	450	495	528	469	558	626	552	479									
11	461	522	479	450	495	528	469	558	626	552										
12	461	522	479	450	495	528	469	558	626											
13	461	522	479	450	495	528	469	558												
14	461	522	479	450	495	528	469													
15	461	522	479	450	495	528														
16	461	522	479	450	495															
17	461	522	479	450																
18	461	522	479																	
19	461	522																		
20	461																			

B. Annual Claim Count Development Factors

1:2										0.9840	1.0106	0.9831	0.9925	1.0305	1.0185	0.9832	0.9875	0.9913	0.9851
2:3									0.9921	1.0000	1.0021	0.9966	0.9950	0.9967	0.9970	0.9898	0.9968	0.9956	
3:4								1.0000	0.9984	1.0000	1.0000	0.9983	0.9975	1.0033	1.0030	1.0000	1.0000		
4:5							1.0000	1.0000	1.0000	1.0000	1.0000	1.0017	1.0000	0.9934	0.9970	1.0000			
5:6						1.0000	1.0000	1.0000	1.0000	1.0000	1.0021	1.0017	1.0000	1.0000	1.0000				
6:7					1.0000	1.0000	1.0000	1.0000	1.0000	0.9982	1.0000	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	0.9982	1.0000	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	0.9966	0.9994	0.9957	0.9941	0.9956	1.0006	0.9968	1.0000	1.0000	2022	246
2:3	0.9962	0.9952	0.9964	0.9962	0.9960	0.9952	0.9959	1.0000	1.0000	2021	198
3:4	1.0001	1.0004	0.9998	1.0000	1.0003	1.0000	1.0001	1.0000	1.0000	2020	228
4:5	0.9992	0.9987	0.9996	0.9996	0.9993	0.9992	0.9993	1.0000	1.0000	2019	315
5:6	1.0004	1.0006	1.0004	1.0002	1.0004	1.0008	1.0005	1.0000	1.0000	2018	290
6:7	0.9998	0.9997	0.9998	1.0000	1.0000	0.9997	0.9998	1.0000	1.0000	2017	329
7:8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2016	302
8:9	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2015	396
9:10	0.9998	0.9997	0.9998	1.0000	1.0000	0.9997	0.9998	1.0000	1.0000	2014	581
10:11	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2013	479
11:12	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2012	552
12:13	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2011	626
13:14	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2010	558
14:15	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2009	469
15:16	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2008	528
16:17	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2007	495
17:18	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2006	450
18:19	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2005	479
19:20	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	2004	522
										2003	461

Source: A. CMCRB Database - Validated 2023-08-03

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 04/30/23

Report	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	444,342
2	347,155	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	342,247	
3	348,431	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	468,749		
4	356,071	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	637,173			
5	357,292	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	581,295				
6	359,495	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	760,082					
7	362,053	499,175	577,565	464,210	663,201	584,120	487,454	733,721	862,257	704,535	763,168	806,301	612,724	543,140						
8	364,430	499,182	439,393	464,210	663,201	586,976	487,454	733,721	862,257	704,535	763,168	806,301	612,724							
9	366,489	499,182	439,393	464,210	663,201	593,200	487,454	733,728	862,257	704,535	763,168	806,301								
10	368,386	499,182	439,463	464,210	663,201	600,587	488,067	733,514	862,257	704,535	763,168									

B. Annual Loss Development Factors

1:2										0.9880	1.1042	0.9658	0.9316	0.9904	1.0577	0.9963	1.0387	1.0432	0.8376
2:3									0.9800	1.0045	1.0489	1.0021	0.9574	0.9690	0.9994	0.9491	1.0320	1.0073	
3:4								1.0000	1.0035	1.0007	1.0008	0.9840	0.9905	1.0034	1.0098	0.9950	1.0188		
4:5							1.0002	1.0000	1.0015	1.0001	1.0008	1.0013	1.0000	0.9931	0.9986	1.0000			
5:6						1.0155	1.0000	1.0000	1.0000	1.0001	1.0006	1.0010	1.0000	1.0000	1.0040				
6:7					1.0000	1.0105	1.0000	1.0000	1.0000	0.9596	1.0000	1.0000	1.0000	1.0019					
7:8				1.0000	1.0000	1.0049	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000						
8:9			1.0000	1.0000	1.0000	1.0106	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000							
9:10		1.0000	1.0002	1.0000	1.0000	1.0125	1.0013	0.9997	1.0000	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	0.9954	0.9940	0.9987	1.0015	1.0172	1.0026	0.9996	0.9996	0.9996	2022	444,164
2:3	0.9950	0.9857	0.9954	0.9940	0.9833	0.9852	0.9900	1.0000	1.0000	2021	342,247
3:4	1.0007	1.0003	1.0005	1.0005	0.9997	0.9998	1.0003	1.0000	1.0000	2020	468,749
4:5	0.9996	0.9990	0.9998	1.0001	0.9999	0.9992	0.9996	1.0000	1.0000	2019	637,173
5:6	1.0021	1.0010	1.0019	1.0007	1.0004	1.0010	1.0012	1.0000	1.0000	2018	581,295
6:7	0.9972	0.9936	0.9967	1.0002	1.0000	0.9934	0.9969	1.0000	1.0000	2017	760,082
7:8	1.0005	1.0000	1.0004	1.0000	1.0000	1.0000	1.0001	1.0000	1.0000	2016	543,140
8:9	1.0011	1.0000	1.0010	1.0000	1.0000	1.0000	1.0002	1.0000	1.0000	2015	612,724
9:10	1.0014	1.0023	1.0013	1.0002	1.0003	1.0019	1.0012	1.0000	1.0000	2014	806,301

Source: A. CMCRB Database - Validated 2023-08-03

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

Exhibit VI-D

Indemnity and Funeral Reported Paid Losses as of 04/30/23

Report	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	1,862,374
2	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	4,057,654	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	4,387,625	
3	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	6,183,091	7,473,314	6,081,014	10,827,506	7,651,201	6,950,711	7,418,658	6,860,470	6,799,224	7,070,255		
4	6,234,883	7,427,776	5,182,592	5,951,422	7,770,869	4,714,994	5,032,592	6,658,499	4,543,195	6,078,298	7,663,308	8,392,146	6,502,458	11,747,478	9,380,121	8,203,041	8,254,560	7,235,896	7,265,118			
5	6,774,208	8,517,965	5,654,435	6,488,204	8,470,539	4,894,518	5,362,003	6,986,131	4,950,115	6,374,543	8,035,378	9,139,912	6,652,885	12,208,353	10,671,950	8,356,903	9,169,543	7,965,018				
6	6,969,310	9,582,098	6,009,319	6,696,634	8,926,585	4,966,788	5,648,220	7,214,898	5,107,208	6,690,310	8,374,033	9,395,170	7,003,338	12,232,461	10,663,121	8,518,921	9,835,135					
7	7,402,247	9,706,503	6,156,138	6,907,738	9,168,385	4,991,574	5,900,930	7,644,898	5,168,086	7,001,167	8,425,450	9,588,035	7,421,020	12,388,158	10,912,322	8,580,831						
8	7,611,242	10,138,868	6,524,987	6,965,528	9,422,725	5,014,153	5,986,526	7,907,461	5,228,910	7,146,676	8,462,687	9,898,479	7,504,122	12,388,158	11,432,649							
9	7,653,900	10,368,436	6,705,837	7,020,184	9,810,124	5,059,383	6,164,246	8,052,763	5,289,734	7,433,505	8,495,832	10,137,263	7,582,900	12,388,158								
10	7,721,764	10,619,368	6,755,866	7,139,264	9,993,283	5,160,329	6,244,573	8,342,088	5,350,515	7,433,605	8,530,282	10,145,648	7,643,756									
11	7,789,732	10,873,650	6,839,005	7,190,739	10,178,581	5,422,689	6,340,857	8,901,130	5,589,456	7,433,490	8,564,019	10,153,887										
12	7,855,086	11,009,570	6,873,904	7,240,755	10,392,475	5,671,285	6,488,602	8,944,239	5,608,980	7,365,256	8,597,756											
13	7,919,766	11,120,644	6,908,899	7,280,738	10,542,895	5,694,209	6,942,382	8,979,706	5,628,504	7,365,256												
14	8,081,870	11,269,601	6,946,798	7,323,413	10,679,371	5,717,956	6,975,971	9,015,173	5,646,873													
15	8,115,379	11,305,361	6,981,697	7,366,089	10,920,744	5,741,638	7,009,560	9,052,005														
16	8,142,053	11,400,129	7,016,692	7,350,142	10,975,651	5,765,321	7,043,149															
17	8,205,378	11,418,631	7,051,787	7,391,622	11,040,607	5,789,406																
18	8,226,812	11,437,132	7,086,686	7,433,101	11,098,287																	
19	8,248,304	11,517,844	7,121,585	7,467,610																		
20	8,270,080	11,517,844	7,157,059																			

Medical Reported Paid Losses as of 04/30/23

Report	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	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	1,653,925
2	2,027,699	2,673,510	2,124,881	3,067,832	3,289,523	2,697,293	4,228,737	3,040,747	2,474,923	3,390,240	4,450,020	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	2,951,476	
3	2,236,309	3,007,596	2,332,479	3,293,472	3,433,690	2,989,067	4,505,191	3,288,243	2,735,746	3,683,337	4,827,070	4,960,347	3,742,975	5,735,672	3,580,853	3,604,969	5,032,359	4,989,893	3,462,723	3,395,981		
4	2,326,207	3,216,844	2,439,613	3,868,121	3,535,900	3,075,764	4,758,401	3,434,618	2,852,087	4,051,859	5,016,688	5,092,937	3,809,188	5,817,859	3,713,959	3,669,953	5,185,111	5,092,605	3,554,967			
5	2,425,392	3,378,060	2,555,109	3,923,267	3,673,096	3,157,818	4,904,090	3,482,499	2,904,942	4,202,511	5,268,876	5,128,604	3,896,925	5,835,421	3,864,888	3,678,978	5,301,963	5,198,390				
6	2,495,415	3,495,984	2,595,546	3,963,872	3,920,165	3,202,045	5,019,560	3,502,704	2,927,377	4,278,113	5,371,485	5,199,172	3,971,294	5,882,026	3,861,601	3,696,787	5,834,516					
7	2,581,983	3,544,378	2,700,553	4,010,252	4,000,731	3,238,455	5,140,304	3,511,257	2,949,564	4,315,213	5,516,684	5,222,506	4,070,119	5,884,600	3,872,574	3,758,565						
8	2,622,094	3,704,613	2,730,444	4,058,643	4,067,412	3,238,035	5,234,607	3,521,293	2,976,674	4,328,399	5,583,999	5,246,341	4,082,391	5,884,600	3,875,127							
9	2,671,237	3,722,461	2,774,982	4,076,363	4,107,726	3,301,685	5,319,822	3,531,557	3,010,190	4,334,343	5,735,261	5,306,826	4,093,543	5,886,404								
10	2,715,237	3,742,716	2,804,379	4,109,608	4,128,239	3,378,839	5,379,266	3,544,208	3,047,335	4,335,338	5,788,585	5,344,906	4,094,298									
11	2,768,418	3,756,522	2,834,175	4,170,720	4,158,962	3,500,778	5,462,608	3,552,431	3,085,329	4,336,335	5,837,992	5,383,343										
12	2,821,879	3,784,665	2,866,258	4,202,501	4,195,156	3,554,600	5,581,048	3,559,244	3,124,808	4,337,118	5,854,851											
13	2,865,653	3,812,899	2,898,699	4,226,023	4,412,543	3,591,568	5,778,998	3,570,134	3,125,511	4,338,132												
14	2,899,480	3,831,944	2,929,990	4,371,249	4,422,232	3,600,198	5,847,116	3,586,284	3,125,511													
15	2,925,169	3,988,207	2,969,782	4,392,927	4,510,074	3,605,231	5,899,717	3,590,411														
16	2,939,820	4,012,963	2,989,382	4,421,454	4,590,441	3,616,268	5,961,595															
17	3,006,814	4,019,602	2,993,333	4,471,734	4,595,425	3,671,480																
18	3,017,086	4,027,614	2,997,115	4,496,839	4,610,253																	
19	3,018,743	4,033,642	3,000,446	4,525,516																		
20	3,019,006	4,040,089	3,002,033																			

Source: CMCRB Database - Validated 2023-08-03

	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	$986,306	$566,302	$986,306	$132,462	$303,010	$132,462
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$140,586	$303,010	$140,586
(2) Difference- Social Security (Federal= b-1 minus a-2)	$82,447	$0	$82,447	8,124	0	8,124
(3) Index (to a(2))	8.3592%	0.0000%	8.3592%	6.1331%	0.0000%	6.1331%
(4) Complement	91.6408%	100.0000%	91.6408%	93.8669%	100.0000%	93.8669%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$184,777	$311,058	$184,777
(2) Difference (Federal= c-1 minus b-1)	$148,442	$67,749	$148,442	44,191	8,048	44,191
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	18,555	8,469	18,555	5,524	1,006	5,524
(5) Index (to a-2)	1.8813%	1.4954%	1.8813%	4.1702%	0.3320%	4.1702%
(6) Complement	98.1187%	98.5046%	98.1187%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$101,002	$8,469	$101,002	$13,648	$1,006	$13,648
(2) Index (to a-2)	10.2405%	1.4954%	10.2405%			10.3032%
(3) Complement	89.7595%	98.5046%	89.7595%	Factor		110.3032%
(4) Total Average	885,304	557,833	885,304			146,110
(e) Wage Level Decrease				(e) Wage Level Increase		
(1) Percentage from Exhibit VII-G, Page 1			0			
(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)			89.7595%	(d-3) times (e-4)		110.3032%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			89.7595%			110.3032%
(4) Percentage Decrease			10.2405%	Increase		10.3032%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3) Decrease			$101,002	Increase		$13,648
(2) Average after Act 57 (a-2 plus or minus g-1)			$885,304			$146,110

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	# 76			# 76		
(2) Average Amounts	$380,574	$295,075	$380,574	$261,967	$293,375	$261,967
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$269,860	$300,035	$269,860
(2) Difference- Social Security (Federal= b-1 minus a-2)	$33,300	$15,835	$33,300	7,893	6,660	7,893
(3) Index (to a(2))	8.7499%	5.3664%	8.7499%	3.0130%	2.2701%	3.0130%
(4) Complement	91.2501%	94.6336%	91.2501%	96.9870%	97.7299%	96.9870%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$307,363	$330,195	$307,363
(2) Difference (Federal= c-1 minus b-1)	$88,074	$71,742	$88,074	37,503	30,160	37,503
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	11,009	8,968	11,009	4,688	3,770	4,688
(5) Index (to a-2)	2.8928%	3.0391%	2.8928%	1.7895%	1.2850%	1.7895%
(6) Complement	97.1072%	96.9609%	97.1072%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$44,309	$24,803	$44,309	$12,581	$10,430	$12,581
(2) Index (to a-2)	11.6427%	8.4056%	11.6427%			4.8025%
(3) Complement	88.3573%	91.5944%	88.3573%	Factor		104.8025%
(4) Total Average	336,265	270,272	336,265			274,548
(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)			88.3573%			104.8025%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			88.3573%			104.8025%
(4) Percentage Decrease			11.6427%	Increase		4.8025%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$44,309	Increase		$12,581
(2) Average after Act 57 (a-2 plus or minus g-1)			$336,265			$274,548

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	$661,521	$451,804	$661,521	$78,041	$161,157	$78,041
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$81,152	$161,203	$81,152
(2) Difference- Social Security (Federal= b-1 minus a-2)	$17,691	$5,066	$17,691	3,111	46	3,111
(3) Index (to a(2))	2.6743%	1.1213%	2.6743%	3.9864%	0.0285%	3.9864%
(4) Complement	97.3257%	98.8787%	97.3257%	96.0136%	99.9715%	96.0136%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$100,003	$175,472	$100,003
(2) Difference (Federal= c-1 minus b-1)	$129,751	$94,760	$129,751	18,851	14,269	18,851
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	16,219	11,845	16,219	2,356	1,784	2,356
(5) Index (to a-2)	2.4518%	2.6217%	2.4518%	3.0194%	1.1068%	3.0194%
(6) Complement	97.5482%	97.3783%	97.5482%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$33,910	$16,911	$33,910	$5,467	$1,830	$5,467
(2) Index (to a-2)	5.1260%	3.7430%	5.1260%			7.0058%
(3) Complement	94.8740%	96.2570%	94.8740%	Factor		107.0058%
(4) Total Average	627,611	434,893	627,611			83,508
(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)			94.8740%			107.0058%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			94.8740%			107.0058%
(4) Percentage Decrease			5.1260%	Increase		7.0058%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$33,910	Increase		$5,467
(2) Average after Act 57 (a-2 plus or minus g-1)			$627,611			$83,508

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	$493,693	$342,757	$493,693	$218,138	$273,354	$218,138
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$225,200	$276,675	$225,200
(2) Difference- Social Security (Federal= b-1 minus a-2)	$35,529	$7,959	$35,529	7,062	3,321	7,062
(3) Index (to a(2))	7.1966%	2.3221%	7.1966%	3.2374%	1.2149%	3.2374%
(4) Complement	92.8034%	97.6779%	92.8034%	96.7626%	98.7851%	96.7626%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$267,573	$306,211	$267,573
(2) Difference (Federal= c-1 minus b-1)	$89,990	$61,248	$89,990	42,373	29,536	42,373
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	11,249	7,656	11,249	5,297	3,692	5,297
(5) Index (to a-2)	2.2785%	2.2337%	2.2785%	2.4281%	1.3506%	2.4281%
(6) Complement	97.7215%	97.7663%	97.7215%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$46,778	$15,615	$46,778	$12,359	$7,013	$12,359
(2) Index (to a-2)	9.4751%	4.5557%	9.4751%			5.6655%
(3) Complement	90.5249%	95.4443%	90.5249%	Factor		105.6655%
(4) Total Average	446,915	327,142	446,915			230,497
(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)			90.5249%			105.6655%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			90.5249%			105.6655%
(4) Percentage Decrease			9.4751%	Increase		5.6655%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$46,778	Increase		$12,359
(2) Average after Act 57 (a-2 plus or minus g-1)			$446,915			$230,497

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	$358,097	$266,518	$358,097	$254,023	$284,204	$254,023
(3) Index (Base)	100%		100.0000%	100%		100.0000%
(b) Social Security Offset				(b) Social Security Onset		
(1) Total (including above)	-	-	-	$265,635	$292,533	$265,635
(2) Difference- Social Security (Federal= b-1 minus a-2)	$24,162	$11,954	$24,162	11,612	8,329	11,612
(3) Index (to a(2))	6.7473%	4.4853%	6.7473%	4.5712%	2.9306%	4.5712%
(4) Complement	93.2527%	95.5147%	93.2527%	95.4288%	97.0694%	95.4288%
(c) Pension Offset (after Social Security Offset)				(c) Pension Onset		
(1) Total (including above)	-	-	-	$280,928	$302,181	$280,928
(2) Difference (Federal= c-1 minus b-1)	$62,478	$42,449	$62,478	15,293	9,648	15,293
(3) % Pension (VII-G, P. 2)	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
(4) Net Pension	7,810	5,306	7,810	1,912	1,206	1,912
(5) Index (to a-2)	2.1809%	1.9909%	2.1809%	0.7525%	0.4243%	0.7525%
(6) Complement	97.8191%	98.0091%	97.8191%			
(d) Combined Social Security and Pension Offsets				(d) Combined Social Sec, Pension Onsets		
(1) Average Amounts (b-2 plus c-4)	$31,972	$17,260	$31,972	$13,524	$9,535	$13,524
(2) Index (to a-2)	8.9282%	6.4762%	8.9282%			5.3238%
(3) Complement	91.0718%	93.5238%	91.0718%	Factor		105.3238%
(4) Total Average	326,125	249,258	326,125			267,547
(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)			91.0718%			105.3238%
(2) AMA Guidelines (a-3)			100.0000%			100.0000%
(3) Full Effect of Act 57 (1 X 2)			91.0718%			105.3238%
(4) Percentage Decrease			8.9282%	Increase		5.3238%
(g) Combined Dollar Effect						
(1) (d-1) plus (e-3)			$31,972	Increase		$13,524
(2) Average after Act 57 (a-2 plus or minus g-1)			$326,125			$267,547

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 2013-2022	(2) Claim Frequency per 100 Miner Years: Indicated (Eff 4/1/2023)	(3) Claim Frequency per 100 Miner Years: Trended to 4/1/2024	(4) Claim Frequency per 100 Miner Years: Indicated (Eff 4/1/2024)	(5) Credibility: Expected Awarded Claims	(6) Credibility: Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) 10 Year 2013-2022 Payroll	(10) Claim Frequency Per $100 of Payroll
Underground:	Anthracite	1011	40.2	1.309713	1.309713	1.477985	0.527	0.097	1.326035	1.2%	2,269,773	0.234854
	Bituminous	1002	21,050.3	0.185113	0.185113	0.194095	38.967	0.835	0.192613	4.1%	1,721,059,279	0.023559
Surface:	Anthracite	1016	3,924.4	0.089972	0.089972	0.062257	3.531	0.251	0.083016	-7.7%	226,658,088	0.014374
	Bituminous	1013	6,699.3	0.076806	0.076806	0.092889	5.145	0.303	0.081679	6.3%	378,734,579	0.014448
Four Standard Classifications			31,714.2	0.151887	0.151887	0.158030	48.170		0.157054	3.1%	2,328,721,719	0.021389
	Coke	1017	578.8	0.011784	0.011784	0.004959	0.068	0.035	0.011545	-2.0%	31,863,165	0.002097
	Auger	1019	93.2	0.023958	0.023958	0.010026	0.022	0.020	0.023679	-1.2%	5,190,509	0.004252
Co-Gen:	Anthracite	1022	1,573.4	0.039892	0.039892	0.082159	0.628	0.106	0.044372	11.2%	90,157,786	0.007744
	Bituminous	1024	2,083.1	0.026549	0.026549	0.009961	0.553	0.099	0.024907	-6.2%	120,717,435	0.004298
Prep Plants:	Anthracite	1026	1,752.3	0.278006	0.278006	0.280162	4.871	0.295	0.278642	0.2%	102,823,002	0.047486
	Bituminous	1028	4,128.8	0.037464	0.037464	0.047851	1.547	0.166	0.039188	4.6%	342,548,429	0.004723
Other Classes			10,209.6	0.075317		0.082503	7.690		0.076463	2.2%	693,300,326	0.011260
Total			41,923.8	0.133240		0.139637	55.859		0.137428	2.9%	3,022,022,045	0.019065

Source: (1) Estimated Miner Years from Exhibit VII-B-2
(2) Exhibit VII-B-1, Page 2 Col. 10
(3) Approved claim frequency trended to 4/1/2024 @ 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) / 55.859)^0.5
(7)=(4)*(6)+((3)*(1-(6))
(8)=(7)/(2)-1 Totals and subtotals are weighted with 10 year estimated miner years.
(9) Exhibit X-A, Page 2
(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. 4/1/2023	(2) Payroll 2012-2021	(3) Expected Awarded Claims 2012-2021 (1) x (2)	(4) Estimated Miner Years 2013-2022	(5) Estimated Miner Years 2022	(6) Adjustment Factor	(7) Average Weekly Wage 2012	(8) Payroll 2012	(9) Estimated Miner Years 2012-2021	(10) Frequency Per 100 Miner Years
Underground:	Anthracite	1011	0.242481	3,235,380	0.784518	40.2	0.9	1.084	888	1,029,260	59.9	1.309713
	Bituminous	1002	0.023199	1,739,276,552	40.349477	21,050.3	1,384.3	1.561	888	153,618,908	21,797.2	0.185113
Surface:	Anthracite	1016	0.016147	225,061,778	3.634073	3,924.4	410.6	1.084	888	26,295,907	4,039.1	0.089972
	Bituminous	1013	0.014083	422,112,917	5.944616	6,699.3	486.9	1.084	888	76,452,811	7,739.8	0.076806
Four Standard Classifications				2,389,686,627	50.712684	31,714.2	2,282.7			257,396,886	33,636.0	
	Coke	1017	0.002173	37,601,270	0.081708	578.8	-	1.084	888	5,738,105	693.4	0.011784
	Auger	1019	0.004397	5,775,808	0.025396	93.2	3.3	1.084	888	808,208	106.0	0.023958
Co-Gen:	Anthracite	1022	0.007177	91,784,314	0.658736	1,573.4	127.3	1.084	888	10,273,004	1,651.3	0.039892
	Bituminous	1024	0.004743	112,459,131	0.533394	2,083.1	254.8	1.084	888	9,047,745	2,009.1	0.026549
Prep Plants:	Anthracite	1026	0.049198	95,486,350	4.697737	1,752.3	235.7	1.084	888	8,671,140	1,689.8	0.278006
	Bituminous	1028	0.004669	335,675,940	1.567271	4,128.8	420.0	1.561	888	34,211,729	4,183.4	0.037464
Other Classes				678,782,813		10,209.6	1,041.1			68,749,931	10,333.0	
Total				3,068,469,440		41,923.8	3,323.8			326,146,817	43,969.0	

Source: (1) Approved Claim Frequency (4/1/23): See Exhibit III from filing effective 4/1/2023 (See Exhibit X-F)
(2) 10 years Payroll(2012-2021): Exhibit X-A, Page 2
(3) Expected Awarded Claims = (1)x(2) / 1,000,000
(4) Estimated Miner Years 2013-2022: See Exhibit VII-B-2
(5) Estimated Miner Years 2022: See Exhibit VII-B-2
(6) Wage Adjustment Factor was derived from CMCRB data. See Exhibit X-G
(7) Average Weekly Wage 2012: See Exhibit XII-D
(8) Payroll 2012: See Exhibit X-A, Page 2
(9) Estimated Miner Years 2012-2021 =(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	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	1	1	0	0	0.0000	0.0000	0.000000	381,876	1.000000	917	1.084	7.4	13.513514	
2014	0	0	0	0	0.0000	0.0000	0.000000	258,809	0.000000	932	1.084	4.9	0.000000	
2015	0	0	0	0	0.0000	0.0000	0.000000	254,336	0.000000	951	1.084	4.7	0.000000	
2016	0	0	0	0	0.0000	0.0000	0.000000	163,760	0.000000	978	1.084	3.0	0.000000	
2017	0	0	0	0	0.0000	0.0000	0.000000	252,383	0.000000	995	1.084	4.5	0.000000	
2018	0	0	0	0	0.0000	0.0000	0.000000	183,346	0.000000	1,025	1.084	3.2	0.000000	
2019	0	0	0	0	0.0000	0.0000	0.000000	179,379	0.000000	1,049	1.084	3.0	0.000000	
2020	0	0	0	0	0.0000	0.0000	0.000000	299,700	0.000000	1,081	1.084	4.9	0.000000	
2021	0	0	0	0	0.0000	0.0000	0.000000	232,531	0.000000	1,130	1.084	3.7	0.000000	
2022	0	0	0	0	0.0128	0.0128	0.011397	63,653	0.011397	1,205	1.084	0.9	1.266331	
TOTAL	1	1	0	0	0.0128	0.0128	0.011397	2,269,773	1.011397			40.2	14.779845	
Average: State Frequency													1.477985	
Federal Excess Frequency (times 40.0%)													0.591194	

BITUMINOUS UNDERGROUND (1002)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	7	6	0	1	0.0000	0.0000	0.000000	149,747,092	6.000000	917	1.561	2,011.8	0.298240
2014	10	9	1	0	0.0000	1.0000	0.889000	271,230,707	9.889000	932	1.561	3,585.2	0.275828
2015	9	7	0	2	0.0000	0.0000	0.000000	216,454,460	7.000000	951	1.561	2,804.0	0.249643
2016	4	4	0	0	0.0416	0.0416	0.036982	148,556,407	4.036982	978	1.561	1,871.3	0.215731
2017	0	0	0	0	0.3696	0.3696	0.328574	172,708,778	0.328574	995	1.561	2,138.4	0.015365
2018	4	3	0	1	0.7637	0.7637	0.678965	180,553,142	3.678965	1,025	1.561	2,170.1	0.169530
2019	1	1	0	0	1.2662	1.2662	1.125634	177,833,672	2.125634	1,049	1.561	2,088.5	0.101778
2020	2	2	0	0	1.4167	1.4167	1.259446	139,028,472	3.259446	1,081	1.561	1,584.4	0.205721
2021	2	1	1	0	1.7333	2.7333	2.429913	129,544,914	3.429913	1,130	1.561	1,412.3	0.242860
2022	0	0	0	0	2.5889	2.5889	2.301514	135,401,635	2.301514	1,205	1.561	1,384.3	0.166258
TOTAL	39	33	2	4	8.1800	10.1800	9.050029	1,721,059,279	42.050029			21,050.3	1.940954
Average: State Frequency													0.194095
Federal Excess Frequency (times 40.0%)													0.077638

ANTHRACITE SURFACE (1016)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	1	0	0	1	0.0000	0.0000	0.000000	22,449,824	0.000000	917	1.084	434.3	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	20,466,075	0.000000	932	1.084	389.6	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	24,218,779	0.000000	951	1.084	451.8	0.000000
2016	2	2	0	0	0.0000	0.0000	0.000000	20,873,611	2.000000	978	1.084	378.6	0.528262
2017	0	0	0	0	0.0000	0.0000	0.000000	21,167,074	0.000000	995	1.084	377.4	0.000000
2018	0	0	0	0	0.0000	0.0000	0.000000	19,576,675	0.000000	1,025	1.084	338.8	0.000000
2019	0	0	0	0	0.0000	0.0000	0.000000	23,224,142	0.000000	1,049	1.084	392.8	0.000000
2020	0	0	0	0	0.0000	0.0000	0.000000	22,443,061	0.000000	1,081	1.084	368.3	0.000000
2021	0	0	0	0	0.0835	0.0835	0.074240	24,346,630	0.074240	1,130	1.084	382.2	0.019424
2022	0	0	0	0	0.3459	0.3459	0.307470	27,892,217	0.307470	1,205	1.084	410.6	0.074883
TOTAL	3	2	0	1	0.4294	0.4294	0.381710	226,658,088	2.381710			3,924.4	0.622569
Average: State Frequency													0.062257
Federal Excess Frequency (times 40.0%)													0.024903

BITUMINOUS SURFACE (1013)

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0000	0.0000	0.000000	61,349,745	0.000000	917	1.084	1,186.9	0.000000
2014	2	2	0	0	0.0000	0.0000	0.000000	54,050,731	2.000000	932	1.084	1,028.9	0.194382
2015	4	4	0	0	0.0000	0.0000	0.000000	40,934,048	4.000000	951	1.084	763.6	0.523834
2016	0	0	0	0	0.0000	0.0000	0.000000	29,127,089	0.000000	978	1.084	528.4	0.000000
2017	0	0	0	0	0.0335	0.0335	0.029755	33,140,780	0.029755	995	1.084	590.9	0.005036
2018	0	0	0	0	0.0856	0.0856	0.076134	35,242,187	0.076134	1,025	1.084	610.0	0.012481
2019	0	0	0	0	0.1524	0.1524	0.135492	35,362,714	0.135492	1,049	1.084	598.0	0.022658
2020	0	0	0	0	0.1838	0.1838	0.163425	27,274,125	0.163425	1,081	1.084	447.6	0.036511
2021	0	0	0	0	0.2775	0.2775	0.246689	29,178,687	0.246689	1,130	1.084	458.1	0.053850
2022	0	0	0	0	0.4389	0.4389	0.390182	33,074,473	0.390182	1,205	1.084	486.9	0.080136
TOTAL	6	6	0	0	1.1717	1.1717	1.041677	378,734,579	7.041677			6,699.3	0.928888
Average: State Frequency													0.092889
Federal Excess Frequency (times 40.0%)													0.037156

FOUR STANDARD CLASSES

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	9	7	0	2	0.0000	0.0000	0.000000	233,928,537	7.000000	917		3,640.4	0.192287	
2014	12	11	1	0	0.0000	1.0000	0.889000	346,006,322	11.889000	932		5,008.6	0.237372	
2015	13	11	0	2	0.0000	0.0000	0.000000	281,861,623	11.000000	951		4,024.1	0.273353	
2016	6	6	0	0	0.0416	0.0416	0.036982	198,720,867	6.036982	978		2,781.3	0.217056	
2017	0	0	0	0	0.4031	0.4031	0.358329	227,269,015	0.358329	995		3,111.2	0.011517	
2018	4	3	0	1	0.8494	0.8494	0.755099	235,555,350	3.755099	1,025		3,122.1	0.120275	
2019	1	1	0	0	1.4186	1.4186	1.261127	236,599,907	2.261127	1,049		3,082.3	0.073358	
2020	2	2	0	0	1.6005	1.6005	1.422871	189,045,358	3.422871	1,081		2,405.2	0.142311	
2021	2	1	1	0	2.0943	3.0943	2.750842	183,302,762	3.750842	1,130		2,256.3	0.166239	
2022	0	0	0	0	3.3865	3.3865	3.010563	196,431,978	3.010563	1,205		2,282.7	0.131886	
TOTAL	49	42	2	5	9.7939	11.7939	10.484813	2,328,721,719	52.484813			31,714.2	1.565654	
Average: State Frequency													0.156565	0.158030
Federal Excess Frequency (times 40.0%)													0.062626	0.063212

Source: Claim counts - CMCRB OD Database as of 08/03/2023
IBNR: Exhibit VII-C
Exhibit X-A, Page 2
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) = 48 / [48 + 06] = 0.889
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	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	0	0	0	0	0.0000	0.0000	0.000000	4,791,910	0.000000	917	1.084	92.7	0.000000	
2014	0	0	0	0	0.0000	0.0000	0.000000	4,464,398	0.000000	932	1.084	85.0	0.000000	
2015	0	0	0	0	0.0000	0.0000	0.000000	4,340,376	0.000000	951	1.084	81.0	0.000000	
2016	0	0	0	0	0.0003	0.0003	0.000267	4,435,066	0.000267	978	1.084	80.5	0.000331	
2017	0	0	0	0	0.0031	0.0031	0.002756	4,566,113	0.002756	995	1.084	81.4	0.003386	
2018	0	0	0	0	0.0062	0.0062	0.005512	4,484,744	0.005512	1,025	1.084	77.6	0.007103	
2019	0	0	0	0	0.0097	0.0097	0.008623	4,466,971	0.008623	1,049	1.084	75.5	0.011422	
2020	0	0	0	0	0.0010	0.0010	0.000889	313,587	0.000889	1,081	1.084	5.1	0.017431	
2021	0	0	0	0	0.0000	0.0000	0.000000	0	0.000000	1,130	1.084	0.0	N/A	
2022	0	0	0	0	0.0000	0.0000	0.000000	0	0.000000	1,205	1.084	0.0	N/A	
TOTAL	0	0	0	0	0.0203	0.0203	0.018047	31,863,165	0.018047			578.8	0.039673	
Average: State Frequency													0.004959	
Federal Excess Frequency (times 40.0%)													0.001984	

AUGER (1019)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0000	0.0000	0.000000	1,025,399	0.000000	917	1.084	19.8	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	806,976	0.000000	932	1.084	15.4	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	582,619	0.000000	951	1.084	10.9	0.000000
2016	0	0	0	0	0.0000	0.0000	0.000000	372,496	0.000000	978	1.084	6.8	0.000000
2017	0	0	0	0	0.0003	0.0003	0.000267	449,009	0.000267	995	1.084	8.0	0.003334
2018	0	0	0	0	0.0008	0.0008	0.000711	600,138	0.000711	1,025	1.084	10.4	0.006838
2019	0	0	0	0	0.0012	0.0012	0.001067	539,914	0.001067	1,049	1.084	9.1	0.011723
2020	0	0	0	0	0.0013	0.0013	0.001156	384,571	0.001156	1,081	1.084	6.3	0.018344
2021	0	0	0	0	0.0009	0.0009	0.000800	206,478	0.000800	1,130	1.084	3.2	0.025003
2022	0	0	0	0	0.0013	0.0013	0.001156	222,909	0.001156	1,205	1.084	3.3	0.035021
TOTAL	0	0	0	0	0.0058	0.0058	0.005156	5,190,509	0.005156			93.2	0.100263
Average: State Frequency													0.010026
Federal Excess Frequency (times 40.0%)													0.004010

ANTHRACITE CO-GEN (1022)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0000	0.0000	0.000000	8,342,651	0.000000	917	1.084	161.4	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	9,060,883	0.000000	932	1.084	172.5	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	10,469,089	0.000000	951	1.084	195.3	0.000000
2016	0	0	0	0	0.0006	0.0006	0.000533	8,994,602	0.000533	978	1.084	163.2	0.000327
2017	0	0	0	0	0.0059	0.0059	0.005245	8,819,700	0.005245	995	1.084	157.3	0.003334
2018	0	0	0	0	0.0161	0.0161	0.014313	11,600,891	0.014313	1,025	1.084	200.8	0.007128
2019	1	1	0	0	0.0178	0.0178	0.015824	8,191,669	1.015824	1,049	1.084	138.5	0.733447
2020	0	0	0	0	0.0250	0.0250	0.022225	7,660,069	0.022225	1,081	1.084	125.7	0.017681
2021	0	0	0	0	0.0370	0.0370	0.032893	8,371,756	0.032893	1,130	1.084	131.4	0.025033
2022	0	0	0	0	0.0496	0.0496	0.044094	8,646,476	0.044094	1,205	1.084	127.3	0.034638
TOTAL	1	1	0	0	0.1520	0.1520	0.135128	90,157,786	1.135128			1,573.4	0.821588
Average: State Frequency													0.082159
Federal Excess Frequency (times 40.0%)													0.032864

BITUMINOUS CO-GEN (1024)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0000	0.0000	0.000000	10,355,884	0.000000	917	1.084	200.3	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	11,721,184	0.000000	932	1.084	223.1	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	11,748,205	0.000000	951	1.084	219.2	0.000000
2016	0	0	0	0	0.0008	0.0008	0.000711	11,327,552	0.000711	978	1.084	205.5	0.000346
2017	0	0	0	0	0.0077	0.0077	0.006845	11,435,057	0.006845	995	1.084	203.9	0.003357
2018	0	0	0	0	0.0168	0.0168	0.014935	12,043,297	0.014935	1,025	1.084	208.4	0.007167
2019	0	0	0	0	0.0257	0.0257	0.022847	11,818,883	0.022847	1,049	1.084	199.9	0.011429
2020	0	0	0	0	0.0348	0.0348	0.030937	10,678,482	0.030937	1,081	1.084	175.2	0.017658
2021	0	0	0	0	0.0543	0.0543	0.048273	12,282,842	0.048273	1,130	1.084	192.8	0.025038
2022	0	0	0	0	0.0992	0.0992	0.088189	17,306,049	0.088189	1,205	1.084	254.8	0.034611
TOTAL	0	0	0	0	0.2393	0.2393	0.212738	120,717,435	0.212738			2,083.1	0.099606
Average: State Frequency													0.009961
Federal Excess Frequency (times 40.0%)													0.003984

Source: Claim counts - CMCRB OD Database as of 08/03/2023
IBNR: Exhibit VII-C
Exhibit X-A, Page 2
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) = 48 / [48 + 06] = 0.889
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	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	0	0	0	0	0.0000	0.0000	0.000000	8,265,665	0.000000	917	1.084	159.9	0.000000	
2014	1	1	0	0	0.0000	0.0000	0.000000	8,234,771	1.000000	932	1.084	156.7	0.638162	
2015	2	1	0	1	0.0000	0.0000	0.000000	7,606,274	1.000000	951	1.084	141.9	0.704722	
2016	0	0	0	0	0.0013	0.0013	0.001156	7,018,927	0.001156	978	1.084	127.3	0.000908	
2017	1	1	0	0	0.0130	0.0130	0.011557	7,746,154	1.011557	995	1.084	138.1	0.732482	
2018	0	0	0	0	0.0336	0.0336	0.029870	9,651,288	0.029870	1,025	1.084	167.0	0.017886	
2019	0	0	0	0	0.0699	0.0699	0.062141	12,873,320	0.062141	1,049	1.084	217.7	0.028544	
2020	1	1	0	0	0.1022	0.1022	0.090856	12,543,358	1.090856	1,081	1.084	205.9	0.529799	
2021	0	0	0	0	0.1423	0.1423	0.126505	12,875,453	0.126505	1,130	1.084	202.1	0.062595	
2022	0	0	0	0	0.2294	0.2294	0.203937	16,007,792	0.203937	1,205	1.084	235.7	0.086524	
TOTAL	5	4	0	1	0.5917	0.5917	0.526021	102,823,002	4.526021			1,752.3	2.801622	
Average: State Frequency													0.280162	
Federal Excess Frequency (times 40.0%)													0.112065	

BITUMINOUS PREP PLANT (1028)

IBNR Factor adjusted by 0.4000

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0000	0.0000	0.000000	34,253,697	0.000000	917	1.561	460.2	0.000000
2014	0	0	0	0	0.0000	0.0000	0.000000	43,520,040	0.000000	932	1.561	575.3	0.000000
2015	0	0	0	0	0.0000	0.0000	0.000000	33,564,176	0.000000	951	1.561	434.8	0.000000
2016	1	1	0	0	0.0017	0.0017	0.001511	23,689,882	1.001511	978	1.561	298.4	0.335627
2017	0	0	0	0	0.0194	0.0194	0.017247	28,803,457	0.017247	995	1.561	356.6	0.004836
2018	0	0	0	0	0.0448	0.0448	0.039827	32,199,872	0.039827	1,025	1.561	387.0	0.010291
2019	0	0	0	0	0.0784	0.0784	0.069698	36,099,579	0.069698	1,049	1.561	424.0	0.016438
2020	0	0	0	0	0.1094	0.1094	0.097257	33,562,164	0.097257	1,081	1.561	382.5	0.025427
2021	0	0	0	0	0.1581	0.1581	0.140551	35,771,344	0.140551	1,130	1.561	390.0	0.036039
2022	0	0	0	0	0.2355	0.2355	0.209360	41,084,218	0.209360	1,205	1.561	420.0	0.049848
TOTAL	1	1	0	0	0.6473	0.6473	0.575450	342,548,429	1.575450			4,128.8	0.478506
Average: State Frequency													0.047851
Federal Excess Frequency (times 40.0%)													0.019140

TOTAL OTHER CLASSES

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2013	0	0	0	0	0.0000	0.0000	0.000000	67,035,206	0.000000	917		1,094.3	0.000000	
2014	1	1	0	0	0.0000	0.0000	0.000000	77,808,252	1.000000	932		1,228.0	0.081433	
2015	2	1	0	1	0.0000	0.0000	0.000000	68,310,739	1.000000	951		1,083.1	0.092328	
2016	1	1	0	0	0.0047	0.0047	0.004178	55,838,525	1.004178	978		881.7	0.113891	
2017	1	1	0	0	0.0494	0.0494	0.043917	61,819,490	1.043917	995		945.3	0.110432	
2018	0	0	0	0	0.1183	0.1183	0.105169	70,580,230	0.105169	1,025		1,051.2	0.010005	
2019	1	1	0	0	0.2027	0.2027	0.180200	73,990,336	1.180200	1,049		1,064.7	0.110848	
2020	1	1	0	0	0.2737	0.2737	0.243319	65,142,231	1.243319	1,081		900.7	0.138039	
2021	0	0	0	0	0.3926	0.3926	0.349021	69,507,873	0.349021	1,130		919.5	0.037958	
2022	0	0	0	0	0.6150	0.6150	0.546735	83,267,444	0.546735	1,205		1,041.1	0.052515	
TOTAL	7	6	0	1	1.6564	1.6564	1.472540	693,300,326	7.472540			10,209.6	0.747449	
Average: State Frequency													0.074745	0.082503
Federal Excess Frequency (times 40.0%)													0.029898	0.033001

GRAND TOTAL

YEAR	REPORTED	AWARDED	PENDING	DENIED	IBNR	IBNR + PENDING	0.889 AWARD RATIO	Payroll	EXPECTED ULTIMATE AWARDED	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2013	9	7	0	2	0.0000	0.0000	0.000000	300,963,743	7.000000	917		4,734.7	0.147845	
2014	13	12	1	0	0.0000	1.0000	0.889000	423,814,574	12.889000	932		6,236.6	0.206667	
2015	15	12	0	3	0.0000	0.0000	0.000000	350,172,362	12.000000	951		5,107.2	0.234962	
2016	7	7	0	0	0.0463	0.0463	0.041161	254,559,392	7.041161	978		3,663.0	0.192224	
2017	1	1	0	0	0.4525	0.4525	0.402246	289,088,505	1.402246	995		4,056.5	0.034568	
2018	4	3	0	1	0.9677	0.9677	0.860268	306,135,580	3.860268	1,025		4,173.3	0.092499	
2019	2	2	0	0	1.6213	1.6213	1.441327	310,590,243	3.441327	1,049		4,147.0	0.082984	
2020	3	3	0	0	1.8742	1.8742	1.666190	254,187,589	4.666190	1,081		3,305.9	0.141147	
2021	2	1	1	0	2.4869	3.4869	3.099863	252,810,635	4.099863	1,130		3,175.8	0.129097	
2022	0	0	0	0	4.0015	4.0015	3.557298	279,699,422	3.557298	1,205		3,323.8	0.107025	
TOTAL	56	48	2	6	11.4503	13.4503	11.957352	3,022,022,045	59.957352			41,923.8	1.369018	
Average: State Frequency													0.136902	0.139637
Federal Excess Frequency (times 40.0%)													0.054761	0.055855

Source: Claim counts - CMCRB OD Database as of 08/03/2023
IBNR: Exhibit VII-C
Exhibit X-A, Page 2
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) = 48 / [48 + 06] = 0.889
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 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	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	0	
36	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0		
48	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0			
60	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0				
72	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0					
84	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0						
96	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0							
108	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0								
120	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1									
132	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0										
144	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1											
156	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0												
168	0	0	0	1	1	1	0	0	0	0	0	0	0	0													
180	0	0	0	1	1	1	0	0	0	0	0	0	0														
192	0	0	0	1	1	1	0	0	0	0	0	0															
204	0	0	0	1	1	1	0	0	0	0	0																
216	0	0	0	1	1	1	0	0	0	0																	
228	0	0	0	1	1	1	0	0	0																		
240	0	0	0	1	1	1	0	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	1	0	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	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	2022
($Millions)	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	0.06365

																												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	2.61862	0.00000	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	0.20143
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	0.01282

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 2

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

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	0	2	0	0	0	2	1	2	1	3	0	0	0	0	0	1	3	3	1	1	2	0	2	0	2	2	
36	0	3	1	2	1	2	2	2	1	3	0	0	0	0	0	1	3	3	2	1	3	0	4	1	2		
48	0	3	1	2	1	2	2	2	2	3	0	0	1	0	0	2	3	3	4	3	4	0	4	1			
60	0	3	1	2	1	3	3	2	2	3	0	0	2	0	0	2	4	3	6	6	4	0	4				
72	2	3	1	2	1	3	3	2	2	4	0	0	2	0	0	2	4	6	8	6	4	0					
84	2	3	1	2	9	3	3	2	2	4	0	0	2	0	0	2	4	7	9	9	4						
96	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4	7	9	9							
108	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4	7	10								
120	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4	7									
132	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2	4										
144	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0	2											
156	2	3	1	2	9	4	3	2	2	4	0	0	2	0	0												
168	2	3	1	2	9	4	3	2	2	4	0	0	2	0													
180	2	3	1	2	9	4	3	2	2	4	0	0	2														
192	2	3	1	2	9	4	3	2	2	4	0	0															
204	2	3	1	2	9	4	3	2	2	4	0																
216	2	3	1	2	9	4	3	2	2	4																	
228	2	3	1	2	9	4	3	2	2																		
240	2	3	1	2	9	4	3	2																			

Incremental Changes

12-24													0	0	0	1	3	1	1	1	2	0	1	0	2	0	
24-36												0	0	0	0	0	0	0	1	0	1	0	2	1	0		
36-48											0	0	1	0	0	1	0	0	2	2	1	0	0	0			
48-60										0	0	0	1	0	0	0	1	0	2	3	0	0	0				
60-72									0	1	0	0	0	0	0	0	0	3	2	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	1	1	3	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	1								
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	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	2022		
($Millions)	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	139.02847	129.54491	135.40164		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00673	0.01953	0.00668	0.00369	0.00462	0.01346	0.00000	0.00554	0.00000	0.01439	0.00000		0.00574	0.00574
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00369	0.00000	0.00673	0.00000	0.01108	0.00562	0.00000			0.00209	0.00319
36-48												0.00000	0.00987	0.00000	0.00000	0.00673	0.00000	0.00000	0.00737	0.00924	0.00673	0.00000	0.00000	0.00000				0.00307	0.00307
48-60											0.00000	0.00000	0.00987	0.00000	0.00000	0.00000	0.00651	0.00000	0.00737	0.01386	0.00000	0.00000	0.00000					0.00289	0.00289
60-72										0.01411	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02003	0.00737	0.00000	0.00000	0.00000						0.00319	0.00209
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00668	0.00369	0.01386	0.00000							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	0.00028
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	0.00369									0.00028	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
																												0.01912	0.01912

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	0.00028	0.00214	0.00423	0.00712	0.01019	0.01338	0.01912
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	0.04160	0.36960	0.76374	1.26618	1.41670	1.73331	2.58888

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 2

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

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	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	0	
36	1	3	1	1	3	1	2	2	1	1	0	2	1	0	0	1	0	1	0	0	1	0	0	0	0		
48	1	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2	0	0	0			
60	2	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2	0	0				
72	2	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2	0					
84	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0	2						
96	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0	0							
108	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1	0								
120	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0	1									
132	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1	0										
144	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0	1											
156	3	3	1	1	3	1	2	2	1	1	0	3	1	0	0												
168	3	3	1	1	3	1	2	2	1	1	0	3	1	0													
180	3	3	1	1	3	1	2	2	1	1	0	3	1														
192	3	3	1	1	3	1	2	2	1	1	0	3															
204	3	3	1	1	3	1	2	2	1	1	0																
216	3	3	1	1	3	1	2	2	1	1																	
228	3	3	1	1	3	1	2	2	1																		
240	3	3	1	1	3	1	2	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	0	1	0	0	0	0	0	0	0		
36-48											0	1	0	0	0	0	0	0	0	0	1	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	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	2022		
($Millions)	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	23.22414	22.44306	24.34663	27.89222		
																												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	0.04454	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.00343	0.00343
36-48												0.06870	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04791	0.00000	0.00000	0.00000	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	0.08351	0.34586

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 2

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

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	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	0	
36	3	2	1	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0		
48	3	3	1	2	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	2	0	0	0	0			
60	3	3	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	1	2	0	0	0				
72	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	1	4	0	0					
84	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2	4	0						
96	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2	4							
108	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2								
120	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2	0									
132	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1	2										
144	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0	1											
156	3	4	1	2	0	0	0	0	0	1	0	0	0	0	0												
168	3	4	1	2	0	0	0	0	0	1	0	0	0	0													
180	3	4	1	2	0	0	0	0	0	1	0	0	0														
192	3	4	1	2	0	0	0	0	0	1	0	0															
204	3	4	1	2	0	0	0	0	0	1	0																
216	3	4	1	2	0	0	0	0	0	1																	
228	3	4	1	2	0	0	0	0	0																		
240	3	4	1	2	0	0	0	0																			

Incremental Changes

12-24													0	0	0	0	0	0	0	1	0	0	0	0	0	0	
24-36												0	0	0	0	1	0	0	0	1	0	0	0	0	0		
36-48											0	0	0	0	0	0	1	0	1	0	0	0	0	0			
48-60										0	0	0	0	0	0	0	1	0	0	0	0	0	0				
60-72									0	0	0	0	0	0	0	0	0	0	0	2	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	1	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	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	2022		
($Millions)	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	29.17869	33.07447		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02443	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000		0.00188	0.00376
24-36													0.00000	0.00000	0.00000	0.01162	0.00000	0.00000	0.00000	0.02443	0.00000	0.00000	0.00000	0.00000	0.00000			0.00277	0.00277
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.01308	0.00000	0.01850	0.00000	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	0.01308	0.00000	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	0.04886	0.00000	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	0.01850	0.00000	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	0.03347	0.08564	0.15241	0.18383	0.27749	0.43890

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 2

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

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	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	0	
36	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	0	1	1	1	0	1	1		
48	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1	1	0	1			
60	0	1	0	0	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1	1	0				
72	0	1	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	1	1	1					
84	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	2	1						
96	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	2							
108	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1								
120	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0	0									
132	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0	0										
144	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1	0											
156	0	2	0	1	1	0	1	1	1	0	1	1	0	0	1												
168	0	2	0	1	1	0	1	1	1	0	1	1	0	0													
180	0	2	0	1	1	0	1	1	1	0	1	1	0														
192	0	2	0	1	1	0	1	1	1	0	1	1															
204	0	2	0	1	1	0	1	1	1	0	1																
216	0	2	0	1	1	0	1	1	1	0																	
228	0	2	0	1	1	0	1	1	1																		
240	0	2	0	1	1	0	1	1																			

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	0	1	1	0	0	0	0		
36-48											0	0	0	0	0	0	0	0	1	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	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	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	2022		
($Millions)	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	73.99034	65.14223	69.50787	83.26744		
																												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	0.01464	0.01791	0.00000	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	0.01285	0.00000	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	0.01464	0.00000							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	0.00099	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	0.06449	0.14736	0.38470	

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 2

COAL MINE COMPENSATION RATING BUREAU
STATE OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	3	8	1	4	5	3	3	5	3	5	1	3	1	0	1	3	3	3	1	2	3	1	2	1	3	2	
36	4	9	3	6	6	3	5	5	3	5	1	3	1	0	1	4	3	5	2	4	5	1	4	2	3		
48	4	10	3	6	6	4	5	5	4	5	1	4	2	0	1	5	4	5	6	6	7	1	4	2			
60	5	10	3	6	6	5	6	5	4	5	1	4	3	0	1	5	6	5	8	9	7	1	4				
72	7	11	3	7	6	5	6	5	4	6	1	4	3	0	1	5	6	8	10	11	7	1					
84	8	12	3	7	14	5	6	5	4	6	1	4	3	0	1	5	6	9	12	15	7						
96	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6	9	12	15							
108	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6	9	13								
120	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6	9									
132	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5	6										
144	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1	5											
156	8	12	3	7	14	6	6	5	4	6	1	4	3	0	1												
168	8	12	3	7	14	6	6	5	4	6	1	4	3	0													
180	8	12	3	7	14	6	6	5	4	6	1	4	3														
192	8	12	3	7	14	6	6	5	4	6	1	4															
204	8	12	3	7	14	6	6	5	4	6	1																
216	8	12	3	7	14	6	6	5	4	6																	
228	8	12	3	7	14	6	6	5	4																		
240	8	12	3	7	14	6	6	5																			

Incremental Changes

12-24													0	0	0	1	3	1	1	2	2	0	1	0	2	0	
24-36												0	0	0	0	1	0	2	1	2	2	0	2	1	0		
36-48											0	1	1	0	0	1	1	0	4	2	2	0	0	0			
48-60										0	0	0	1	0	0	0	2	0	2	3	0	0	0				
60-72									0	1	0	0	0	0	0	0	0	3	2	2	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	1	2	4	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	1								
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	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	2022		
($Millions)	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	254.18759	252.81063	279.69942		
																												Average	Smoothed
12-24														0.00000	0.00000	0.00308	0.00920	0.00332	0.00236	0.00571	0.00786	0.00000	0.00327	0.00000	0.00787	0.00000		0.00328	0.00328
24-36													0.00000	0.00000	0.00000	0.00308	0.00000	0.00665	0.00236	0.00571	0.00786	0.00000	0.00653	0.00322	0.00000			0.00272	0.00290
36-48												0.00457	0.00400	0.00000	0.00000	0.00308	0.00307	0.00000	0.00944	0.00571	0.00786	0.00000	0.00000	0.00000				0.00290	0.00272
48-60											0.00000	0.00000	0.00400	0.00000	0.00000	0.00000	0.00613	0.00000	0.00472	0.00857	0.00000	0.00000	0.00000					0.00180	0.00195
60-72										0.00494	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00997	0.00472	0.00571	0.00000	0.00000						0.00195	0.00180
72-84									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00332	0.00472	0.01142	0.00000							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	0.00018
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	0.00236									0.00018	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
																												0.01433	0.01433

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	0.00018	0.00168	0.00348	0.00543	0.00815	0.01105	0.01433
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	0.04582	0.48567	1.06535	1.68651	2.07163	2.79356	4.00809

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

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
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	0.00018	0.00018	0.00018	0.00018	0.00018	0.00018
2017	0.00168	0.00168	0.00168	0.00168	0.00168	0.00168
2018	0.00348	0.00348	0.00348	0.00348	0.00348	0.00348
2019	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543
2020	0.00815	0.00815	0.00815	0.00815	0.00815	0.00815
2021	0.01105	0.01105	0.01105	0.01105	0.01105	0.01105
2022	0.01433	0.01433	0.01433	0.01433	0.01433	0.01433
B. Adjustment Factor	0.40000	0.40000	0.40000	0.40000	1.00000	0.40000
C. Payroll Per $1M						
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	12.87332	36.09958
2020	0.31359	0.38457	7.66007	10.67848	12.54336	33.56216
2021	0.00000	0.20648	8.37176	12.28284	12.87545	35.77134
2022	0.00000	0.22291	8.64648	17.30605	16.00779	41.08422
D. IBNR						
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	0.0003	0.0000	0.0006	0.0008	0.0013	0.0017
2017	0.0031	0.0003	0.0059	0.0077	0.0130	0.0194
2018	0.0062	0.0008	0.0161	0.0168	0.0336	0.0448
2019	0.0097	0.0012	0.0178	0.0257	0.0699	0.0784
2020	0.0010	0.0013	0.0250	0.0348	0.1022	0.1094
2021	0.0000	0.0009	0.0370	0.0543	0.1423	0.1581
2022	0.0000	0.0013	0.0496	0.0992	0.2294	0.2355

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

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
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
2012	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						
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
2012	5.73811	0.80821	10.27300	9.04775	8.67114	34.21173
D. IBNR						
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
2012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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
(i) Total	# 6	7,298,921	# 3	1,577,837	# 9	8,876,758	# 0	-	# 9	8,876,758
(ii) Average		$1,216,487		$525,946		$986,306		$0		$986,306
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		$1,216,487		$525,946						
(ii) Difference (Col. 2 minus Col. 1)						($690,541)				
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		($690,541)						
(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	$7,298,921	$1,216,487	# 0.0000	$0	$0	# 6.0000	$7,298,921	$1,216,487
(ii) Comm./Comp.	# 3	$1,577,837	$525,946	# 0.0000	$0	$0	# 3.0000	$1,577,837	$525,946
(iii) Total	# 9	$8,876,758	$986,306	# 0.0000	$0	$0	# 9.0000	$8,876,758	$986,306
(iv) Average Severity before Adjustment									$986,306
(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
(i) Total	# 8	13,414,216	# 66	14,376,552	# 74	27,790,768	# 2	3,735,324	# 76	31,526,092
(ii) Average		$1,676,777		$217,827		$375,551		$1,867,662		$414,817
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$1,676,777		$217,827						
(ii) Difference (Col. 2 minus Col. 1)						($1,458,950)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Total	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$1,867,662		$1,867,662						
(ii) C/C Difference		$0		($1,458,950)						
(iii) (e-i) + (e-ii)		$1,867,662		$408,711						
(iv) Total (d-ii) x (e-iii)		$403,819		$729,053						
(v) Total of (e-iv)								$1,132,872		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$13,414,216	$1,676,777	# 0.2162	$403,819	$1,867,662	# 8.2162	$13,818,035	$1,681,800
(ii) Comm./Comp.	# 66	$14,376,552	$217,827	# 1.7838	$729,053	$408,711	# 67.7838	$15,105,605	$222,850
(iii) Total	# 74	$27,790,768	$375,551	# 2.0000	$1,132,872	$566,436	# 76.0000	$28,923,640	$380,574
(iv) Average Severity before Adjustment									$414,817
(v) Impact									($34,243)

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
(i) Total	# 24	21,429,113	# 14	3,708,670	# 38	25,137,783	# 0	-	# 38	25,137,783
(ii) Average		$892,880		$264,905		$661,521		$0		$661,521
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		$892,880		$264,905						
(ii) Difference (Col. 2 minus Col. 1)						($627,975)				
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		($627,975)						
(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	$21,429,113	$892,880	# 0.0000	$0	$0	# 24.0000	$21,429,113	$892,880
(ii) Comm./Comp.	# 14	$3,708,670	$264,905	# 0.0000	$0	$0	# 14.0000	$3,708,670	$264,905
(iii) Total	# 38	$25,137,783	$661,521	# 0.0000	$0	$0	# 38.0000	$25,137,783	$661,521
(iv) Average Severity before Adjustment									$661,521
(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
(i) Total	# 4	6,601,055	# 20	5,247,588	# 24	11,848,642	# 0	-	# 24	11,848,642
(ii) Average		$1,650,264		$262,379		$493,693		$0		$493,693
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		$1,650,264		$262,379						
(ii) Difference (Col. 2 minus Col. 1)						($1,387,884)				
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		($1,387,884)						
(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	$6,601,055	$1,650,264	# 0.0000	$0	$0	# 4.0000	$6,601,055	$1,650,264
(ii) Comm./Comp.	# 20	$5,247,588	$262,379	# 0.0000	$0	$0	# 20.0000	$5,247,588	$262,379
(iii) Total	# 24	$11,848,642	$493,693	# 0.0000	$0	$0	# 24.0000	$11,848,642	$493,693
(iv) Average Severity before Adjustment									$493,693
(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
(i) Total	# 3	3,138,466	# 13	2,591,089	# 16	5,729,555	# 0	-	# 16	5,729,555
(ii) Average		$1,046,155		$199,315		$358,097		$0		$358,097
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		$1,046,155		$199,315						
(ii) Difference (Col. 2 minus Col. 1)						($846,841)				
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		($846,841)						
(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	$3,138,466	$1,046,155	# 0.0000	$0	$0	# 3.0000	$3,138,466	$1,046,155
(ii) Comm./Comp.	# 13	$2,591,089	$199,315	# 0.0000	$0	$0	# 13.0000	$2,591,089	$199,315
(iii) Total	# 16	$5,729,555	$358,097	# 0.0000	$0	$0	# 16.0000	$5,729,555	$358,097
(iv) Average Severity before Adjustment									$358,097
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- 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
(i) Total	# 6	742,019	# 3	-	# 9	742,019	# 0	-	# 9	742,019
(ii) Average		$123,670		$0		$82,447		$0		$82,447
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		$123,670		$0						
(ii) Difference (Col. 2 minus Col. 1)						($123,670)				
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		($123,670)						
(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	$742,019	$123,670	# 0.0000	$0	$0	# 6.0000	$742,019	$123,670
(ii) Comm./Comp.	# 3	$0	$0	# 0.0000	$0	$0	# 3.0000	$0	$0
(iii) Total	# 9	$742,019	$82,447	# 0.0000	$0	$0	# 9.0000	$742,019	$82,447
(iv) Average Severity before Adjustment									$82,447
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- 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
(i) Total	# 8	1,172,160	# 66	810,683	# 74	1,982,843	# 2	787,384	# 76	2,770,227
(ii) Average		$146,520		$12,283		$26,795		$393,692		$36,450
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$146,520		$12,283						
(ii) Difference (Col. 2 minus Col. 1)						($134,237)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Number	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$393,692		$393,692						
(ii) C/C Difference		$0		($134,237)						
(iii) (e-i) + (e-ii)		$393,692		$259,455						
(iv) Total (d-ii) x (e-iii)		$85,123		$462,812						
(v) Total of (e-iv)								$547,934		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$1,172,160	$146,520	# 0.2162	$85,123	$393,692	# 8.2162	$1,257,283	$153,025
(ii) Comm./Comp.	# 66	$810,683	$12,283	# 1.7838	$462,812	$259,455	# 67.7838	$1,273,495	$18,788
(iii) Total	# 74	$1,982,843	$26,795	# 2.0000	$547,934	$273,967	# 76.0000	$2,530,778	$33,300
(iv) Average Severity before Adjustment									$36,450
(v) Impact									($3,151)

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- 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
(i) Total	# 24	602,692	# 14	69,558	# 38	672,250	# 0	-	# 38	672,250
(ii) Average		$25,112		$4,968		$17,691		$0		$17,691
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		$25,112		$4,968						
(ii) Difference (Col. 2 minus Col. 1)						($20,144)				
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		($20,144)						
(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	$602,692	$25,112	# 0.0000	$0	$0	# 24.0000	$602,692	$25,112
(ii) Comm./Comp.	# 14	$69,558	$4,968	# 0.0000	$0	$0	# 14.0000	$69,558	$4,968
(iii) Total	# 38	$672,250	$17,691	# 0.0000	$0	$0	# 38.0000	$672,250	$17,691
(iv) Average Severity before Adjustment									$17,691
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- 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
(i) Total	# 4	687,188	# 20	165,501	# 24	852,689	# 0	-	# 24	852,689
(ii) Average		$171,797		$8,275		$35,529		$0		$35,529
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		$171,797		$8,275						
(ii) Difference (Col. 2 minus Col. 1)						($163,522)				
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		($163,522)						
(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	$687,188	$171,797	# 0.0000	$0	$0	# 4.0000	$687,188	$171,797
(ii) Comm./Comp.	# 20	$165,501	$8,275	# 0.0000	$0	$0	# 20.0000	$165,501	$8,275
(iii) Total	# 24	$852,689	$35,529	# 0.0000	$0	$0	# 24.0000	$852,689	$35,529
(iv) Average Severity before Adjustment									$35,529
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

State O. D. Severity- 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
(i) Total	# 3	225,291	# 13	161,296	# 16	386,587	# 0	-	# 16	386,587
(ii) Average		$75,097		$12,407		$24,162		$0		$24,162
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		$75,097		$12,407						
(ii) Difference (Col. 2 minus Col. 1)						($62,690)				
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		($62,690)						
(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	$225,291	$75,097	# 0.0000	$0	$0	# 3.0000	$225,291	$75,097
(ii) Comm./Comp.	# 13	$161,296	$12,407	# 0.0000	$0	$0	# 13.0000	$161,296	$12,407
(iii) Total	# 16	$386,587	$24,162	# 0.0000	$0	$0	# 16.0000	$386,587	$24,162
(iv) Average Severity before Adjustment									$24,162
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Underground Antrhacite

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
(i) Total	# 6	1,245,818	# 3	90,161	# 9	1,335,978	# 0	-	# 9	1,335,978
(ii) Average		$207,636		$30,054		$148,442		$0		$148,442
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		$207,636		$30,054						
(ii) Difference (Col. 2 minus Col. 1)						($177,583)				
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		($177,583)						
(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	$1,245,818	$207,636	# 0.0000	$0	$0	# 6.0000	$1,245,818	$207,636
(ii) Comm./Comp.	# 3	$90,161	$30,054	# 0.0000	$0	$0	# 3.0000	$90,161	$30,054
(iii) Total	# 9	$1,335,978	$148,442	# 0.0000	$0	$0	# 9.0000	$1,335,978	$148,442
(iv) Average Severity before Adjustment									$148,442
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Underground Bituminous

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
(i) Total	# 8	2,881,046	# 66	3,656,418	# 74	6,537,464	# 2	699,700	# 76	7,237,164
(ii) Average		$360,131		$55,400		$88,344		$349,850		$95,226
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$360,131		$55,400						
(ii) Difference (Col. 2 minus Col. 1)						($304,730)				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Number	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$349,850		$349,850						
(ii) C/C Difference		$0		($304,730)						
(iii) (e-i) + (e-ii)		$349,850		$45,120						
(iv) Total (d-ii) x (e-iii)		$75,643		$80,484						
(v) Total of (e-iv)								$156,127		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$2,881,046	$360,131	# 0.2162	$75,643	$349,850	# 8.2162	$2,956,689	$359,860
(ii) Comm./Comp.	# 66	$3,656,418	$55,400	# 1.7838	$80,484	$45,120	# 67.7838	$3,736,902	$55,130
(iii) Total	# 74	$6,537,464	$88,344	# 2.0000	$156,127	$78,063	# 76.0000	$6,693,590	$88,074
(iv) Average Severity before Adjustment									$95,226
(v) Impact									($7,152)

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
(i) Total	# 24	4,058,310	# 14	872,233	# 38	4,930,544	# 0	-	# 38	4,930,544
(ii) Average		$169,096		$62,302		$129,751		$0		$129,751
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		$169,096		$62,302						
(ii) Difference (Col. 2 minus Col. 1)						($106,794)				
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		($106,794)						
(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	$4,058,310	$169,096	# 0.0000	$0	$0	# 24.0000	$4,058,310	$169,096
(ii) Comm./Comp.	# 14	$872,233	$62,302	# 0.0000	$0	$0	# 14.0000	$872,233	$62,302
(iii) Total	# 38	$4,930,544	$129,751	# 0.0000	$0	$0	# 38.0000	$4,930,544	$129,751
(iv) Average Severity before Adjustment									$129,751
(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
(i) Total	# 4	1,215,473	# 20	944,289	# 24	2,159,762	# 0	-	# 24	2,159,762
(ii) Average		$303,868		$47,214		$89,990		$0		$89,990
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		$303,868		$47,214						
(ii) Difference (Col. 2 minus Col. 1)						($256,654)				
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		($256,654)						
(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	$1,215,473	$303,868	# 0.0000	$0	$0	# 4.0000	$1,215,473	$303,868
(ii) Comm./Comp.	# 20	$944,289	$47,214	# 0.0000	$0	$0	# 20.0000	$944,289	$47,214
(iii) Total	# 24	$2,159,762	$89,990	# 0.0000	$0	$0	# 24.0000	$2,159,762	$89,990
(iv) Average Severity before Adjustment									$89,990
(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
(i) Total	# 3	759,209	# 13	240,445	# 16	999,654	# 0	-	# 16	999,654
(ii) Average		$253,070		$18,496		$62,478		$0		$62,478
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		$253,070		$18,496						
(ii) Difference (Col. 2 minus Col. 1)						($234,574)				
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		($234,574)						
(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	$759,209	$253,070	# 0.0000	$0	$0	# 3.0000	$759,209	$253,070
(ii) Comm./Comp.	# 13	$240,445	$18,496	# 0.0000	$0	$0	# 13.0000	$240,445	$18,496
(iii) Total	# 16	$999,654	$62,478	# 0.0000	$0	$0	# 16.0000	$999,654	$62,478
(iv) Average Severity before Adjustment									$62,478
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 6	4	# 3	1,192,153	# 9	1,192,157	# 0	-	# 9	1,192,157
(ii) Average		$1		$397,384		$132,462		$0		$132,462
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		$397,384						
(ii) Difference (Col. 2 minus Col. 1)						$397,384				
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		$397,384						
(iii) (e-i) + (e-ii)		$0		$397,384						
(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	$4	$1	# 0.0000	$0	$0	# 6.0000	$4	$1
(ii) Comm./Comp.	# 3	$1,192,153	$397,384	# 0.0000	$0	$0	# 3.0000	$1,192,153	$397,384
(iii) Total	# 9	$1,192,157	$132,462	# 0.0000	$0	$0	# 9.0000	$1,192,157	$132,462
(iv) Average Severity before Adjustment									$132,462
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 8	760	# 66	19,384,958	# 74	19,385,718	# 2	-	# 76	19,385,718
(ii) Average		$95		$293,711		$261,969		$0		$255,075
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$95		$293,711						
(ii) Difference (Col. 2 minus Col. 1)						$293,617				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Number	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$0		$0						
(ii) C/C Difference		$0		$293,617						
(iii) (e-i) + (e-ii)		$0		$293,617						
(iv) Total (d-ii) x (e-iii)		$0		$523,748						
(v) Total of (e-iv)								$523,748		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$760	$95	# 0.2162	$0	$0	# 8.2162	$760	$92
(ii) Comm./Comp.	# 66	$19,384,958	$293,711	# 1.7838	$523,748	$293,617	# 67.7838	$19,908,706	$293,709
(iii) Total	# 74	$19,385,718	$261,969	# 2.0000	$523,748	$261,874	# 76.0000	$19,909,466	$261,967
(iv) Average Severity before Adjustment									$255,075
(v) Impact									$6,891

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 24	50,378	# 14	2,915,182	# 38	2,965,560	# 0	-	# 38	2,965,560
(ii) Average		$2,099		$208,227		$78,041		$0		$78,041
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		$2,099		$208,227						
(ii) Difference (Col. 2 minus Col. 1)						$206,128				
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		$206,128						
(iii) (e-i) + (e-ii)		$0		$206,128						
(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	$50,378	$2,099	# 0.0000	$0	$0	# 24.0000	$50,378	$2,099
(ii) Comm./Comp.	# 14	$2,915,182	$208,227	# 0.0000	$0	$0	# 14.0000	$2,915,182	$208,227
(iii) Total	# 38	$2,965,560	$78,041	# 0.0000	$0	$0	# 38.0000	$2,965,560	$78,041
(iv) Average Severity before Adjustment									$78,041
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 4	1	# 20	5,235,313	# 24	5,235,313	# 0	-	# 24	5,235,313
(ii) Average		$0		$261,766		$218,138		$0		$218,138
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		$261,766						
(ii) Difference (Col. 2 minus Col. 1)						$261,765				
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		$261,765						
(iii) (e-i) + (e-ii)		$0		$261,765						
(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	$5,235,313	$261,766	# 0.0000	$0	$0	# 20.0000	$5,235,313	$261,766
(iii) Total	# 24	$5,235,313	$218,138	# 0.0000	$0	$0	# 24.0000	$5,235,313	$218,138
(iv) Average Severity before Adjustment									$218,138
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 3	5	# 13	4,064,365	# 16	4,064,370	# 0	-	# 16	4,064,370
(ii) Average		$2		$312,643		$254,023		$0		$254,023
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		$312,643						
(ii) Difference (Col. 2 minus Col. 1)						$312,642				
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		$312,642						
(iii) (e-i) + (e-ii)		$0		$312,642						
(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	$4,064,365	$312,643	# 0.0000	$0	$0	# 13.0000	$4,064,365	$312,643
(iii) Total	# 16	$4,064,370	$254,023	# 0.0000	$0	$0	# 16.0000	$4,064,370	$254,023
(iv) Average Severity before Adjustment									$254,023
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 6	73,118	# 3	1,192,153	# 9	1,265,270	# 0	-	# 9	1,265,270
(ii) Average		$12,186		$397,384		$140,586		$0		$140,586
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		$12,186		$397,384						
(ii) Difference (Col. 2 minus Col. 1)						$385,198				
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		$385,198						
(iii) (e-i) + (e-ii)		$0		$385,198						
(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	$73,118	$12,186	# 0.0000	$0	$0	# 6.0000	$73,118	$12,186
(ii) Comm./Comp.	# 3	$1,192,153	$397,384	# 0.0000	$0	$0	# 3.0000	$1,192,153	$397,384
(iii) Total	# 9	$1,265,270	$140,586	# 0.0000	$0	$0	# 9.0000	$1,265,270	$140,586
(iv) Average Severity before Adjustment									$140,586
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 8	108,640	# 66	19,882,116	# 74	19,990,756	# 2	5,453	# 76	19,996,209
(ii) Average		$13,580		$301,244		$270,145		$2,727		$263,108
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$13,580		$301,244						
(ii) Difference (Col. 2 minus Col. 1)						$287,664				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Number	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$2,727		$2,727						
(ii) C/C Difference		$0		$287,664						
(iii) (e-i) + (e-ii)		$2,727		$290,391						
(iv) Total (d-ii) x (e-iii)		$590		$517,995						
(v) Total of (e-iv)								$518,584		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$108,640	$13,580	# 0.2162	$590	$2,727	# 8.2162	$109,229	$13,294
(ii) Comm./Comp.	# 66	$19,882,116	$301,244	# 1.7838	$517,995	$290,391	# 67.7838	$20,400,111	$300,959
(iii) Total	# 74	$19,990,756	$270,145	# 2.0000	$518,584	$259,292	# 76.0000	$20,509,340	$269,860
(iv) Average Severity before Adjustment									$263,108
(v) Impact									$6,752

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 24	168,604	# 14	2,915,182	# 38	3,083,786	# 0	-	# 38	3,083,786
(ii) Average		$7,025		$208,227		$81,152		$0		$81,152
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		$7,025		$208,227						
(ii) Difference (Col. 2 minus Col. 1)						$201,202				
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		$201,202						
(iii) (e-i) + (e-ii)		$0		$201,202						
(iv) Total		$0		$0						
(d-ii) x (e-iii)										
(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	$168,604	$7,025	# 0.0000	$0	$0	# 24.0000	$168,604	$7,025
(ii) Comm./Comp.	# 14	$2,915,182	$208,227	# 0.0000	$0	$0	# 14.0000	$2,915,182	$208,227
(iii) Total	# 38	$3,083,786	$81,152	# 0.0000	$0	$0	# 38.0000	$3,083,786	$81,152
(iv) Average Severity before Adjustment									$81,152
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 4	91,596	# 20	5,313,207	# 24	5,404,803	# 0	-	# 24	5,404,803
(ii) Average		$22,899		$265,660		$225,200		$0		$225,200
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		$22,899		$265,660						
(ii) Difference (Col. 2 minus Col. 1)						$242,761				
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		$242,761						
(iii) (e-i) + (e-ii)		$0		$242,761						
(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	$91,596	$22,899	# 0.0000	$0	$0	# 4.0000	$91,596	$22,899
(ii) Comm./Comp.	# 20	$5,313,207	$265,660	# 0.0000	$0	$0	# 20.0000	$5,313,207	$265,660
(iii) Total	# 24	$5,404,803	$225,200	# 0.0000	$0	$0	# 24.0000	$5,404,803	$225,200
(iv) Average Severity before Adjustment									$225,200
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

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
(i) Total	# 3	53,840	# 13	4,196,322	# 16	4,250,162	# 0	-	# 16	4,250,162
(ii) Average		$17,947		$322,794		$265,635		$0		$265,635
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		$17,947		$322,794						
(ii) Difference (Col. 2 minus Col. 1)						$304,847				
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		$304,847						
(iii) (e-i) + (e-ii)		$0		$304,847						
(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	$53,840	$17,947	# 0.0000	$0	$0	# 3.0000	$53,840	$17,947
(ii) Comm./Comp.	# 13	$4,196,322	$322,794	# 0.0000	$0	$0	# 13.0000	$4,196,322	$322,794
(iii) Total	# 16	$4,250,162	$265,635	# 0.0000	$0	$0	# 16.0000	$4,250,162	$265,635
(iv) Average Severity before Adjustment									$265,635
(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
(i) Total	# 6	402,200	# 3	1,260,796	# 9	1,662,996	# 0	-	# 9	1,662,996
(ii) Average		$67,033		$420,265		$184,777		$0		$184,777
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		$67,033		$420,265						
(ii) Difference (Col. 2 minus Col. 1)						$353,232				
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		$353,232						
(iii) (e-i) + (e-ii)		$0		$353,232						
(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	$402,200	$67,033	# 0.0000	$0	$0	# 6.0000	$402,200	$67,033
(ii) Comm./Comp.	# 3	$1,260,796	$420,265	# 0.0000	$0	$0	# 3.0000	$1,260,796	$420,265
(iii) Total	# 9	$1,662,996	$184,777	# 0.0000	$0	$0	# 9.0000	$1,662,996	$184,777
(iv) Average Severity before Adjustment									$184,777
(v) Impact									$0

Source: Exhibit IX-A

Coal Mine Compensation Rating Bureau

Federal Excess After Social Security and Private Pension 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
(i) Total	# 8	523,605	# 66	22,113,682	# 74	22,637,287	# 2	241,415	# 76	22,878,703
(ii) Average		$65,451		$335,056		$305,909		$120,708		$301,036
b. Percentage of Awarded and Commuted/Compromised within Total Awarded										
(i) Number	# 8		# 66		# 74					
(ii) Percentage	10.8108%		89.1892%		100%					
c. Difference Between Average Awarded Permanent Claim and Average Commuted/Compromised Claim										
(i) Average		$65,451		$335,056						
(ii) Difference (Col. 2 minus Col. 1)						$269,605				
d. Pending claims Split into Awarded and Commuted/Comp using Awarded Mix										
(i) Awarded Mix	10.8108%		89.1892%							
(ii) Number	# 0.2162		# 1.7838				# 2			
e. Pending Average from Above; Commuted and Compromised less Awarded Difference										
(i) Pending Ave.		$120,708		$120,708						
(ii) C/C Difference		$0		$269,605						
(iii) (e-i) + (e-ii)		$120,708		$390,313						
(iv) Total (d-ii) x (e-iii)		$26,099		$696,234						
(v) Total of (e-iv)								$722,333		

f. Calculation of Impact of Adjustment

	Awarded			Pending			Total		
	Count	Amount	Average	Count	Amount	Average	Count	Amount	Average
(i) Permanent	# 8	$523,605	$65,451	# 0.2162	$26,099	$120,708	# 8.2162	$549,704	$66,905
(ii) Comm./Comp.	# 66	$22,113,682	$335,056	# 1.7838	$696,234	$390,313	# 67.7838	$22,809,916	$336,510
(iii) Total	# 74	$22,637,287	$305,909	# 2.0000	$722,333	$361,166	# 76.0000	$23,359,620	$307,363
(iv) Average Severity before Adjustment									$301,036
(v) Impact									$6,328

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
(i) Total	# 24	361,937	# 14	3,438,158	# 38	3,800,095	# 0	-	# 38	3,800,095
(ii) Average		$15,081		$245,583		$100,003		$0		$100,003
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		$15,081		$245,583						
(ii) Difference (Col. 2 minus Col. 1)						$230,502				
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		$230,502						
(iii) (e-i) + (e-ii)		$0		$230,502						
(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	$361,937	$15,081	# 0.0000	$0	$0	# 24.0000	$361,937	$15,081
(ii) Comm./Comp.	# 14	$3,438,158	$245,583	# 0.0000	$0	$0	# 14.0000	$3,438,158	$245,583
(iii) Total	# 38	$3,800,095	$100,003	# 0.0000	$0	$0	# 38.0000	$3,800,095	$100,003
(iv) Average Severity before Adjustment									$100,003
(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
(i) Total	# 4	411,711	# 20	6,010,033	# 24	6,421,744	# 0	-	# 24	6,421,744
(ii) Average		$102,928		$300,502		$267,573		$0		$267,573
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		$102,928		$300,502						
(ii) Difference (Col. 2 minus Col. 1)						$197,574				
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		$197,574						
(iii) (e-i) + (e-ii)		$0		$197,574						
(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	$411,711	$102,928	# 0.0000	$0	$0	# 4.0000	$411,711	$102,928
(ii) Comm./Comp.	# 20	$6,010,033	$300,502	# 0.0000	$0	$0	# 20.0000	$6,010,033	$300,502
(iii) Total	# 24	$6,421,744	$267,573	# 0.0000	$0	$0	# 24.0000	$6,421,744	$267,573
(iv) Average Severity before Adjustment									$267,573
(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
(i) Total	# 3	160,456	# 13	4,334,398	# 16	4,494,854	# 0	-	# 16	4,494,854
(ii) Average		$53,485		$333,415		$280,928		$0		$280,928
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		$53,485		$333,415						
(ii) Difference (Col. 2 minus Col. 1)						$279,930				
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		$279,930						
(iii) (e-i) + (e-ii)		$0		$279,930						
(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	$160,456	$53,485	# 0.0000	$0	$0	# 3.0000	$160,456	$53,485
(ii) Comm./Comp.	# 13	$4,334,398	$333,415	# 0.0000	$0	$0	# 13.0000	$4,334,398	$333,415
(iii) Total	# 16	$4,494,854	$280,928	# 0.0000	$0	$0	# 16.0000	$4,494,854	$280,928
(iv) Average Severity before Adjustment									$280,928
(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	$518.31	680.84	480.95	520.79	5.1817%
	1991	534.55	705.35	495.31	537.27	5.1817%
	1992	551.29	730.74	510.09	554.27	5.1817%
	1993	568.56	757.05	525.31	571.81	5.1817%
	1994	586.37	784.30	540.99	589.90	5.1817%
	1995	604.73	812.54	557.14	608.56	5.1817%
Mixed Pre & Post Act 57:	1996	623.68	841.79	573.77	627.82	3.3220% ***
Post Act 57:	1997	643.21 *	872.09 *	590.89 *	647.68	0.0%
	1998	663.36 *	903.49 *	608.53 *	668.17	0.0%
	1999	684.14 *	936.01 *	626.69 *	689.32	0.0%
	2000	705.57 *	969.71 *	645.40 *	711.13	0.0%
	2001	727.67 *	1,004.62 *	664.66 *	733.63	0.0%
	2002	750.46 *	1,040.78 *	684.50 *	756.84	0.0%
	2003	773.97 *	1,078.25 *	704.93 *	780.78	0.0%
	2004	798.21 *	1,117.07 *	725.97 *	805.49	0.0%
	2005	823.22 *	1,157.28 *	747.63 *	830.97	0.0%
	2006	849.00 *	1,198.95 *	769.95 *	857.27	0.0%
	2007	875.60 *	1,242.11 *	792.93 *	884.39	0.0%
	2008	903.02 *	1,286.83 *	816.60 *	912.37	0.0%
	2009	931.31 *	1,333.15 *	840.97 *	941.24	0.0%
	2010	960.48 *	1,381.14 *	866.07 *	971.02	0.0%
	2011	990.57 *	1,430.87 *	891.92 *	1,001.74	0.0%
	2012	1,021.59 *	1,482.38 *	918.54 *	1,033.44	0.0%
	2013	1,053.59 *	1,535.74 *	945.95 *	1,066.14	0.0%
	2014	1,086.60 *	1,591.03 *	974.19 *	1,099.87	0.0%
	2015	1,120.63 *	1,648.31 *	1,003.26 *	1,134.67	0.0%
	2016	1,155.73 *	1,707.65 *	1,033.21 *	1,170.57	0.0%
	2017	1,191.94 *	1,769.12 *	1,064.04 *	1,207.61	0.0%
	2018	1,229.27 *	1,832.81 *	1,095.80 *	1,245.82	0.0%
	2019	1,267.78 *	1,898.79 *	1,128.51 *	1,285.24	0.0%
	2020	1,307.49 *	1,967.15 *	1,162.19 *	1,325.90	0.0%
	2021	1,348.44 *	2,037.97 *	1,196.88 *	1,367.85	0.0%
	2022	1,390.68 *	2,111.33 *	1,232.60 *	1,411.13	0.0%
	Average:					1.0428%
	Projected to:					
Pre Act 57:	4/1/2025	1,590.62	2,270.60	1,458.73	1,611.38	
Post Act 57:	4/1/2025	1,508.20 *	2,152.95 *	1,383.14 *	1,527.88	

b) Conversion Calculation:

Conversion Factor:		5.1817%	5.1817%	5.1817%	5.1817%	
						Note:
Post Act 57:	1996	$591.36	$798.17	$544.04	$595.29	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1997	609.88	826.90	560.27	614.12	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1998	628.99	856.67	577.00	633.55	Pre Act 57 times (1.0 - Factor)
Post Act 57:	1999	648.69	887.51	594.22	653.60	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2000	669.01	919.46	611.95	674.28	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2001	689.96	952.56	630.22	695.61	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2002	711.58	986.85	649.03	717.62	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2003	733.86	1,022.38	668.40	740.33	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2004	756.85	1,059.19	688.35	763.75	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2005	780.56	1,097.32	708.89	787.92	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2006	805.01	1,136.82	730.05	812.85	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2007	830.22	1,177.75	751.84	838.56	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2008	856.23	1,220.15	774.28	865.10	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2009	883.05	1,264.07	797.39	892.47	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2010	910.71	1,309.58	821.19	920.71	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2011	939.24	1,356.72	845.70	949.84	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2012	968.66	1,405.57	870.94	979.89	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2013	999.00	1,456.17	896.94	1,010.89	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2014	1,030.29	1,508.59	923.71	1,042.88	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2015	1,062.56	1,562.90	951.28	1,075.88	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2016	1,095.85	1,619.16	979.67	1,109.92	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2017	1,130.17	1,677.45	1,008.91	1,145.03	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2018	1,165.57	1,737.84	1,039.02	1,181.26	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2019	1,202.08	1,800.40	1,070.03	1,218.64	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2020	1,239.74	1,865.22	1,101.97	1,257.20	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2021	1,278.57	1,932.37	1,134.86	1,296.97	Pre Act 57 times (1.0 - Factor)
Post Act 57:	2022	1,318.62	2,001.93	1,168.73	1,338.01	Pre Act 57 times (1.0 - Factor)
Post Act 57:	4/1/2025	1,508.20	2,152.95	1,383.14	1,527.88	Pre Act 57 times (1.0 - Factor)

* Post Act 57 for 1997-2022 and Projected to 04/01/2025
** 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 04/01/2025 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	518.31
1991	436.00	0.00					510.68	510.68	534.55
1992	455.00	608.33	608.33	1.3370		608.33		608.33	551.29
1993	475.00	419.67	419.67	0.8835	Low		556.37	556.37	568.56
1994	493.00	0.00					577.45	577.45	586.37
1995	509.00	0.00					596.19	596.19	604.73
1996	527.00	0.00					617.27	617.27	623.68
1997	542.00	0.00					634.84	634.84	643.21
1998	561.00	0.00					657.10	657.10	663.36
1999	588.00	501.00	528.38	0.8986		528.38		528.38	684.14
2000	611.00	0.00					715.66	715.66	705.57
2001	644.00	0.00					754.31	754.31	727.67
2002	662.00	0.00					775.40	775.40	750.46
2003	675.00	0.00					790.62	790.62	773.97
2004	690.00	0.00					808.19	808.19	798.21
2005	716.00	0.00					838.65	838.65	823.22
2006	745.00	0.00					872.61	872.61	849.00
2007	779.00	0.00					912.44	912.44	875.60
2008	807.00	0.00					945.23	945.23	903.02
2009	836.00	0.00					979.20	979.20	931.31
2010	845.00	0.00					989.74	989.74	960.48
2011	858.00	1400.00	1476.51	1.7209	High		1004.97	1004.97	990.57
2012	888.00	0.00					1040.11	1040.11	1021.59
2013	917.00	1009.57	1064.74	1.1611		1064.74		1064.74	1053.59
2014	932.00	0.00					1091.65	1091.65	1086.60
2015	951.00	0.00					1113.90	1113.90	1120.63
2016	978.00	0.00					1145.53	1145.53	1155.73
2017	995.00	0.00					1165.44	1165.44	1191.94
2018	1025.00	0.00					1200.58	1200.58	1229.27
2019	1049.00	0.00					1228.69	1228.69	1267.78
2020	1081.00	0.00					1266.17	1266.17	1307.49
2021	1130.00	0.00					1323.56	1323.56	1348.44
2022	1205.00	0.00					1411.41	1411.41	1390.68
2023	1273.00								
			High	1.7209					
			Low	0.8835					
Average Ratio Claimant/State - High & Low				1.1713					

Projected	
2024	1,324.00
2025	1,370.00
2026	1,413.00
4/1/2025	1,358.00

Projected Avg. Wage at Claimants' Level

1,358.00 * 1.1713 = $1,590.62

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	680.84
1991	436.00	827.00	827.00	1.8968		827.00		827.00	705.35
1992	455.00	652.04	652.04	1.4331		652.04		652.04	730.74
1993	475.00	729.40	729.40	1.5356		729.40		729.40	757.05
1994	493.00	1043.85	1043.85	2.1173		1043.85		1043.85	784.30
1995	509.00	1525.00	1525.00	2.9961	High		851.06	851.06	812.54
1996	527.00	706.64	706.64	1.3409		706.64		706.64	841.79
1997	542.00	672.19	708.92	1.3080		708.92		708.92	872.09
1998	561.00	1058.08	1115.90	1.9891		1115.90		1115.90	903.49
1999	588.00	675.00	711.89	1.2107		711.89		711.89	936.01
2000	611.00	901.03	950.27	1.5553		950.27		950.27	969.71
2001	644.00	604.79	637.84	0.9904	Low		1076.78	1076.78	1004.62
2002	662.00	800.15	843.88	1.2747		843.88		843.88	1040.78
2003	675.00	1324.39	1396.77	2.0693		1396.77		1396.77	1078.25
2004	690.00	876.68	924.59	1.3400		924.59		924.59	1117.07
2005	716.00	912.44	962.30	1.3440		962.30		962.30	1157.28
2006	745.00	0.00					1245.66	1245.66	1198.95
2007	779.00	0.00					1302.50	1302.50	1242.11
2008	807.00	1164.02	1227.63	1.5212		1227.63		1227.63	1286.83
2009	836.00	0.00					1397.81	1397.81	1333.15
2010	845.00	0.00					1412.86	1412.86	1381.14
2011	858.00	1269.97	1339.37	1.5610		1339.37		1339.37	1430.87
2012	888.00	1326.96	1399.48	1.5760		1399.48		1399.48	1482.38
2013	917.00	1500.49	1582.49	1.7257		1582.49		1582.49	1535.74
2014	932.00	1405.33	1482.13	1.5903		1482.13		1482.13	1591.03
2015	951.00	1841.04	1941.65	2.0417		1941.65		1941.65	1648.31
2016	978.00	1566.91	1652.54	1.6897		1652.54		1652.54	1707.65
2017	995.00	0.00					1663.66	1663.66	1769.12
2018	1025.00	2108.50	2223.73	2.1695		2223.73		2223.73	1832.81
2019	1049.00	1864.38	1966.27	1.8744		1966.27		1966.27	1898.79
2020	1081.00	2283.13	2407.90	2.2275		2407.90		2407.90	1967.15
2021	1130.00	1657.92	1748.52	1.5474		1748.52		1748.52	2037.97
2022	1205.00	0.00					2014.78	2014.78	2111.33
2023	1273.00								
			High	2.9961					
			Low	0.9904					
Average Ratio Claimant/State - High & Low				1.6720					

Projected	
2024	1,324.00
2025	1,370.00
2026	1,413.00
4/1/2025	1,358.00

Projected Avg. Wage at Claimants' Level

1,358.00 * 1.672 = $2,270.60

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	480.95
1991	436.00	492.75	492.75	1.1302	492.75		492.75	495.31
1992	455.00	565.40	565.40	1.2426	565.40		565.40	510.09
1993	475.00	548.61	548.61	1.1550	548.61		548.61	525.31
1994	493.00	543.95	543.95	1.1033	543.95		543.95	540.99
1995	509.00	651.71	651.71	1.2804	651.71		651.71	557.14
1996	527.00	453.71	453.71	0.8609	453.71		453.71	573.77
1997	542.00	530.26	559.24	1.0318	559.24		559.24	590.89
1998	561.00	744.92	785.63	1.4004	785.63		785.63	608.53
1999	588.00	571.47	602.70	1.0250	602.70		602.70	626.69
2000	611.00	133.68	140.99	0.2307 Low		656.32	656.32	645.40
2001	644.00	517.49	545.77	0.8475	545.77		545.77	664.66
2002	662.00	589.00	621.19	0.9384	621.19		621.19	684.50
2003	675.00	633.40	668.01	0.9897	668.01		668.01	704.93
2004	690.00	1568.35	1654.06	2.3972 High		741.18	741.18	725.97
2005	716.00	575.91	607.38	0.8483	607.38		607.38	747.63
2006	745.00	0.00				800.26	800.26	769.95
2007	779.00	733.08	773.14	0.9925	773.14		773.14	792.93
2008	807.00	0.00				866.86	866.86	816.60
2009	836.00	0.00				898.01	898.01	840.97
2010	845.00	0.00				907.68	907.68	866.07
2011	858.00	466.84	492.35	0.5738	492.35		492.35	891.92
2012	888.00	0.00				953.87	953.87	918.54
2013	917.00	0.00				985.02	985.02	945.95
2014	932.00	0.00				1001.13	1001.13	974.19
2015	951.00	0.00				1021.54	1021.54	1003.26
2016	978.00	1419.00	1496.55	1.5302	1496.55		1496.55	1033.21
2017	995.00	0.00				1068.80	1068.80	1064.04
2018	1025.00	0.00				1101.03	1101.03	1095.80
2019	1049.00	0.00				1126.81	1126.81	1128.51
2020	1081.00	0.00				1161.18	1161.18	1162.19
2021	1130.00	0.00				1213.81	1213.81	1196.88
2022	1205.00	0.00				1294.38	1294.38	1232.60
2023	1273.00							
			High	2.3972				
			Low	0.2307				
Average Ratio Claimant/State - High & Low				1.0742				

Projected	
2024	1,324.00
2025	1,370.00
2026	1,413.00
4/1/2025	1,358.00

Projected Avg. Wage at Claimants' Level

1,358.00 * 1.0742 = $1,458.73

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	520.79
1991	436.00	595.45	595.45	1.3657		595.45		595.45	537.27
1992	455.00	652.89	652.89	1.4349		652.89		652.89	554.27
1993	475.00	705.41	705.41	1.4851	High		563.63	563.63	571.81
1994	493.00	621.91	621.91	1.2615		621.91		621.91	589.90
1995	509.00	477.90	477.90	0.9389		477.90		477.90	608.56
1996	527.00	628.07	644.84	1.2236		644.84		644.84	627.82
1997	542.00	698.16	736.31	1.3585		736.31		736.31	647.68
1998	561.00	500.00	527.32	0.9400		527.32		527.32	668.17
1999	588.00	569.19	600.30	1.0209		600.30		600.30	689.32
2000	611.00	0.00					725.00	725.00	711.13
2001	644.00	0.00					764.16	764.16	733.63
2002	662.00	0.00					785.52	785.52	756.84
2003	675.00	0.00					800.94	800.94	780.78
2004	690.00	0.00					818.74	818.74	805.49
2005	716.00	676.00	712.94	0.9957		712.94		712.94	830.97
2006	745.00	0.00					884.00	884.00	857.27
2007	779.00	0.00					924.35	924.35	884.39
2008	807.00	0.00					957.57	957.57	912.37
2009	836.00	0.00					991.98	991.98	941.24
2010	845.00	0.00					1002.66	1002.66	971.02
2011	858.00	1111.56	1172.31	1.3663		1172.31		1172.31	1001.74
2012	888.00	1157.60	1220.86	1.3748		1220.86		1220.86	1033.44
2013	917.00	0.00					1088.09	1088.09	1066.14
2014	932.00	879.70	927.77	0.9955		927.77		927.77	1099.87
2015	951.00	809.44	853.67	0.8977	Low		1128.44	1128.44	1134.67
2016	978.00	0.00					1160.48	1160.48	1170.57
2017	995.00	0.00					1180.65	1180.65	1207.61
2018	1025.00	0.00					1216.24	1216.24	1245.82
2019	1049.00	0.00					1244.72	1244.72	1285.24
2020	1081.00	0.00					1282.69	1282.69	1325.90
2021	1130.00	0.00					1340.84	1340.84	1367.85
2022	1205.00	0.00					1429.83	1429.83	1411.13
2023	1273.00								
			High	1.4851					
			Low	0.8977					
Average Ratio Claimant/State - High & Low				1.1866					

Projected	
2024	1,324.00
2025	1,370.00
2026	1,413.00
4/1/2025	1,358.00

Projected Avg. Wage at Claimants' Level

1,358.00 * 1.1866 = $1,611.38

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
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%
2023	3.2%
Average All years	2.5%
Average latest 10 years	2.8%
Average latest 5 years	4.1%
Average latest 3 years	5.9%
Selected Annual Change Last Year's Selection was 2.5%	2.5%

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
1994	422		2,123		2,505		60,600	
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%
2024	1,174	5.3%	5,904	5.3%	6,972	5.2%	168,600	5.2%
Average All years		3.5%		3.5%		3.5%		3.5%
Average latest 10 years		3.7%		3.7%		3.8%		3.8%
Average latest 5 years		4.9%		4.9%		4.9%		4.9%
Average latest 3 years		5.7%		5.7%		5.8%		5.7%
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
2024	1,174	Actual	5,904	Actual	6,972	Actual	168,600	Actual
2025	1,203	2.5%	6,052	2.5%	7,146	2.5%	172,800	2.5%
2026	1,233	2.5%	6,203	2.5%	7,325	2.5%	177,100	2.5%
Average Break Point For Policies effective between 4-1-2024 and 4-1-2025	1,196		6,015		7,103		171,800	

Note: Weighted average of the three calendar years: 2024, 2025, 2026.

Weights: 2024	28.125%
2025	68.750%
2026	3.125%
	100.00%

Notes:

The above weights assume 1-year policies effective between 4-1-2024 and 4-1-2025

E.G.: 28.125% of the losses will occur between 4-1-2024 and 12-31-2024.
68.750% of the losses will occur between 1-1-2025 and 12-31-2025.
3.125% of the losses will occur between 1-1-2026 and 3-31-2026.

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 4-1-2025 with a 4-1-2024 filing effective date.)

		Monthly Wages		
	Yearly Maximum	First Break Point	Second Break Point	Third Break Point
Wage Amount:	171,800	1,196	6,015	7,103
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	1,196	804	0	
			90%	32%	15%	
			1,076	257	0	1,334
2	4,000	4,000	1,196	2,804	0	
			90%	32%	15%	
			1,076	897	0	1,974
3	6,000	6,000	1,196	4,804	0	
			90%	32%	15%	
			1,076	1,537	0	2,614
4	8,000	8,000	1,196	6,015	789	
			90%	32%	15%	
			1,076	1,925	118	3,120
5	10,000	10,000	1,196	6,015	2,789	
			90%	32%	15%	
			1,076	1,925	418	3,420
6	12,000	12,000	1,196	6,015	4,789	
			90%	32%	15%	
			1,076	1,925	718	3,720

Notes:
(a) Monthly Wage limited to Monthly Maximum ($171,800/12 = $12,000)
(b) minimum of adjusted monthly wage and $1196
(c) minimum of (adjusted monthly wage less $1196) and $6,015
(d) minimum of (adjusted monthly wage less $1196 less $6,015) and $7,103

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)
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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	1	1	-	-	-	-	-	1.00	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	0.0051	0.0019
Total	1	1	-	-	-	-	-	1.00	-	0.0051	0.0019

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
2003	# 0.0000	$ 1.3543	-	675	1.084	35.6	-
2004	-	1.3453	-	690	1.084	34.6	-
2005	-	1.4176	-	716	1.084	35.1	-
2006	-	1.4425	-	745	1.084	34.4	-
2007	-	1.6625	-	779	1.084	37.9	-
2008	-	2.1367	-	807	1.084	47.0	-
2009	-	1.3359	-	836	1.084	28.3	-
2010	-	1.2996	-	845	1.084	27.3	-
2011	-	1.2579	-	858	1.084	26.0	-
2012	-	1.0293	-	888	1.084	20.6	-
2013	1.0000	0.3819	2.6185	917	1.084	7.4	13.5135
2014	-	0.2588	-	932	1.084	4.9	-
2015	-	0.2543	-	951	1.084	4.7	-
2016	-	0.1638	-	978	1.084	3.0	-
2017	-	0.2524	-	995	1.084	4.5	-
2018	-	0.1833	-	1,025	1.084	3.2	-
2019	-	0.1794	-	1,049	1.084	3.0	-
2020	-	0.2997	-	1,081	1.084	4.9	-
2021	-	0.2325	-	1,130	1.084	3.7	-
2022	0.0019	0.0637	0.0291	1,205	1.084	0.9	0.2059
Total	1.0019	16.5514	0.0605			367.0	0.2730

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
Col.(13): Exh. X-A, Page 3

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: 0.3614

BITUMINOUS UNDERGROUND(0158)

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2005	2	1	1	-	0.30	-	-	1.30	0.70	-	-
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	-	3	-	0.15	0.15	1.15	2.85	-	-
2013	6	1	3	2	0.90	0.10	0.10	2.00	4.00	-	-
2014	5	2	2	1	0.60	0.05	0.05	2.65	2.35	-	-
2015	6	2	-	4	-	0.20	0.20	2.20	3.80	-	-
2016	4	-	-	4	-	0.20	0.20	0.20	3.80	0.0166	0.0060
2017	-	-	-	-	-	-	-	-	-	0.1478	0.0534
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.3055	0.1104
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.5065	0.1830
2020	-	-	-	-	-	-	-	-	-	0.5667	0.2048
2021	2	-	1	1	0.30	0.05	0.05	0.35	1.65	0.6933	0.2506
2022	-	-	-	-	-	-	-	-	-	1.0356	0.3742
Total	40	12	7	21	2.10	1.05	1.05	15.15	24.85	3.2720	1.1825

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
2003	# 0.0000	$ 36.4984	-	675	1.561	666.1	-
2004	0.0500	46.0739	0.0011	690	1.561	822.6	0.0061
2005	1.3000	66.2758	0.0196	716	1.561	1,140.3	0.1140
2006	-	70.4659	-	745	1.561	1,165.2	-
2007	-	79.9043	-	779	1.561	1,263.6	-
2008	1.0500	101.3540	0.0104	807	1.561	1,547.3	0.0679
2009	-	101.3481	-	836	1.561	1,493.5	-
2010	1.0000	125.3936	0.0080	845	1.561	1,828.2	0.0547
2011	2.0000	148.4857	0.0135	858	1.561	2,132.0	0.0938
2012	1.1500	153.6189	0.0075	888	1.561	2,131.2	0.0540
2013	2.0000	145.1463	0.0138	917	1.561	1,950.0	0.1026
2014	2.6500	183.4320	0.0144	932	1.561	2,424.7	0.1093
2015	2.2000	140.5703	0.0157	951	1.561	1,821.0	0.1208
2016	0.2060	118.5455	0.0017	978	1.561	1,493.3	0.0138
2017	0.0534	172.7088	0.0003	995	1.561	2,138.4	0.0025
2018	1.2604	180.5998	0.0070	1,025	1.561	2,170.6	0.0581
2019	0.2330	178.0190	0.0013	1,049	1.561	2,090.7	0.0111
2020	0.2048	139.2175	0.0015	1,081	1.561	1,586.6	0.0129
2021	0.6006	129.5449	0.0046	1,130	1.561	1,412.3	0.0425
2022	0.3742	135.4016	0.0028	1,205	1.561	1,384.3	0.0270
Total	16.3325	2,452.6043	0.0067			32,661.9	0.0500

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

ANTHRACITE SURFACE(0153)

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
2003	# 2	# 1	# 0	# 1	# 0.00	# 0.05	# 0.05	# 1.05	# 0.95	# 0.0000	# 0.0000
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	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	0.0334	0.0121
2022	-	-	-	-	-	-	-	-	-	0.1383	0.0500
Total	9	3	-	6	-	0.30	0.30	3.30	5.70	0.1717	0.0621

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
2003	# 1.0500	$ 11.9282	0.0880	675	1.084	313.5	0.3349
2004	1.0000	12.3597	0.0809	690	1.084	317.8	0.3147
2005	-	12.1409	-	716	1.084	300.8	-
2006	0.0500	12.0653	0.0041	745	1.084	287.3	0.0174
2007	0.1000	14.8666	0.0067	779	1.084	338.6	0.0295
2008	-	16.2202	-	807	1.084	356.6	-
2009	-	15.8935	-	836	1.084	337.3	-
2010	-	13.3192	-	845	1.084	279.6	-
2011	1.0000	19.5074	0.0513	858	1.084	403.3	0.2480
2012	-	24.7347	-	888	1.084	494.2	-
2013	-	20.7200	-	917	1.084	400.9	-
2014	0.0500	18.9113	0.0026	932	1.084	360.0	0.0139
2015	-	22.2344	-	951	1.084	414.8	-
2016	0.0500	19.2571	0.0026	978	1.084	349.3	0.0143
2017	-	19.0946	-	995	1.084	340.5	-
2018	-	18.3035	-	1,025	1.084	316.8	-
2019	-	20.1652	-	1,049	1.084	341.0	-
2020	-	19.3438	-	1,081	1.084	317.5	-
2021	0.0121	21.0109	0.0006	1,130	1.084	329.9	0.0037
2022	0.0500	24.5595	0.0020	1,205	1.084	361.6	0.0138
Total	3.3621	356.6360	0.0094			6,961.3	0.0483

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

BITUMINOUS SURFACE(0156)

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
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	-	1	3	0.30	0.15	0.15	0.45	3.55	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	0.0134	0.0048
2018	-	-	-	-	-	-	-	-	-	0.0343	0.0124
2019	-	-	-	-	-	-	-	-	-	0.0610	0.0220
2020	-	-	-	-	-	-	-	-	-	0.0735	0.0266
2021	-	-	-	-	-	-	-	-	-	0.1110	0.0401
2022	-	-	-	-	-	-	-	-	-	0.1756	0.0634
Total	8	1	1	6	0.30	0.30	0.30	1.60	6.40	0.4687	0.1694

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
2003	# 0.0000	$ 47.8737	-	675	1.084	1,258.2	-
2004	-	56.2173	-	690	1.084	1,445.4	-
2005	-	64.8716	-	716	1.084	1,607.3	-
2006	-	63.7985	-	745	1.084	1,519.2	-
2007	-	64.8081	-	779	1.084	1,475.9	-
2008	-	74.6012	-	807	1.084	1,640.0	-
2009	-	63.3067	-	836	1.084	1,343.4	-
2010	-	74.2552	-	845	1.084	1,559.0	-
2011	-	87.7305	-	858	1.084	1,814.0	-
2012	0.1000	77.8905	0.0013	888	1.084	1,556.1	0.0064
2013	-	62.7181	-	917	1.084	1,213.4	-
2014	1.0500	55.3686	0.0190	932	1.084	1,053.9	0.0996
2015	0.4500	42.0001	0.0107	951	1.084	783.5	0.0574
2016	-	30.1312	-	978	1.084	546.6	-
2017	0.0048	34.2490	0.0001	995	1.084	610.6	0.0008
2018	0.0124	36.3052	0.0003	1,025	1.084	628.4	0.0020
2019	0.0220	36.5036	0.0006	1,049	1.084	617.3	0.0036
2020	0.0266	27.9895	0.0009	1,081	1.084	459.3	0.0058
2021	0.0401	29.9786	0.0013	1,130	1.084	470.7	0.0085
2022	0.0634	33.5785	0.0019	1,205	1.084	494.4	0.0128
Total	1.7694	1,064.1757	0.0017			22,096.6	0.0080

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

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
2003	# 2	# 1	# 0	# 1	# 0.00	# 0.05	# 0.05	# 1.05	# 0.95	# 0.0000	# 0.0000
2004	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2005	2	1	1	-	0.30	-	-	1.30	0.70	-	-
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	-	5	-	0.25	0.25	1.25	4.75	-	-
2013	7	2	3	2	0.90	0.10	0.10	3.00	4.00	-	-
2014	8	3	2	3	0.60	0.15	0.15	3.75	4.25	-	-
2015	10	2	1	7	0.30	0.35	0.35	2.65	7.35	-	-
2016	5	-	-	5	-	0.25	0.25	0.25	4.75	0.0166	0.0060
2017	-	-	-	-	-	-	-	-	-	0.1612	0.0583
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.3398	0.1228
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.5674	0.2051
2020	-	-	-	-	-	-	-	-	-	0.6402	0.2314
2021	2	-	1	1	0.30	0.05	0.05	0.35	1.65	0.8377	0.3028
2022	-	-	-	-	-	-	-	-	-	1.3546	0.4895
Total	58	17	8	33	2.40	1.65	1.65	21.05	36.95	3.9176	1.4158

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
2003	# 1.0500	$ 97.6546	0.0108	675		2,273.4	0.0462
2004	1.0500	115.9962	0.0091	690		2,620.4	0.0401
2005	1.3000	144.7059	0.0090	716		3,083.5	0.0422
2006	0.0500	147.7722	0.0003	745		3,006.1	0.0017
2007	0.1000	161.2415	0.0006	779		3,116.0	0.0032
2008	1.0500	194.3121	0.0054	807		3,590.9	0.0292
2009	-	181.8842	-	836		3,202.5	-
2010	1.0000	214.2676	0.0047	845		3,694.1	0.0271
2011	3.0000	256.9815	0.0117	858		4,375.3	0.0686
2012	1.2500	257.2734	0.0049	888		4,202.1	0.0297
2013	3.0000	228.9663	0.0131	917		3,571.7	0.0840
2014	3.7500	257.9707	0.0145	932		3,843.5	0.0976
2015	2.6500	205.0591	0.0129	951		3,024.0	0.0876
2016	0.2560	168.0976	0.0015	978		2,392.2	0.0107
2017	0.0583	226.3048	0.0003	995		3,094.0	0.0019
2018	1.2728	235.3918	0.0054	1,025		3,119.0	0.0408
2019	0.2551	234.8672	0.0011	1,049		3,052.0	0.0084
2020	0.2314	186.8505	0.0012	1,081		2,368.3	0.0098
2021	0.6528	180.7669	0.0036	1,130		2,216.6	0.0294
2022	0.4895	193.6033	0.0025	1,205		2,241.2	0.0218
Total	22.4658	3,889.9674	0.0058			62,086.8	0.0362

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
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: 0.3614

COKE(0154)

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0001	0.0000
2017	-	-	-	-	-	-	-	-	-	0.0012	0.0004
2018	-	-	-	-	-	-	-	-	-	0.0025	0.0009
2019	-	-	-	-	-	-	-	-	-	0.0039	0.0014
2020	-	-	-	-	-	-	-	-	-	0.0004	0.0001
2021	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	0.0081	0.0029

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
2003	# 0.0000	$ 11.5341	-	675	1.084	303.1	-
2004	-	12.0491	-	690	1.084	309.8	-
2005	-	12.8610	-	716	1.084	318.7	-
2006	-	12.7374	-	745	1.084	303.3	-
2007	-	13.6699	-	779	1.084	311.3	-
2008	-	9.7611	-	807	1.084	214.6	-
2009	-	5.1736	-	836	1.084	109.8	-
2010	-	5.4357	-	845	1.084	114.1	-
2011	-	3.5991	-	858	1.084	74.4	-
2012	-	5.7381	-	888	1.084	114.6	-
2013	-	4.7919	-	917	1.084	92.7	-
2014	-	4.4644	-	932	1.084	85.0	-
2015	-	4.3404	-	951	1.084	81.0	-
2016	0.0000	4.4351	0.0000	978	1.084	80.5	0.0001
2017	0.0004	4.5661	0.0001	995	1.084	81.4	0.0006
2018	0.0009	4.4847	0.0002	1,025	1.084	77.6	0.0012
2019	0.0014	4.5199	0.0003	1,049	1.084	76.4	0.0018
2020	0.0001	0.3136	0.0005	1,081	1.084	5.1	0.0028
2021	-	-	-	1,130	1.084	-	-
2022	-	-	-	1,205	1.084	-	-
Total	0.0029	124.4752	0.0000			2,753.4	0.0001

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	0.0001	0.0000
2018	-	-	-	-	-	-	-	-	-	0.0003	0.0001
2019	-	-	-	-	-	-	-	-	-	0.0005	0.0002
2020	-	-	-	-	-	-	-	-	-	0.0005	0.0002
2021	-	-	-	-	-	-	-	-	-	0.0004	0.0001
2022	-	-	-	-	-	-	-	-	-	0.0005	0.0002
Total	-	-	-	-	-	-	-	-	-	0.0023	0.0008

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
2003	# 0.0000	$ 1.1022	-	675	1.084	29.0	-
2004	-	1.0588	-	690	1.084	27.2	-
2005	-	1.0265	-	716	1.084	25.4	-
2006	-	1.0668	-	745	1.084	25.4	-
2007	-	1.1212	-	779	1.084	25.5	-
2008	-	2.5068	-	807	1.084	55.1	-
2009	-	0.9470	-	836	1.084	20.1	-
2010	-	0.8275	-	845	1.084	17.4	-
2011	-	1.1763	-	858	1.084	24.3	-
2012	-	0.8082	-	888	1.084	16.1	-
2013	-	1.0469	-	917	1.084	20.3	-
2014	-	0.8616	-	932	1.084	16.4	-
2015	-	0.6548	-	951	1.084	12.2	-
2016	-	0.3928	-	978	1.084	7.1	-
2017	0.0000	0.5663	0.0001	995	1.084	10.1	0.0004
2018	0.0001	0.6001	0.0002	1,025	1.084	10.4	0.0011
2019	0.0002	0.5932	0.0003	1,049	1.084	10.0	0.0017
2020	0.0002	0.3952	0.0005	1,081	1.084	6.5	0.0029
2021	0.0001	0.2276	0.0006	1,130	1.084	3.6	0.0036
2022	0.0002	0.2229	0.0008	1,205	1.084	3.3	0.0057
Total	0.0008	17.2027	0.0000			365.4	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
Col.(13): Exh. X-A, Page 3
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: 0.3614

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
2003	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05	# 0.05	# 0.95	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0002	0.0001
2017	-	-	-	-	-	-	-	-	-	0.0024	0.0009
2018	-	-	-	-	-	-	-	-	-	0.0064	0.0023
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.0071	0.0026
2020	-	-	-	-	-	-	-	-	-	0.0100	0.0036
2021	-	-	-	-	-	-	-	-	-	0.0148	0.0053
2022	-	-	-	-	-	-	-	-	-	0.0198	0.0072
Total	2	-	-	2	-	0.10	0.10	0.10	1.90	0.0608	0.0220

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
2003	# 0.0500	$ 7.0096	0.0071	675	1.084	184.2	0.0271
2004	-	7.3515	-	690	1.084	189.0	-
2005	-	7.8553	-	716	1.084	194.6	-
2006	-	8.4125	-	745	1.084	200.3	-
2007	-	9.1867	-	779	1.084	209.2	-
2008	-	7.5214	-	807	1.084	165.3	-
2009	-	7.5347	-	836	1.084	159.9	-
2010	-	7.9580	-	845	1.084	167.1	-
2011	-	10.9816	-	858	1.084	227.1	-
2012	-	9.3118	-	888	1.084	186.0	-
2013	-	7.6308	-	917	1.084	147.6	-
2014	-	8.3609	-	932	1.084	159.1	-
2015	-	9.5548	-	951	1.084	178.2	-
2016	0.0001	7.9533	0.0000	978	1.084	144.3	0.0001
2017	0.0009	7.7936	0.0001	995	1.084	139.0	0.0006
2018	0.0023	10.0538	0.0002	1,025	1.084	174.0	0.0013
2019	0.0526	6.8075	0.0077	1,049	1.084	115.1	0.0457
2020	0.0036	6.9033	0.0005	1,081	1.084	113.3	0.0032
2021	0.0053	7.7863	0.0007	1,130	1.084	122.2	0.0044
2022	0.0072	7.7638	0.0009	1,205	1.084	114.3	0.0063
Total	0.1220	163.7312	0.0007			3,289.8	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
Col.(13): Exh. X-A, Page 3
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: 0.3614

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0003	0.0001
2017	-	-	-	-	-	-	-	-	-	0.0031	0.0011
2018	-	-	-	-	-	-	-	-	-	0.0067	0.0024
2019	-	-	-	-	-	-	-	-	-	0.0103	0.0037
2020	-	-	-	-	-	-	-	-	-	0.0139	0.0050
2021	-	-	-	-	-	-	-	-	-	0.0217	0.0078
2022	-	-	-	-	-	-	-	-	-	0.0397	0.0143
Total	1	-	-	1	-	0.05	0.05	0.05	0.95	0.0957	0.0346

	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Year	Total Awarded (8)+(11)	Payroll ($M)	Frequency (12)/(13)	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Per 100 Miner Years
2003	# 0.0000	$ 3.0525	-	675	1.084	80.2	-
2004	-	6.3745	-	690	1.084	163.9	-
2005	-	8.5248	-	716	1.084	211.2	-
2006	-	9.4236	-	745	1.084	224.4	-
2007	0.0500	10.8291	0.0046	779	1.084	246.6	0.0203
2008	-	8.4819	-	807	1.084	186.5	-
2009	-	7.8664	-	836	1.084	166.9	-
2010	-	8.7327	-	845	1.084	183.3	-
2011	-	9.1024	-	858	1.084	188.2	-
2012	-	9.0477	-	888	1.084	180.8	-
2013	-	10.3559	-	917	1.084	200.3	-
2014	-	11.7212	-	932	1.084	223.1	-
2015	-	11.7482	-	951	1.084	219.2	-
2016	0.0001	11.3276	0.0000	978	1.084	205.5	0.0001
2017	0.0011	11.4351	0.0001	995	1.084	203.9	0.0005
2018	0.0024	12.0433	0.0002	1,025	1.084	208.4	0.0012
2019	0.0037	11.8189	0.0003	1,049	1.084	199.9	0.0019
2020	0.0050	10.6785	0.0005	1,081	1.084	175.2	0.0029
2021	0.0078	12.2828	0.0006	1,130	1.084	192.8	0.0041
2022	0.0143	17.3060	0.0008	1,205	1.084	254.8	0.0056
Total	0.0846	202.1531	0.0004			3,915.1	0.0022

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	1	-	0.30	-	-	0.30	0.70	-	-
2015	1	1	-	-	-	-	-	1.00	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0005	0.0002
2017	-	-	-	-	-	-	-	-	-	0.0052	0.0019
2018	-	-	-	-	-	-	-	-	-	0.0134	0.0049
2019	-	-	-	-	-	-	-	-	-	0.0280	0.0101
2020	1	-	1	-	0.30	-	-	0.30	0.70	0.0409	0.0148
2021	-	-	-	-	-	-	-	-	-	0.0569	0.0206
2022	-	-	-	-	-	-	-	-	-	0.0918	0.0332
Total	5	2	2	1	0.60	0.05	0.05	2.65	2.35	0.2367	0.0855

	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Year	Total Awarded (8)+(11)	Payroll ($M)	Frequency (12)/(13)	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Per 100 Miner Years
2003	# 0.0000	$ 3.4080	-	675	1.084	89.6	-
2004	-	4.4067	-	690	1.084	113.3	-
2005	-	5.1701	-	716	1.084	128.1	-
2006	-	4.8859	-	745	1.084	116.3	-
2007	0.0500	5.8173	0.0086	779	1.084	132.5	0.0377
2008	-	5.7335	-	807	1.084	126.0	-
2009	-	6.2646	-	836	1.084	132.9	-
2010	1.0000	4.8769	0.2050	845	1.084	102.4	0.9766
2011	-	6.1233	-	858	1.084	126.6	-
2012	-	7.5690	-	888	1.084	151.2	-
2013	-	7.0749	-	917	1.084	136.9	-
2014	0.3000	6.5215	0.0460	932	1.084	124.1	0.2417
2015	1.0000	6.1966	0.1614	951	1.084	115.6	0.8651
2016	0.0002	5.5430	0.0000	978	1.084	100.5	0.0002
2017	0.0019	6.0568	0.0003	995	1.084	108.0	0.0017
2018	0.0049	6.9168	0.0007	1,025	1.084	119.7	0.0041
2019	0.0101	10.8292	0.0009	1,049	1.084	183.1	0.0055
2020	0.3148	10.6713	0.0295	1,081	1.084	175.1	0.1798
2021	0.0206	11.3591	0.0018	1,130	1.084	178.3	0.0115
2022	0.0332	14.5129	0.0023	1,205	1.084	213.7	0.0155
Total	2.7355	139.9374	0.0195			2,673.9	0.1023

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
Col.(13): Exh. X-A, Page 3
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: 0.3614

BITUMINOUS PREP PLANT(0184)

	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
2003	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00	# 0.00	# 0.00	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0007	0.0002
2017	-	-	-	-	-	-	-	-	-	0.0078	0.0028
2018	-	-	-	-	-	-	-	-	-	0.0179	0.0065
2019	-	-	-	-	-	-	-	-	-	0.0314	0.0113
2020	-	-	-	-	-	-	-	-	-	0.0438	0.0158
2021	-	-	-	-	-	-	-	-	-	0.0632	0.0229
2022	-	-	-	-	-	-	-	-	-	0.0942	0.0340
Total	-	-	-	-	-	-	-	-	-	0.2589	0.0936

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
2003	# 0.0000	$ 10.1952	-	675	1.561	186.1	-
2004	-	13.4602	-	690	1.561	240.3	-
2005	-	16.5483	-	716	1.561	284.7	-
2006	-	17.0510	-	745	1.561	282.0	-
2007	-	18.8952	-	779	1.561	298.8	-
2008	-	21.2503	-	807	1.561	324.4	-
2009	-	19.8280	-	836	1.561	292.2	-
2010	-	26.3131	-	845	1.561	383.6	-
2011	-	35.1551	-	858	1.561	504.8	-
2012	-	34.2117	-	888	1.561	474.6	-
2013	-	33.6400	-	917	1.561	451.9	-
2014	-	31.8544	-	932	1.561	421.1	-
2015	-	24.3206	-	951	1.561	315.1	-
2016	0.0002	20.0794	0.0000	978	1.561	252.9	0.0001
2017	0.0028	28.8035	0.0001	995	1.561	356.6	0.0008
2018	0.0065	32.1999	0.0002	1,025	1.561	387.0	0.0017
2019	0.0113	36.1173	0.0003	1,049	1.561	424.2	0.0027
2020	0.0158	33.5622	0.0005	1,081	1.561	382.5	0.0041
2021	0.0229	35.7713	0.0006	1,130	1.561	390.0	0.0059
2022	0.0340	41.0858	0.0008	1,205	1.561	420.0	0.0081
Total	0.0936	530.3425	0.0002			7,072.8	0.0013

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
Col.(13): Exh. X-A, Page 3

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: 0.3614

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
2003	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05	# 0.05	# 0.95	# 0.0000	# 0.0000
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	2	-	-	2	-	0.10	0.10	0.10	1.90	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	-	-	-	-	1.00	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	1	-	0.30	-	-	0.30	0.70	-	-
2015	1	1	-	-	-	-	-	1.00	-	-	-
2016	-	-	-	-	-	-	-	-	-	0.0019	0.0007
2017	-	-	-	-	-	-	-	-	-	0.0198	0.0071
2018	-	-	-	-	-	-	-	-	-	0.0473	0.0171
2019	1	-	-	1	-	0.05	0.05	0.05	0.95	0.0811	0.0293
2020	1	-	1	-	0.30	-	-	0.30	0.70	0.1095	0.0396
2021	-	-	-	-	-	-	-	-	-	0.1570	0.0568
2022	-	-	-	-	-	-	-	-	-	0.2460	0.0889
Total	8	2	2	4	0.60	0.20	0.20	2.80	5.20	0.6626	0.2394

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
2003	# 0.0500	$ 36.3016	0.0014	675		872.2	0.0057
2004	-	44.7008	-	690		1,043.5	-
2005	-	51.9860	-	716		1,162.7	-
2006	-	53.5772	-	745		1,151.7	-
2007	0.1000	59.5194	0.0017	779		1,223.9	0.0082
2008	-	55.2550	-	807		1,071.9	-
2009	-	47.6143	-	836		881.8	-
2010	1.0000	54.1439	0.0185	845		967.9	0.1033
2011	-	66.1378	-	858		1,145.4	-
2012	-	66.6865	-	888		1,123.3	-
2013	-	64.5404	-	917		1,049.7	-
2014	0.3000	63.7840	0.0047	932		1,028.8	0.0292
2015	1.0000	56.8154	0.0176	951		921.3	0.1085
2016	0.0007	49.7312	0.0000	978		790.8	0.0001
2017	0.0071	59.2214	0.0001	995		899.0	0.0008
2018	0.0171	66.2986	0.0003	1,025		977.1	0.0018
2019	0.0793	70.6860	0.0011	1,049		1,008.7	0.0079
2020	0.3396	62.5241	0.0054	1,081		857.7	0.0396
2021	0.0568	67.4271	0.0008	1,130		886.9	0.0064
2022	0.0889	80.8914	0.0011	1,205		1,006.1	0.0088
Total	3.0394	1,177.8421	0.0026			20,070.4	0.0151

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
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: 0.3614

GRAND TOTAL

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
2003	# 3	# 1	# 0	# 2	# 0.00	# 0.10	# 0.10	# 1.10	# 1.90	# 0.0000	# 0.0000
2004	2	1	-	1	-	0.05	0.05	1.05	0.95	-	-
2005	2	1	1	-	0.30	-	-	1.30	0.70	-	-
2006	1	-	-	1	-	0.05	0.05	0.05	0.95	-	-
2007	4	-	-	4	-	0.20	0.20	0.20	3.80	-	-
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	-	5	-	0.25	0.25	1.25	4.75	-	-
2013	7	2	3	2	0.90	0.10	0.10	3.00	4.00	-	-
2014	9	3	3	3	0.90	0.15	0.15	4.05	4.95	-	-
2015	11	3	1	7	0.30	0.35	0.35	3.65	7.35	-	-
2016	5	-	-	5	-	0.25	0.25	0.25	4.75	0.0185	0.0067
2017	-	-	-	-	-	-	-	-	-	0.1810	0.0654
2018	4	1	-	3	-	0.15	0.15	1.15	2.85	0.3871	0.1399
2019	2	-	-	2	-	0.10	0.10	0.10	1.90	0.6485	0.2344
2020	1	-	1	-	0.30	-	-	0.30	0.70	0.7497	0.2709
2021	2	-	1	1	0.30	0.05	0.05	0.35	1.65	0.9948	0.3595
2022	-	-	-	-	-	-	-	-	-	1.6006	0.5785
Total	66	19	10	37	3.00	1.85	1.85	23.85	42.15	4.5801	1.6553

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
2003	# 1.1000	$ 133.9562	0.0082	675		3,145.6	0.0350
2004	1.0500	160.6970	0.0065	690		3,663.9	0.0287
2005	1.3000	196.6919	0.0066	716		4,246.2	0.0306
2006	0.0500	201.3494	0.0002	745		4,157.8	0.0012
2007	0.2000	220.7609	0.0009	779		4,339.9	0.0046
2008	1.0500	249.5671	0.0042	807		4,662.8	0.0225
2009	-	229.4985	-	836		4,084.3	-
2010	2.0000	268.4115	0.0075	845		4,662.0	0.0429
2011	3.0000	323.1193	0.0093	858		5,520.7	0.0543
2012	1.2500	323.9599	0.0039	888		5,325.4	0.0235
2013	3.0000	293.5067	0.0102	917		4,621.4	0.0649
2014	4.0500	321.7547	0.0126	932		4,872.3	0.0831
2015	3.6500	261.8745	0.0139	951		3,945.3	0.0925
2016	0.2567	217.8288	0.0012	978		3,183.0	0.0081
2017	0.0654	285.5262	0.0002	995		3,993.0	0.0016
2018	1.2899	301.6904	0.0043	1,025		4,096.1	0.0315
2019	0.3344	305.5532	0.0011	1,049		4,060.7	0.0082
2020	0.5709	249.3746	0.0023	1,081		3,226.0	0.0177
2021	0.7095	248.1940	0.0029	1,130		3,103.5	0.0229
2022	0.5785	274.4947	0.0021	1,205		3,247.3	0.0178
Total	25.5053	5,067.8095	0.0050			82,157.2	0.0310

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
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: 0.3614

Coal Mine Compensation Rating Bureau
Summary of Individual Claim Detail for Federal Basic
Claims from Exposure Years 1990 to 2022

Federal Basic Severities

	Indemnity	Medical	Total
Underground Anthracite Class 160			
Total	12,230,082	3,077,096	15,307,178
Number of Claims	27	27	27
Average	452,966	113,967	566,933
Underground Bituminous Class 158			
Total	36,074,392	9,203,763	45,278,155
Number of Claims	109	109	109
Average	330,958	84,438	415,396
Surface Anthracite Class 153			
Total	16,325,395	3,791,662	20,117,057
Number of Claims	49	49	49
Average	333,171	77,381	410,552
Surface Bituminous Class 156			
Total	23,120,320	5,393,570	28,513,890
Number of Claims	73	73	73
Average	316,717	73,885	390,601
Four Standard Classes Combined			
Total	87,750,189	21,466,091	109,216,280
Number of Claims	258	258	258
Average	340,117	83,202	423,319
Other Classes			
Total	7,736,150	2,125,686	9,861,836
Number of Claims	22	22	22
Average	351,643	96,622	448,265
All Classes Combined			
Total	95,486,339	23,591,777	119,078,116
Number of Claims	280	280	280
Average	341,023	84,256	425,279

Source: Exhibit IX-B

COAL MINE COMPENSATION RATING BUREAU

Federal Basic Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2013-2022	(2) Claim Frequency Per 100 Miner Years: Approved (Eff 4/1/2023)	(3) Trended to 4/1/2024	(4) Indicated (Eff 4/1/2024)	(5) Credibility: Expected Awarded Claims	(6) Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) Payroll 2013-2022	(10) Frequency Per $1M Payroll
Underground:	Anthracite	0160	40.2	1.683710	1.683710	9.592957	0.677	0.120	2.632820	56.4%	2,269,773	0.466299
	Bituminous	0158	18,471.9	0.141221	0.141221	0.189935	26.086	0.747	0.177610	25.8%	1,523,185,562	0.021539
Surface:	Anthracite	0153	3,532.3	0.211410	0.211410	0.220194	7.468	0.400	0.214924	1.7%	203,600,404	0.037288
	Bituminous	0156	6,878.1	0.113152	0.113152	0.095925	7.783	0.408	0.106123	-6.2%	388,822,277	0.018773
Four Standard Classifications			28,922.5	0.145262	0.145262	0.184343	42.014		0.168579		2,117,878,016	0.023022
	Coke	0154	579.7	0.011183	0.011183	0.014104	0.065	0.037	0.011291	1.0%	31,916,057	0.002051
	Auger	0157	99.9	0.053821	0.053821	0.040180	0.054	0.034	0.053357	-0.9%	5,561,453	0.009584
Co-Gen:	Anthracite	0181	1,407.1	0.047689	0.047689	0.058819	0.671	0.120	0.049025	2.8%	80,608,014	0.008558
	Bituminous	0182	2,083.1	0.031615	0.031615	0.034677	0.659	0.119	0.031979	1.2%	120,717,435	0.005518
Prep Plants:	Anthracite	0183	1,455.0	0.090443	0.090443	0.103263	1.316	0.168	0.092597	2.4%	85,681,963	0.015724
	Bituminous	0184	3,801.3	0.051112	0.051112	0.081366	1.943	0.204	0.057284	12.1%	317,434,389	0.006860
Other Classes			9,426.1	0.049937	0.049937	0.066489	4.708		0.053040		641,919,311	0.007789
Total			38,348.6	0.121831	0.121831	0.155375	46.722		0.140180		2,759,797,327	0.019479

Source: (1) Exhibit VIII-B-2
(2) Exhibit VIII-B-1, Page 4
(3) = (2) trended to 4/1/2024 @ 0.0%
(4) Exhibit VIII-B-1, Page 3
(5) = (1) x (3) / 100
(6) = [(5) / 46.722]^(0.5)
(7) = (4)*(6)+((3)*(1-(6))
(8) = (7)/(2)-1
(9) Exhibit X-A, Page 3
(10) = (7) X (1) / [(9) * 10,000]

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

COAL MINE COMPENSATION RATING BUREAU

Federal Excess Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2013-2022	(2) Claim Frequency Per 100 Miner Years: Approved (Eff 4/1/2023)	(3) Trended to 4/1/2024	(4) Indicated (Eff 4/1/2024)	(5) Credibility: Expected Awarded Claims	(6) Factor	(7) Claim Frequency Indicated w/ Credibility	(8) Change in Indication After Cred.	(9) Payroll 2013-2022	(10) Frequency Per $1M Payroll
Underground:	Anthracite	0160	40.2	0.472290	0.472290	0.511642	0.190	0.102	0.476304	0.8%	2,269,773	0.084358
	Bituminous	0158	18,471.9	0.067619	0.067619	0.070730	12.491	0.824	0.070182	3.8%	1,523,185,562	0.008511
Surface:	Anthracite	0153	3,532.3	0.042463	0.042463	0.030751	1.500	0.286	0.039113	-7.9%	203,600,404	0.006786
	Bituminous	0156	6,878.1	0.024630	0.024630	0.029869	1.694	0.304	0.026223	6.5%	388,822,277	0.004639
Four Standard Classifications			28,922.5	0.054886	0.054886	0.056743	15.875		0.056498		2,117,878,016	0.007716
	Coke	0154	579.7	0.004572	0.004572	0.001515	0.027	0.038	0.004456	-2.5%	31,916,057	0.000809
	Auger	0157	99.9	0.009752	0.009752	0.003065	0.010	0.023	0.009598	-1.6%	5,561,453	0.001724
Co-Gen:	Anthracite	0181	1,407.1	0.013400	0.013400	0.025575	0.189	0.101	0.014630	9.2%	80,608,014	0.002554
	Bituminous	0182	2,083.1	0.009152	0.009152	0.003528	0.191	0.102	0.008578	-6.3%	120,717,435	0.001480
Prep Plants:	Anthracite	0183	1,455.0	0.111082	0.111082	0.109625	1.616	0.296	0.110651	-0.4%	85,681,963	0.018790
	Bituminous	0184	3,801.3	0.012516	0.012516	0.014686	0.476	0.161	0.012865	2.8%	317,434,389	0.001541
Other Classes			9,426.1	0.026601	0.026601	0.027567	2.509		0.026723		641,919,311	0.003924
Total			38,348.6	0.047933	0.047933	0.049572	18.384		0.049179		2,759,797,327	0.006834

Source: (1) Exhibit VIII-B-2
(2) Exhibit VIII-B-1, Page 6
(3) = (2) trended to 4/1/2024 @ 0.0%
(4) Exhibit VIII-B-1, Page 5
(5) = (1) x (3) / 100
(6) = [(5) / 18.384]^(0.5)
(7) = (4)*(6)+((3)*(1-(6))
(8) = (7)/(2)-1
(9) Exhibit X-A, Page 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

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Effective Date - April 01, 2024

Run Date: 10/10/23 13:27

8,279,552,471.016330

Coal Mine Compensation Rating Bureau

Federal Basic Occupational Disease Classification Frequency

Classification		Class Code	(1) Estimated Miner Years 2022	(2) Approved Frequency Equivalent Per 100 Miner Years 4/1/2023	(3) Modeled Indication	(4) Experience Indication	(5) Weighted Average of Cols. (3) & (4)	(6) Percent Change
Underground:	Anthracite	0160	0.9	1.683710	9.122088	9.749913	9.592957	469.75%
	Bituminous	0158	1,384.3	0.141221	0.287968	0.157257	0.189935	34.49%
Surface:	Anthracite	0153	361.6	0.211410	0.206990	0.224596	0.220194	4.15%
	Bituminous	0156	494.4	0.113152	0.124594	0.086369	0.095925	-15.22%
Four Standard Classifications			2,241.2	0.146973	0.242411	0.156336	0.177855	21.01%
	Coke	0154	0.0	0.011183	0.016939	0.013159	0.014104	26.12%
	Auger	0157	3.3	0.053821	0.045053	0.038556	0.040180	-25.35%
Co-Gen:	Anthracite	0181	114.3	0.047689	0.080180	0.051699	0.058819	23.34%
	Bituminous	0182	254.8	0.031615	0.045987	0.030907	0.034677	9.69%
Prep Plants:	Anthracite	0183	213.7	0.090443	0.146627	0.088808	0.103263	14.17%
	Bituminous	0184	420.0	0.051112	0.103881	0.073861	0.081366	59.19%
	Other Classes		1,006.1	0.054148	0.095413	0.063524	0.071496	32.04%
		Total	3,247.3	0.118213	0.196867	0.127580	0.144902	22.58%

Source: (1) Exhibit VIII-B-2
(2) Exhibit VIII-B-1, Page 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. 4/1/2023	(2) Payroll 2012-2021	(3) Estimated Awarded Claims 2012-2021 (1) x (2)	(4) Estimated Miner Years 2013-2022	(5) Estimated Miner Years 2022	(6) Adjustment Factor	(7) Average Weekly Wage 2012	(8) Payroll 2012	(9) Estimated Miner Years 2012-2021	(10) Approved Frequency Equivalent Per 100 Miner Years
Underground:	Anthracite	0160	0.311723	3,235,380	1.008542	40.2	0.9	1.084	888	1,029,260	59.9	1.683710
	Bituminous	0158	0.017608	1,541,402,835	27.141021	18,471.9	1,384.3	1.561	888	153,618,908	19,218.8	0.141221
Surface:	Anthracite	0153	0.038022	203,775,586	7.747955	3,532.3	361.6	1.084	888	24,734,711	3,664.9	0.211410
	Bituminous	0156	0.020742	433,134,295	8.984072	6,878.1	494.4	1.084	888	77,890,500	7,939.8	0.113152
Four Standard Classifications				2,181,548,096		28,922.5	2,241.2			257,273,379	30,883	
	Coke	0154	0.002062	37,654,162	0.077643	579.7	-	1.084	888	5,738,105	694.3	0.011183
	Auger	0157	0.009868	6,146,752	0.060656	99.9	3.3	1.084	888	808,208	112.7	0.053821
Co-Gen:	Anthracite	0181	0.008584	82,156,038	0.705227	1,407.1	114.3	1.084	888	9,311,812	1,478.8	0.047689
	Bituminous	0182	0.005648	112,459,131	0.635169	2,083.1	254.8	1.084	888	9,047,745	2,009.1	0.031615
Prep Plants:	Anthracite	0183	0.015995	78,738,115	1.259416	1,455.0	213.7	1.084	888	7,569,023	1,392.5	0.090443
	Bituminous	0184	0.006346	310,560,319	1.970816	3,801.3	420.0	1.561	888	34,211,729	3,855.9	0.051112
Other Classes				627,714,517		9,426.1	1,006.1			66,686,622	9,543.3	
Total				2,809,262,613		38,348.6	3,247.3			323,960,001	40,426.7	

Source:
(1) Exhibit X-F (Federal Basic Frequency)
(2) Exhibit X-A, Page 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, Page 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 2022	(2) Approved Frequency Equivalent Per 100 Miner Years 4/1/2023	(3) Modeled Indication	(4) Experience Indication	(5) Weighted Average of Cols. (3) & (4)	(6) Percent Change
Underground:	Anthracite	0160	0.9	0.472290	0.272985	0.591194	0.511642	8.33%
	Bituminous	0158	1,384.3	0.067619	0.050005	0.077638	0.070730	4.60%
Surface:	Anthracite	0153	361.6	0.042463	0.048297	0.024903	0.030751	-27.58%
	Bituminous	0156	494.4	0.024630	0.008008	0.037156	0.029869	21.27%
Four Standard Classifications			2,241.2	0.054240	0.040554	0.060406	0.055443	2.22%
	Coke	0154	0.0	0.004572	0.000107	0.001984	0.001515	-66.86%
	Auger	0157	3.3	0.009752	0.000229	0.004010	0.003065	-68.57%
Co-Gen:	Anthracite	0181	114.3	0.013400	0.003708	0.032864	0.025575	90.86%
	Bituminous	0182	254.8	0.009152	0.002161	0.003984	0.003528	-61.45%
Prep Plants:	Anthracite	0183	213.7	0.111082	0.102305	0.112065	0.109625	-1.31%
	Bituminous	0184	420.0	0.012516	0.001323	0.019140	0.014686	17.34%
	Other Classes		1,006.1	0.032691	0.023252	0.036549	0.033225	1.63%
		Total	3,247.3	0.047564	0.035193	0.053014	0.048559	2.09%

Source: (1) Exhibit VIII-B-2
(2) Exhibit VIII-B-1, Page 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. 4/1/2023	(2) Payroll 2012-2021	(3) Estimated Awarded Claims 2012-2021 (1) x (2)	(4) Estimated Miner Years 2013-2022	(5) Estimated Miner Years 2022	(6) Adjustment Factor	(7) Average Weekly Wage 2012	(8) Payroll 2012	(9) Estimated Miner Years 2012-2021	(10) Approved Frequency Equivalent Per 100 Miner Years
Underground:	Anthracite	0160	0.087440	3,235,380	0.282902	40.2	0.9	1.084	888	1,029,260	59.9	0.472290
	Bituminous	0158	0.008431	1,541,402,835	12.995567	18,471.9	1,384.3	1.561	888	153,618,908	19,218.8	0.067619
Surface:	Anthracite	0153	0.007637	203,775,586	1.556234	3,532.3	361.6	1.084	888	24,734,711	3,664.9	0.042463
	Bituminous	0156	0.004515	433,134,295	1.955601	6,878.1	494.4	1.084	888	77,890,500	7,939.8	0.024630
Four Standard Classifications				2,181,548,096		28,922.5	2,241.2			257,273,379	30,883	
	Coke	0154	0.000843	37,654,162	0.031742	579.7	-	1.084	888	5,738,105	694.3	0.004572
	Auger	0157	0.001788	6,146,752	0.010990	99.9	3.3	1.084	888	808,208	112.7	0.009752
Co-Gen:	Anthracite	0181	0.002412	82,156,038	0.198160	1,407.1	114.3	1.084	888	9,311,812	1,478.8	0.013400
	Bituminous	0182	0.001635	112,459,131	0.183871	2,083.1	254.8	1.084	888	9,047,745	2,009.1	0.009152
Prep Plants:	Anthracite	0183	0.019645	78,738,115	1.546810	1,455.0	213.7	1.084	888	7,569,023	1,392.5	0.111082
	Bituminous	0184	0.001554	310,560,319	0.482611	3,801.3	420.0	1.561	888	34,211,729	3,855.9	0.012516
Other Classes				627,714,517		9,426.1	1,006.1			66,686,622	9,543.3	
Total				2,809,262,613		38,348.6	3,247.3			323,960,001	40,426.7	

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

FEDERAL BASIC OCCUPATIONAL DISEASE

ANTHRACITE UNDERGROUND (0160)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.600 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	4	2	0	2	0.0212	0.0212	0.012714	381,876	2.012714	917	1.084	7.4	27.198838	
2014	0	0	0	0	0.0290	0.0290	0.017424	258,809	0.017424	932	1.084	4.9	0.355592	
2015	1	0	1	0	0.0441	1.0441	0.626454	254,336	0.626454	951	1.084	4.7	13.328809	
2016	0	0	0	0	0.0444	0.0444	0.026652	163,760	0.026652	978	1.084	3.0	0.888400	
2017	0	0	0	0	0.1046	0.1046	0.062766	252,383	0.062766	995	1.084	4.5	1.394800	
2018	1	1	0	0	0.1067	0.1067	0.064038	183,346	1.064038	1,025	1.084	3.2	33.251188	
2019	0	0	0	0	0.1470	0.1470	0.088206	179,379	0.088206	1,049	1.084	3.0	2.940200	
2020	0	0	0	0	0.3230	0.3230	0.193800	299,700	0.193800	1,081	1.084	4.9	3.955102	
2021	0	0	0	0	0.3352	0.3352	0.201090	232,531	0.201090	1,130	1.084	3.7	5.434865	
2022	0	0	0	0	0.1313	0.1313	0.078762	63,653	0.078762	1,205	1.084	0.9	8.751333	
TOTAL	6	3	1	2	1.2865	2.2865	1.371906	2,269,773	4.371906			40.2	97.499127	
AVERAGE													9.749913	

BITUMINOUS UNDERGROUND (0158)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.103 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	4	1	0	3	8.3895	8.3895	0.864113	145,146,253	1.864113	917	1.561	1,950.0	0.095596
2014	20	1	3	16	12.3670	15.3670	1.582799	183,431,952	2.582799	932	1.561	2,424.7	0.106520
2015	19	1	3	15	11.0783	14.0783	1.450069	140,570,275	2.450069	951	1.561	1,821.0	0.134545
2016	11	2	0	9	11.0947	11.0947	1.142751	118,545,477	3.142751	978	1.561	1,493.3	0.210457
2017	6	1	0	5	18.8304	18.8304	1.939535	172,708,778	2.939535	995	1.561	2,138.4	0.137464
2018	15	1	2	12	22.5118	24.5118	2.524711	180,599,760	3.524711	1,025	1.561	2,170.6	0.162384
2019	5	1	1	3	24.9939	25.9939	2.677369	178,019,000	3.677369	1,049	1.561	2,090.7	0.175892
2020	5	0	0	5	22.2665	22.2665	2.293444	139,217,518	2.293444	1,081	1.561	1,586.6	0.144551
2021	4	0	2	2	23.5927	25.5927	2.636050	129,544,914	2.636050	1,130	1.561	1,412.3	0.186649
2022	1	0	1	0	28.3680	29.3680	3.024904	135,401,635	3.024904	1,205	1.561	1,384.3	0.218515
TOTAL	90	8	12	70	183.4927	195.4927	20.135746	1,523,185,562	28.135746			18,471.9	1.572573
AVERAGE													0.157257

ANTHRACITE SURFACE (0153)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.300 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	4	2	1	1	0.3506	1.3506	0.405174	20,720,014	2.405174	917	1.084	400.9	0.599944
2014	1	0	0	1	0.4376	0.4376	0.131283	18,911,339	0.131283	932	1.084	360.0	0.036468
2015	2	0	1	1	0.6579	1.6579	0.497373	22,234,350	0.497373	951	1.084	414.8	0.119907
2016	4	1	0	3	0.7079	0.7079	0.212367	19,257,107	1.212367	978	1.084	349.3	0.347085
2017	1	0	0	1	0.8537	0.8537	0.256116	19,094,634	0.256116	995	1.084	340.5	0.075218
2018	2	0	2	0	1.0208	3.0208	0.906237	18,303,511	0.906237	1,025	1.084	316.8	0.286060
2019	0	0	0	0	1.3704	1.3704	0.411129	20,165,184	0.411129	1,049	1.084	341.0	0.120566
2020	0	0	0	0	1.5574	1.5574	0.467211	19,343,807	0.467211	1,081	1.084	317.5	0.147153
2021	1	0	1	0	2.0122	3.0122	0.903666	21,010,929	0.903666	1,130	1.084	329.9	0.273921
2022	0	0	0	0	2.8885	2.8885	0.866535	24,559,529	0.866535	1,205	1.084	361.6	0.239639
TOTAL	15	3	5	7	11.8570	16.8570	5.057091	203,600,404	8.057091			3,532.3	2.245961
AVERAGE													0.224596

BITUMINOUS SURFACE (0156)

Year	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.150 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	5	0	0	5	1.8696	1.8696	0.280445	62,718,061	0.280445	917	1.084	1,213.4	0.023112
2014	4	2	0	2	1.9545	1.9545	0.293177	55,368,615	2.293177	932	1.084	1,053.9	0.217590
2015	9	1	1	7	1.7132	2.7132	0.406977	42,000,092	1.406977	951	1.084	783.5	0.179576
2016	0	0	0	0	1.3978	1.3978	0.209669	30,131,218	0.209669	978	1.084	546.6	0.038359
2017	1	0	0	1	1.7984	1.7984	0.269762	34,248,962	0.269762	995	1.084	610.6	0.044180
2018	0	0	0	0	2.1623	2.1623	0.324351	36,305,197	0.324351	1,025	1.084	628.4	0.051615
2019	1	0	0	1	2.4636	2.4636	0.369545	36,503,594	0.369545	1,049	1.084	617.3	0.059865
2020	1	0	0	1	2.1222	2.1222	0.318324	27,989,489	0.318324	1,081	1.084	459.3	0.069306
2021	0	0	0	0	2.5341	2.5341	0.380114	29,978,567	0.380114	1,130	1.084	470.7	0.080755
2022	0	0	0	0	3.2739	3.2739	0.491085	33,578,482	0.491085	1,205	1.084	494.4	0.099329
TOTAL	21	3	1	17	21.2896	22.2896	3.343446	388,822,277	6.343446			6,878.1	0.863687
AVERAGE													0.086369

FOUR STANDARD CLASSES

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.150 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2013	17	5	1	11	10.6309	11.6309	1.744628	228,966,204	6.562446	917		3,571.7	0.183735	
2014	25	3	3	19	14.7881	17.7881	2.668221	257,970,715	5.024682	932		3,843.5	0.130732	
2015	31	2	6	23	13.4935	19.4935	2.924028	205,059,053	4.980873	951		3,024.0	0.164711	
2016	15	3	0	12	13.2448	13.2448	1.986716	168,097,562	4.591439	978		2,392.2	0.191934	
2017	8	1	0	7	21.5872	21.5872	3.238077	226,304,757	3.528179	995		3,094.0	0.114033	
2018	18	2	4	12	25.8016	29.8016	4.470243	235,391,814	5.819337	1,025		3,119.0	0.186577	
2019	6	1	1	4	28.9749	29.9749	4.496241	234,867,157	4.546248	1,049		3,052.0	0.148960	
2020	6	0	0	6	26.2690	26.2690	3.940347	186,850,514	3.272779	1,081		2,368.3	0.138191	
2021	5	0	3	2	28.4742	31.4742	4.721127	180,766,941	4.120920	1,130		2,216.6	0.185912	
2022	1	0	1	0	34.6616	35.6616	5.349243	193,603,299	4.461286	1,205		2,241.2	0.199058	
TOTAL	132	17	19	96	217.9258	236.9258	29.908189	2,117,878,016	46.908189			28,922.5	1.643843	
AVERAGE													0.164384	0.161956

Source: Claim counts - CMCRB OD Database as of 4/30/2023
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A, Page 3
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.148=18 / [18 + 104]
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	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	0	0	0	0	0.0486	0.0486	0.007193	4,791,910	0.007193	917	1.084	92.7	0.007759	
2014	0	0	0	0	0.0516	0.0516	0.007637	4,464,398	0.007637	932	1.084	85.0	0.008984	
2015	0	0	0	0	0.0565	0.0565	0.008362	4,340,376	0.008362	951	1.084	81.0	0.010323	
2016	0	0	0	0	0.0646	0.0646	0.009561	4,435,066	0.009561	978	1.084	80.5	0.011877	
2017	0	0	0	0	0.0738	0.0738	0.010922	4,566,113	0.010922	995	1.084	81.4	0.013418	
2018	0	0	0	0	0.0807	0.0807	0.011944	4,484,744	0.011944	1,025	1.084	77.6	0.015391	
2019	0	0	0	0	0.0903	0.0903	0.013364	4,519,863	0.013364	1,049	1.084	76.4	0.017493	
2020	0	0	0	0	0.0069	0.0069	0.001021	313,587	0.001021	1,081	1.084	5.1	0.020024	
2021	0	0	0	0	0.0000	0.0000	0.000000	-	0.000000	1,130	1.084	0.0	N/A	
2022	0	0	0	0	0.0000	0.0000	0.000000	-	0.000000	1,205	1.084	0.0	N/A	
TOTAL	0	0	0	0	0.4730	0.4730	0.070004	31,916,057	0.070004			579.7	0.105269	
AVERAGE													0.013159	

AUGER (0157)

IBNR Factor adjusted by 0.5000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.0265	0.0265	0.003922	1,046,947	0.003922	917	1.084	20.3	0.019320
2014	0	0	0	0	0.0249	0.0249	0.003685	861,590	0.003685	932	1.084	16.4	0.022471
2015	0	0	0	0	0.0213	0.0213	0.003152	654,766	0.003152	951	1.084	12.2	0.025839
2016	0	0	0	0	0.0143	0.0143	0.002116	392,776	0.002116	978	1.084	7.1	0.029808
2017	0	0	0	0	0.0229	0.0229	0.003389	566,324	0.003389	995	1.084	10.1	0.033556
2018	0	0	0	0	0.0270	0.0270	0.003996	600,138	0.003996	1,025	1.084	10.4	0.038423
2019	0	0	0	0	0.0296	0.0296	0.004381	593,214	0.004381	1,049	1.084	10.0	0.043808
2020	0	0	0	0	0.0218	0.0218	0.003226	395,231	0.003226	1,081	1.084	6.5	0.049637
2021	0	0	0	0	0.0137	0.0137	0.002028	227,558	0.002028	1,130	1.084	3.6	0.056322
2022	0	0	0	0	0.0148	0.0148	0.002190	222,909	0.002190	1,205	1.084	3.3	0.066376
TOTAL	0	0	0	0	0.2168	0.2168	0.032086	5,561,453	0.032086			99.9	0.385560
AVERAGE													0.038556

ANTHRACITE CO-GEN (0181)

IBNR Factor adjusted by 0.5000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	1	0	0	1	0.1934	0.1934	0.028623	7,630,762	0.028623	917	1.084	147.6	0.019392
2014	0	0	0	0	0.2417	0.2417	0.035772	8,360,898	0.035772	932	1.084	159.1	0.022484
2015	0	0	0	0	0.3111	0.3111	0.046043	9,554,806	0.046043	951	1.084	178.2	0.025838
2016	0	0	0	0	0.2897	0.2897	0.042876	7,953,309	0.042876	978	1.084	144.3	0.029713
2017	0	0	0	0	0.3150	0.3150	0.046620	7,793,558	0.046620	995	1.084	139.0	0.033540
2018	1	0	0	1	0.4521	0.4521	0.066911	10,053,839	0.066911	1,025	1.084	174.0	0.038454
2019	0	0	0	0	0.3399	0.3399	0.050305	6,807,496	0.050305	1,049	1.084	115.1	0.043706
2020	1	0	1	0	0.3801	1.3801	0.204255	6,903,273	0.204255	1,081	1.084	113.3	0.180278
2021	0	0	0	0	0.4700	0.4700	0.069560	7,786,285	0.069560	1,130	1.084	122.2	0.056923
2022	0	0	0	0	0.5148	0.5148	0.076190	7,763,788	0.076190	1,205	1.084	114.3	0.066658
TOTAL	3	0	1	2	3.5078	4.5078	0.667154	80,608,014	0.667154			1,407.1	0.516986
AVERAGE													0.051699

BITUMINOUS CO-GEN (0182)

IBNR Factor adjusted by 0.4000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.2100	0.2100	0.031080	10,355,884	0.031080	917	1.084	200.3	0.015517
2014	0	0	0	0	0.2710	0.2710	0.040108	11,721,184	0.040108	932	1.084	223.1	0.017978
2015	0	0	0	0	0.3060	0.3060	0.045288	11,748,205	0.045288	951	1.084	219.2	0.020661
2016	1	0	0	1	0.3301	0.3301	0.048855	11,327,552	0.048855	978	1.084	205.5	0.023774
2017	0	0	0	0	0.3697	0.3697	0.054716	11,435,057	0.054716	995	1.084	203.9	0.026835
2018	0	0	0	0	0.4332	0.4332	0.064114	12,043,297	0.064114	1,025	1.084	208.4	0.030765
2019	0	0	0	0	0.4721	0.4721	0.069871	11,818,883	0.069871	1,049	1.084	199.9	0.034953
2020	0	0	0	0	0.4704	0.4704	0.069619	10,678,482	0.069619	1,081	1.084	175.2	0.039737
2021	0	0	0	0	0.5931	0.5931	0.087779	12,282,842	0.087779	1,130	1.084	192.8	0.045528
2022	0	0	0	0	0.9180	0.9180	0.135864	17,306,049	0.135864	1,205	1.084	254.8	0.053322
TOTAL	1	0	0	1	4.3736	4.3736	0.647293	120,717,435	0.647293			2,083.1	0.309070
AVERAGE													0.030907

Source: Claim counts - CMCRB OD Database as of 4/30/2023
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A, Page 3
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.148=18 / [18 + 104]
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	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	Weighted Frequency
2013	1	0	1	0	0.3228	1.3228	0.195774	7,074,886	0.195774	917	1.084	136.9	0.143005	
2014	0	0	0	0	0.3393	0.3393	0.050216	6,521,541	0.050216	932	1.084	124.1	0.040464	
2015	0	0	0	0	0.3632	0.3632	0.053754	6,196,596	0.053754	951	1.084	115.6	0.046500	
2016	0	0	0	0	0.3634	0.3634	0.053783	5,542,968	0.053783	978	1.084	100.5	0.053516	
2017	0	0	0	0	0.4406	0.4406	0.065209	6,056,810	0.065209	995	1.084	108.0	0.060379	
2018	0	0	0	0	0.5598	0.5598	0.082850	6,916,759	0.082850	1,025	1.084	119.7	0.069215	
2019	0	0	0	0	0.9734	0.9734	0.144063	10,829,165	0.144063	1,049	1.084	183.1	0.078680	
2020	1	0	1	0	1.0577	2.0577	0.304540	10,671,271	0.304540	1,081	1.084	175.1	0.173923	
2021	0	0	0	0	1.2341	1.2341	0.182647	11,359,096	0.182647	1,130	1.084	178.3	0.102438	
2022	0	0	0	0	1.7321	1.7321	0.256351	14,512,871	0.256351	1,205	1.084	213.7	0.119958	
TOTAL	2	0	2	0	7.3864	9.3864	1.389187	85,681,963	1.389187			1,455.0	0.888078	
Average													0.088808	

BITUMINOUS PREP PLANT (0184)

IBNR Factor adjusted by 0.4000

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years
2013	0	0	0	0	0.6822	0.6822	0.100966	33,639,969	0.100966	917	1.561	451.9	0.022342
2014	3	0	1	2	0.7366	1.7366	0.257017	31,854,431	0.257017	932	1.561	421.1	0.061035
2015	1	0	0	1	0.6335	0.6335	0.093758	24,320,608	0.093758	951	1.561	315.1	0.029755
2016	0	0	0	0	0.5851	0.5851	0.086595	20,079,401	0.086595	978	1.561	252.9	0.034241
2017	0	0	0	0	0.9313	0.9313	0.137832	28,803,457	0.137832	995	1.561	356.6	0.038652
2018	1	1	0	0	1.1583	1.1583	0.171428	32,199,872	1.171428	1,025	1.561	387.0	0.302695
2019	1	0	0	1	1.4428	1.4428	0.213534	36,117,344	0.213534	1,049	1.561	424.2	0.050338
2020	1	0	0	1	1.4785	1.4785	0.218818	33,562,164	0.218818	1,081	1.561	382.5	0.057207
2021	0	0	0	0	1.7273	1.7273	0.255640	35,771,344	0.255640	1,130	1.561	390.0	0.065549
2022	0	0	0	0	2.1794	2.1794	0.322551	41,085,799	0.322551	1,205	1.561	420.0	0.076798
TOTAL	7	1	1	5	11.5550	12.5550	1.858140	317,434,389	2.858140			3,801.3	0.738612
Average													0.073861

TOTAL OTHER CLASSES

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2013	2	0	1	1	1.4835	2.4835	0.367558	64,540,358	0.367558	917		1,049.7	0.035016	
2014	3	0	1	2	1.6651	2.6651	0.394435	63,784,042	0.394435	932		1,028.8	0.038339	
2015	1	0	0	1	1.6916	1.6916	0.250357	56,815,357	0.250357	951		921.3	0.027174	
2016	1	0	0	1	1.6472	1.6472	0.243786	49,731,072	0.243786	978		790.8	0.030828	
2017	0	0	0	0	2.1533	2.1533	0.318688	59,221,319	0.318688	995		899.0	0.035449	
2018	2	1	0	1	2.7111	2.7111	0.401243	66,298,649	1.401243	1,025		977.1	0.143408	
2019	1	0	0	1	3.3481	3.3481	0.495519	70,685,965	0.495519	1,049		1,008.7	0.049124	
2020	3	0	2	1	3.4154	5.4154	0.801479	62,524,008	0.801479	1,081		857.7	0.093445	
2021	0	0	0	0	4.0382	4.0382	0.597654	67,427,125	0.597654	1,130		886.9	0.067387	
2022	0	0	0	0	5.3591	5.3591	0.793147	80,891,416	0.793147	1,205		1,006.1	0.078834	
TOTAL	13	1	4	8	27.5126	31.5126	4.663865	641,919,311	5.663865			9,426.1	0.599004	
Average													0.059900	0.059260

GRAND TOTAL

YEAR	Reported	Awarded	Pending	Denied	IBNR	IBNR + Pending	0.148 Award Ratio	Payroll	Expected Ultimate Awarded	Statewide Average Weekly Wage	Adjustment Factor	Estimated Miner Years	Frequency Claims per 100 Miner Years	
2013	19	5	2	12	12.1144	14.1144	2.088924	293,506,562	6.930004	917		4,621.4	0.149955	
2014	28	3	4	21	16.4532	20.4532	3.027080	321,754,757	5.419117	932		4,872.3	0.111223	
2015	32	2	6	24	15.1851	21.1851	3.135398	261,874,410	5.231230	951		3,945.3	0.132594	
2016	16	3	0	13	14.8920	14.8920	2.204012	217,828,634	4.835224	978		3,183.0	0.151908	
2017	8	1	0	7	23.7405	23.7405	3.513591	285,526,076	3.846867	995		3,993.0	0.096340	
2018	20	3	4	13	28.5127	32.5127	4.811883	301,690,463	7.220580	1,025		4,096.1	0.176279	
2019	7	1	1	5	32.3230	33.3230	4.931810	305,553,122	5.041767	1,049		4,060.7	0.124160	
2020	9	0	2	7	29.6844	31.6844	4.689288	249,374,522	4.074259	1,081		3,226.0	0.126294	
2021	5	0	3	2	32.5124	35.5124	5.255832	248,194,066	4.718573	1,130		3,103.5	0.152040	
2022	1	0	1	0	40.0207	41.0207	6.071067	274,494,715	5.254433	1,205		3,247.3	0.161809	
TOTAL	145	18	23	104	245.4384	268.4384	39.728883	2,759,797,327	52.572054			38,348.6	1.382602	
Average													0.138260	0.136713

Source: Claim counts - CMCRB OD Database as of 4/30/2023
IBNR: Exhibit VIII-C
Payroll- Exhibit X-A, Page 3
The Award Ratio is equal to Awarded ÷ (Awarded plus Denied). Other Classes use the Total Award Ratio: 0.148=18 / [18 + 104]
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 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
12	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	0
24	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	0	
36	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0		
48	0	0	0	0	1	2	0	0	0	0	1	0	0	1	0	2	0	1	0	1	0	0	0	0			
60	0	0	0	1	1	2	0	0	0	0	1	0	0	1	0	2	0	2	0	1	0	0	1				
72	0	0	0	1	1	3	0	0	0	0	1	0	1	1	0	2	0	3	0	1	0	0					
84	0	0	0	1	1	4	0	0	0	0	1	0	1	1	0	2	0	3	0	1	0						
96	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0	4	0	1							
108	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0	4	0								
120	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0	4									
132	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2	0										
144	0	0	0	1	1	4	0	1	0	0	1	0	1	1	0	2											
156	0	0	0	2	1	4	1	1	0	0	1	0	1	1	0												
168	0	0	0	2	1	4	2	1	0	0	1	0	1	1													
180	0	0	1	3	1	4	2	1	1	0	1	0	1														
192	0	0	1	3	1	4	2	1	1	0	1	0															
204	0	0	1	3	1	4	2	1	1	0	1																
216	0	0	2	3	1	4	2	1	1	0																	
228	0	0	2	3	1	4	2	1	1																		
240	0	0	2	3	2	5	2	1																			

Incremental Changes

12-24													0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24-36												0	0	0	0	1	0	0	0	0	0	0	0	0	0		
36-48											0	0	0	0	0	1	0	0	0	1	0	0	0	0			
48-60										0	0	0	0	0	0	0	0	1	0	0	0	0	1				
60-72									0	0	0	0	1	0	0	0	0	1	0	0	0	0					
72-84								0	0	0	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	1	0	0	0	0	0	0	0	0	0	1	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	1	0	0	1	0	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	1	0	0	0	0	0	0	0													
168-180	0	0	1	1	0	0	0	0	1	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	1	0	0	0	0	0	0	0																	
216-228	0	0	0	0	0	0	0	0	0																		
228-240	0	0	0	0	1	1	0	0																			

Payroll	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	2022		
($Millions)	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	0.06365		
																												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	0.62097
24-36													0.00000	0.00000	0.00000	0.79495	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.06115	0.36359
36-48												0.00000	0.00000	0.00000	0.00000	0.79495	0.00000	0.00000	0.00000	3.93174	0.00000	0.00000	0.00000	0.00000				0.36359	0.25823
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	0.00000	0.00000	0.00000	5.45405					0.62097	0.23743
60-72										0.00000	0.00000	0.00000	0.46801	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	0.00000	0.00000	0.00000						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								0.73841	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	2.61862	0.00000	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	0.55122	0.00000	0.00000	0.72121	0.00000	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	0.72121	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.05548	0.00000
168-180	0.00000	0.00000	0.56744	0.55122	0.00000	0.00000	0.00000	0.00000	0.74332	0.00000	0.00000	0.00000	0.00000															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	0.56744	0.00000	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	0.72984	0.61105	0.00000	0.00000																				0.16761	0.00000
																											Total=	2.06231	2.06231

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	0.81952	1.07775	1.44134	2.06231
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02119	0.02904	0.04409	0.04442	0.10461	0.10673	0.14701	0.32300	0.33515	0.13127

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 3
File: D:\OneDrive\Clients\Coal Mine\2023 Rate Filing\XL 2023 Relabeled\[2023-08-C.xlsx]VIII-C-1
Run Date: October 10, 2023 - 01:27:26 PM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
BITUMINOUS UNDERGROUND (0158)

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
12	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	2	1
24	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	4	
36	2	4	5	6	4	2	4	0	1	0	1	2	1	1	2	2	4	3	10	11	6	6	10	5	5		
48	2	5	5	7	4	2	5	0	2	0	1	2	1	4	2	2	4	3	12	15	9	6	11	5			
60	3	6	5	7	4	3	6	0	2	0	1	3	1	4	2	4	4	3	14	15	9	6	15				
72	4	7	5	7	4	4	6	0	2	0	1	3	1	5	3	4	4	4	15	19	10	6					
84	4	7	5	7	5	4	6	0	2	1	1	3	1	5	4	6	5	4	15	19	11						
96	5	7	5	8	5	4	7	0	2	1	1	4	1	5	4	6	6	4	16	19							
108	5	7	5	9	5	6	7	1	2	1	1	4	1	5	5	6	6	4	20								
120	5	7	5	10	5	6	11	1	2	1	1	4	1	5	5	6	6	4									
132	5	8	5	11	8	7	11	1	2	1	1	4	1	5	5	6	6										
144	5	9	5	15	11	7	13	1	2	1	1	5	1	5	6	6											
156	5	9	5	16	11	7	15	1	3	1	1	5	1	6	6												
168	5	9	6	16	15	7	16	1	3	1	1	5	1	6													
180	5	9	6	17	22	7	17	1	3	1	2	5	1														
192	5	9	7	18	35	7	17	1	4	1	2	5															
204	6	9	7	19	37	7	20	2	4	1	2																
216	8	10	10	19	40	8	20	2	5	1																	
228	8	11	10	20	48	8	20	2	5																		
240	8	11	10	22	52	8	20	2																			

Incremental Changes

12-24													1	1	2	0	2	1	3	2	1	1	4	1	2	2	
24-36												2	0	0	0	0	1	0	4	4	2	2	2	3	0		
36-48											0	0	0	3	0	0	0	0	2	4	3	0	1	0			
48-60										0	0	1	0	0	0	2	0	0	2	0	0	0	4				
60-72									0	0	0	0	0	1	1	0	0	1	1	4	1	0					
72-84								0	0	1	0	0	0	0	1	2	1	0	0	0	1						
84-96							1	0	0	0	0	1	0	0	0	0	1	0	1	0							
96-108						2	0	1	0	0	0	0	0	0	1	0	0	0	4								
108-120					0	0	4	0	0	0	0	0	0	0	0	0	0	0									
120-132				1	3	1	0	0	0	0	0	0	0	0	0	0	0										
132-144			0	4	3	0	2	0	0	0	0	1	0	0	1	0											
144-156		0	0	1	0	0	2	0	1	0	0	0	0	1	0												
156-168	0	0	1	0	4	0	1	0	0	0	0	0	0	0													
168-180	0	0	0	1	7	0	1	0	0	0	1	0	0														
180-192	0	0	1	1	13	0	0	0	1	0	0	0															
192-204	1	0	0	1	2	0	3	1	0	0	0																
204-216	2	1	3	0	3	1	0	0	1	0																	
216-228	0	1	0	1	8	0	0	0	0																		
228-240	0	0	0	2	4	0	0	0																			

Payroll	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	2022
($Millions)	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	139.21752	129.54491	135.40164

																												Average	Smoothed
12-24														0.00987	0.01595	0.00000	0.01302	0.00689	0.01635	0.01423	0.00844	0.00579	0.02215	0.00562	0.01437	0.01544		0.01139	0.02739
24-36													0.00000	0.00000	0.00000	0.00000	0.00651	0.00000	0.02181	0.02846	0.01687	0.01158	0.01107	0.01685	0.00000			0.00870	0.02218
36-48												0.00000	0.00000	0.02960	0.00000	0.00000	0.00000	0.00000	0.01090	0.02846	0.02531	0.00000	0.00554	0.00000				0.00768	0.01954
48-60											0.00000	0.01251	0.00000	0.00000	0.00000	0.01347	0.00000	0.00000	0.01090	0.00000	0.00000	0.00000	0.02215					0.00454	0.01575
60-72										0.00000	0.00000	0.00000	0.00000	0.00987	0.00797	0.00000	0.00000	0.00689	0.00545	0.02846	0.00844	0.00000						0.00516	0.01562
72-84									0.00000	0.01509	0.00000	0.00000	0.00000	0.00000	0.00797	0.01347	0.00651	0.00000	0.00000	0.00000	0.00844							0.00396	0.01544
84-96								0.00000	0.00000	0.00000	0.00000	0.01251	0.00000	0.00000	0.00000	0.00000	0.00651	0.00000	0.00545	0.00000								0.00188	0.01478
96-108							0.00000	0.02740	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00797	0.00000	0.00000	0.00000	0.02181									0.00440	0.01139
108-120						0.00000	0.09795	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00753	0.00962
120-132					0.06313	0.02061	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00644	0.00870
132-144				0.06816	0.06313	0.00000	0.04897	0.00000	0.00000	0.00000	0.00000	0.01251	0.00000	0.00000	0.00797	0.00000												0.01544	0.00768
144-156			0.00000	0.01704	0.00000	0.00000	0.04897	0.00000	0.02170	0.00000	0.00000	0.00000	0.00000	0.00987	0.00000													0.00751	0.00753
156-168		0.00000	0.01637	0.00000	0.08417	0.00000	0.02449	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000														0.00962	0.00751
168-180	0.00000	0.00000	0.00000	0.01704	0.14730	0.00000	0.02449	0.00000	0.00000	0.00000	0.01419	0.00000	0.00000															0.01562	0.00644
180-192	0.00000	0.00000	0.01637	0.01704	0.27357	0.00000	0.00000	0.00000	0.02170	0.00000	0.00000	0.00000																0.02739	0.00516
192-204	0.01329	0.00000	0.00000	0.01704	0.04209	0.00000	0.07346	0.02740	0.00000	0.00000	0.00000																	0.01575	0.00454
204-216	0.02659	0.01421	0.04911	0.00000	0.06313	0.02061	0.00000	0.00000	0.02170	0.00000																		0.01954	0.00440
216-228	0.00000	0.01421	0.00000	0.01704	0.16835	0.00000	0.00000	0.00000	0.00000																			0.02218	0.00396
228-240	0.00000	0.00000	0.00000	0.03408	0.08417	0.00000	0.00000	0.00000																				0.01478	0.00188
																											Total=	0.20951	0.20951

IBNR Claims

Cumulative Factor									0.00188	0.00584	0.01024	0.01478	0.01994	0.02638	0.03389	0.04142	0.04910	0.05780	0.06742	0.07881	0.09359	0.10903	0.12465	0.14040	0.15994	0.18212	0.20951
times Payroll									0.08662	0.38705	0.72157	1.18099	2.02100	2.67356	4.24959	6.15028	7.54269	8.38945	12.36698	11.07834	11.09467	18.83044	22.51176	24.99387	22.26645	23.59272	28.36800

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 3
File: D:\OneDrive\Clients\Coal Mine\2023 Rate Filing\XL 2023 Relabeled\[2023-08-C.xlsx]VIII-C-2
Run Date: October 10, 2023 - 01:27:26 PM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ANTHRACITE SURFACE (0153)

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
12	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	0
24	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	1	
36	6	7	6	0	4	2	4	3	3	2	0	2	2	1	0	1	1	1	1	1	1	1	1	0	0		
48	6	8	7	0	5	4	5	3	3	2	1	2	2	1	0	1	1	1	1	1	3	1	2	0			
60	6	8	7	0	5	5	5	3	4	2	1	2	2	1	0	1	1	2	1	2	3	1	2				
72	8	8	8	0	5	5	6	3	4	2	1	2	2	2	0	1	1	3	1	2	4	1					
84	8	8	8	0	5	5	6	4	5	2	1	2	2	2	0	1	1	3	1	2	4						
96	9	8	8	0	5	5	6	4	5	2	1	2	2	2	2	1	1	4	1	2							
108	9	8	8	0	5	6	6	4	5	2	1	2	2	2	2	1	1	4	1								
120	9	8	8	1	7	6	6	4	5	2	1	2	2	2	2	1	1	4									
132	9	8	8	1	7	7	6	4	5	2	1	2	2	2	2	1	1										
144	9	8	9	1	7	7	6	4	5	2	1	2	2	2	2	1											
156	9	9	9	1	7	7	6	5	5	2	1	2	2	2	2												
168	9	9	9	1	7	7	6	5	6	2	1	2	2	2													
180	10	9	9	1	7	7	6	5	6	2	1	2	2														
192	10	9	9	1	7	7	6	5	6	2	1	2															
204	11	9	9	1	10	7	6	5	6	2	1																
216	11	9	9	1	10	7	6	5	6	2																	
228	11	9	9	1	10	7	6	5	6																		
240	11	9	9	1	10	7	6	5																			

Incremental Changes

12-24													2	0	0	1	0	0	0	1	0	0	0	0	0	1	
24-36												0	0	1	0	0	1	0	0	0	0	0	0	0	0		
36-48											1	0	0	0	0	0	0	0	0	0	2	0	1	0			
48-60										0	0	0	0	0	0	0	0	1	0	1	0	0	0				
60-72									0	0	0	0	0	1	0	0	0	1	0	0	1	0					
72-84								1	1	0	0	0	0	0	0	0	0	0	0	0	0						
84-96							0	0	0	0	0	0	0	0	2	0	0	1	0	0							
96-108						1	0	0	0	0	0	0	0	0	0	0	0	0	0								
108-120					2	0	0	0	0	0	0	0	0	0	0	0	0	0									
120-132				0	0	1	0	0	0	0	0	0	0	0	0	0	0										
132-144			1	0	0	0	0	0	0	0	0	0	0	0	0	0											
144-156		1	0	0	0	0	0	1	0	0	0	0	0	0	0												
156-168	0	0	0	0	0	0	0	0	1	0	0	0	0	0													
168-180	1	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	1	0	0	0	3	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 ($Millions)	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	2022	Average	Smoothed
	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	20.16518	19.34381	21.01093	24.55953		
12-24														0.00000	0.00000	0.05126	0.00000	0.00000	0.00000	0.04498	0.00000	0.00000	0.00000	0.00000	0.00000	0.04759		0.01106	0.02184
24-36													0.00000	0.06292	0.00000	0.00000	0.04043	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			0.00795	0.01526
36-48												0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.10386	0.00000	0.05463	0.00000				0.01219	0.01255
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.04826	0.00000	0.04498	0.00000	0.00000	0.00000					0.00717	0.01219
60-72										0.00000	0.00000	0.00000	0.00000	0.06292	0.00000	0.00000	0.00000	0.04826	0.00000	0.00000	0.05193	0.00000						0.01255	0.01106
72-84									0.08091	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000							0.00622	0.00795
84-96								0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.15016	0.00000	0.00000	0.04826	0.00000	0.00000								0.01526	0.00717
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	0.00645
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	0.00622
120-132					0.00000	0.07738	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000											0.00595	0.00622
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	0.00595
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.08383	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00645	0.00475
156-168		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.08091	0.00000	0.00000	0.00000	0.00000	0.00000														0.00622	0.00000
168-180	0.06176	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00475	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	0.06176	0.00000	0.00000	0.00000	0.17849	0.00000	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=	0.11761	0.11761

IBNR Claims

Cumulative Factor									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00475	0.01070	0.01692	0.02314	0.02959	0.03676	0.04471	0.05577	0.06796	0.08051	0.09577	0.11761
times Payroll									0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.09266	0.26466	0.35058	0.43761	0.65791	0.70789	0.85372	1.02079	1.37043	1.55737	2.01222	2.88845

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 3
File: D:\OneDrive\Clients\Coal Mine\2023 Rate Filing\XL 2023 Relabeled\[2023-08-C.xlsx]VIII-C-3
Run Date: October 10, 2023 - 01:27:26 PM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
BITUMINOUS SURFACE (0156)

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
														Year													
12	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	0
24	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	0	
36	5	3	2	1	3	1	2	1	1	1	1	2	1	0	1	1	8	2	1	6	0	1	0	1	1		
48	6	5	2	1	5	1	2	1	1	1	1	3	1	0	1	2	8	3	1	7	0	1	0	1			
60	7	5	2	1	5	1	2	1	1	1	1	3	1	0	1	3	8	3	3	8	0	1	0				
72	8	5	3	2	6	1	2	1	1	1	1	4	4	0	2	3	8	4	4	8	0	1					
84	9	7	3	2	6	2	2	1	1	1	3	5	5	0	2	4	9	4	4	9	0						
96	10	7	4	2	6	2	2	1	1	1	3	5	5	0	2	4	9	5	4	9							
108	10	7	5	2	6	2	2	2	1	1	3	5	5	1	2	5	9	5	4								
120	10	8	5	2	6	2	3	3	2	1	3	6	5	1	2	5	9	5									
132	11	8	5	2	6	3	4	3	2	1	3	6	6	1	2	6	9										
144	11	8	6	2	6	3	4	4	2	1	3	6	7	1	2	6											
156	11	8	6	2	6	3	4	5	2	1	3	6	7	1	2												
168	12	8	6	2	6	4	4	5	2	2	3	6	7	2													
180	12	8	6	2	6	5	4	5	2	2	3	6	7														
192	12	9	6	2	7	7	4	5	2	2	3	7															
204	12	10	7	2	7	7	4	5	2	2	4																
216	13	10	8	3	9	7	4	5	2	2																	
228	13	10	9	4	9	7	4	6	2																		
240	14	10	9	4	9	7	4	6																			

Incremental Changes

12-24													1	0	0	1	5	0	1	2	0	0	0	1	0	0	
24-36												0	0	0	0	0	0	0	0	3	0	0	0	0	0		
36-48											0	1	0	0	0	1	0	1	0	1	0	0	0	0			
48-60										0	0	0	0	0	0	1	0	0	2	1	0	0	0				
60-72									0	0	0	1	3	0	1	0	0	1	1	0	0	0					
72-84								0	0	0	2	1	1	0	0	1	1	0	0	1	0						
84-96							0	0	0	0	0	0	0	0	0	0	0	1	0	0							
96-108						0	0	1	0	0	0	0	0	1	0	1	0	0	0								
108-120					0	0	1	1	1	0	0	1	0	0	0	0	0	0									
120-132				0	0	1	1	0	0	0	0	0	1	0	0	1	0										
132-144			1	0	0	0	0	1	0	0	0	0	1	0	0	0											
144-156		0	0	0	0	0	0	1	0	0	0	0	0	0	0												
156-168	1	0	0	0	0	1	0	0	0	1	0	0	0	1													
168-180	0	0	0	0	0	1	0	0	0	0	0	0	0														
180-192	0	1	0	0	1	2	0	0	0	0	0	1															
192-204	0	1	1	0	0	0	0	0	0	0	1																
204-216	1	0	1	1	2	0	0	0	0	0																	
216-228	0	0	1	1	0	0	0	1	0																		
228-240	1	0	0	0	0	0	0	0																			

Payroll	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	2022		
($Millions)	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	29.97857	33.57848		
																												Average	Smoothed
12-24														0.00000	0.00000	0.01140	0.06419	0.00000	0.01806	0.04762	0.00000	0.00000	0.00000	0.02739	0.00000	0.00000		0.01297	0.01297
24-36													0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.07143	0.00000	0.00000	0.00000	0.00000	0.00000			0.00549	0.00871
36-48												0.01543	0.00000	0.00000	0.00000	0.01140	0.00000	0.01594	0.00000	0.02381	0.00000	0.00000	0.00000	0.00000				0.00512	0.00833
48-60											0.00000	0.00000	0.00000	0.00000	0.00000	0.01140	0.00000	0.00000	0.03612	0.02381	0.00000	0.00000	0.00000					0.00549	0.00793
60-72										0.00000	0.00000	0.01543	0.04021	0.00000	0.01347	0.00000	0.00000	0.01594	0.01806	0.00000	0.00000	0.00000						0.00793	0.00705
72-84									0.00000	0.00000	0.03135	0.01543	0.01340	0.00000	0.00000	0.01140	0.01284	0.00000	0.00000	0.02381	0.00000							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	0.01594	0.00000	0.00000								0.00123	0.00560
96-108							0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.00000	0.01580	0.00000	0.01140	0.00000	0.00000	0.00000									0.00370	0.00549
108-120						0.00000	0.01869	0.02089	0.01779	0.00000	0.00000	0.01543	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00560	0.00549
120-132					0.00000	0.01720	0.01869	0.00000	0.00000	0.00000	0.00000	0.00000	0.01340	0.00000	0.00000	0.01140	0.00000											0.00467	0.00512
132-144				0.00000	0.00000	0.00000	0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.01340	0.00000	0.00000	0.00000												0.00264	0.00467
144-156			0.00000	0.00000	0.00000	0.00000	0.00000	0.02089	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000													0.00161	0.00419
156-168		0.00000	0.00000	0.00000	0.00000	0.01720	0.00000	0.00000	0.00000	0.01542	0.00000	0.00000	0.00000	0.01580														0.00372	0.00372
168-180	0.00000	0.00000	0.00000	0.00000	0.00000	0.01720	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000															0.00132	0.00370
180-192	0.00000	0.01473	0.00000	0.00000	0.02003	0.03439	0.00000	0.00000	0.00000	0.00000	0.00000	0.01543																0.00705	0.00264
192-204	0.00000	0.01473	0.01571	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01567																	0.00419	0.00161
204-216	0.01285	0.00000	0.01571	0.01846	0.04005	0.00000	0.00000	0.00000	0.00000	0.00000																		0.00871	0.00161
216-228	0.00000	0.00000	0.01571	0.01846	0.00000	0.00000	0.00000	0.02089	0.00000																			0.00612	0.00132
228-240	0.01285	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000																				0.00161	0.00123
																											Total=	0.09750	0.09750

IBNR Claims

Cumulative Factor									0.00123	0.00255	0.00416	0.00577	0.00841	0.01211	0.01583	0.02002	0.02469	0.02981	0.03530	0.04079	0.04639	0.05251	0.05956	0.06749	0.07582	0.08453	0.09750
times Payroll									0.06915	0.16542	0.26540	0.37394	0.62740	0.76664	1.17546	1.75636	1.92312	1.86963	1.95451	1.71318	1.39779	1.79841	2.16234	2.46363	2.12216	2.53409	3.27390

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 3
File: D:\OneDrive\Clients\Coal Mine\2023 Rate Filing\XL 2023 Relabeled\[2023-08-C.xlsx]VIII-C-4
Run Date: October 10, 2023 - 01:27:26 PM

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

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
	Year																										
12	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	0
24	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	0	
36	0	4	2	3	1	0	1	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2	1	3		
48	0	4	2	3	1	0	1	0	1	1	0	0	0	0	0	1	1	2	0	0	0	0	2	1			
60	0	5	2	4	1	0	1	0	1	1	0	0	0	0	0	1	1	2	2	0	1	0	2				
72	0	6	2	4	1	0	2	0	1	1	0	0	0	1	0	1	2	2	2	0	1	0					
84	0	6	3	4	1	0	2	1	1	1	0	0	0	1	0	1	2	2	2	1	1						
96	0	6	3	4	1	0	2	1	1	2	0	0	0	1	0	1	2	2	3	1							
108	0	6	3	4	1	0	2	1	1	2	0	1	1	1	0	1	2	2	3								
120	0	6	3	4	1	0	2	1	1	3	1	1	1	1	0	1	2	2									
132	0	6	3	4	1	0	2	1	1	3	1	1	1	1	0	1	2										
144	0	6	3	5	1	0	2	1	1	3	2	1	1	1	0	1											
156	0	6	3	5	1	0	2	2	1	3	2	1	2	1	0												
168	0	6	3	5	1	0	2	2	1	3	2	1	2	1													
180	0	7	3	5	1	0	2	2	1	3	2	1	3														
192	0	7	3	5	1	0	2	2	2	3	2	1															
204	0	7	3	5	2	0	2	2	2	3	2																
216	0	7	3	5	3	0	2	2	2	3																	
228	0	7	3	5	3	0	2	3	2																		
240	0	8	3	5	3	0	2	3																			

Payroll	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	2022
($Millions)	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	70.68597	62.52401	67.42713	80.89142

Source: Coal Mine Compensation Rating Bureau Database as of 4-30-2023
Payrolls: Exhibit X-A, Page 3
File: D:\OneDrive\Clients\Coal Mine\2023 Rate Filing\XL 2023 Relabeled\[2023-08-C.xlsx]VIII-C-5
Run Date: October 10, 2023 - 01:27:26 PM

COAL MINE COMPENSATION RATING BUREAU
FEDERAL OCCUPATIONAL DISEASE
ALL CLASSIFICATIONS

Claims with File Dates on or before 12-31-2022, Valued as of 4-30-2023

Incremental Frequency and IBNR

Reported Claims

Months	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	2022
	Year																										
12	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	2	1
24	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	5	
36	13	18	15	10	13	7	11	4	6	4	3	6	4	3	3	6	13	8	12	18	7	8	13	7	9		
48	14	22	16	11	16	9	13	4	7	4	4	7	4	6	3	8	14	10	14	24	12	8	15	7			
60	16	24	16	13	16	11	14	4	8	4	4	8	4	6	3	11	14	12	20	26	13	8	20				
72	20	26	18	14	17	13	16	4	8	4	4	9	8	9	5	11	15	16	22	30	15	8					
84	21	28	19	14	18	15	16	6	9	5	6	10	9	9	6	14	17	16	22	32	16						
96	24	28	20	15	18	15	17	7	9	6	6	11	9	9	8	14	18	19	24	32							
108	24	28	21	16	18	18	17	9	9	6	6	12	10	10	9	15	18	19	28								
120	24	29	21	18	20	18	22	10	10	7	7	13	10	10	9	15	18	19									
132	25	30	21	19	23	21	23	10	10	7	7	13	11	10	9	16	18										
144	25	31	23	24	26	21	25	11	10	7	8	14	12	10	10	16											
156	25	32	23	26	26	21	28	14	11	7	8	14	13	11	10												
168	26	32	24	26	30	22	30	14	12	8	8	14	13	12													
180	27	33	25	28	37	23	31	14	13	8	9	14	14														
192	27	34	26	29	51	25	31	14	15	8	9	15															
204	29	35	27	30	57	25	34	15	15	8	10																
216	32	36	32	31	63	26	34	15	16	8																	
228	32	37	33	33	71	26	34	17	16																		
240	33	38	33	35	76	27	34	17																			

Incremental Changes

12-24													4	1	2	2	7	2	4	5	1	1	5	2	2	3	
24-36												2	0	1	0	2	2	0	4	7	2	2	3	4	0		
36-48											1	1	0	3	0	2	1	2	2	6	5	0	2	0			
48-60										0	0	1	0	0	0	3	0	2	6	2	1	0	5				
60-72									0	0	0	1	4	3	2	0	1	4	2	4	2	0					
72-84								2	1	1	2	1	1	0	1	3	2	0	0	2	1						
84-96							1	1	0	1	0	1	0	0	2	0	1	3	2	0							
96-108						3	0	2	0	0	0	1	1	1	1	1	0	0	4								
108-120					2	0	5	1	1	1	1	1	0	0	0	0	0	0									
120-132				1	3	3	1	0	0	0	0	0	1	0	0	1	0										
132-144			2	5	3	0	2	1	0	0	1	1	1	0	1	0											
144-156		1	0	2	0	0	3	3	1	0	0	0	1	1	0												
156-168	1	0	1	0	4	1	2	0	1	1	0	0	0	1													
168-180	1	1	1	2	7	1	1	0	1	0	1	0	1														
180-192	0	1	1	1	14	2	0	0	2	0	0	1															
192-204	2	1	1	1	6	0	3	1	0	0	1																
204-216	3	1	5	1	6	1	0	0	1	0																	
216-228	0	1	1	2	8	0	0	2	0																		
228-240	1	1	0	2	5	1	0	0																			

Payroll	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	2022
($Millions)	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	249.37453	248.19407	274.49472

																												Average	Smoothed
12-24														0.00436	0.00745	0.00619	0.02161	0.00681	0.01243	0.01909	0.00459	0.00350	0.01657	0.00655	0.00802	0.01209		0.00994	0.01189
24-36													0.00000	0.00436	0.00000	0.00619	0.00617	0.00000	0.01243	0.02673	0.00918	0.00700	0.00994	0.01309	0.00000			0.00731	0.01059
36-48												0.00453	0.00000	0.01307	0.00000	0.00619	0.00309	0.00681	0.00622	0.02291	0.02295	0.00000	0.00663	0.00000				0.00711	0.01026
48-60											0.00000	0.00453	0.00000	0.00000	0.00000	0.00928	0.00000	0.00681	0.01865	0.00764	0.00459	0.00000	0.01657					0.00524	0.00994
60-72										0.00000	0.00000	0.00453	0.01603	0.01307	0.00745	0.00000	0.00309	0.01363	0.00622	0.01527	0.00918	0.00000						0.00681	0.00910
72-84									0.00622	0.00508	0.00993	0.00453	0.00401	0.00000	0.00373	0.00928	0.00617	0.00000	0.00000	0.00764	0.00459							0.00471	0.00798
84-96								0.00747	0.00000	0.00508	0.00000	0.00453	0.00000	0.00000	0.00745	0.00000	0.00309	0.01022	0.00622	0.00000								0.00339	0.00773
96-108							0.00000	0.01493	0.00000	0.00000	0.00000	0.00453	0.00401	0.00436	0.00373	0.00309	0.00000	0.00000	0.01243									0.00362	0.00731
108-120						0.00000	0.03600	0.00747	0.00622	0.00508	0.00497	0.00453	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000										0.00494	0.00711
120-132					0.02067	0.01971	0.00720	0.00000	0.00000	0.00000	0.00000	0.00000	0.00401	0.00000	0.00000	0.00309	0.00000											0.00421	0.00695
132-144				0.03057	0.02067	0.00000	0.01440	0.00747	0.00000	0.00000	0.00497	0.00453	0.00401	0.00000	0.00373	0.00000												0.00695	0.00681
144-156			0.00000	0.01223	0.00000	0.00000	0.02160	0.02240	0.00622	0.00000	0.00000	0.00000	0.00401	0.00436	0.00000													0.00545	0.00545
156-168		0.00000	0.00571	0.00000	0.02755	0.00657	0.01440	0.00000	0.00622	0.00508	0.00000	0.00000	0.00000	0.00436														0.00538	0.00538
168-180	0.00428	0.00432	0.00571	0.01223	0.04822	0.00657	0.00720	0.00000	0.00622	0.00000	0.00497	0.00000	0.00401															0.00798	0.00524
180-192	0.00000	0.00432	0.00571	0.00611	0.09644	0.01314	0.00000	0.00000	0.01245	0.00000	0.00000	0.00453																0.01189	0.00494
192-204	0.00856	0.00432	0.00571	0.00611	0.04133	0.00000	0.02160	0.00747	0.00000	0.00000	0.00497																	0.00910	0.00471
204-216	0.01284	0.00432	0.02853	0.00611	0.04133	0.00657	0.00000	0.00000	0.00622	0.00000																		0.01059	0.00421
216-228	0.00000	0.00432	0.00571	0.01223	0.05511	0.00000	0.00000	0.01493	0.00000																			0.01026	0.00362
228-240	0.00428	0.00432	0.00000	0.01223	0.03444	0.00657	0.00000	0.00000																				0.00773	0.00339
																											Total=	0.13261	0.13261

IBNR Claims

Cumulative Factor	0.00339	0.00701	0.01122	0.01593	0.02087	0.02611	0.03149	0.03694	0.04375	0.05070	0.05781	0.06512	0.07285	0.08083	0.08993	0.09987	0.11013	0.12072	0.13261
times Payroll	0.54476	1.37881	2.25914	3.51672	5.20847	5.99221	8.45228	11.93603	14.17325	14.88078	18.60064	17.05326	15.86882	23.07907	27.13102	30.51559	27.46362	29.96199	36.40074

Source: Counts and Payrolls: Sum of Exhibits VIII-C, Page 1 thru 5

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
2013	0.0507	0.0507	0.0507	0.0507	0.0507	0.0507
2014	0.0578	0.0578	0.0578	0.0578	0.0578	0.0578
2015	0.0651	0.0651	0.0651	0.0651	0.0651	0.0651
2016	0.0729	0.0729	0.0729	0.0729	0.0729	0.0729
2017	0.0808	0.0808	0.0808	0.0808	0.0808	0.0808
2018	0.0899	0.0899	0.0899	0.0899	0.0899	0.0899
2019	0.0999	0.0999	0.0999	0.0999	0.0999	0.0999
2020	0.1101	0.1101	0.1101	0.1101	0.1101	0.1101
2021	0.1207	0.1207	0.1207	0.1207	0.1207	0.1207
2022	0.1326	0.1326	0.1326	0.1326	0.1326	0.1326
B. Adjustment Factor	0.2000	0.5000	0.5000	0.4000	0.9000	0.4000
C. Payroll Per $1M						
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	10.82917	36.11734
2020	0.31359	0.39523	6.90327	10.67848	10.67127	33.56216
2021	0.00000	0.22756	7.78629	12.28284	11.35910	35.77134
2022	0.00000	0.22291	7.76379	17.30605	14.51287	41.08580
D. IBNR						
2013	0.0486	0.0265	0.1934	0.2100	0.3228	0.6822
2014	0.0516	0.0249	0.2417	0.2710	0.3393	0.7366
2015	0.0565	0.0213	0.3111	0.3060	0.3632	0.6335
2016	0.0646	0.0143	0.2897	0.3301	0.3634	0.5851
2017	0.0738	0.0229	0.3150	0.3697	0.4406	0.9313
2018	0.0807	0.0270	0.4521	0.4332	0.5598	1.1583
2019	0.0903	0.0296	0.3399	0.4721	0.9734	1.4428
2020	0.0069	0.0218	0.3801	0.4704	1.0577	1.4785
2021	0.0000	0.0137	0.4700	0.5931	1.2341	1.7273
2022	0.0000	0.0148	0.5148	0.9180	1.7321	2.1794

Source: IBNR Factor - Exhibit VIII-C, Page 6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A, Page 3
IBNR = A times B times C

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
2003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2004	0.0034	0.0034	0.0034	0.0034	0.0034	0.0034
2005	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070
2006	0.0112	0.0112	0.0112	0.0112	0.0112	0.0112
2007	0.0159	0.0159	0.0159	0.0159	0.0159	0.0159
2008	0.0209	0.0209	0.0209	0.0209	0.0209	0.0209
2009	0.0261	0.0261	0.0261	0.0261	0.0261	0.0261
2010	0.0315	0.0315	0.0315	0.0315	0.0315	0.0315
2011	0.0369	0.0369	0.0369	0.0369	0.0369	0.0369
2012	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438
B. Adjustment Factor	0.2000	0.5000	0.5000	0.4000	0.9000	0.4000
C. Payroll Per $1M						
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
2012	5.73811	0.80821	9.31181	9.04775	7.56902	34.21173
D. IBNR						
2003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2004	0.0082	0.0018	0.0125	0.0086	0.0134	0.0183
2005	0.0180	0.0036	0.0275	0.0239	0.0326	0.0464
2006	0.0286	0.0060	0.0472	0.0423	0.0493	0.0765
2007	0.0436	0.0089	0.0732	0.0690	0.0834	0.1204
2008	0.0407	0.0262	0.0785	0.0708	0.1077	0.1774
2009	0.0270	0.0124	0.0984	0.0822	0.1472	0.2071
2010	0.0342	0.0130	0.1253	0.1100	0.1382	0.3314
2011	0.0266	0.0217	0.2028	0.1345	0.2036	0.5195
2012	0.0502	0.0177	0.2037	0.1583	0.2980	0.5987

Source: IBNR Factor - Exhibit VIII-C, Page 6
Adjustment Factor - Judgement
Payrolls: Exhibit X-A, Page 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%
1/1/2023	to	12/31/2023	737.90	369.00	4.1%

All Years	Average	2.3%
Last 10 Yrs	Average	1.7%
Last 5 Yrs	Average	2.3%
Last 3 Yrs	Average	2.4%

Selected Benefit Change from	2023	to	2024	2.50%
Selected Benefit Change from	2024	to	2025	2.50%
Selected Benefit Change from	2025	to	2026	2.50%

Selected Average Annual Benefit Change (Last Year's Selection: 2.5%) 2.50%

			Projected Benefit- Claimant		Dependant	Weight
1/1/2024	to	12/31/2024	756.30	a	378.20	28.125%
1/1/2025	to	12/31/2025	775.20	a	387.60	68.750%
1/1/2026	to	12/31/2026	794.60	a	397.30	3.125%

Average Monthly Benefit During the Policy Period Beginning 04/01/2024	770.50	b	385.30
Average Weekly Benefit During the Policy Period Beginning 04/01/2024	177.80	c	88.90
Annual (Weekly X 52)	9,245.60		4,622.80
Annual Miner and Spouse			13,868.40

a Previous year's benefit times selected benefit change
b Weighted average of projected benefit levels from 01-01-24 to 12-31-26
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)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 4	# 2	# 0	# 2	# 0.00	# 0.10	# 0.10
2014	-	-	-	-	-	-	-
2015	1	-	1	-	0.30	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	1	1	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
Total	6	3	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
2013	# 2.10	# 1.90	# 0.0212	# 0.0044	# 2.1044	$ 381,876	5.5107
2014	-	-	0.0290	0.0060	0.0060	258,809	0.0233
2015	0.30	0.70	0.0441	0.0092	0.3092	254,336	1.2155
2016	-	-	0.0444	0.0092	0.0092	163,760	0.0563
2017	-	-	0.1046	0.0217	0.0217	252,383	0.0860
2018	1.00	-	0.1067	0.0222	1.0222	183,346	5.5750
2019	-	-	0.1470	0.0305	0.0305	179,379	0.1701
2020	-	-	0.3230	0.0671	0.0671	299,700	0.2237
2021	-	-	0.3352	0.0696	0.0696	232,531	0.2992
2022	-	-	0.1313	0.0273	0.0273	63,653	0.4281
Total	3.40	2.60	1.2865	0.2671	3.6671	$ 2,269,773	1.6156

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	7.4	28.4378
2014	932	1.0840	4.9	0.1230
2015	951	1.0840	4.7	6.5777
2016	978	1.0840	3.0	0.3074
2017	995	1.0840	4.5	0.4826
2018	1,025	1.0840	3.2	31.9424
2019	1,049	1.0840	3.0	1.0173
2020	1,081	1.0840	4.9	1.3685
2021	1,130	1.0840	3.7	1.8805
2022	1,205	1.0840	0.9	3.0280
Total			40.2	9.1221

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-A, Page 3
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: 0.2076

Federal Basic Occupational Disease After Administration / Law Change Frequencies by Classification

Bituminous Underground (0158)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
Year							
2013	# 4	# 1	# 0	# 3	# 0.00	# 0.15	# 0.15
2014	20	1	3	16	0.90	0.80	0.80
2015	19	1	3	15	0.90	0.75	0.75
2016	11	2	-	9	-	0.45	0.45
2017	6	1	-	5	-	0.25	0.25
2018	15	1	2	12	0.60	0.60	0.60
2019	5	1	1	3	0.30	0.15	0.15
2020	5	-	-	5	-	0.25	0.25
2021	4	-	2	2	0.60	0.10	0.10
2022	1	-	1	-	0.30	-	-
Total	90	8	12	70	3.60	3.50	3.50

	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Ultimate Awarded	Ultimate Denied	IBNR	IBNR Awarded	Total Awarded		Frequency
Year	(2)+(5)+(7)	(1)-(8)		(10)xAward Ratio	(8)+(11)	Payroll	(12)/(13) x 1000000
2013	# 1.15	# 2.85	# 8.3895	# 1.7416	# 2.8916	$ 145,146,253	0.0199
2014	2.70	17.30	12.3670	2.5674	5.2674	183,431,952	0.0287
2015	2.65	16.35	11.0783	2.2999	4.9499	140,570,275	0.0352
2016	2.45	8.55	11.0947	2.3033	4.7533	118,545,477	0.0401
2017	1.25	4.75	18.8304	3.9092	5.1592	172,708,778	0.0299
2018	2.20	12.80	22.5118	4.6734	6.8734	180,599,760	0.0381
2019	1.45	3.55	24.9939	5.1887	6.6387	178,019,000	0.0373
2020	0.25	4.75	22.2665	4.6225	4.8725	139,217,518	0.0350
2021	0.70	3.30	23.5927	4.8978	5.5978	129,544,914	0.0432
2022	0.30	0.70	28.3680	5.8892	6.1892	135,401,635	0.0457
Total	15.10	74.90	183.4927	38.0931	53.1931	$ 1,523,185,562	0.0349

	(15)	(16)	(17)	(18)
	Statewide Average	Adjustment	Estimated Miner	Frequency Claims per 100
Year	Weekly Wage	Factor	Years	Miner Years
2013	917	1.5610	1,950.0	0.1483
2014	932	1.5610	2,424.7	0.2172
2015	951	1.5610	1,821.0	0.2718
2016	978	1.5610	1,493.3	0.3183
2017	995	1.5610	2,138.4	0.2413
2018	1,025	1.5610	2,170.6	0.3167
2019	1,049	1.5610	2,090.7	0.3175
2020	1,081	1.5610	1,586.6	0.3071
2021	1,130	1.5610	1,412.3	0.3964
2022	1,205	1.5610	1,384.3	0.4471
Total			18,471.9	0.2880

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-A, Page 3
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: 0.2076

Anthracite Surface (0153)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2013	# 4	# 2	# 1	# 1	# 0.30	# 0.05	# 0.05
2014	1	-	-	1	-	0.05	0.05
2015	2	-	1	1	0.30	0.05	0.05
2016	4	1	-	3	-	0.15	0.15
2017	1	-	-	1	-	0.05	0.05
2018	2	-	2	-	0.60	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	1	-	1	-	0.30	-	-
2022	-	-	-	-	-	-	-
Total	15	3	5	7	1.50	0.35	0.35

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
2013	# 2.35	# 1.65	# 0.3506	# 0.0728	# 2.4228	$ 20,720,014	0.1169
2014	0.05	0.95	0.4376	0.0908	0.1408	18,911,339	0.0074
2015	0.35	1.65	0.6579	0.1366	0.4866	22,234,350	0.0219
2016	1.15	2.85	0.7079	0.1470	1.2970	19,257,107	0.0673
2017	0.05	0.95	0.8537	0.1772	0.2272	19,094,634	0.0119
2018	0.60	1.40	1.0208	0.2119	0.8119	18,303,511	0.0444
2019	-	-	1.3704	0.2845	0.2845	20,165,184	0.0141
2020	-	-	1.5574	0.3233	0.3233	19,343,807	0.0167
2021	0.30	0.70	2.0122	0.4177	0.7177	21,010,929	0.0342
2022	-	-	2.8885	0.5996	0.5996	24,559,529	0.0244
Total	4.85	10.15	11.8570	2.4615	7.3115	$ 203,600,404	0.0359

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	400.9	0.6043
2014	932	1.0840	360.0	0.0391
2015	951	1.0840	414.8	0.1173
2016	978	1.0840	349.3	0.3713
2017	995	1.0840	340.5	0.0667
2018	1,025	1.0840	316.8	0.2563
2019	1,049	1.0840	341.0	0.0834
2020	1,081	1.0840	317.5	0.1018
2021	1,130	1.0840	329.9	0.2176
2022	1,205	1.0840	361.6	0.1658
Total			3,532.3	0.2070

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-A, Page 3
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: 0.2076

Bituminous Surface (0156)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2013	# 5	# 0	# 0	# 5	# 0.00	# 0.25	# 0.25
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	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
Total	21	3	1	17	0.30	0.85	0.85

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
2013	# 0.25	# 4.75	# 1.8696	# 0.3881	# 0.6381	$ 62,718,061	0.0102
2014	2.10	1.90	1.9545	0.4058	2.5058	55,368,615	0.0453
2015	1.65	7.35	1.7132	0.3557	2.0057	42,000,092	0.0478
2016	-	-	1.3978	0.2902	0.2902	30,131,218	0.0096
2017	0.05	0.95	1.7984	0.3733	0.4233	34,248,962	0.0124
2018	-	-	2.1623	0.4489	0.4489	36,305,197	0.0124
2019	0.05	0.95	2.4636	0.5114	0.5614	36,503,594	0.0154
2020	0.05	0.95	2.1222	0.4406	0.4906	27,989,489	0.0175
2021	-	-	2.5341	0.5261	0.5261	29,978,567	0.0175
2022	-	-	3.2739	0.6797	0.6797	33,578,482	0.0202
Total	4.15	16.85	21.2896	4.4197	8.5697	$ 388,822,277	0.0220

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	1,213.4	0.0526
2014	932	1.0840	1,053.9	0.2378
2015	951	1.0840	783.5	0.2560
2016	978	1.0840	546.6	0.0531
2017	995	1.0840	610.6	0.0693
2018	1,025	1.0840	628.4	0.0714
2019	1,049	1.0840	617.3	0.0910
2020	1,081	1.0840	459.3	0.1068
2021	1,130	1.0840	470.7	0.1118
2022	1,205	1.0840	494.4	0.1375
Total			6,878.1	0.1246

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-A, Page 3
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: 0.2076

Four Standard Classes

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 17	# 5	# 1	# 11	# 0.30	# 0.55	# 0.55
2014	25	3	3	19	0.90	0.95	0.95
2015	31	2	6	23	1.80	1.15	1.15
2016	15	3	-	12	-	0.60	0.60
2017	8	1	-	7	-	0.35	0.35
2018	18	2	4	12	1.20	0.60	0.60
2019	6	1	1	4	0.30	0.20	0.20
2020	6	-	-	6	-	0.30	0.30
2021	5	-	3	2	0.90	0.10	0.10
2022	1	-	1	-	0.30	-	-
Total	132	17	19	96	5.70	4.80	4.80

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
2013	# 5.85	# 11.15	# 10.6309	# 2.2070	# 8.0570	$ 228,966,204	0.0352
2014	4.85	20.15	14.7881	3.0700	7.9200	257,970,715	0.0307
2015	4.95	26.05	13.4935	2.8013	7.7513	205,059,053	0.0378
2016	3.60	11.40	13.2448	2.7496	6.3496	168,097,562	0.0378
2017	1.35	6.65	21.5872	4.4815	5.8315	226,304,757	0.0258
2018	3.80	14.20	25.8016	5.3564	9.1564	235,391,814	0.0389
2019	1.50	4.50	28.9749	6.0152	7.5152	234,867,157	0.0320
2020	0.30	5.70	26.2690	5.4534	5.7534	186,850,514	0.0308
2021	1.00	4.00	28.4742	5.9112	6.9112	180,766,941	0.0382
2022	0.30	0.70	34.6616	7.1958	7.4958	193,603,299	0.0387
Total	27.50	104.50	217.9258	45.2414	72.7414	$ 2,117,878,016	0.0343

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917		3,571.7	0.2256
2014	932		3,843.5	0.2061
2015	951		3,024.0	0.2563
2016	978		2,392.2	0.2654
2017	995		3,094.0	0.1885
2018	1,025		3,119.0	0.2936
2019	1,049		3,052.0	0.2462
2020	1,081		2,368.3	0.2429
2021	1,130		2,216.6	0.3118
2022	1,205		2,241.2	0.3345
Total			28,922.5	0.2515

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: 0.2076

Coke (0154)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
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
2013	# 0.00	# 0.00	# 0.0486	# 0.0101	# 0.0101	$ 4,791,910	0.0021
2014	-	-	0.0516	0.0107	0.0107	4,464,398	0.0024
2015	-	-	0.0565	0.0117	0.0117	4,340,376	0.0027
2016	-	-	0.0646	0.0134	0.0134	4,435,066	0.0030
2017	-	-	0.0738	0.0153	0.0153	4,566,113	0.0034
2018	-	-	0.0807	0.0168	0.0168	4,484,744	0.0037
2019	-	-	0.0903	0.0187	0.0187	4,519,863	0.0041
2020	-	-	0.0069	0.0014	0.0014	313,587	0.0046
2021	-	-	-	-	-	0	N/A
2022	-	-	-	-	-	-	N/A
Total	-	-	0.4730	0.0982	0.0982	$ 31,916,057	0.0031

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	92.7	0.0109
2014	932	1.0840	85.0	0.0126
2015	951	1.0840	81.0	0.0145
2016	978	1.0840	80.5	0.0167
2017	995	1.0840	81.4	0.0188
2018	1,025	1.0840	77.6	0.0216
2019	1,049	1.0840	76.4	0.0245
2020	1,081	1.0840	5.1	0.0281
2021	1,130	1.0840	-	N/A
2022	1,205	1.0840	-	N/A
Total			579.7	0.0169

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-A, Page 3
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: 0.2076

Auger (0157)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
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
2013	# 0.00	# 0.00	# 0.0265	# 0.0055	# 0.0055	$ 1,046,947	0.0053
2014	-	-	0.0249	0.0052	0.0052	861,590	0.0060
2015	-	-	0.0213	0.0044	0.0044	654,766	0.0068
2016	-	-	0.0143	0.0030	0.0030	392,776	0.0076
2017	-	-	0.0229	0.0048	0.0048	566,324	0.0084
2018	-	-	0.0270	0.0056	0.0056	600,138	0.0093
2019	-	-	0.0296	0.0061	0.0061	593,214	0.0104
2020	-	-	0.0218	0.0045	0.0045	395,231	0.0115
2021	-	-	0.0137	0.0028	0.0028	227,558	0.0125
2022	-	-	0.0148	0.0031	0.0031	222,909	0.0138
Total	-	-	0.2168	0.0450	0.0450	$ 5,561,453	0.0081

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	20.3	0.0271
2014	932	1.0840	16.4	0.0315
2015	951	1.0840	12.2	0.0362
2016	978	1.0840	7.1	0.0418
2017	995	1.0840	10.1	0.0471
2018	1,025	1.0840	10.4	0.0539
2019	1,049	1.0840	10.0	0.0614
2020	1,081	1.0840	6.5	0.0696
2021	1,130	1.0840	3.6	0.0790
2022	1,205	1.0840	3.3	0.0931
Total			99.9	0.0451

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-A, Page 3
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: 0.2076

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
2013	# 1	# 0	# 0	# 1	# 0.00	# 0.05	# 0.05
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	1	-	-	1	-	0.05	0.05
2019	-	-	-	-	-	-	-
2020	1	-	1	-	0.30	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
Total	3	-	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
2013	# 0.05	# 0.95	# 0.1934	# 0.0401	# 0.0901	$ 7,630,762	0.0118
2014	-	-	0.2417	0.0502	0.0502	8,360,898	0.0060
2015	-	-	0.3111	0.0646	0.0646	9,554,806	0.0068
2016	-	-	0.2897	0.0601	0.0601	7,953,309	0.0076
2017	-	-	0.3150	0.0654	0.0654	7,793,558	0.0084
2018	0.05	0.95	0.4521	0.0939	0.1439	10,053,839	0.0143
2019	-	-	0.3399	0.0706	0.0706	6,807,496	0.0104
2020	0.30	0.70	0.3801	0.0789	0.3789	6,903,273	0.0549
2021	-	-	0.4700	0.0976	0.0976	7,786,285	0.0125
2022	-	-	0.5148	0.1069	0.1069	7,763,788	0.0138
Total	0.40	2.60	3.5078	0.7282	1.1282	$ 80,608,014	0.0140

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	147.6	0.0611
2014	932	1.0840	159.1	0.0315
2015	951	1.0840	178.2	0.0362
2016	978	1.0840	144.3	0.0417
2017	995	1.0840	139.0	0.0470
2018	1,025	1.0840	174.0	0.0827
2019	1,049	1.0840	115.1	0.0613
2020	1,081	1.0840	113.3	0.3344
2021	1,130	1.0840	122.2	0.0798
2022	1,205	1.0840	114.3	0.0935
Total			1,407.1	0.0802

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-A, Page 3
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: 0.2076

Bituminous Co-Gen (0182)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	1	-	-	1	-	0.05	0.05
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
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
2013	# 0.00	# 0.00	# 0.2100	# 0.0436	# 0.0436	$ 10,355,884	0.0042
2014	-	-	0.2710	0.0563	0.0563	11,721,184	0.0048
2015	-	-	0.3060	0.0635	0.0635	11,748,205	0.0054
2016	0.05	0.95	0.3301	0.0685	0.1185	11,327,552	0.0105
2017	-	-	0.3697	0.0767	0.0767	11,435,057	0.0067
2018	-	-	0.4332	0.0899	0.0899	12,043,297	0.0075
2019	-	-	0.4721	0.0980	0.0980	11,818,883	0.0083
2020	-	-	0.4704	0.0977	0.0977	10,678,482	0.0091
2021	-	-	0.5931	0.1231	0.1231	12,282,842	0.0100
2022	-	-	0.9180	0.1906	0.1906	17,306,049	0.0110
Total	0.05	0.95	4.3736	0.9080	0.9580	$ 120,717,435	0.0079

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	200.3	0.0218
2014	932	1.0840	223.1	0.0252
2015	951	1.0840	219.2	0.0290
2016	978	1.0840	205.5	0.0577
2017	995	1.0840	203.9	0.0376
2018	1,025	1.0840	208.4	0.0432
2019	1,049	1.0840	199.9	0.0490
2020	1,081	1.0840	175.2	0.0557
2021	1,130	1.0840	192.8	0.0639
2022	1,205	1.0840	254.8	0.0748
Total			2,083.1	0.0460

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-A, Page 3
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: 0.2076

Anthracite Prep-Plant (0183)

Year	Counts (1) Reported	(2) Awarded	(3) Pending	(4) Denied	(5) Pending Awarded (3) * 30%	(6) Denied Reopened	(7) Denied Awarded
2013	# 1	# 0	# 1	# 0	# 0.30	# 0.00	# 0.00
2014	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-
2020	1	-	1	-	0.30	-	-
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
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
2013	# 0.30	# 0.70	# 0.3228	# 0.0670	# 0.3670	$ 7,074,886	0.0519
2014	-	-	0.3393	0.0704	0.0704	6,521,541	0.0108
2015	-	-	0.3632	0.0754	0.0754	6,196,596	0.0122
2016	-	-	0.3634	0.0754	0.0754	5,542,968	0.0136
2017	-	-	0.4406	0.0915	0.0915	6,056,810	0.0151
2018	-	-	0.5598	0.1162	0.1162	6,916,759	0.0168
2019	-	-	0.9734	0.2021	0.2021	10,829,165	0.0187
2020	0.30	0.70	1.0577	0.2196	0.5196	10,671,271	0.0487
2021	-	-	1.2341	0.2562	0.2562	11,359,096	0.0226
2022	-	-	1.7321	0.3596	0.3596	14,512,871	0.0248
Total	0.60	1.40	7.3864	1.5334	2.1334	$ 85,681,963	0.0249

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.0840	136.9	0.2681
2014	932	1.0840	124.1	0.0568
2015	951	1.0840	115.6	0.0652
2016	978	1.0840	100.5	0.0751
2017	995	1.0840	108.0	0.0847
2018	1,025	1.0840	119.7	0.0971
2019	1,049	1.0840	183.1	0.1104
2020	1,081	1.0840	175.1	0.2967
2021	1,130	1.0840	178.3	0.1437
2022	1,205	1.0840	213.7	0.1683
Total			1,455.0	0.1466

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-A, Page 3
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: 0.2076

Bituminous Prep-Plant (0184)

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 0	# 0	# 0	# 0	# 0.00	# 0.00	# 0.00
2014	3	-	1	2	0.30	0.10	0.10
2015	1	-	-	1	-	0.05	0.05
2016	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-
2018	1	1	-	-	-	-	-
2019	1	-	-	1	-	0.05	0.05
2020	1	-	-	1	-	0.05	0.05
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
Total	7	1	1	5	0.30	0.25	0.25

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
2013	# 0.00	# 0.00	# 0.6822	# 0.1416	# 0.1416	$ 33,639,969	0.0042
2014	0.40	2.60	0.7366	0.1529	0.5529	31,854,431	0.0174
2015	0.05	0.95	0.6335	0.1315	0.1815	24,320,608	0.0075
2016	-	-	0.5851	0.1215	0.1215	20,079,401	0.0060
2017	-	-	0.9313	0.1933	0.1933	28,803,457	0.0067
2018	1.00	-	1.1583	0.2405	1.2405	32,199,872	0.0385
2019	0.05	0.95	1.4428	0.2995	0.3495	36,117,344	0.0097
2020	0.05	0.95	1.4785	0.3069	0.3569	33,562,164	0.0106
2021	-	-	1.7273	0.3586	0.3586	35,771,344	0.0100
2022	-	-	2.1794	0.4524	0.4524	41,085,799	0.0110
Total	1.55	5.45	11.5550	2.3988	3.9488	$ 317,434,389	0.0124

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917	1.5610	451.9	0.0313
2014	932	1.5610	421.1	0.1313
2015	951	1.5610	315.1	0.0576
2016	978	1.5610	252.9	0.0480
2017	995	1.5610	356.6	0.0542
2018	1,025	1.5610	387.0	0.3205
2019	1,049	1.5610	424.2	0.0824
2020	1,081	1.5610	382.5	0.0933
2021	1,130	1.5610	390.0	0.0919
2022	1,205	1.5610	420.0	0.1077
Total			3,801.3	0.1039

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-A, Page 3
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: 0.2076

Total Other Classes

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 2	# 0	# 1	# 1	# 0.30	# 0.05	# 0.05
2014	3	-	1	2	0.30	0.10	0.10
2015	1	-	-	1	-	0.05	0.05
2016	1	-	-	1	-	0.05	0.05
2017	-	-	-	-	-	-	-
2018	2	1	-	1	-	0.05	0.05
2019	1	-	-	1	-	0.05	0.05
2020	3	-	2	1	0.60	0.05	0.05
2021	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-
Total	13	1	4	8	1.20	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
2013	# 0.35	# 1.65	# 1.4835	# 0.3080	# 0.6580	$ 64,540,358	0.0102
2014	0.40	2.60	1.6651	0.3457	0.7457	63,784,042	0.0117
2015	0.05	0.95	1.6916	0.3512	0.4012	56,815,357	0.0071
2016	0.05	0.95	1.6472	0.3420	0.3920	49,731,072	0.0079
2017	-	-	2.1533	0.4470	0.4470	59,221,319	0.0075
2018	1.05	0.95	2.7111	0.5628	1.6128	66,298,649	0.0243
2019	0.05	0.95	3.3481	0.6951	0.7451	70,685,965	0.0105
2020	0.65	2.35	3.4154	0.7090	1.3590	62,524,008	0.0217
2021	-	-	4.0382	0.8383	0.8383	67,427,125	0.0124
2022	-	-	5.3591	1.1125	1.1125	80,891,416	0.0138
Total	2.60	10.40	27.5126	5.7116	8.3116	$ 641,919,311	0.0129

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917		1,049.7	0.0627
2014	932		1,028.8	0.0725
2015	951		921.3	0.0435
2016	978		790.8	0.0496
2017	995		899.0	0.0497
2018	1,025		977.1	0.1651
2019	1,049		1,008.7	0.0739
2020	1,081		857.7	0.1585
2021	1,130		886.9	0.0945
2022	1,205		1,006.1	0.1106
Total			9,426.1	0.0882

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: 0.2076

Grand Total

	Counts						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Reported	Awarded	Pending	Denied	Pending Awarded (3) * 30%	Denied Reopened	Denied Awarded
2013	# 19	# 5	# 2	# 12	# 0.60	# 0.60	# 0.60
2014	28	3	4	21	1.20	1.05	1.05
2015	32	2	6	24	1.80	1.20	1.20
2016	16	3	-	13	-	0.65	0.65
2017	8	1	-	7	-	0.35	0.35
2018	20	3	4	13	1.20	0.65	0.65
2019	7	1	1	5	0.30	0.25	0.25
2020	9	-	2	7	0.60	0.35	0.35
2021	5	-	3	2	0.90	0.10	0.10
2022	1	-	1	-	0.30	-	-
Total	145	18	23	104	6.90	5.20	5.20

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
2013	# 6.20	# 12.80	# 12.1144	# 2.5149	# 8.7149	$ 293,506,562	0.0297
2014	5.25	22.75	16.4532	3.4157	8.6657	321,754,757	0.0269
2015	5.00	27.00	15.1851	3.1524	8.1524	261,874,410	0.0311
2016	3.65	12.35	14.8920	3.0916	6.7416	217,828,634	0.0309
2017	1.35	6.65	23.7405	4.9285	6.2785	285,526,076	0.0220
2018	4.85	15.15	28.5127	5.9192	10.7692	301,690,463	0.0357
2019	1.55	5.45	32.3230	6.7103	8.2603	305,553,122	0.0270
2020	0.95	8.05	29.6844	6.1625	7.1125	249,374,522	0.0285
2021	1.00	4.00	32.5124	6.7496	7.7496	248,194,066	0.0312
2022	0.30	0.70	40.0207	8.3083	8.6083	274,494,715	0.0314
Total	30.10	114.90	245.4384	50.9530	81.0530	$ 2,759,797,327	0.0294

Year	(15) Statewide Average Weekly Wage	(16) Adjustment Factor	(17) Estimated Miner Years	(18) Frequency Claims per 100 Miner Years
2013	917		4,621.4	0.1886
2014	932		4,872.3	0.1779
2015	951		3,945.3	0.2066
2016	978		3,183.0	0.2118
2017	995		3,993.0	0.1572
2018	1,025		4,096.1	0.2629
2019	1,049		4,060.7	0.2034
2020	1,081		3,226.0	0.2205
2021	1,130		3,103.5	0.2497
2022	1,205		3,247.3	0.2651
Total			38,348.6	0.2114

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: 0.2076

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	Offsets for:		After Offsets:			State	Medical	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Medical	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP
1717	1011	2		1993	61.3	761,473	48,867	810,340	-	186,816	3	3	2,097	401,460	450,327	-	102,031	196,620	196,620	197,595
1721	1011	2		1990	66.8	1,031,519	36,248	1,067,767	-	228,849	-	-	0	621,718	657,965	-	183,047	129,147	129,147	130,093
2053	1011	2		1992	47.4	2,129,124	85,468	2,214,591	390,267	238,088	-	27,630	190,227	769,015	854,483	-	-	473,860	473,860	473,860
3070	1011	2		1993	61.2	578,813	48,867	627,680	-	185,222	-	-	63	354,650	403,518	-	101,161	92,630	92,630	93,596
5551	1011	2		1993	64.8	718,763	40,202	758,966	-	201,326	0	0	815	401,143	441,345	-	133,343	166,468	166,468	167,377
5717	1011	2		1992	50.0	1,742,476	77,101	1,819,577	351,752	205,516	1	45,484	208,999	634,137	711,239	-	-	476,208	476,208	476,208
6627	1011	2	LS	1999	62.2	181,729	46,603	228,332	-	90,161	240,357	240,357	309,000	181,729	228,332	-	90,161	240,357	240,357	309,000
10280	1011	2	LS	2011	49.9	685,286	77,101	762,388	-	-	507,004	507,004	507,004	685,286	762,388	-	-	507,004	507,004	507,004
10536	1011	2	LS	2013	53.7	520,847	66,271	587,118	-	-	444,792	444,792	444,792	520,847	587,118	-	-	444,792	444,792	444,792
Awarded - Lifetime						6	6,962,168	336,753	7,298,921	742,019	1,245,818	4	73,118	402,200	3,182,124	3,518,877	0	519,582	1,534,933	1,534,933	1,538,727
Awarded - Other						3	1,387,862	189,976	1,577,837	0	90,161	1,192,153	1,192,153	1,260,796	1,387,862	1,577,837	0	90,161	1,192,153	1,192,153	1,260,796
Pending						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Underground Anthracite						9	8,350,029	526,729	8,876,758	742,019	1,335,978	1,192,157	1,265,270	1,662,996	4,569,986	5,096,714	0	609,742	2,727,086	2,727,086	2,799,523
Average							927,781	58,525	986,306	82,447	148,442	132,462	140,586	184,777	507,776	566,302	0	67,749	303,010	303,010	311,058

* 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	Offsets for:		After Offsets:			State	Medical	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Medical	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP
511	1002	2		1992	63.5	1,081,328	42,272	1,123,599	-	478,913	-	-	-	697,836	740,108	-	303,416	74,969	74,969	77,196
517	1002	2	LS	1993	64.9	149,965	40,202	190,167	-	127,298	224,590	224,590	345,071	149,965	190,167	-	127,298	224,590	224,590	345,071
518	1002	2	LS	1992	63.6	234,847	42,272	277,118	-	189,174	234,617	234,617	349,816	234,847	277,118	-	189,174	234,617	234,617	349,816
1330	1002	2	500	1993	63.3	542,312	44,405	586,717	-	167,461	291,595	291,595	291,595	542,312	586,717	-	167,461	291,595	291,595	291,595
1892	1002	2	LS	1990	67.4	83,375	36,248	119,623	-	64,536	243,724	243,724	308,260	83,375	119,623	-	64,536	243,724	243,724	308,260
3222	1002	2	500	1992	62.8	201,358	44,405	245,762	-	62,178	250,610	250,610	257,774	201,358	245,762	-	62,178	250,610	250,610	257,774
3532	1002	2	LS	1995	58.1	405,912	56,027	461,940	75,581	31,643	304,802	318,701	344,381	405,912	461,940	75,581	31,643	304,802	318,701	344,381
3706	1002	2	LS	1992	65.1	157,292	40,202	197,494	-	125,696	222,831	222,831	339,668	157,292	197,494	-	125,696	222,831	222,831	339,668
5479	1002	2		1992	63.7	1,138,992	42,272	1,181,264	-	309,456	-	-	0	616,995	659,266	-	196,056	179,588	179,588	181,026
5918	1002	2		1990	66.7	1,425,313	36,248	1,461,561	-	473,611	-	-	13	797,065	833,312	-	371,705	143,118	143,118	145,115
5966	1002	2		1994	58.8	2,014,740	53,583	2,068,323	417,612	419,272	-	2,997	162,580	819,756	873,339	137,947	170,862	332,088	334,387	363,401
6415	1002	2	500	1992	62.4	591,150	46,603	637,753	-	196,258	265,574	265,574	265,574	591,150	637,753	-	196,258	265,574	265,574	265,574
6771	1002	2	500	1992	62.5	135,264	46,603	181,867	-	36,077	112,785	112,785	118,046	135,264	181,867	-	36,077	112,785	112,785	118,046
7004	1002	2		1992	60.7	1,515,451	48,867	1,564,318	-	388,133	-	-	0	777,788	826,655	-	229,416	207,899	207,899	209,814
7051	1002	2	LS	1997	56.5	199,074	61,065	260,139	18,597	-	324,330	339,319	339,319	199,074	260,139	18,597	-	324,330	339,319	339,319
7941	1002	2	LS	1994	66.3	24,391	38,194	62,585	-	18,533	266,670	266,670	285,203	24,391	62,585	-	18,533	266,670	266,670	285,203
8028	1002	2		1992	55.5	1,913,247	61,065	1,974,312	390,718	335,734	-	2,903	108,321	810,473	871,538	71,526	77,340	330,401	332,646	336,170
9826	1002	2	LS	1999	52.9	65,434	68,933	134,366	-	-	493,088	493,088	493,088	65,434	134,366	-	-	493,088	493,088	493,088
9829	1002	2	LS	2001	61.4	178,436	48,867	227,303	-	105,382	296,191	296,191	385,323	178,436	227,303	-	105,382	296,191	296,191	385,323
9835	1002	2	LS	1999	55.0	4,437	63,648	68,084	114	-	530,714	530,827	530,827	4,437	68,084	114	-	530,714	530,827	530,827
9841	1002	2	LS	2001	59.3	169,515	53,583	223,098	59,337	181	312,254	365,940	366,121	169,515	223,098	59,337	181	312,254	365,940	366,121
9886	1002	2	LS	2000	59.9	791,720	51,195	842,915	102,466	125,138	300,372	300,372	300,897	791,720	842,915	102,466	125,138	300,372	300,372	300,897
9901	1002	2	LS	2002	45.3	246,521	91,090	337,611	-	-	597,151	597,151	597,151	246,521	337,611	-	-	597,151	597,151	597,151
9996	1002	2	LS	2004	52.3	113,750	71,628	185,379	-	-	458,463	458,463	458,463	113,750	185,379	-	-	458,463	458,463	458,463
10016	1002	2	LS	2002	58.7	204,643	53,583	258,225	71,676	176	289,822	343,333	343,500	204,643	258,225	71,676	176	289,822	343,333	343,500
10021	1002	2	LS	2000	66.1	119,468	38,194	157,662	-	91,565	195,616	195,616	287,181	119,468	157,662	-	91,565	195,616	195,616	287,181
10022	1002	2	LS	2000	59.0	118,855	53,583	172,437	41,731	-	306,186	347,533	347,533	118,855	172,437	41,731	-	306,186	347,533	347,533
10025	1002	2	LS	2000	57.7	118,899	56,027	174,926	31,408	-	334,306	365,468	365,468	118,899	174,926	31,408	-	334,306	365,468	365,468
10026	1002	2	LS	2000	61.4	119,267	48,867	168,134	-	72,074	261,167	261,167	332,500	119,267	168,134	-	72,074	261,167	261,167	332,500
10038	1002	2	LS	2000	44.4	97,406	93,891	191,298	-	-	769,141	769,141	769,141	97,406	191,298	-	-	769,141	769,141	769,141
10048	1002	2	LS	2005	54.6	116,025	63,648	179,672	2,975	-	394,492	397,467	397,467	116,025	179,672	2,975	-	394,492	397,467	397,467
10088	1002	2	LS	2005	60.5	158,432	51,195	209,626	-	93,530	271,525	271,525	360,872	158,432	209,626	-	93,530	271,525	271,525	360,872
10164	1002	2	LS	2001	53.4	113,010	68,933	181,943	-	-	594,348	594,348	594,348	113,010	181,943	-	-	594,348	594,348	594,348
10208	1002	2	LS	2005	61.6	294,300	46,603	340,903	-	176,049	234,022	234,022	309,896	294,300	340,903	-	176,049	234,022	234,022	309,896
10286	1002	2	LS	2008	58.0	144,634	56,027	200,662	38,206	-	396,853	434,652	434,652	144,634	200,662	38,206	-	396,853	434,652	434,652
10330	1002	2	LS	2012	63.3	245,608	44,405	290,013	-	170,277	292,650	292,650	391,949	245,608	290,013	-	170,277	292,650	292,650	391,949
10345	1002	2	LS	2008	49.6	655,325	77,101	732,426	-	-	536,239	536,239	536,239	655,325	732,426	-	-	536,239	536,239	536,239
10347	1002	2	LS	2011	65.3	298,304	40,202	338,506	-	198,204	191,948	191,948	275,114	298,304	338,506	-	198,204	191,948	191,948	275,114
10357	1002	2	LS	2012	62.4	121,334	46,603	167,937	-	75,132	272,052	272,052	346,440	121,334	167,937	-	75,132	272,052	272,052	346,440
10360	1002	2	LS	2013	59.7	133,583	51,195	184,777	58,669	-	131,207	176,512	176,512	133,583	184,777	58,669	-	131,207	176,512	176,512
10433	1002	2	LS	2012	68.0	109,896	34,364	144,260	-	84,933	235,110	235,110	320,043	109,896	144,260	-	84,933	235,110	235,110	320,043
10434	1002	2	LS	2013	62.7	92,924	44,405	137,328	-	66,113	288,951	288,951	355,062	92,924	137,328	-	66,113	288,951	288,951	355,062
10435	1002	2	LS	2013	58.5	266,130	56,027	322,157	62,994	7,305	326,411	360,560	367,782	266,130	322,157	62,994	7,305	326,411	360,560	367,782
10465	1002	2	LS	2011	65.8	20,630	38,194	58,824	-	-	148,780	148,780	148,780	20,630	58,824	-	-	148,780	148,780	148,780
10516	1002	2	LS	2014	75.8	92,762	21,691	114,453	-	54,927	113,955	113,955	168,881	92,762	114,453	-	54,927	113,955	113,955	168,881
10561	1002	2	LS	2014	60.6	162,618	48,867	211,485	-	110,071	104,509	104,509	174,746	162,618	211,485	-	110,071	104,509	104,509	174,746
10601	1002	2	LS	2015	61.6	346,758	46,603	393,361	-	141,388	274,601	274,601	286,555	346,758	393,361	-	141,388	274,601	274,601	286,555
10652	1002	2	LS	2016	57.5	187,935	56,027	243,962	49,644	-	147,296	175,279	175,279	187,935	243,962	49,644	-	147,296	175,279	175,279
10671	1002	2	LS	2013	57.4	258,738	58,523	317,261	38,634	7,491	323,768	344,804	352,155	258,738	317,261	38,634	7,491	323,768	344,804	352,155
10698	1002	2	LS	2014	65.1	70,439	40,202	110,641	-	56,816	304,899	304,899	361,714	70,439	110,641	-	56,816	304,899	304,899	361,714
10699	1002	2	LS	2014	55.3	114,168	63,648	177,816	2,928	-	396,116	399,043	399,043	114,168	177,816	2,928	-	396,116	399,043	399,043
10700	1002	2	LS	2014	73.8	85,626	24,488	110,114	-	-	44,997	44,997	44,997	85,626	110,114	-	-	44,997	44,997	44,997
10701	1002	2	LS	2014	65.0	78,490	40,202	118,693	-	-	107,789	107,789	107,789	78,490	118,693	-	-	107,789	107,789	107,789
10703	1002	2	LS	2016	62.4	7,313	46,603	53,916	-	4,529	370,514	370,514	375,043	7,313	53,916	-	4,529	370,514	370,514	375,043
10731	1002	2	LS	2018	62.8	74,334	44,405	118,739	-	52,887	325,136	325,136	378,023	74,334	118,739	-	52,887	325,136	325,136	378,023
10740	1002	2	LS	2016	64.0	73,133	42,272	115,405	-	58,911	299,184	299,184	358,094	73,133	115,405	-	58,911	299,184	299,184	358,094
10743	1002	2	LS	2016	61.4	59,837	48,867	108,704	-	36,160	350,548	350,548	386,708	59,837	108,704	-	36,160	350,548	350,548	386,708
10744	1002	2	LS	2014	59.7	71,355	51,195	122,550	31,339	-	370,991	402,330	402,330	71,355	122,550	31,339	-	370,991	402,330	402,330
10745	1002	2	LS	2013	60.6	73,925	48,867	122,792	-	50,037	286,984	286,984	337,021	73,925	122,792	-	50,037	286,984	286,984	337,021
10749	1002	2	LS	2015	64.3	75,763	42,272	118,034	-	61,028	287,362	287,362	348,391	75,763	118,034	-	61,028	287,362	287,362	348,391
10772	1002	2	LS	2013	64.5	22,214	42,272	64,486	-	17,894	315,185	315,185	333,079	22,214	64,486	-	17,894	315,185	315,185	333,079
10778	1002	2	LS	2015	59.9	241,498	51,195	292,693	99,330	6,736	301,656	361,538	368,226	241,498	292,693	99,330	6,736	301,656	361,538	368,226
10812	1002	2	LS	2015	65.6	14,567	38,194	52,761	-	11,632	345,597	345,597	357,228	14,567	52,761	-	11,632	345,597	345,597	357,228
10828	1002	2		2014	44.3	2,171,553	93,891	2,265,445	363,831	160,864	760	102,740	252,690	643,522	737,413	-	-	759,510	759,510	759,510
10853	1002	2		2018	70.2	1,744,599	30,795	1,775,394	-	315,062	-	-	-	767,949	798,745	-	243,335	295,998	295,998	297,338
10860	1002	2	LS	2014	58.8	71,355	53,583	124,938	25,053	-	165,596	190,650	190,650	71,355	124,938	25,053	-	165,596	190,650	190,650
10861	1002	2	LS	2015	60.6	234,175	48,867	283,042	-	158,505	221,411	221,411	323,161	234,175	283,042	-	158,505	221,411	221,411	323,161
10891	1002	2	LS	2018	64.8	18,583	40,202	58,786	-	15,775	338,924	338,924	354,699	18,583	58,786	-	15,775	338,924	338,924	354,699
10945	1002	2	LS	2015	62.0	13,775	46,603	60,378	-	8,530	374,702	374,702	383,231	13,775	60,378	-	8,530	374,702	374,702	383,231
10954	1002	2	LS	2019	63.2	239,306	44,405	283,711	-	170,261	170,095	170,095	270,446	239,306	283,711	-	170,261	170,095	170,095	270,446
10958	1002	2	LS	2021	64.8	166,016	40,202	206,218	-	137,610	88,457	88,457	171,103	166,016	206,218	-	137,610	88,457	88,457	171,103
10968	1002	1		2021	57.4	1,922,843	58,523	1,981,366	410,508	381,916	-	3,349	151,747	817,521	876,044	95,556	112,172	310,333	312,664	328,842
10969	1002	2	LS	2015	61.6	4,133	46,603	50,736	-	2,866	188,045	188,045	190,911	4,133	50,736	-	2,866	188,045	188,045	190,911
10986	1002	2	LS	2020	62.9	155,830	44,405	200,235	-	110,870	104,512	104,512	174,778	155,830	200,235	-	110,870	104,512	104,512	174,778
11002	1002	1		2014	57.2	1,695,434	58,523	1,753,958	376,876	317,783	-	2,104	89,669	774,230	832,754	87,728	91,662	277,604	279,744	282,698
11015	1002	2	LS	2020	62.0	242,403	46,603	289,006	-	96,583	460,944	460,944	502,342	242,403	289,006	-	96,583	460,944	460,944	502,342
Awarded - Lifetime					8	13,005,223	408,993	13,414,216	1,172,160	2,881,046	760	108,640	523,605	5,931,384	6,340,376	209,473	1,592,129	2,323,572	2,328,114	2,369,570
Awarded - Other					66	11,100,470	3,276,082	14,376,552	810,683	3,656,418	19,384,958	19,882,116	22,113,682	11,100,470	14,376,552	810,683	3,656,418	19,384,958	19,882,116	22,113,682
Pending					2	3,618,277	117,047	3,735,324	787,384	699,700	0	5,453	241,415	1,591,751	1,708,798	183,284	203,835	587,938	592,408	611,540
Total Underground Bituminous					76	27,723,971	3,802,121	31,526,092	2,770,227	7,237,164	19,385,718	19,996,209	22,878,703	18,623,605	22,425,726	1,203,439	5,452,382	22,296,468	22,802,639	25,094,792
Average						364,789	50,028	414,817	36,450	95,226	255,075	263,108	301,036	245,047	295,075	15,835	71,742	293,375	300,035	330,195

* Type code is as follows: 500 is 500 Weeks, WO is Widow Only, LS is Lump Sum (Compromised and Commuted), 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	Offsets for:		After Offsets:			State	Medical	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Medical	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP
408	1016	2		1994	69.0	1,045,089	32,545	1,077,634	-	227,117	-	-	-	680,715	713,260	-	191,915	97,525	97,525	98,377
439	1016	2	LS	1999	73.6	28,193	24,488	52,681	-	-	87,545	87,545	87,545	28,193	52,681	-	-	87,545	87,545	87,545
566	1016	2		1990	63.6	1,122,823	42,272	1,165,095	-	206,121	7,067	7,067	10,123	414,177	456,449	-	130,588	480,787	480,787	481,745
636	1016	2		1994	62.3	731,572	46,603	778,175	-	184,499	2	2	2,161	390,713	437,316	-	100,766	186,263	186,263	187,225
778	1016	2	WO	1991	#N/A	377,029	-	377,029	-	-	-	-	-	377,029	377,029	-	-	-	-	-
924	1016	2	LS	1997	62.6	37,030	44,405	81,435	-	26,346	337,240	337,240	363,586	37,030	81,435	-	26,346	337,240	337,240	363,586
1719	1016	2		1996	63.1	878,992	44,405	923,396	-	299,205	-	-	-	552,719	597,124	-	176,852	83,404	83,404	84,881
2268	1016	2		1997	66.6	660,563	36,248	696,811	-	-	-	-	-	460,680	496,927	-	-	56,345	56,345	56,345
2287	1016	2	LS	1998	67.8	664,764	34,364	699,127	-	167,184	159,937	159,937	159,937	664,764	699,127	-	167,184	159,937	159,937	159,937
2479	1016	2		1990	63.9	988,466	42,272	1,030,738	-	282,230	-	-	1	560,560	602,832	-	178,807	155,275	155,275	156,587
2794	1016	2		1993	65.9	1,244,226	38,194	1,282,420	-	283,109	-	-	-	768,621	806,816	-	231,367	113,333	113,333	114,468
2827	1016	2		1992	66.1	982,130	38,194	1,020,324	-	216,891	-	-	0	600,715	638,909	-	175,134	121,046	121,046	121,933
3350	1016	2	WO	1993	#N/A	836,947	-	836,947	-	-	-	-	-	836,947	836,947	-	-	-	-	-
3814	1016	2		1993	71.8	78,383	27,510	105,892	-	-	42,918	42,918	42,918	61,825	89,335	-	-	59,476	59,476	59,476
3970	1016	2	LS	1991	43.1	409,563	96,678	506,241	-	-	301,217	301,217	301,217	409,563	506,241	-	-	301,217	301,217	301,217
5605	1016	2		1992	69.3	926,984	32,545	959,529	-	200,412	-	-	0	613,070	645,615	-	171,049	91,924	91,924	92,657
5805	1016	2		1992	67.2	743,534	36,248	779,781	-	-	-	-	-	518,544	554,791	-	-	55,972	55,972	55,972
6071	1016	2		1994	60.3	1,128,949	51,195	1,180,144	-	269,270	-	-	5	586,951	638,146	-	147,064	206,590	206,590	207,995
6322	1016	2	LS	1991	59.5	695,482	53,583	749,065	69,558	68,297	137,993	137,993	137,993	695,482	749,065	69,558	68,297	137,993	137,993	137,993
6481	1016	2		1990	65.7	833,253	38,194	871,447	-	185,686	-	-	69	463,313	501,507	-	141,032	168,834	168,834	169,639
6603	1016	2		1995	69.8	572,627	30,795	603,423	-	123,680	0	0	362	365,669	396,464	-	103,911	108,649	108,649	109,118
6765	1016	2	WO	1990	#N/A	655,704	-	655,704	-	-	-	-	-	655,704	655,704	-	-	-	-	-
7028	1016	2		1997	62.3	768,807	46,603	815,410	-	246,021	-	-	0	471,064	517,667	-	134,367	91,753	91,753	93,036
7473	1016	2		1995	67.0	1,677,033	36,248	1,713,281	-	424,990	-	-	0	805,366	841,614	-	317,401	210,220	210,220	212,077
7825	1016	2		1995	67.6	599,663	34,364	634,027	-	131,531	0	0	332	378,721	413,085	-	108,741	111,448	111,448	111,964
7857	1016	2		1993	59.7	921,269	51,195	972,464	325,344	259,265	-	3,242	71,602	536,119	587,314	122,950	117,779	107,762	109,516	112,872
9805	1016	2	LS	2000	74.6	24,320	23,062	47,382	-	16,581	259,134	259,134	275,715	24,320	47,382	-	16,581	259,134	259,134	275,715
9811	1016	2		2001	48.1	1,243,573	82,663	1,326,236	277,348	123,654	387	115,371	232,796	454,032	536,695	-	-	467,513	467,513	467,513
9939	1016	2	LS	2003	61.4	258,663	48,867	307,530	-	104,230	304,284	304,284	346,319	258,663	307,530	-	104,230	304,284	304,284	346,319
9981	1016	2		2004	79.6	720,055	16,779	736,835	-	198,754	-	-	-	622,915	639,694	-	194,886	16,891	16,891	17,075
10030	1016	2		2005	60.2	835,175	51,195	886,370	-	195,876	3	3	1,568	427,466	478,660	-	106,980	217,783	217,783	218,805
10074	1016	2	LS	2003	61.5	124,158	48,867	173,025	-	75,030	114,432	114,432	176,573	124,158	173,025	-	75,030	114,432	114,432	176,573
10140	1016	2	LS	2007	68.8	130,839	32,545	163,385	-	98,120	186,914	186,914	285,034	130,839	163,385	-	98,120	186,914	186,914	285,034
10190	1016	2	LS	2007	60.6	101,183	48,867	150,051	-	68,488	110,029	110,029	177,664	101,183	150,051	-	68,488	110,029	110,029	177,664
10259	1016	2	LS	2007	72.9	55,375	25,969	81,344	-	36,508	172,196	172,196	208,704	55,375	81,344	-	36,508	172,196	172,196	208,704
10278	1016	2	LS	2011	76.7	124,864	20,378	145,242	-	57,576	109,768	109,768	167,344	124,864	145,242	-	57,576	109,768	109,768	167,344
10602	1016	2	LS	2016	63.7	191,024	42,272	233,295	-	153,873	256,261	256,261	372,296	191,024	233,295	-	153,873	256,261	256,261	372,296
10810	1016	2	LS	2016	51.6	247,240	71,628	318,869	-	-	378,230	378,230	378,230	247,240	318,869	-	-	378,230	378,230	378,230
Awarded - Lifetime					24	20,572,847	856,266	21,429,113	602,692	4,058,310	50,378	168,604	361,937	12,603,634	13,459,899	122,950	2,728,638	3,208,794	3,210,548	3,229,760
Awarded - Other					14	3,092,699	615,972	3,708,670	69,558	872,233	2,915,182	2,915,182	3,438,158	3,092,699	3,708,670	69,558	872,233	2,915,182	2,915,182	3,438,158
Pending					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Surface Anthracite					38	23,665,545	1,472,238	25,137,783	672,250	4,930,544	2,965,560	3,083,786	3,800,095	15,696,332	17,168,570	192,509	3,600,872	6,123,976	6,125,730	6,667,918
Average						622,778	38,743	661,521	17,691	129,751	78,041	81,152	100,003	413,061	451,804	5,066	94,760	161,157	161,203	175,472

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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)						
											Federal Excess:							Federal Excess:		
		Awd (2)		Exp.	Age of Miner at	State		Medical	Offsets for:			After Offsets:		State	Medical	Offsets for:			After Offsets:	
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Medical	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP
513	1013	2		1993	64.4	1,666,065	42,272	1,708,337	-	489,782	-	-	0	807,087	849,359	-	310,302	216,444	216,444	218,721
656	1013	2		1999	53.5	1,327,719	66,271	1,393,990	309,873	198,944	1	36,714	191,857	545,547	611,818	25,507	22,114	361,593	363,403	371,548
1135	1013	2	LS	1990	45.5	725,164	91,090	816,254	-	-	581,067	581,067	581,067	725,164	816,254	-	-	581,067	581,067	581,067
2486	1013	2	LS	1996	64.2	97,385	42,272	139,656	-	78,445	101,532	101,532	177,944	97,385	139,656	-	78,445	101,532	101,532	177,944
3386	1013	2	LS	1993	57.8	425,056	56,027	481,083	49,835	47,331	337,497	339,388	365,073	425,056	481,083	49,835	47,331	337,497	339,388	365,073
3867	1013	2		1994	45.8	2,043,815	88,279	2,132,094	377,315	199,809	0	54,882	219,854	698,607	786,886	-	-	540,916	540,916	540,916
3968	1013	2	500	1991	43.7	543,480	93,891	637,371	-	-	290,899	290,899	290,899	543,480	637,371	-	-	290,899	290,899	290,899
5814	1013	2	LS	1997	61.0	13,770	48,867	62,638	-	8,322	340,940	340,940	349,262	13,770	62,638	-	8,322	340,940	340,940	349,262
5816	1013	2	LS	1996	61.0	232,249	48,867	281,116	-	140,351	251,974	251,974	342,592	232,249	281,116	-	140,351	251,974	251,974	342,592
5963	1013	2	LS	1994	59.1	81,948	53,583	135,531	28,773	-	380,494	409,267	409,267	81,948	135,531	28,773	-	380,494	409,267	409,267
5968	1013	2	LS	1995	56.9	397,202	58,523	455,725	29,133	25,714	381,346	383,274	396,295	397,202	455,725	29,133	25,714	381,346	383,274	396,295
7788	1013	2	LS	1991	69.2	241,253	32,545	273,798	-	161,301	105,813	105,813	205,040	241,253	273,798	-	161,301	105,813	105,813	205,040
9770	1013	2	LS	1999	59.2	55,036	53,583	108,619	19,324	-	352,517	371,841	371,841	55,036	108,619	19,324	-	352,517	371,841	371,841
9771	1013	2	LS	1998	62.5	143,686	44,405	188,090	-	102,229	105,072	105,072	175,385	143,686	188,090	-	102,229	105,072	105,072	175,385
9999	1013	2	LS	2005	46.2	44,735	88,279	133,014	-	-	322,658	322,658	322,658	44,735	133,014	-	-	322,658	322,658	322,658
10439	1013	2		2011	61.5	1,320,031	46,603	1,366,634	-	326,937	-	-	0	683,925	730,528	-	193,244	206,239	206,239	207,852
10537	1013	2	LS	2012	64.5	140,328	42,272	182,600	-	113,037	200,708	200,708	310,313	140,328	182,600	-	113,037	200,708	200,708	310,313
10582	1013	2	LS	2015	72.1	120,708	27,510	148,218	-	-	45,492	45,492	45,492	120,708	148,218	-	-	45,492	45,492	45,492
10598	1013	2	LS	2012	61.7	31,184	46,603	77,787	-	21,628	346,663	346,663	368,291	31,184	77,787	-	21,628	346,663	346,663	368,291
10659	1013	2	LS	2015	56.9	106,508	58,523	165,031	18,987	-	160,695	179,609	179,609	106,508	165,031	18,987	-	160,695	179,609	179,609
10665	1013	2	LS	2014	55.8	352,357	61,065	413,421	17,628	15,289	376,845	382,090	390,308	352,357	413,421	17,628	15,289	376,845	382,090	390,308
10826	1013	2	LS	2015	63.1	191,713	44,405	236,118	-	136,400	242,586	242,586	346,008	191,713	236,118	-	136,400	242,586	242,586	346,008
10895	1013	2	LS	2014	63.0	132,460	44,405	176,864	-	94,242	105,590	105,590	175,945	132,460	176,864	-	94,242	105,590	105,590	175,945
10899	1013	2	LS	2015	54.8	71,005	63,648	134,653	1,821	-	204,923	206,744	206,744	71,005	134,653	1,821	-	204,923	206,744	206,744
Awarded - Lifetime					4	6,357,630	243,425	6,601,055	687,188	1,215,473	1	91,596	411,711	2,735,167	2,978,591	25,507	525,660	1,325,191	1,327,001	1,339,037
Awarded - Other					20	4,147,226	1,100,361	5,247,588	165,501	944,289	5,235,313	5,313,207	6,010,033	4,147,226	5,247,588	165,501	944,289	5,235,313	5,313,207	6,010,033
Pending					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Surface Bituminous					24	10,504,856	1,343,786	11,848,642	852,689	2,159,762	5,235,313	5,404,803	6,421,744	6,882,393	8,226,179	191,007	1,469,949	6,560,504	6,640,209	7,349,070
Average						437,702	55,991	493,693	35,529	89,990	218,138	225,200	267,573	286,766	342,757	7,959	61,248	273,354	276,675	306,211

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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	Offsets for:		After Offsets:			State	Medical	Offsets for:		After Offsets:		
ID No.	Class	Pend (1)	Type*	Yr.	Comp Date	Benefit	Medical	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP	Benefit	Plus State	Soc. Sec.	Pension	Base	SS	SS, PP
3221	1017	2		1993	60.8	1,838,033	48,867	1,886,900	-	527,722	-	-	36	806,843	855,710	-	311,923	275,575	275,575	278,179
3224	1017	2	LS	1992	56.9	295,061	58,523	353,584	46,591	6,009	356,899	379,387	384,547	295,061	353,584	46,591	6,009	356,899	379,387	384,547
9944	1022	2	LS	2003	53.1	106,735	68,933	175,667	-	-	409,142	409,142	409,142	106,735	175,667	-	-	409,142	409,142	409,142
10817	1022	2	LS	2019	60.6	242,732	48,867	291,599	-	118,332	230,166	230,166	287,346	242,732	291,599	-	118,332	230,166	230,166	287,346
10124	1024	2	LS	2006	60.0	144,890	51,195	196,084	63,635	-	356,623	419,543	419,543	144,890	196,084	63,635	-	356,623	419,543	419,543
1126	1026	2		1997	55.4	619,692	63,648	683,340	225,291	119,012	5	53,840	160,419	318,332	381,980	29,968	22,762	155,495	156,802	170,207
9877	1026	2	LS	1997	54.7	49,374	63,648	113,022	1,266	-	224,410	225,676	225,676	49,374	113,022	1,266	-	224,410	225,676	225,676
9993	1026	2	LS	2004	78.1	92,880	-	92,880	-	-	164,040	164,040	164,040	92,880	92,880	-	-	164,040	164,040	164,040
10161	1026	2	LS	2007	43.2	36,794	96,678	133,472	-	-	815,477	815,477	815,477	36,794	133,472	-	-	815,477	815,477	815,477
10245	1026	2		2010	74.5	543,738	24,488	568,226	-	112,475	-	-	0	411,020	435,508	-	104,054	51,827	51,827	52,107
10600	1026	2	LS	2015	72.2	221,388	27,510	248,897	-	70,270	62,752	62,752	93,836	221,388	248,897	-	70,270	62,752	62,752	93,836
10650	1026	2	LS	2017	52.5	112,885	71,628	184,514	-	-	297,187	297,187	297,187	112,885	184,514	-	-	297,187	297,187	297,187
10718	1026	2	LS	2014	58.6	138,686	53,583	192,269	45,893	2,801	343,360	388,643	391,444	138,686	192,269	45,893	2,801	343,360	388,643	391,444
10904	1026	2	LS	2020	54.6	367,907	63,648	431,554	3,911	3,229	436,625	436,625	438,673	367,907	431,554	3,911	3,229	436,625	436,625	438,673
9784	1028	2	LS	2000	78.3	85,860	-	85,860	-	-	227,083	227,083	227,083	85,860	85,860	-	-	227,083	227,083	227,083
10741	1028	2	LS	2016	64.2	49,413	42,272	91,685	-	39,803	140,600	140,600	180,404	49,413	91,685	-	39,803	140,600	140,600	180,404
Awarded - Lifetime						3	3,001,464	137,003	3,138,466	225,291	759,209	5	53,840	160,456	1,536,196	1,673,198	29,968	438,739	482,897	484,205	500,493
Awarded - Other						13	1,944,605	646,484	2,591,089	161,296	240,445	4,064,365	4,196,322	4,334,398	1,944,605	2,591,089	161,296	240,445	4,064,365	4,196,322	4,334,398
Pending						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Surface Bituminous						16	4,946,069	783,487	5,729,555	386,587	999,654	4,064,370	4,250,162	4,494,854	3,480,801	4,264,287	191,265	679,184	4,547,263	4,680,527	4,834,891
Average							309,129	48,968	358,097	24,162	62,478	254,023	265,635	280,928	217,550	266,518	11,954	42,449	284,204	292,533	302,181

* 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	647,908	169,728
1335	160	2	4/4/1994	0	61.23	209,855	103,843
2051	160	2	12/6/1990	0	64.94	337,748	85,430
3089	160	2	12/6/1990	0	52.39	669,799	152,211
3156	160	2	6/22/1990	0	67.11	486,028	77,026
3720	160	2	10/1/1990	WO	N/A	272,981	-
4555	160	2	6/22/1990	0	67.34	334,679	77,026
4735	160	2	5/5/1992	WO	N/A	311,743	-
7258	160	2	12/2/1993	0	59.78	488,287	108,789
7489	160	2	6/22/1990	0	54.50	613,765	135,251
7863	160	2	12/6/1990	0	56.42	726,397	129,762
9876	160	2	6/13/2001	0	64.89	328,279	85,430
9929	160	2	5/7/2001	0	51.00	503,978	158,000
9960	160	2	4/1/1999	WO	N/A	154,308	-
10091	160	1	3/1/2001	0	48.03	687,001	175,660
10199	160	2	1/1/1990	0	60.50	462,202	108,789
10200	160	2	10/24/2006	0	53.47	645,493	146,482
10237	160	2	7/21/2003	0	65.28	319,183	85,430
10395	160	2	6/30/1999	0	59.24	228,883	113,863
10422	160	1	3/1/2011	0	53.44	289,564	146,482
10482	160	2	6/1/1991	0	61.87	474,221	99,032
10814	160	1	1/1/2015	0	54.84	268,890	135,251
10873	160	2	3/22/2013	0	55.43	268,890	135,251
10896	160	2	3/1/2013	0	56.00	258,703	129,762
10900	160	1	8/1/2001	0	41.03	899,727	217,143
10977	160	2	4/28/2018	0	58.78	423,076	113,863
10994	160	1	10/15/1996	0	45.62	918,493	187,592

Total Underground Anthracite		12,230,082	3,077,096
Average of 27 claims	56.77	452,966	113,967
Medical plus Indemnity		566,933	

*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	311,865	61,874
508	158	2	8/15/1991	0	75.55	96,434	46,094
917	158	2	4/1/1993	0	62.00	423,175	99,032
931	158	2	3/3/1995	0	68.32	328,590	73,023
3481	158	2	5/20/1990	0	57.28	498,033	124,362
5821	158	2	5/1/1992	0	69.52	278,481	65,440
6950	158	2	9/30/1990	0	57.91	453,472	119,058
7484	158	2	1/1/1990	WO	N/A	366,800	-
7689	158	2	9/19/1991	0	54.11	548,768	140,826
8381	158	2	12/31/1997	0	77.23	194,799	43,303
9758	158	2	6/28/2000	0	65.98	312,344	81,163
9839	158	2	11/1/2000	0	68.63	284,335	69,158
9857	158	2	7/14/1992	0	79.44	179,313	38,087
9863	158	2	5/1/1990	0	73.06	114,750	55,183
9870	158	2	6/1/1994	WO	N/A	338,875	-
10032	158	2	1/3/1999	0	74.23	276,882	52,037
10042	158	2	11/15/2001	0	55.61	532,421	129,762
10065	158	2	10/9/1992	WO	N/A	120,762	-
10086	158	2	2/9/2006	0	56.41	532,421	129,762
10090	158	2	5/1/2004	0	61.18	396,799	103,843
10123	158	2	3/1/1999	0	52.44	552,816	152,211
10129	158	2	7/1/1993	0	61.63	563,156	99,032
10134	158	2	5/1/2004	0	77.77	163,951	40,635
10182	158	2	9/1/2001	0	61.75	389,337	99,032
10189	158	2	7/11/2002	0	55.34	268,890	135,251
10194	158	2	10/10/2001	0	66.61	345,090	77,026
10215	158	1	6/6/2007	0	55.18	583,103	135,251
10218	158	2	1/1/1999	0	66.66	315,029	77,026
10235	158	2	4/15/1994	0	65.26	337,748	85,430
10254	158	2	5/1/1999	0	67.52	290,466	73,023
10255	158	2	12/1/1992	WO	N/A	193,087	-
10265	158	2	5/15/1999	0	63.36	495,662	94,360
10287	158	2	2/19/2007	0	67.35	315,029	77,026
10291	158	2	6/30/2002	0	67.37	158,025	77,026
10293	158	2	12/1/2003	0	65.01	391,139	85,430
10299	158	2	2/4/2001	0	65.28	302,100	85,430
10300	158	1	8/1/1992	0	44.61	728,650	193,566
10315	158	2	4/1/1993	0	66.37	321,526	81,163
10327	158	2	12/1/1991	0	68.11	290,466	73,023
10328	158	2	4/6/1994	0	72.51	228,870	55,183
10366	158	2	10/12/1991	0	71.12	255,596	61,874
10367	158	2	6/10/1997	0	64.04	434,488	89,827
10368	158	2	2/24/1996	0	70.14	374,164	65,440
10387	158	2	10/12/1991	0	61.09	376,564	103,843
10397	158	1	12/15/1996	0	75.22	190,458	49,007
10402	158	2	1/15/2013	0	65.42	337,748	85,430
10443	158	2	6/30/1998	0	72.56	301,990	55,183
10446	158	2	12/1/1992	0	69.46	142,550	69,158
10455	158	2	3/1/2002	0	67.39	305,764	77,026
10486	158	1	5/26/2000	0	61.38	209,855	103,843
10488	158	1	5/26/2000	0	60.52	430,378	103,843
10498	158	2	5/15/1992	0	75.59	96,434	46,094
10499	158	2	9/30/1996	0	62.19	200,655	99,032
10509	158	1	8/7/2000	0	63.25	191,682	94,360
10526	158	1	5/26/2000	0	69.75	297,104	65,440
Sub Totals for Exhibit IX-B Page 2-A						17,968,887	4,397,531

Combined Totals are on Exhibit IX-B Page 2-B

*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
10529	158	2	5/26/2000	0	66.26	312,344	81,163
10530	158	1	5/26/2000	0	65.36	379,625	85,430
10531	158	2	5/26/2000	0	72.88	207,382	55,183
10555	158	1	3/2/2015	0	63.42	361,547	94,360
10558	158	2	9/30/1994	0	66.17	303,531	81,163
10584	158	2	7/15/1996	0	79.41	172,448	38,087
10593	158	2	5/29/2000	0	62.50	382,142	94,360
10595	158	2	2/11/2010	0	73.09	236,744	55,183
10610	158	2	7/31/1999	0	66.67	456,933	77,026
10616	158	1	12/17/2015	0	65.09	391,139	85,430
10639	158	2	11/24/1996	0	62.00	378,917	99,032
10655	158	2	5/31/2017	0	61.49	376,564	103,843
10670	158	1	12/31/2014	0	59.02	434,086	113,863
10673	158	2	11/18/2011	0	65.02	310,457	85,430
10687	158	1	8/1/1997	0	35.99	460,080	244,962
10695	158	2	3/30/2000	0	59.79	404,524	108,789
10705	158	1	5/26/2000	0	62.90	393,074	94,360
10720	158	1	12/1/1992	0	52.39	622,445	152,211
10721	158	2	7/1/1992	0	79.66	75,143	35,656
10725	158	2	4/1/1993	0	76.03	162,154	46,094
10734	158	1	2/1/2012	0	69.62	297,104	65,440
10757	158	1	5/1/1992	0	55.38	268,890	135,251
10765	158	1	6/30/2002	0	49.75	321,064	163,840
10770	158	2	9/1/2004	0	80.30	182,696	35,656
10795	158	2	12/31/1996	0	81.28	117,255	33,347
10800	158	1	5/1/2007	0	77.49	90,768	43,303
10824	158	2	1/15/2016	0	62.77	393,074	94,360
10830	158	2	12/1/2015	0	59.77	475,030	108,789
10846	158	2	7/20/2016	0	56.95	538,434	124,362
10870	158	1	10/10/2019	0	68.46	308,789	73,023
10872	158	2	7/1/1994	0	60.52	357,955	103,843
10874	158	2	7/7/2018	0	66.24	295,088	81,163
10875	158	2	10/31/1992	0	73.59	257,765	52,037
10881	158	2	7/20/2000	0	66.63	296,867	77,026
10883	158	2	5/19/2000	0	69.22	312,595	69,158
10885	158	2	4/15/1994	WO	N/A	182,890	-
10890	158	1	5/29/2000	0	66.99	296,867	77,026
10894	158	1	5/26/2000	0	64.71	319,183	85,430
10897	158	1	1/2/2003	0	51.00	630,808	158,000
10914	158	1	2/23/1997	0	73.43	228,870	55,183
10928	158	2	12/29/2014	0	64.45	375,211	89,827
10935	158	2	1/1/2019	0	64.57	347,605	85,430
10962	158	1	8/31/2015	0	54.11	548,768	140,826
10964	158	1	5/26/2000	0	68.73	267,325	69,158
10970	158	1	5/26/2000	0	69.95	253,293	65,440
10979	158	1	11/20/2014	0	58.37	545,219	119,058
10981	158	1	2/16/2018	0	66.86	324,663	77,026
10991	158	1	5/26/2000	0	75.67	214,369	46,094
11003	158	1	12/5/2014	0	60.05	415,190	108,789
11005	158	1	2/2/2018	0	62.17	411,465	99,032
11007	158	1	11/30/2021	0	66.23	321,526	81,163
11008	158	1	11/19/2021	0	61.38	430,378	103,843
11014	158	1	12/1/1995	0	47.72	342,195	175,660
11016	158	1	8/15/2022	0	67.49	315,029	77,026
Sub Totals for Exhibit IX-B Page 2-B						18,105,505	4,806,232
Total Underground Bituminous						36,074,392	9,203,763
Average of 109 claims					65.23	330,958	84,438
Medical plus Indemnity						415,396	

*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	442,119	119,058
2157	153	1	10/10/1990	0	54.96	646,185	135,251
2299	153	2	1/15/1990	0	60.12	462,202	108,789
3725	153	2	9/30/1995	0	65.56	287,018	81,163
3955	153	2	10/29/1995	0	66.54	367,138	77,026
4749	153	2	1/3/1992	0	65.72	271,997	81,163
5044	153	2	2/4/1990	0	71.50	234,182	58,458
5131	153	2	5/22/1992	0	68.11	361,246	73,023
5372	153	2	3/10/1997	0	60.04	449,802	108,789
5952	153	2	1/31/1995	WO	N/A	136,901	-
6287	153	2	10/28/1990	0	73.92	208,994	52,037
6303	153	2	8/5/1990	WO	N/A	214,427	-
6581	153	2	6/5/1997	WO	N/A	225,543	-
7032	153	2	2/10/1993	0	62.41	411,465	99,032
7250	153	2	9/30/1993	WO	N/A	338,875	-
7263	153	2	3/1/1991	WO	N/A	225,543	-
7451	153	2	11/5/1990	0	72.80	214,196	55,183
9726	153	2	8/10/1995	0	68.28	308,789	73,023
9739	153	2	12/22/2000	0	73.86	240,057	52,037
9760	153	2	2/7/2000	0	75.44	211,324	49,007
9793	153	1	1/26/2001	0	53.76	535,572	140,826
9885	153	2	6/1/1998	0	66.88	296,867	77,026
9940	153	2	12/1/1990	0	63.20	540,821	94,360
10049	153	2	11/19/2005	0	72.28	234,182	58,458
10073	153	2	3/1/2005	0	60.49	437,833	108,789
10107	153	2	1/6/2004	0	56.26	481,598	129,762
10109	153	2	4/4/2003	0	65.00	174,416	85,430
10145	153	2	5/24/2007	0	59.55	475,030	108,789
10156	153	2	10/21/2002	0	75.14	235,350	49,007
10222	153	2	2/2/2006	0	74.97	218,974	49,007
10231	153	2	4/2/2003	0	65.03	328,279	85,430
10232	153	2	7/31/2004	0	56.70	473,328	124,362
10261	153	2	5/30/1996	0	67.25	334,679	77,026
10275	153	2	3/31/2003	0	68.92	333,300	69,158
10384	153	2	10/23/2007	0	76.31	96,434	46,094
10429	153	2	5/22/2013	0	54.36	562,424	140,826
10459	153	2	8/3/2009	0	57.34	461,635	124,362
10621	153	1	2/28/2013	0	63.34	404,438	94,360
10672	153	2	5/12/2013	0	70.05	269,713	65,440
10717	153	2	1/30/2008	0	70.84	255,596	61,874
10785	153	2	8/1/2016	0	66.94	324,663	77,026
10791	153	1	8/18/1996	0	57.47	248,626	124,362
10856	153	1	8/9/2018	0	61.42	418,751	103,843
10876	153	2	1/5/2004	0	79.13	148,267	38,087
10878	153	2	4/2/2003	0	63.12	382,142	94,360
10882	153	2	3/1/2004	0	64.07	354,445	89,827
10952	153	1	12/1/2018	0	61.83	447,861	99,032
10971	153	1	5/15/2015	0	64.28	344,674	89,827
11009	153	1	1/12/2021	0	71.41	247,496	61,874

Total Surface Anthracite		16,325,395	3,791,662
Average of 49 claims	65.57	333,171	77,381
Medical plus Indemnity		410,552	

*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	278,481	65,440
600	156	2	9/10/1992	0	62.67	371,634	94,360
601	156	2	6/19/1992	0	66.18	341,017	81,163
1356	156	2	5/1/1995	0	55.30	598,211	135,251
2494	156	2	4/19/1996	0	64.66	379,625	85,430
3047	156	2	12/31/1996	0	77.58	170,111	40,635
3058	156	2	1/17/1991	0	65.64	351,353	81,163
5221	156	2	6/4/1995	0	66.01	312,344	81,163
5374	156	2	10/21/1991	WO	N/A	558,962	-
5483	156	2	8/6/1990	0	61.43	209,855	103,843
6244	156	2	10/10/1990	0	81.72	113,403	31,195
6949	156	2	12/7/1994	0	54.92	613,765	135,251
7245	156	2	9/1/1991	0	77.57	170,111	40,635
7248	156	2	8/31/1995	0	64.94	337,748	85,430
7893	156	2	2/19/1992	0	61.43	396,799	103,843
8012	156	2	1/1/1990	0	70.45	261,316	65,440
8022	156	2	11/1/1995	0	61.86	389,337	99,032
9761	156	2	9/30/1991	0	74.06	208,994	52,037
9767	156	2	6/1/2000	0	62.11	400,184	99,032
9795	156	2	12/1/1992	0	69.69	278,481	65,440
9866	156	2	9/20/1994	0	78.84	80,128	38,087
9945	156	2	8/31/1995	0	73.69	223,807	52,037
9953	156	2	3/1/1994	0	55.28	613,765	135,251
9961	156	2	5/31/2000	0	52.09	653,561	152,211
9967	156	2	1/15/1990	0	71.04	247,496	61,874
10003	156	2	5/30/1995	0	72.79	244,986	55,183
10104	156	2	6/1/1990	0	71.51	121,301	58,458
10112	156	2	12/1/2007	0	63.94	447,578	89,827
10114	156	2	10/26/1991	WO	N/A	193,087	-
10128	156	2	8/1/1994	0	74.82	211,324	49,007
10204	156	2	2/28/1992	0	69.75	287,612	65,440
10206	156	2	2/8/2010	0	70.65	301,582	61,874
10217	156	2	11/25/2008	0	63.72	344,674	89,827
10221	156	2	1/1/1993	0	81.01	134,935	33,347
10281	156	2	5/1/2011	0	75.14	102,325	49,007
10305	156	2	3/1/1995	0	61.87	411,465	99,032
10333	156	2	6/15/1992	0	80.08	75,143	35,656
10335	156	2	6/1/1995	WO	N/A	248,654	-
10351	156	2	12/27/2012	0	58.61	457,415	113,863
10385	156	2	3/1/2012	WO	N/A	272,981	-
10400	156	1	2/28/1993	0	80.02	168,529	35,656
10403	156	1	6/1/1996	0	46.06	860,668	187,592
10414	156	2	4/27/2001	0	75.85	230,863	46,094
10418	156	2	1/1/2003	0	73.15	244,986	55,183
10447	156	2	12/1/2008	0	76.83	187,717	43,303
10458	156	2	11/1/2008	0	73.78	223,807	52,037
10517	156	2	4/1/2014	0	67.97	299,445	73,023
10521	156	2	5/1/1996	0	67.14	334,679	77,026
10554	156	2	4/13/2015	0	76.53	194,799	43,303
10566	156	2	8/31/2001	0	76.17	173,205	46,094
10609	156	2	7/1/1996	0	68.92	293,392	69,158
10679	156	2	10/1/2008	0	60.63	407,557	103,843
10690	156	2	8/1/1995	0	67.23	324,663	77,026
10692	156	2	11/1/1994	0	74.28	308,183	52,037
10694	156	2	8/1/1992	0	76.16	167,506	46,094
Sub Totals for Exhibit IX-B Page 4-A						16,835,549	3,793,231

Combined Totals are on Exhibit IX-B Page 4-B

*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
10756	156	2	10/1/1991	0	60.98	349,220	103,843
10774	156	1	6/1/2012	0	63.74	364,619	89,827
10779	156	2	11/1/2014	0	74.24	231,749	52,037
10833	156	1	1/1/2015	0	61.06	407,557	103,843
10836	156	1	3/1/2008	0	61.84	435,307	99,032
10844	156	2	10/10/1997	0	82.97	61,816	29,192
10857	156	2	11/17/1993	0	84.89	99,678	25,580
10879	156	2	12/13/1994	0	76.53	168,454	43,303
10880	156	2	8/14/2007	0	61.18	523,664	103,843
10884	156	2	1/1/1994	0	68.06	299,445	73,023
10889	156	1	4/30/1997	0	66.73	158,025	77,026
10949	156	1	2/1/2003	0	45.76	752,737	187,592
10963	156	1	2/12/1995	0	78.24	176,593	40,635
10988	156	1	6/30/1995	0	70.15	278,481	65,440
10995	156	1	7/1/1998	0	40.00	944,619	222,903
10996	156	1	1/1/1999	0	61.57	200,655	99,032
11001	156	1	7/1/2009	0	63.67	364,619	89,827
11013	156	1	6/10/2007	0	63.21	467,534	94,360

Sub Totals for Exhibit IX-B Page 4-B		6,284,771	1,600,338
Total Surface Bituminous		23,120,320	5,393,570
Average of 73 claims	67.95	316,717	73,885
Medical plus Indemnity		390,601	

*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	240,057	52,037
3158	181	2	3/14/1997	0	62.00	411,465	99,032
10886	181	1	1/24/2020	0	51.77	593,199	152,211
10451	182	2	5/1/2005	0	65.93	166,111	81,163
4592	183	2	7/19/1997	WO	N/A	128,677	-
9887	183	1	2/2/2000	0	51.88	300,021	152,211
9904	183	2	12/31/1997	WO	N/A	163,501	-
9992	183	2	7/22/2004	0	71.54	250,158	58,458
10620	183	1	10/1/2013	0	53.08	584,789	146,482
10877	183	2	4/4/2003	0	58.24	465,260	119,058
10907	183	1	7/3/2020	0	59.29	457,415	113,863
10135	184	2	2/1/2002	0	75.55	268,104	46,094
10244	184	2	1/1/1999	0	81.69	148,357	31,195
10338	184	2	10/15/2005	0	68.77	142,550	69,158
10680	184	1	5/17/2006	0	54.69	527,213	135,251
10838	184	1	7/1/2004	0	45.32	728,650	193,566
10892	184	2	3/30/2018	0	64.15	335,291	89,827
10901	184	1	1/1/2008	0	54.58	514,382	135,251
10940	184	1	12/1/2003	0	56.31	258,703	129,762
10950	184	1	3/1/2014	0	59.50	219,270	108,789
10993	184	1	7/1/2001	0	54.89	527,213	135,251
11000	184	1	5/31/2008	0	67.13	305,764	77,026

Total Other Classes		7,736,150	2,125,686
Average of 22 claims	61.50	351,643	96,622
Medical plus Indemnity		448,265	

*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	23,224,142	35,362,714	4,466,971	539,914	8,191,669	11,818,883	12,873,320	36,099,579	310,590,243
2020	299,700	139,028,472	22,443,061	27,274,125	313,587	384,571	7,660,069	10,678,482	12,543,358	33,562,164	254,187,589
2021	232,531	129,544,914	24,346,630	29,178,687	-	206,478	8,371,756	12,282,842	12,875,453	35,771,344	252,810,635
2022	63,653	135,401,635	27,892,217	33,074,473	-	222,909	8,646,476	17,306,049	16,007,792	41,084,218	279,699,422

Source: Exhibits X-C and X-D
Prior filings for 2011 and prior.

COAL MINE COMPENSATION RATING BUREAU
Summary of Developed & Adjusted Payrolls
State Occupational Disease

State OD	Anthracite Underground	Bituminous Underground	Anthracite Surface	Bituminous Surface	Coke	Auger	Anthracite Co-gen	Bituminous Co-gen	Anthracite Prep Plant	Bituminous Prep Plant	Total
	(1011)	(1002)	(1016)	(1013)	(1017)	(1019)	(1022)	(1024)	(1026)	(1028)	
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	23,224,142	35,362,714	4,466,971	539,914	8,191,669	11,818,883	12,873,320	36,099,579	310,590,243
2020	299,700	139,028,472	22,443,061	27,274,125	313,587	384,571	7,660,069	10,678,482	12,543,358	33,562,164	254,187,589
2021	232,531	129,544,914	24,346,630	29,178,687	-	206,478	8,371,756	12,282,842	12,875,453	35,771,344	252,810,635
2022	63,653	135,401,635	27,892,217	33,074,473	-	222,909	8,646,476	17,306,049	16,007,792	41,084,218	279,699,422

Source: Exhibits X-C and X-D
Prior filings for 2011 and prior.

COAL MINE COMPENSATION RATING BUREAU
Summary of Developed & Adjusted Payrolls
Federal Occupational Disease

Federal OD	Anthracite Underground	Bituminous Underground	Anthracite Surface	Bituminous Surface	Coke	Auger	Anthracite Co-gen	Bituminous Co-gen	Anthracite Prep Plant	Bituminous Prep Plant	Total
	(0160)	(0158)	(0153)	(0156)	(0154)	(0157)	(0181)	(0182)	(0183)	(0184)	
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	20,165,184	36,503,594	4,519,863	593,214	6,807,496	11,818,883	10,829,165	36,117,344	305,553,122
2020	299,700	139,217,518	19,343,807	27,989,489	313,587	395,231	6,903,273	10,678,482	10,671,271	33,562,164	249,374,522
2021	232,531	129,544,914	21,010,929	29,978,567	-	227,558	7,786,285	12,282,842	11,359,096	35,771,344	248,194,066
2022	63,653	135,401,635	24,559,529	33,578,482	-	222,909	7,763,788	17,306,049	14,512,871	41,085,799	274,494,715

Source: Exhibits X-C and X-D
Prior filings for 2011 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
2012	17.53	219,407	38,462	7.16	154,428,761	11,057,099	6.33	26,295,907	1,664,531	1.26	76,452,811	963,305
2013	17.53	175,900	30,835	7.16	149,953,068	10,736,640	6.33	22,449,824	1,421,074	1.26	61,349,745	773,007
2014	17.53	258,809	45,369	7.16	271,230,707	19,420,119	6.33	20,466,075	1,295,503	1.26	54,050,731	681,039
2015	17.53	254,336	44,585	7.16	216,454,460	15,498,139	6.33	24,218,779	1,533,049	1.26	40,934,048	515,769
2016	17.53	163,760	28,707	7.16	148,556,407	10,636,639	6.33	20,873,611	1,321,300	1.26	29,127,089	367,001
2017	17.53	252,383	44,243	7.16	172,708,778	12,365,949	6.33	21,167,074	1,339,876	1.26	33,140,780	417,574
2018	17.53	183,346	32,141	7.16	180,553,142	12,927,605	6.33	19,576,675	1,239,204	1.26	35,242,187	444,052
2019	17.53	179,379	31,445	7.16	177,833,672	12,732,891	6.33	23,224,142	1,470,088	1.26	35,362,714	445,570
2020	17.53	299,700	52,537	7.16	139,028,472	9,954,439	6.33	22,443,061	1,420,646	1.26	27,274,125	343,654
2021	17.53	232,531	40,763	7.16	129,544,914	9,275,416	6.33	24,346,630	1,541,142	1.26	29,178,687	367,651
2022	17.53	63,653	11,158	7.16	135,401,635	9,694,757	6.33	27,892,217	1,765,577	1.26	33,074,473	416,738

	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
2012	4.60	5,738,105	263,953	6.34	808,208	51,240	7.77	10,273,004	798,212	1.30	9,047,745	117,621
2013	4.60	4,791,910	220,428	6.34	1,025,399	65,010	7.77	8,342,651	648,224	1.30	10,355,884	134,626
2014	4.60	4,464,398	205,362	6.34	806,976	51,162	7.77	9,060,883	704,031	1.30	11,721,184	152,375
2015	4.60	4,340,376	199,657	6.34	582,619	36,938	7.77	10,469,089	813,448	1.30	11,748,205	152,727
2016	4.60	4,435,066	204,013	6.34	372,496	23,616	7.77	8,994,602	698,881	1.30	11,327,552	147,258
2017	4.60	4,566,113	210,041	6.34	449,009	28,467	7.77	8,819,700	685,291	1.30	11,435,057	148,656
2018	4.60	4,484,744	206,298	6.34	600,138	38,049	7.77	11,600,891	901,389	1.30	12,043,297	156,563
2019	4.60	4,466,971	205,481	6.34	539,914	34,231	7.77	8,191,669	636,493	1.30	11,818,883	153,645
2020	4.60	313,587	14,425	6.34	384,571	24,382	7.77	7,660,069	595,187	1.30	10,678,482	138,820
2021	4.60	0	0	6.34	206,478	13,091	7.77	8,371,756	650,485	1.30	12,282,842	159,677
2022	4.60	0	0	6.34	222,909	14,132	7.77	8,646,476	671,831	1.30	17,306,049	224,979

	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
2012	2.78	8,671,140	241,058	2.06	34,211,729	704,762	326,146,817	15,900,243
2013	2.78	8,265,665	229,785	2.06	34,253,697	705,626	300,963,743	14,965,255
2014	2.78	8,234,771	228,927	2.06	43,520,040	896,513	423,814,574	23,680,400
2015	2.78	7,606,274	211,454	2.06	33,564,176	691,422	350,172,362	19,697,188
2016	2.78	7,018,927	195,126	2.06	23,689,882	488,012	254,559,392	14,110,553
2017	2.78	7,746,154	215,343	2.06	28,803,457	593,351	289,088,505	16,048,791
2018	2.78	9,651,288	268,306	2.06	32,199,872	663,317	306,135,580	16,876,924
2019	2.78	12,873,320	357,878	2.06	36,099,579	743,651	310,590,243	16,811,373
2020	2.78	12,543,358	348,705	2.06	33,562,164	691,381	254,187,589	13,584,176
2021	2.78	12,875,453	357,938	2.06	35,771,344	736,890	252,810,635	13,143,053
2022	2.78	16,007,792	445,017	2.06	41,084,218	846,335	279,699,422	14,090,524

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, 2023

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	$17.53	1011	$19.97	0160	$14.19
Bituminous	1001	$7.16	1002	$0.73	0158	$0.93
SURFACE						
Anthracite	1012	$6.33	1016	$0.94	0153	$1.63
Bituminous	1014	$1.26	1013	$0.49	0156	$0.83
COKE	1469	$4.60	1017	$0.09	0154	$0.09
AUGER	1015	$6.34	1019	$0.18	0157	$0.39
CO-GEN						
Anthracite	1021	$7.77	1022	$0.42	0181	$0.37
Bituminous	1023	$1.30	1024	$0.19	0182	$0.24
PREP PLANT						
Anthracite	1025	$2.78	1026	$2.87	0183	$0.81
Bituminous	1027	$2.06	1028	$0.19	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	$16.87	1011	$19.97	0160	$14.19
Bituminous	1001	$6.73	1002	$0.73	0158	$0.93
SURFACE						
Anthracite	1012	$6.14	1016	$0.94	0153	$1.63
Bituminous	1014	$1.18	1013	$0.49	0156	$0.83
	1469	$4.45	1017	$0.09	0154	$0.09
	1015	$6.08	1019	$0.18	0157	$0.39
CO-GEN						
Anthracite	1021	$7.55	1022	$0.42	0181	$0.37
Bituminous	1023	$1.22	1024	$0.19	0182	$0.24
PREP PLANT						
Anthracite	1025	$2.67	1026	$2.87	0183	$0.81
Bituminous	1027	$1.96	1028	$0.19	0184	$0.25

Source: Current Manual Loss Costs from Exhibit I-A-M approved filing effective April 1, 2023
Unloaded Approved Loss Costs from Exhibit I-A-UL approved filing effective April 1, 2023

Coal Mine Compensation Rating Bureau
Adjustments from 2023 Filing

Section 1 Catastrophic Loss Cost (2023)

Underground			
	Anthracite	0.27	
	Bituminous	0.27	
Auger		0.12	(1/3 Underground, 2/3 Surface)
Other Classes		0.05	

Section 2 Load Factors (2023)

Experience Rating	1.0000
Merit Rating (Exh XIV-A, Page 1)	1.0002
Safety Committee (Exh. XIV-B)	1.0228
	1.0230
Small Business Advocate (XI-A)	1.0002

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)
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
2022	63,653	0	0	1.0000	63,653	0.063653

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)
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	139,028,472	0	189,046	1.0000	139,217,518	139.217518
2021	129,544,914	0	0	1.0000	129,544,914	129.544914
2022	135,401,635	0	0	1.0000	135,401,635	135.401635

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)
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	23,224,142	3,889,152	830,194	1.0000	20,165,184	20.165184
2020	22,443,061	3,744,355	645,101	1.0000	19,343,807	19.343807
2021	24,346,630	3,817,925	482,224	1.0000	21,010,929	21.010929
2022	27,892,217	3,742,054	430,889	1.0065	24,559,529	24.559529

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)
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	29,178,687	0	799,880	1.0000	29,978,567	29.978567
2022	33,074,473	0	504,009	1.0000	33,578,482	33.578482

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)
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	1.0000	0	0.000000
2022	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)
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	206,478	0	21,080	1.0000	227,558	0.227558
2022	222,909	0	0	1.0000	222,909	0.222909

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)
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	8,371,756	1,323,798	738,327	1.0000	7,786,285	7.786285
2022	8,646,476	993,185	110,497	1.0000	7,763,788	7.763788

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)
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	12,282,842	0	0	1.0000	12,282,842	12.282842
2022	17,306,049	0	0	1.0000	17,306,049	17.306049

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)
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	12,873,320	2,160,285	116,130	1.0000	10,829,165	10.829165
2020	12,543,358	1,982,278	110,191	1.0000	10,671,271	10.671271
2021	12,875,453	1,803,692	287,335	1.0000	11,359,096	11.359096
2022	16,007,792	1,632,269	155,366	1.0122	14,512,871	14.512871

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)
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	33,562,164	0	0	1.0000	33,562,164	33.562164
2021	35,771,344	0	0	1.0015	35,771,344	35.771344
2022	41,084,218	0	1,550	1.0200	41,085,799	41.085799

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
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
2022	63,653	0	63,653	0.063653

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
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	139,028,472	0	139,028,472	139.028472
2021	129,544,914	0	129,544,914	129.544914
2022	135,401,635	0	135,401,635	135.401635

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 4-30-2023

ANTHRACITE UNDERGROUND (1010)

Year	REPORTED PAYROLL* (1)	DEVELOPMENT FACTORS** (2)	DEVELOPED PAYROLL (3) = (1) * (2)
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
2022	0	1.0000	0

CMCRB database for files 258, 330, 4027 and 4049 Payrolls as of 4-30-2023

* 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, Page 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
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
2022	63,653	1.0000	63,653	0.063653

BITUMINOUS UNDERGROUND (1001)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	DEVELOPED PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
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	139,028,472	1.0000	139,028,472	139.028472
2021	129,544,914	1.0000	129,544,914	129.544914
2022	135,401,635	1.0000	135,401,635	135.401635

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
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	23,224,142	1.0000	23,224,142	23.224142
2020	22,443,061	1.0000	22,443,061	22.443061
2021	24,346,630	1.0000	24,346,630	24.346630
2022	27,712,088	1.0065	27,892,217	27.892217

BITUMINOUS SURFACE (1014)

YEAR	REPORTED PAYROLL (1)	DEVELOP FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
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	29,178,687	1.0000	29,178,687	29.178687
2022	33,074,473	1.0000	33,074,473	33.074473

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
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	-	1.0000	-	0.000000
2022	-	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
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	206,478	1.0000	206,478	0.206478
2022	222,909	1.0000	222,909	0.222909

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
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	8,371,756	1.0000	8,371,756	8.371756
2022	8,646,476	1.0000	8,646,476	8.646476

BITUMINOUS CO-GEN (1023)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
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	12,282,842	1.0000	12,282,842	12.282842
2022	17,306,049	1.0000	17,306,049	17.306049

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
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	12,873,320	1.0000	12,873,320	12.873320
2020	12,543,358	1.0000	12,543,358	12.543358
2021	12,875,453	1.0000	12,875,453	12.875453
2022	15,814,851	1.0122	16,007,792	16.007792

BITUMINOUS PREP PLANT (1027)

YEAR	REPORTED PAYROLL (1)	DEVELOPMENT FACTORS (2)	PAYROLL (3) =(1) x (2)	PAYROLL PER MILLION (4) =(1)X(2)/1000000
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	33,562,164	1.0000	33,562,164	33.562164
2021	35,717,767	1.0015	35,771,344	35.771344
2022	40,278,645	1.0200	41,084,218	41.084218

Source: (1) Payroll and (2) Development - Exhibit X-E, Page 5

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE UNDERGROUND (1010)

RPT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379	299,700	232,531	63,653
2ND	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379	299,700	232,531	
3RD	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379	299,700		
4TH	219,407	175,900	258,809	254,336	163,760	252,383	183,346	179,379			
5TH	219,407	175,900	258,809	254,336	163,760	252,383	183,346				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	135,401,635
2ND	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	129,544,914	
3RD	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778	180,553,142	177,833,672	139,028,472		
4TH	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778	180,553,142	177,833,672			
5TH	154,428,761	149,953,068	271,230,707	216,454,460	148,556,407	172,708,778	180,553,142				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9898	1.0074	1.0048	0.9998	0.9977	1.0191	1.0106	0.9634	1.0072	0.9851	0.9971	0.9968	1.0000
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	0.9995	1.0000	1.0000	0.9992		0.9997	0.9997	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 4-30-2023 - Traumatic Payroll Reports

PAYROLLS
ANTHRACITE SURFACE (1012)

RPT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	27,712,088
2ND	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	24,346,630	
3RD	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675	23,563,089	22,443,061		
4TH	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675	23,224,142			
5TH	26,295,907	22,449,824	20,466,075	24,218,779	20,873,611	21,167,074	19,576,675				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1ST	1.0090	1.0146	1.0021	0.9977	1.0075	1.0196	1.0031	0.9982	1.0021	1.0094	1.0065	1.0003	1.0065
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9837		0.9967	0.9938	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9856			0.9971	0.9971	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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	33,074,473
2ND	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	29,178,687	
3RD	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		
4TH	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780	35,242,187	35,362,714			
5TH	76,452,811	61,349,745	54,050,731	40,934,048	29,127,089	33,140,780	35,242,187				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9909	0.9665	0.9884	0.9940	1.0044	0.9613	0.9993	0.9968	0.9975	0.9864	0.9883	0.9883	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 4-30-2023 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
COKE (1469)

RPT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	0
2ND	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	0	
3RD	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		
4TH	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113	4,484,744	4,466,971			
5TH	5,738,105	4,791,910	4,464,398	4,340,376	4,435,066	4,566,113	4,484,744				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	789,136	1,082,639	876,196	592,775	372,496	452,051	560,126	539,914	388,307	208,581	222,909
2ND	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138	539,914	384,571	206,478	
3RD	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138	539,914	384,571		
4TH	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138	539,914			
5TH	808,208	1,025,399	806,976	582,619	372,496	449,009	600,138				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0242	0.9471	0.9210	0.9829	1.0000	0.9933	1.0714	1.0000	0.9904	0.9899	1.0090	1.0090	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 4-30-2023 - Traumatic Payroll Reports

PAYROLLS
ANTHRACITE CO-GEN (1021)

RPT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	8,646,476
2ND	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	8,371,756	
3RD	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		
4TH	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700	11,600,891	8,191,669			
5TH	10,273,004	8,342,651	9,060,883	10,469,089	8,994,602	8,819,700	11,600,891				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9899	0.9613	0.9764	0.9833	0.8292	0.9758	1.0008	0.9967	1.0000	1.0131	0.9973	0.9973	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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	17,306,049
2ND	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	12,282,842	
3RD	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		
4TH	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057	12,043,297	11,818,883			
5TH	9,047,745	10,355,884	11,721,184	11,748,205	11,327,552	11,435,057	12,043,297				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9989	0.7917	1.0235	1.0021	0.9948	0.9878	1.0039	1.0034	0.9817	1.0031	0.9960	0.9960	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 4-30-2023 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU
Payroll Development

PAYROLLS
ANTHRACITE PREP PLANT (1025)

RPT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	15,814,851
2ND	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	12,875,453	
3RD	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288	12,534,373	12,543,358		
4TH	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288	12,873,320			
5TH	8,671,140	8,265,665	8,234,771	7,606,274	7,018,927	7,746,154	9,651,288				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	1.0062	1.0019	1.0168	0.9789	1.0068	1.0324	1.0083	0.9997	1.0038	1.0169	1.0122	1.0238	1.0122
2-3	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0306		1.0061	1.0115	1.0000
3-4	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0270			1.0054	1.0054	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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1ST	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	40,278,645
2ND	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	35,717,767	
3RD	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457	32,199,872	36,099,579	33,562,164		
4TH	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457	32,199,872	36,099,579			
5TH	34,211,729	34,253,697	43,520,040	33,564,176	23,689,882	28,803,457	32,199,872				

DEV.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 YEAR AVERAGE	ACCUM.	SELECTED
1-2	0.9959	1.0142	1.0028	0.9868	1.0736	1.0075	1.0216	0.9777	0.9989	1.1319	1.0275	1.0290	1.0200
2-3	1.0000	1.0014	1.0000	1.0000	1.0000	0.9995	1.0000	1.0000	1.0080		1.0015	1.0015	1.0015
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 4-30-2023 - Traumatic Payroll Reports

COAL MINE COMPENSATION RATING BUREAU

OD Frequencies From Approved Filing

Exhibit X-F

		State OD Class Code	State OD Indicated Frequency (Eff. 4/1/2023) (1)	Federal OD Class Code	Fedeal OD Basic Indicated Frequency (Eff. 4/1/2023) (2)	Fedeal OD Excess Indicated Frequency (Eff. 4/1/2023) (3)
Underground:	Anthracite	1011	0.242481	160	0.311723	0.087440
	Bituminous	1002	0.023199	158	0.017608	0.008431
Surface:	Anthracite	1016	0.016147	153	0.038022	0.007637
	Bituminous	1013	0.014083	156	0.020742	0.004515
	Coke	1017	0.002173	154	0.002062	0.000843
	Auger	1019	0.004397	157	0.009868	0.001788
Co-Gen:	Anthracite	1022	0.007177	181	0.008584	0.002412
	Bituminous	1024	0.004743	182	0.005648	0.001635
Prep Plants:	Anthracite	1026	0.049198	183	0.015995	0.019645
	Bituminous	1028	0.004669	184	0.006346	0.001554

Source: (1): Exhibit III Column (3) of prior filing.
(2) & (3): Exhibit IV-A Column (3) of prior filing.

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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
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	#	1,623.92	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	#	1,686.73	1,319.82	1,326.58		710.31	1,267.77	1,180.50	1,161.30	1,298.33
2021	#	1,610.48	1,219.42	1,037.50			580.00	1,471.25	943.00	1,401.53
2022	#	1,630.01	1,348.95	1,317.80			1,204.60	1,789.00	1,546.50	1,607.73

	Number of Wage Records Used to Calculate Average Coal Class Weekly Wages									
Year	1010	1001	1012	1014	1469	1015	1021	1023	1025	1027
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	#	128	11	7	1		11	5	4	5
2019	#	125	16	11	1		2	1	6	8
2020	#	88	11	12		1	11	2	10	3
2021	#	117	13	4			1	4	2	6
2022	#	82	11	5			4	2	4	8
Total		1203	171	108	15	10	56	28	49	78

		Average Coal Class Weekly Wage Indexed to Statewide Average Weekly Wage									
Year	SAWW	1010	1001	1012	1014	1469	1015	1021	1023	1025	1027
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	#	1.584	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	#	1.560	1.221	1.227		0.657	1.173	1.092	1.074	1.201
2021	1130	#	1.425	1.079	0.918			0.513	1.302	0.835	1.240
2022	1205	#	1.353	1.119	1.094			1.000	1.485	1.283	1.334
Average			1.567	1.127	1.109	0.743	0.645	1.031	1.137	1.071	1.441

		Average Coal Class Weekly Wage Indexed to Statewide Average Weekly Wage - Classes Combined	
Year	SAWW	Bit. Und. & Prep	All Other Classes
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	1.565	1.167
2019	1049	1.600	0.992
2020	1081	1.548	1.163
2021	1130	1.416	1.045
2022	1205	1.351	1.149
Average		1.561	1.084
Selected Coal Class Adjt. Factor to SAWW		1.561	1.084

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.

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Effective Date - April 01, 2024

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Section A. Office of Small Business Advocate Assessment Factor Calculation

1.	2023-2024 Small Business Advocate Assessment	$	550,000
2.	2022 Insurance Carrier Paid Losses		
	CMCRB		15,046,248
	PCRB		2,005,053,583
	Total		2,020,099,831
3.	Insurer Assessment Ratio (item 1 divided by item 2)		0.0003

Section B. Employer Assessment Factor Calculation

1.	2023/2024 INSURANCE CARRIER ASSESSMENT AMOUNTS		
	A. Administrative Fund		52,098,546
	B. Subsequent Injury Fund		96,698
	C. Supersedeas Fund		23,885,474
	D. Uninsured Employers Guaranty Fund		5,050,298
	TOTAL		81,131,016
2.	2022 Employer Assessment Premium Base		3,346,422,252
3.	2022 Coal Mine Premium Base		19,091,763
4.	Coal Premium percent of Total	(3)/(2)	0.571%
5.	Assessments to be paid by coal employers		462,863
6.	Coal Employer Assessment Factor		0.0242

Source: Pa. Dept. of Labor & Industry
PCRB

COAL MINE COMPENSATION RATING BUREAU

CATASTROPHE - Spread of Loss Cost to Classes

Classification		(1) 2022 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 4/1/2023	(8) Selected	(9) Change (8)/(7) - 1
Underground										
Anthracite Underground	1010	$63,653								
Bituminous Underground	1001	135,401,635								
Total		135,465,288	7	948,257	86.8%	556,391	0.41	0.27	0.33	22.2%
Other than Underground										
Anthracite Surface	1012	27,892,217								
Bituminous Surface	1014	33,074,473								
Coke	1469	0								
Auger	1015	222,909								
Anthracite Co-Gen	1021	8,646,476								
Bituminous Co-Gen	1023	17,306,049								
Anthracite Prep Plant	1025	16,007,792								
Bituminous Prep Plant	1027	41,084,218								
Total		144,234,134	1	144,234	13.2%	84,630	0.06	0.05	0.06	20.0%
Grand Total		279,699,422	8	1,092,491	100.0%	641,021	0.23	a-0.16	0.19	18.8%

a - Current Total Loss Cost is based on 2022 Payroll weights
b- Auger = one-third underground & two-thirds surface or $0.15

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
2003	2	1,647,791
2004	3	2,089,478
2005	4	2,606,684
2006	1	60,559
2007	2	3,677,448
2008	2	976,808
2009	1	212,597
2010	1	43,542
2011	3	695,760
2012	1	302,334
2013	1	10,869
2014	-	-
2015	2	132,019
2016	1	83,215
2017	1	204,237
2018	1	77,077
2019	-	-
2020	-	-
2021	-	-
2022	-	-
	26	12,820,418

Average over 20 years	641,021
2022 Developed Payroll from Exhibit XII-A	279,699,422
Loss Cost	0.23

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) Trend	(8) Loss at Current Level	(9) Excess Over $1,250,000
39840	100100	2003	2	419,207	485,877	2.0119	1,820,938	570,938
39990	100100	2003	1	1,156,545	-	2.0119	2,326,853	1,076,853
40926	100100	2004	9	605,294	504,258	1.9681	2,183,709	933,709
40959	101200	2004	9	186,825	520,966	1.9681	1,393,003	143,003
41102	102700	2004	2	505,991	643,730	1.9681	2,262,766	1,012,766
41534	101400	2005	1	1,007,168	25,566	1.8966	1,958,683	708,683
41618	101400	2005	2	231,682	479,321	1.8966	1,348,488	98,488
41672	100100	2005	2	840,783	650,000	1.8966	2,827,419	1,577,419
41676	100100	2005	2	681,537	94,638	1.8966	1,472,094	222,094
42274	146900	2006	9	290,552	428,429	1.8228	1,310,559	60,559
42863	100100	2007	9	423,025	391,002	1.7433	1,419,093	169,093
43059	101200	2007	2	729,510	2,000,000	1.7433	4,758,355	3,508,355
43335	100100	2008	1	918,605	223	1.6828	1,546,204	296,204
43835	100100	2008	1	1,135,825	11,432	1.6828	1,930,604	680,604
45177	101200	2009	9	629,643	270,749	1.6244	1,462,597	212,597
44994	100100	2010	9	394,662	410,230	1.6071	1,293,542	43,542
45469	101200	2011	9	450,275	350,000	1.5828	1,266,675	16,675
45686	101400	2011	9	321,808	632,412	1.5828	1,510,339	260,339
46013	100100	2011	9	312,490	741,810	1.5828	1,668,746	418,746
46135	100100	2012	9	246,748	768,314	1.5293	1,552,334	302,334
47009	101200	2013	9	601,421	250,000	1.4809	1,260,869	10,869
48423	100100	2015	1	902,268	707	1.4280	1,289,448	39,448
48542	100100	2015	1	940,176	-	1.4280	1,342,571	92,571
48759	100100	2016	1	958,276	1,908	1.3885	1,333,215	83,215
49424	100100	2017	9	526,969	538,562	1.3648	1,454,237	204,237
49769	100100	2018	9	336,287	665,356	1.3249	1,327,077	77,077
Totals	26						45,320,418	12,820,418

20 Year Average	641,021
2022 Developed Payroll	279,699,422
Loss Cost	0.23

Sources: Columns (1) through (6) from CMCRB Database.
Injury types are as follows: 1 (Death), 2 (PT), 9 (PP).
Column (7): Exhibit XII-D.
Column (8) is equal to Columns [(5) + (6)] x (7)
Column (9) is equal to Column (8), 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
2003	$675		2.0119				
2004	$690	2.2%	1.9681	2014	$932	1.6%	1.4571
2005	$716	3.8%	1.8966	2015	$951	2.0%	1.4280
2006	$745	4.1%	1.8228	2016	$978	2.8%	1.3885
2007	$779	4.6%	1.7433	2017	$995	1.7%	1.3648
2008	$807	3.6%	1.6828	2018	$1,025	3.0%	1.3249
2009	$836	3.6%	1.6244	2019	$1,049	2.3%	1.2946
2010	$845	1.1%	1.6071	2020	$1,081	3.1%	1.2562
2011	$858	1.5%	1.5828	2021	$1,130	4.5%	1.2018
2012	$888	3.5%	1.5293	2022	$1,205	6.6%	1.1270
2013	$917	3.3%	1.4809	2023	$1,273	5.6%	1.0668

Average of All Years=	3.23%
Average of last 10 years=	3.35%
Average of last 5 years=	4.44%
Average of last 3 years=	5.60%

Selected Change from	2023	to	2024	4.00%
Selected Change from	2024	to	2025	3.50%
Selected Change from	2025	to	2026	3.10%

Selected= 3.10% (Last Year's Selection was 3.00%)

	Projected Wage		Weight
01-01-2024	$1,324	a	28.125%
01-01-2025	$1,370	a	68.750%
01-01-2026	$1,413	a	3.125%

Average Weekly Wage For Policies effective between 04-01-2024 and 04-01-2026

$1,358 b

a. Previous year's wage times annual increase of 3.10%
b. Weighted average of projected wage levels from 01-01-2024 to 01-01-2026

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	16	6,788,084
1012	Anthracite Surface	5	3,891,499
1014	Bituminous Surface	3	1,067,510
1469	Coke	1	60,559
1015	Auger	-	-
1021	Anthracite Co-Gen	-	-
1023	Bituminous Co-Gen	-	-
1025	Anthracite Prep Plant	-	-
1027	Bituminous Prep Plant	1	1,012,766
	Total	26	$12,820,418

Sources: Exhibit XII-C

Coal Mine Compensation Rating Bureau of Pennsylvania

Experience Rating Plan

Basic Data Lookup Tables

2024 plan factors at 50k and 150 k splits:

Table A: Ratemaking Factors

Year:	2022	2021	2020	Average split by Layer
Loss Develop.	1.5689	1.1694	1.0835	
Layers:	Split of total losses by Layer			
0- 50	0.51999	0.43107	0.39647	0.44918
50-150	0.28175	0.26724	0.25752	0.26884
Over 150	0.19826	0.30169	0.34601	0.28199
Trend	1.0090	1.0115	1.0128	1.0000

Table B: Payroll Development

Classification		Payroll Development
1001	Bit deep	1.0000
1010	Anth deep	1.0000
1012	Anth surf	1.0065
1014	Bit surf	1.0000
1015	Auger	1.0000
1021	Anth Co-gen	1.0000
1023	Bit Co-gen	1.0000
1025	Anth Prep	1.0122
1027	Bit Prep	1.0200
1469	Coke	1.0097

Table C: Unloaded Loss Costs - Traumatic

Classification		Unloaded Loss Cost (1)
1001	Bit deep	5.80
1010	Anth deep	14.29
1012	Anth surf	4.61
1014	Bit surf	0.98
1015	Auger	5.84
1021	Anth Co-gen	6.31
1023	Bit Co-gen	1.25
1025	Anth Prep	2.50
1027	Bit Prep	1.57
1469	Coke	4.28

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	5.80	0.33	1.0003	1.0245	6.28
1010	Anth deep	14.29	0.33	1.0003	1.0245	14.98
1012	Anth surf	4.61	0.06	1.0003	1.0245	4.78
1014	Bit surf	0.98	0.06	1.0003	1.0245	1.07
1015	Auger	5.84	0.15	1.0003	1.0245	6.14
1021	Anth Co-gen	6.31	0.06	1.0003	1.0245	6.53
1023	Bit Co-gen	1.25	0.06	1.0003	1.0245	1.34
1025	Anth Prep	2.50	0.06	1.0003	1.0245	2.62
1027	Bit Prep	1.57	0.06	1.0003	1.0245	1.67
1469	Coke	4.28	0.06	1.0003	1.0245	4.45

	Off-* Balances
Merit Rating Exh. XIV-A	1.0000
Safety Rating Exh XIV-B	1.0245
Combined	1.0245

Table E: Expected Traumatic Loss Costs

Classification		Unloaded Manual Loss Cost	2022 All Layers: De-trended Loss Cost*	2022 All Layers: Undeveloped Losses**	2022 Layer 0-50 (Split of total losses by Layer 0.51999): Undeveloped Expected Loss Cost***	2022 Layer 50-150 (0.28175): Undeveloped Expected Loss Cost***	2022 XS over 150 (0.19826): Undeveloped Expected Loss Cost***	2021 All Layers: De-trended Loss Cost*	2021 All Layers: Undeveloped Losses**	2021 Layer 0-50 (Split of total losses by Layer 0.43107): Undeveloped Expected Loss Cost***	2021 Layer 50-150 (0.26724): Undeveloped Expected Loss Cost***	2021 XS over 150 (0.30169): Undeveloped Expected Loss Cost***	2020 All Layers: De-trended Loss Cost*	2020 All Layers: Undeveloped Losses**	2020 Layer 0-50 (Split of total losses by Layer 0.39647): Undeveloped Expected Loss Cost***	2020 Layer 50-150 (0.25752): Undeveloped Expected Loss Cost***	2020 XS over 150 (0.34601): 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	5.80	5.75	3.66	1.90	1.03	0.73	5.73	4.90	2.11	1.31	1.48	5.73	5.29	2.10	1.36	1.83
1010	Anth deep	14.29	14.16	9.03	4.70	2.54	1.79	14.13	12.08	5.21	3.23	3.64	14.11	13.02	5.16	3.35	4.51
1012	Anth surf	4.61	4.57	2.91	1.51	0.82	0.58	4.56	3.90	1.68	1.04	1.18	4.55	4.20	1.67	1.08	1.45
1014	Bit surf	0.98	0.97	0.62	0.32	0.17	0.12	0.97	0.83	0.36	0.22	0.25	0.97	0.90	0.36	0.23	0.31
1015	Auger	5.84	5.79	3.69	1.92	1.04	0.73	5.77	4.93	2.13	1.32	1.49	5.77	5.33	2.11	1.37	1.84
1021	Anth Co-gen	6.31	6.25	3.98	2.07	1.12	0.79	6.24	5.34	2.30	1.43	1.61	6.23	5.75	2.28	1.48	1.99
1023	Bit Co-gen	1.25	1.24	0.79	0.41	0.22	0.16	1.24	1.06	0.46	0.28	0.32	1.23	1.14	0.45	0.29	0.39
1025	Anth Prep	2.50	2.48	1.58	0.82	0.45	0.31	2.47	2.11	0.91	0.56	0.64	2.47	2.28	0.90	0.59	0.79
1027	Bit Prep	1.57	1.56	0.99	0.51	0.28	0.20	1.55	1.33	0.57	0.36	0.40	1.55	1.43	0.57	0.37	0.49
1469	Coke	4.28	4.24	2.70	1.40	0.76	0.54	4.23	3.62	1.56	0.97	1.09	4.23	3.90	1.55	1.00	1.35
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	2020	$7,826,531	1.0914	$8,541,876	69.20%	1.0657	1.0914	1.0835
	2021	$5,589,383	1.2328	$6,890,591	66.90%	1.0412	1.2328	1.1694
	2022	$2,994,770	1.8444	$5,523,554	65.64%	1.0427	1.8444	1.5689
				$20,956,021	67.47%			
Medical	2020	$3,568,184	1.0657	$3,802,614	30.80%			
	2021	$3,274,862	1.0412	$3,409,786	33.10%			
	2022	$2,773,533	1.0427	$2,891,963	34.36%			
				$10,104,363	32.53%			
	Total			$31,060,384	1.0000			

		Years of Trend	Medical / HB 1846 Trend at 1.5%	Indemnity / HB 1840 Trend at -0.3%	Combined Trend Weighted by % indemnity vs medical by year
Average Exp date AY 2020	7/1/2020	4.75	1.0733	0.9858	1.0128
Average Exp date AY 2021	7/1/2021	3.75	1.0574	0.9888	1.0115
Average Exp date AY 2022	7/1/2022	2.75	1.0418	0.9918	1.0090
Average Date of Accident	4/1/2025				

Source: Loss Development - Exhibit V-F
Loss Trend - Exhibit V-C
Reported Losses - Exhibit V-B page 1

2024 Credibility Tables
PCRB shape

Expected Losses Greater than	Equivalent Modified Payroll at $4.04 *	Primary Credibility	Excess Credibility
11,516	300,000	0.29	0.06
14,394	356,293	0.30	0.06
17,632	436,442	0.31	0.06
21,218	525,198	0.32	0.07
23,729	587,358	0.33	0.07
25,895	640,965	0.34	0.07
28,223	698,595	0.35	0.07
31,724	785,248	0.36	0.07
33,340	825,235	0.37	0.07
36,148	894,752	0.38	0.07
39,261	971,796	0.39	0.07
42,723	1,057,506	0.40	0.07
46,173	1,142,887	0.41	0.07
50,260	1,244,053	0.42	0.07
54,480	1,348,504	0.43	0.07
58,930	1,458,657	0.44	0.07
64,137	1,587,557	0.45	0.07
69,460	1,719,304	0.46	0.07
72,885	1,804,081	0.47	0.07
75,602	1,871,326	0.48	0.07
78,457	1,942,010	0.49	0.07
81,395	2,014,720	0.50	0.07
84,414	2,089,457	0.51	0.07
87,590	2,168,079	0.52	0.07
90,840	2,248,510	0.53	0.07
94,219	2,332,158	0.54	0.07
97,737	2,419,239	0.55	0.08
101,336	2,508,314	0.56	0.08
105,125	2,602,095	0.57	0.08
109,027	2,698,676	0.58	0.08
113,042	2,798,057	0.59	0.08
117,273	2,902,785	0.60	0.08
121,605	3,010,028	0.61	0.08
126,119	3,121,754	0.62	0.08
130,628	3,233,375	0.63	0.08
135,136	3,344,950	0.64	0.08
146,976	3,638,023	0.65	0.08
159,790	3,955,209	0.66	0.08
174,343	4,315,429	0.67	0.09
190,774	4,722,136	0.68	0.09
208,366	5,157,583	0.69	0.09
228,292	5,650,789	0.70	0.09
249,705	6,180,817	0.71	0.09
274,047	6,783,349	0.72	0.10
302,119	7,478,193	0.73	0.10
333,210	8,247,772	0.74	0.10
366,752	9,078,007	0.75	0.11
407,662	10,090,644	0.76	0.11
450,677	11,155,363	0.77	0.12
498,112	12,329,505	0.78	0.12
558,410	13,822,038	0.79	0.13
624,012	15,445,838	0.80	0.13
697,648	17,268,515	0.81	0.14
788,985	19,529,332	0.82	0.15
894,945	22,152,104	0.83	0.16
1,018,370	25,207,178	0.84	0.16
1,157,231	28,644,335	0.85	0.17
1,321,831	32,718,585	0.86	0.18
1,321,831	35,073,666	0.86	0.19
1,528,079	37,823,742	0.87	0.20
1,795,880	44,452,465	0.88	0.21
2,120,319	52,483,144	0.89	0.22
2,120,319	55,913,525	0.89	0.23
2,505,663	62,021,361	0.90	0.24
2,505,663	70,084,630	0.90	0.25
3,000,680	74,274,249	0.91	0.26
3,000,680	88,120,581	0.91	0.27
3,851,016	95,322,170	0.92	0.28
4,547,151	112,553,243	0.93	0.29
4,547,151	126,769,048	0.93	0.30
6,019,437	148,995,969	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

* The average unloaded loss cost underlying the proposed filing is $4.04.
the table was updated to reflect this change.

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

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2024
Mod Comparisons

File	Proposed Manual Premium	Proposed 2024 Mod	Proposed Experience Rated Premium	2023 Mod	Change in Mod Factor
52	4,759	0.761	3,622	0.785	-0.024
55	0	0.860	0	0.795	0.065
66	2,007	0.792	1,590	1.300	-0.508
99	10,201	0.831	8,477	0.831	0.000
119	68,695	0.710	48,773	0.756	-0.046
121	150,676	0.896	135,006	0.891	0.005
124	3,697	0.745	2,754	0.715	0.030
214	12,600	1.650	20,790	0.685	0.965
283	4,769	0.749	3,572	0.699	0.050
306	0	0.817	0	0.918	-0.101
352	3,571	0.785	2,803	0.789	-0.004
354	9,188	2.027	18,624	3.231	-1.204
360	1,197	0.810	970	0.840	-0.030
370	2,059	0.805	1,657	0.835	-0.030
421	2,583	0.770	1,989	1.771	-1.001
652	362,957	0.887	321,943	1.073	-0.186
690	7,699	0.863	6,644	0.805	0.058
954	1,670	0.780	1,303	0.781	-0.001
1016	2,235	0.818	1,828	0.906	-0.088
1037	9,535	0.798	7,609	0.810	-0.012
1700	5,520	1.716	9,472	0.670	1.046
2353	8,239	0.780	6,426	0.807	-0.027
2458	11,601	0.770	8,933	0.830	-0.060
2687	16,230	0.641	10,403	0.698	-0.057
2839	3,563	0.762	2,715	1.565	-0.803
3157	18,990	0.766	14,546	0.794	-0.028
3506	2,064	0.814	1,680	n/a	n/a
3552	1,892	0.795	1,504	0.804	-0.009
3614	27,521	1.279	35,199	1.349	-0.070
3619	12,970	0.810	10,506	0.851	-0.041
3629	8,770	0.797	6,990	0.810	-0.013
3691	10,755	3.048	32,781	1.821	1.227
3804	4,653	1.003	4,667	0.998	0.005
3932	3,549	0.774	2,747	0.790	-0.016
3977	57,888	1.259	72,881	1.180	0.079
3988	3,959	0.806	3,191	1.200	-0.394
3997	1,819	0.805	1,464	0.836	-0.031
4025	29,769	0.908	27,030	0.808	0.100
4030	1,451	0.806	1,170	0.832	-0.026
4031	15,639	1.559	24,381	1.485	0.074

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2024
Mod Comparisons

File	Proposed Manual Premium	Proposed 2024 Mod	Proposed Experience Rated Premium	2023 Mod	Change in Mod Factor
4044	99,588	1.548	154,162	1.417	0.131
4052	46,742	1.047	48,939	1.014	0.033
4058	16,020	1.943	31,127	1.399	0.544
4072	346,110	0.820	283,810	0.889	-0.069
4077	1,031,975	0.805	830,740	0.870	-0.065
4089	0	0.816	0	0.831	-0.015
4094	46,616	1.143	53,282	1.772	-0.629
4103	13,320	0.788	10,496	0.810	-0.022
4110	10,745	1.083	11,637	1.077	0.006
4114	7,112	0.689	4,900	0.692	-0.003
4118	0	0.798	0	0.789	0.009
4120	0	0.784	0	0.825	-0.041
4121	69,345	0.951	65,947	0.945	0.006
4123	7,366	1.097	8,081	0.839	0.258
4125	113,267	0.705	79,853	0.842	-0.137
4127	0	0.799	0	0.786	0.013
4133	15,777	0.768	12,117	0.840	-0.072
999014	232,063	1.040	241,346	1.056	-0.016
999019	383,976	0.871	334,443	0.738	0.133
999020	3,054	0.770	2,352	0.777	-0.007
999031	69,264	0.656	45,437	0.878	-0.222
999038	160,055	1.049	167,898	1.096	-0.047
999039	21,837	2.573	56,187	1.531	1.042
999042	636,287	1.286	818,265	n/a	n/a
999048	9,095	0.796	7,240	0.811	-0.015
999051	900,084	0.885	796,574	0.893	-0.008
999052	43,251	0.761	32,914	0.803	-0.042
999063	3,852,925	0.996	3,837,513	0.938	0.058
999065	1,347	0.810	1,091	1.200	-0.390
999071	3,040,716	1.081	3,287,014	1.109	-0.028
999075	11,295	0.729	8,234	1.419	-0.690

Coal Mine Compensation Rating Bureau of Pennsylvania
Experience Rating 2024
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	2023 Mod	Proposed 2024 Mod	Limited Mod
66	1.300	0.792	0.950
214	0.685	1.650	1.035
354	3.231	2.027	2.881
421	1.771	0.770	1.421
1700	0.670	1.716	1.020
2839	1.565	0.762	1.215
3691	1.821	3.048	2.171
3988	1.200	0.806	0.850
4058	1.399	1.943	1.749
4094	1.772	1.143	1.422
999039	1.531	2.573	1.881
999065	1.200	0.810	0.850
999075	1.419	0.729	1.069

MERIT RATING PLAN OFF-BALANCE CALCULATION

Class	(1) 2022 Developed Payroll	(2) Traumatic Proposed Unloaded Loss Cost	(3) Credit/ Surcharge	(4) Loss Cost Premium	Off-Balance
Underground Anthracite (1010)					
Total	$63,653	14.29		$9,096	
Credit	0	14.29	-5.00%	0	
Surcharge	0	14.29	5.00%	0	
Underground Bituminous (1001)					
Total	$135,401,635	5.80		$7,853,295	
Credit	1,050	5.80	-5.00%	-3	
Surcharge	0	5.80	5.00%	0	
Surface Anthracite (1012)					
Total	$27,892,217	4.61		$1,285,831	
Credit	63,997	4.61	-5.00%	-148	
Surcharge	0	4.61	5.00%	0	
Surface Bituminous (1014)					
Total	$33,074,473	0.98		$324,130	
Credit	217,890	0.98	-5.00%	-107	
Surcharge	0	0.98	5.00%	0	
Coke (1469)					
Total	$0	4.28		$0	
Credit	0	4.28	-5.00%	0	
Surcharge	0	4.28	5.00%	0	
Auger (1015)					
Total	$222,909	5.84		$13,018	
Credit	11,672	5.84	-5.00%	-34	
Surcharge	0	5.84	5.00%	0	
Anthracite Co-Gen (1021)					
Total	$8,646,476	6.31		$545,593	
Credit	2,690	6.31	-5.00%	-8	
Surcharge	1,434	6.31	5.00%	5	
Bituminous Co-Gen (1023)					
Total	$17,306,049	1.25		$216,326	
Credit	0	1.25	-5.00%	0	
Surcharge	0	1.25	5.00%	0	
Anthracite Prep Plant (1025)					
Total	$16,007,792	2.50		$400,195	
Credit	39,599	2.50	-5.00%	-49	
Surcharge	0	2.50	5.00%	0	
Bituminous Prep Plant (1027)					
Total	$41,084,218	1.57		$645,022	
Credit	123,610	1.57	-5.00%	-97	
Surcharge	0	1.57	5.00%	0	
All Classes Combined					
Total	$279,699,422			$11,292,506	
Credit	460,508		-5.00%	-446	
Surcharge	1,434		5.00%	5	
				$11,292,065	1.0000

Source: (1) Exhibit XIV-A Page2
(2) Exhibit II
(4) = [(1) / 100] * (2) * (3)

2022 PAYROLL BY CLASS

Class	2022 Total Developed Payroll	2022 Experience Rated Payroll	2022 Merit Rated Payroll	2022 Manual Payroll
Underground Anthracite (1010)	$63,653	$63,653	$0	$0
Underground Bituminous(1001)	135,401,635	135,400,585	1,050	0
Surface Anthracite (1012)	27,892,217	27,782,760	63,997	45,460
Surface Bituminous (1014)	33,074,473	32,734,758	217,890	121,825
Coke (1469)	0	0	0	0
Auger (1015)	222,909	211,237	11,672	0
Anthracite Co-Gen (1021)	8,646,476	8,642,352	4,124	0
Bituminous Co-Gen (1023)	17,306,049	17,306,049	0	0
Anthracite Prep Plant(1025)	16,007,792	15,767,030	39,599	201,163
Bituminous Prep Plant(1027)	41,084,218	40,960,608	123,610	0
TOTAL	$279,699,422	$278,869,032	$461,942	$368,448

MERIT PAYROLL - CREDIT/SURCHARGE

Class	2022 Merit Rated Payroll	2022 Merit Credit Payroll	2022 Merit No Adjustment Payroll	2022 Merit Surcharge Payroll
Underground Anthracite (1010)	$0	$0	$0	$0
Underground Bituminous(1001)	1,050	1,050	0	0
Surface Anthracite (1012)	63,997	63,997	0	0
Surface Bituminous (1014)	217,890	217,890	0	0
Coke (1469)	0	0	0	0
Auger (1015)	11,672	11,672	0	0
Anthracite Co-Gen (1021)	4,124	2,690	0	1,434
Bituminous Co-Gen (1023)	0	0	0	0
Anthracite Prep Plant(1025)	39,599	39,599	0	0
Bituminous Prep Plant(1027)	123,610	123,610	0	0
TOTAL	$461,942	$460,508	$0	$1,434

Source: Exhibit X-A and CMCRB database as of 4/30/2023

COAL MINE COMPENSATION RATING BUREAU
SAFETY COMMITTEE CREDIT OFFSET

CLASS	(1) 2022 Developed Payroll	(2) Traumatic Proposed Unloaded Loss Cost	(3) Credit	(4) Loss Cost Premium	Off-Balance
Underground Anthracite(1010)					
Total	$63,653	$14.29		$9,096	
Safety Committee	0	14.29	-5.00%	0	
Underground Bituminous(1001)					
Total	135,401,635	5.80		$7,853,295	
Safety Committee	70,591,163	5.80	-5.00%	(204,714)	
Surface Anthracite(1012)					
Total	27,892,217	4.61		$1,285,831	
Safety Committee	10,440,152	4.61	-5.00%	(24,065)	
Surface Bituminous(1014)					
Total	33,074,473	0.98		$324,130	
Safety Committee	8,694,867	0.98	-5.00%	(4,260)	
Coke(1469)					
Total	0	4.28		$0	
Safety Committee	0	4.28	-5.00%	0	
Auger(1015)					
Total	$222,909	5.84		$13,018	
Safety Committee	0	5.84	-5.00%	0	
Anthracite Co-gen(1021)					
Total	8,646,476	6.31		$545,593	
Safety Committee	2,414,594	6.31	-5.00%	(7,618)	
Bituminous Co-gen(1023)					
Total	17,306,049	1.25		$216,326	
Safety Committee	3,621,808	1.25	-5.00%	(2,264)	
Anthracite Prep Plant(1025)					
Total	16,007,792	2.50		$400,195	
Safety Committee	8,135,704	2.50	-5.00%	(10,170)	
Bituminous Prep Plant(1027)					
Total	41,084,218	1.57		$645,022	
Safety Committee	21,626,876	1.57	-5.00%	(16,977)	
All Classes Combined					
Total	279,699,422			11,292,506	
Safety Committee	125,525,164			(270,068)	
				11,022,438	1.0245

Source: (1) Exhibit X-A and CMCRB Database as of 4-30-2023
(2) Exhibit II
(4) = [(1) / 100] * (2) * (3)