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REPORT TO THE TRUSTEE ON THE ACTUARIAL INVESTIGATION AS AT 30 JUNE 2024

DEFINED BENEFIT CATEGORY (FORMERLY KNOWN AS PART 3)

A SUB-PLAN IN THE MINE SUPERANNUATION FUND

18 November 2024

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1

Key Results and Recommendations

This report on the actuarial investigation of the Defined Benefit Category (formerly known as "Part 3") of the Mine Superannuation Fund (the "Fund") as at 30 June 2024 has been prepared to meet the requirements of the Fund's governing rules and the SIS legislation. This investigation report should not be relied upon for any other purpose or by any party other than the Trustee of the Fund. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts. The Trustee should share this report with the Employers who contribute to the Plan. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report.

Change in Financial Position

The following table summarises the Defined Benefit Category's financial position, at both this and the previous actuarial investigation.

	Position at 30 June 2024		
Defined Benefits Only	**$000**	**Asset Coverage**	**Coverage at 30 June 2021**
Assets	15,594*		
Liability for Vested Benefits	12,194	128%	124%
Liability for Actuarial Value of Accrued Benefits	12,202	128%	124%
Liability for Superannuation Guarantee Minimum Benefits	10,844	144%	129%

* The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer Section 9). I have valued these to be $1.350m at 30 June 2024, which is different to the amount in the accounts of $1.410m.

Breakdown of Assets and Liabilities

The table below shows the split of the assets and liabilities summarised in the table above.

Defined Benefit Category	30 June 2024 Actuarial value of Accrued benefits $million	30 June 2024 Vested benefits $million	30 June 2021 Actuarial value of Accrued benefits $million	30 June 2021 Vested benefits $million
Assets				
Current Assets	14.2	14.2	16.9	16.9
Present Value of future Coal Services Contributions for Pre 2000 pensions	1.4	1.4	2.7	2.7
Total Assets	**15.6***	**15.6***	**19.6^**	**19.6^**
Liabilities				
Active defined benefit members	1.9	1.9	2.2	2.2
Dormant defined benefit members	4.4	4.4	5.3	5.3
Pensioners from Defined Benefit Category				
- Pre 2000 Pensions	1.4	1.4	2.7	2.7
- 2000 Increases	0.9	0.9	1.8	1.8
- CPI Increases	2.5	2.5	3.1	3.1
Total Pension liability	4.8	4.8	7.6	7.6
Present value of future expenses for defined benefit members	0.9	0.9	0.3	0.3
Tax on Coal Services Future Pension Contributions	0.2	0.2	0.4	0.4
Total Liabilities	**12.2**	**12.2**	**15.8**	**15.8**
Surplus	**3.4**	**3.4**	**3.8**	**3.8**

* The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $1.350m at 30 June 2024, which is different to the amount in the accounts of $1.410m.

^ The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions. I have valued these to be $2.742m at 30 June 2021, which is different to the amount in the accounts of $3.932m.

The coverage levels at 30 June 2024 were higher than the levels at the previous actuarial investigation, due to the following items of positive experience:

- Changes to the actuarial assumptions as described in Section 10 which decreased the value of the liabilities and therefore increased the coverage levels;
- Earnings on opening surplus; and,
- Surplus being spread over a lower liability amount.

This has been partially offset by:

- Pension increases of 5.2% p.a. which were higher than the expected 2.0% p.a.;
- Increases in the Prescribed Amount of 5.4% p.a. which impacts the benefits of the active and dormant members which were higher than the expected 2.0% p.a.; and,
- Actual expenses were higher than allowed for in our assumptions.

The experience over the inter-valuation period is described in more detail in Section 3.

Recommended Contribution Rates and Projections

At 30 June 2024, the Defined Benefit Category was in a satisfactory financial position. The 128% coverage of Defined Benefit Vested Benefits was above the financing objective of 105% coverage adopted for this investigation.

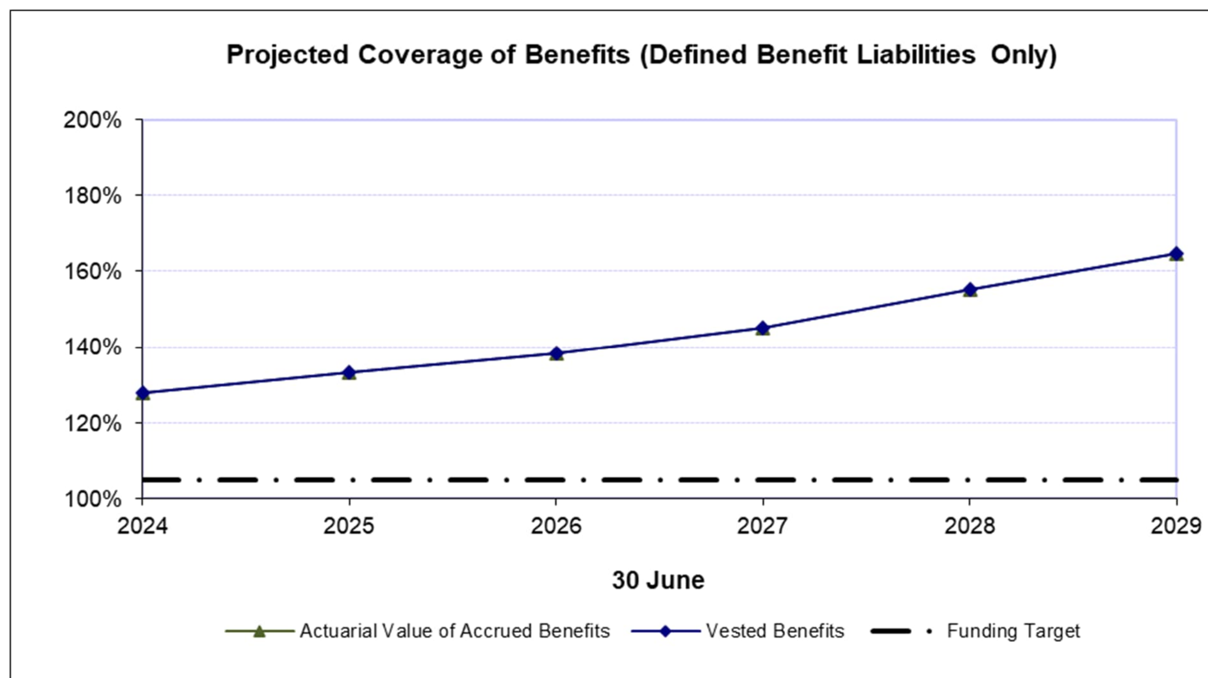
At 30 June 2024, the Actuarial Value of Accrued benefits was also well funded with 128% coverage.

If Coal Services Pty Ltd stopped paying the pre 2000 pensions as they fall due, the coverage of Defined Benefit Vested Benefits would reduce to 119% which would still be above the financing objective. Therefore, it is feasible from my viewpoint that they could stop paying these pensions and instead they could be met from the assets in the Defined Benefit Category. However, I had understood that this practice had to continue (due to prior agreements). For that reason, I have included in my recommendation that they continue. However, I recommend that the Trustee consider whether these contributions could cease.

Therefore, I recommend that:

- Coal Services Pty Ltd should continue to meet the cost of pre 2000 pensions as they fall due;
- The Trustee considers whether Coal Services Pty Ltd have to meet the cost of the pre 2000 pensions as they fall due and if not, they could cease and;
- the Employers should continue to contribute to the Accumulation category in line with the Superannuation Guarantee requirements.

Based on the assumptions adopted for this investigation as detailed in this report, I have prepared the following projection of the Defined Benefit Category assets and benefit liabilities:



The graph above shows that the recommended contributions are anticipated to maintain assets of at least 105% of Defined Benefit Vested Benefits for all periods shown in the graph which is the financing objective for this valuation.

Other Findings and Recommendations for the Trustee

Suitability of Policies

- The investment policy for the defined benefit section of the Defined Benefit Category is suitable.
- The crediting policy for the defined benefit section of the Defined Benefit Category is suitable.
- The Shortfall Limit (for the purposes of SPS 160) is suitable.
- The Trustee's process for monitoring the Defined Benefit Category's financial position is suitable.
- The Self-Insurance arrangements are suitable.

Other comments

- A significant proportion of the liabilities for the active and dormant members are in respect of members that are over age 65. The Trustee may wish to consider a communication exercise to remind the members about their benefits in the Defined Benefit Category.

Action Required by the Trustee

The Trustee should consider this report and confirm its agreement (or otherwise) to the contribution and other recommendations.

The Trustee should seek formal agreement from the Employers to contribute in line with the recommendations.

2

Liability Measures as at 30 June 2024

Vested Benefits

Vested Benefits are the amounts to which the members are entitled should all active and dormant members voluntarily resign or, if eligible, retire at the investigation date, plus the estimated actuarial value of expected future payments in respect of pensioners.

There are three components to the pension payments in the Defined Benefit Category:

1. Pre 1 January 2000 Amount – met on a pay as you go basis through the Defined Benefit Category by contributions from Coal Services. However, the Defined Benefit Category does pay tax on these future contributions and so retains this as a future liability.

2. Increases on 1 January 2000 – this is met from the Defined Benefit Category assets.

3. Post 2000 CPI increases – also met from the Defined Benefit Category assets.

All three components of the pension payments are treated as liabilities of the Defined Benefit Category and are therefore included in Vested Benefits. This is supported by our discussions with APRA regarding other funds and is consistent with the treatment in prior actuarial investigations.

There is a deed of Indemnity dated 1 February 1995 setting out an agreement between Coal Services and the Trustee to pay the Pre 1 January 2000 pension payments directly (through the Defined Benefit Category) on a pay as you go basis. I understand that Mine Super and APRA have agreed that it is reasonable to take advanced credit for these contributions in the value of the assets as shown in Section 1.

At 30 June 2024, Defined Benefit Category assets were greater than Vested Benefits. Accordingly, the Defined Benefit Category was considered to be in a “satisfactory financial position” under SIS legislation. The 128% coverage of Defined Benefit Vested Benefits was also above the financing objective of 105% coverage adopted for this investigation.

Superannuation Guarantee Minimum Benefits

SG Minimum Benefits are the minimum benefits required under SG legislation, as defined in the Benefit Certificate (also referred to as Minimum Requisite Benefits or MRBs). Defined Benefit

Category assets were greater than SG Minimum Benefits (with coverage of 144%) and hence the Defined Benefit Category was considered to be technically “solvent” under SIS legislation.

Actuarial Value of Accrued Benefits

The Actuarial Value of Accrued Benefits is the expected value (as at the investigation date) of all future expected benefit payments, based on membership to date, discounted to the investigation date, taking into account the probability of payment. This value is calculated using actuarial methods and assumptions. In determining the value, I have applied a minimum of the vested benefit at the individual member level, which is consistent with the previous valuation.

The coverage of the Actuarial Value of Accrued Defined Benefits at 30 June 2024 was 128%.

Summary of Method of Attributing Benefits to Past Membership

The calculation of the Actuarial Value of Accrued Benefits has been carried out using a method of apportionment of benefits between past and future membership that satisfies the requirements of Professional Standard No. 402 of the Actuaries Institute and is acceptable for Australian Accounting Standard AASB 1056 purposes.

Defined Benefits

The past membership components of all defined benefits payable in the future from the Defined Benefit Category in respect of current membership are projected forward allowing for assumed increases to the Prescribed Amount and credited interest rates and are then discounted back to the investigation date at the investment return rate assumed for the investigation.

The past membership component for each type of benefit is:

Retirement: Based on the member’s accrued period of membership at the valuation date, allowing for future increases to the Prescribed Amount and interest to the projected exit date when necessary.

Resignation: Based on the member’s vested benefit at the valuation date, allowing for future interest to the projected date of resignation.

In determining the value of the past membership components, I have applied a minimum of the vested benefit at the individual member level.

The method used for determination of Accrued Benefit differs from that used at the previous investigation as no specific allowance has been made for death and disablement in service. This adjustment reflects the now negligible impact that assumptions regarding death and disablement have on the Accrued Benefit liability for the remaining cohort. Apart from the considerations of death and disablement in service, the methodology for calculating Accrued Benefits remains consistent with that of the previous investigation.

3

Experience

Change in Financial Position since Previous Investigation

The table below shows the coverage of assets over the Actuarial Value of Accrued Benefits as at 30 June 2024, and the corresponding values at the previous investigation date.

Defined Benefit Category	30 June 2024 $million	30 June 2021 $million
Assets		
Current Assets	14.2	16.9
Present Value of future Coal Services Contributions for Pre 2000 pensions	1.4	2.7
Total Assets	**15.6^**	**19.6***
Liabilities		
Active defined benefit members	1.9	2.2
Dormant defined benefit members	4.4	5.3
Pensioners from Defined Benefit Category		
- Pre 2000 Pensions	1.4	2.7
- 2000 Increases	0.9	1.8
- CPI Increases	2.5	3.1
Total Pension liability	4.8	7.6
Present value of future expenses for defined benefit members	0.9	0.3
Tax on Coal Services Future Pension Contributions	0.2	0.4
Total Liabilities	**12.2**	**15.8**
Surplus	**3.4**	**3.8**

* The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $1.350m at 30 June 2024, which is different to the amount in the accounts of $1.410m.

^ The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $2.742m at 30 June 2021, which is different to the amount in the accounts of $3.932m.

The coverage levels at 30 June 2024 were higher than the levels at the previous actuarial investigation, due to the following items of positive experience:

- Changes to the actuarial assumptions as described in Section 10 which decreased the value of the liabilities and therefore increased the coverage levels;
- Earnings on opening surplus; and,
- Surplus being spread over a lower liability amount.

This has been partially offset by:

- Pension increases of 5.2% p.a. which were higher than the expected 2.0% p.a.;
- Increases in the Prescribed Amount of 5.4% p.a. which impacts the benefits of the active and dormant members which were higher than the expected 2.0% p.a.; and
- Actual expenses were higher than allowed for in our assumptions.

The financial impact of the items of experience are given in the table below:

	$ million
Surplus at 30 June 2021 (using actuarial value of accrued benefits)	3.8
Interest on Surplus	0.2
Investment gain	0.2
Increase in Prescribed Amount higher than expected	(0.4)
Pension increases higher than expected	(0.5)
Higher expenses than expected over three year period	(0.4)
Change in economic and demographic assumptions	0.8
Change in expense assumption	(0.7)
Other miscellaneous experience	0.4
Surplus at 30 June 2024 (using actuarial value of accrued benefits)	3.4

Investment Returns and Crediting Rates

The investment returns over the past three years were as shown in the table below.

Year to 30 June	Investment Return
2022	-6.4%
2023	6.2%
2024	4.4%
3-year compound average (per annum)	1.3%

The compound average investment return for the three-year period to 30 June 2024 was 1.3% p.a. compared to our longer-term assumption at the last actuarial investigation of 1.5% p.a. for Active/Dormant and 2.1% p.a. for Pensioners. The investment gain in the earlier experience table includes the impact of volatility of investment returns over the period; overall, the investment return was broadly in line with what was expected in the previous actuarial investigation.

CPI Indexation

The increase in CPI over the past three years was:

Year to 30 June	CPI
2022	3.0%
2023	7.3%
2024	5.4%
3-year compound average (per annum)	5.2%

Defined benefits for actives and some dormant members increase in line with the Prescribed Amount which is increased in line with CPI. Pensions in payment also increase in line with CPI. CPI indexation in the three-year valuation period was higher than assumed at 5.2% per annum compared with the 2.0% p.a. assumed which therefore increased the value of the liabilities.

Change in Assumptions since the previous investigation

The economic environment is different to that in 2021 and therefore the financial assumptions that I have used to value the liabilities have changed as shown in Section 10.

1. Financial Assumptions; It is the gap between the assumed investment rate and the CPI assumption that has the biggest impact on the Actuarial Value of Accrued Liabilities. In 2021, this gap was -0.5% p.a. for the active and dormant members who retained their benefits in the defined benefit section and this has increased to 1.5% p.a. at this investigation date. Similarly, the gap used to value the overall pensioner liability has increased from 0.1% p.a.in 2021 to 2.2% p.a.at this investigation date. The changes impact the Actuarial Value of Accrued Liabilities and the value of the assets (albeit to a lesser extent) as the assets include the pre-2000 pensioner liability. As a result, the surplus has increased by $533,000.

2. Demographic Assumptions; I have reviewed the demographic assumptions and made changes based on experience and a recent mortality study carried out by Mercer. The demographic changes have led to a further decrease in the Actuarial Value of Accrued Benefits of $226,000.

3. Expenses; I have revised the expense assumption from a percentage of the reference rate to a fixed amount based on the current expenses charged, and assumed that they will increase with CPI over the duration of the liabilities. This change has resulted in an increase in the Actuarial Value of Accrued Benefits of $663,000.

For further details regarding the determination of these assumptions, please refer to Section 10.

4

Contribution Requirements

Financing Objective

The financing objective I have adopted for this investigation is to maintain the value of the Defined Benefit Category's assets at least equal to 105% of the Vested Benefits. This is the same target as at 2021 investigation.

Accumulation account balances are matched by specific assets and do not require any additional margins. However, the defined benefit liabilities are not linked to the returns on the underlying assets. A target of 105% coverage of Vested Benefits is therefore desirable to provide some security against adverse experience such as poor investment returns.

I consider that the target margin of 105% strikes a suitable balance between the Trustee's desire to provide security to members and the Employer's desire to avoid an unnecessary build-up of surplus.

Based on the assumptions adopted for this investigation, achieving the financing objective of 105% of Vested Benefits for defined benefit members would also result in at least 100% coverage of Actuarial Value of Accrued Benefits. Hence it is not considered necessary to adopt specific financing objectives in relation to these benefit liability measures.

I have taken into consideration the provisions of the Trust Deed and any professional requirements as set out below.

Professional Requirements

Under Professional Standard 400 issued by the Actuaries Institute, the funding method selected by the actuary *"must aim to provide that:*

(a) members' benefit entitlements (including any pension increases provided by the Trust Deed or in accordance with either precedent or the intentions of the Trustee and/or Defined Benefit Category Sponsor) are fully funded before the members retire; and

(b) the Net Assets of the Defined Benefit Category from time to time, after making full provision for the entitlements of any beneficiaries or members who have ceased to be employed, exceed the aggregate of benefits which employed members would reasonably expect to be payable to them on termination of membership, including the expenses of paying those benefits, and having regard to the provisions of the Trust Deed and the likely exercise of any Options or Discretions." (Paragraph 5.5.4 of PS400).

Accordingly, the actuary needs to be satisfied that any funding program is expected to provide a level of assets which meets or exceeds immediate benefit entitlements based on members' reasonable

expectations. Should assets fall below that level, the funding program needs to aim to lift assets to at least the required level over a reasonable time period and to maintain assets at or above the required level thereafter.

The financing objective has been set on the basis that members' reasonable expectations on termination would be to receive their vested benefit entitlement.

Provisions of the Trust Deed

The rules of the Defined Benefit Category require that:

- the Trustee ensures an actuarial investigation of the Fund is conducted when required by legislation. Under legislation actuarial investigations should be carried out at annually as there are pension liabilities. However, APRA have granted an exemption from this requirement and therefore they are only carried out every three years; and
- the Employer must contribute at the rate determined by the Trustee, after consulting the Employer, on the advice of the Actuary to the Fund.

Financing Method

There are various financing methods that could be followed in setting the Employer contribution level. This investigation uses a "Target Funding" method, which was also used at the previous investigation.

Under this method, the Employer contribution required to provide a target level of coverage of a particular benefit liability measure is determined.

Under this method of financing, the level of the Employer contribution may vary from time to time to ensure that the Defined Benefit Category remains on course towards its financing objective of 105% coverage of Vested Benefits.

I consider that the Target Funding method is suitable in the Defined Benefit Category's current circumstances as it allows the recommended contribution rate to be determined specifically to meet the Defined Benefit Category's financing objective.

Recommended Contributions

Based on the Trustee's financing objective described and the results of this investigation, I recommended that the Employer contributes as follows:

- Coal Services Pty Ltd should continue to meet the cost of pre 2000 pensions as they fall due and;
- the Employers should continue to contribute to the Accumulation category in line with the Superannuation Guarantee requirements.

Projected Financial Position

The next section of the report shows the projected financial position on the recommended contributions compared with the Financing Objective adopted by the Trustee.

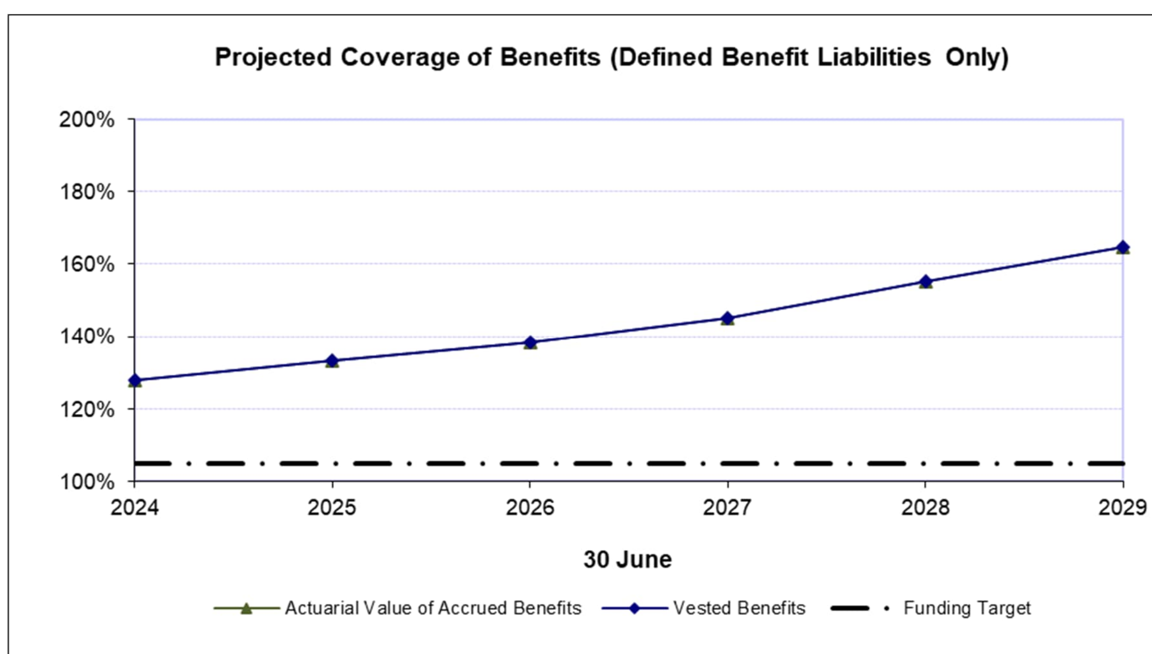
5

Projections

I have prepared a projection of Defined Benefit Category assets and benefit liabilities based on:

- the actuarial assumptions adopted for this investigation; and
- assuming the Employer contributes on the basis as recommended in this report.

The results of the projection are as follows:



The Trustee should note that this projection is based on the assumptions adopted, which represent a single scenario from the range of possibilities. The future is uncertain and the Defined Benefit Category's actual experience will differ from those assumptions; these differences may be minor in their overall effect, or they may be significant and material. In addition, different sets of assumptions or scenarios may also be within the reasonable range and results based on those alternative assumptions would be different.

Meeting the Financing Objective

The projection above shows that the recommended contributions are anticipated to result in assets in excess of 105% of Defined Benefit Vested Benefits (the financing objective adopted in this investigation) and 100% of the Actuarial Value of Accrued Defined Benefits for all periods shown.

6

Investment Policy and Related Risks

Investment Policy

Assets backing defined benefit liabilities

The Defined Benefit Category's assets supporting the defined benefit liabilities are currently invested in a mix of assets which involves exposure to 'growth' assets (equities) of about 25%, with the remaining 75% exposed to 'defensive' assets such as cash and bonds. Please refer to the table below for the actual and benchmark investment allocations of these assets as at the investigation date. 'Growth' assets are expected to earn higher returns over the long term compared to 'defensive' assets, but at the same time to exhibit more variation in returns from year to year.

The actual asset allocation and Strategic Asset Allocation for the assets supporting the defined benefit liabilities are as follows:

Asset Class	Actual Allocation as at 30 June 2024	Strategic Asset Allocation
Australian equities	9.80%	10.0%
Overseas equities	14.80%	15.0%
Total growth	**24.60%**	**25.0%**
Fixed interest	62.50%	60.7%
Cash	12.90%	14.3%
Total defensive	75.40%	**75.0%**
Total	**100.00%**	100.0%

The defined benefit liabilities for pensioners and some active and dormant defined benefit members are not affected by the investment return on the Defined Benefit Category's assets. The volatility of the Defined Benefit Category's investment returns will therefore affect the financial position of the Defined Benefit Category from year to year and is likely to impact on the required level of Employer contributions.

Given that it is not known when members will take their benefit with certainty, the exact term of the Defined Benefit Category's liabilities is unknown. However, with the defined benefit section having been closed to new members for over 20 years and a significant amount of retirement benefits due to become payable in the next few years, the projections carried out as part of this actuarial investigation indicate that a substantial reduction of defined benefit assets is expected over the next 4 to 6 years.

The Defined Benefit Category's investments are expected to provide a high level of liquidity during this period. Hence, I do not envisage any problem in being able to redeem assets to meet benefit payments as they arise.

Crediting Policy

Accumulation Benefits

The main features of the crediting policy in relation to accumulation member accounts are summarised briefly below:

- Earnings credited are based on the actual net earning rates of the investment option chosen by the member (i.e. earnings net of investment costs).

Defined Benefits

The main features of the crediting policy in relation to the accumulation accounts (i.e. member contribution accounts) held by defined benefit members are summarised briefly below:

- Earnings credited are based on the actual net earning rates (i.e. earnings net of investment costs) of the assets supporting the Defined Benefit Category of the Fund.

Documentation

I understand the Fund's crediting and unit pricing policies and related procedures are set out in a Unit Pricing Policy dated 21 November 2019.

Conclusion

Based on a review of the main features, I consider that the unit pricing and crediting policy adopted for these benefits is generally suitable taking into consideration the principles of equity between different generations of members and any material risks which may have a significant impact on the Defined Benefit Category (i.e. a market shock or sudden downturn in investment markets).

Investment Risk – Impact on Cost to the Employer

There is a risk that investment returns will be lower than assumed and the Employer will need to increase contributions to offset this shortfall. This risk is normally borne by the Employer.

The table below shows the impact on the funding position if the assumed investment return was reduced by 1% pa with no change to the other assumptions.

Defined Benefit Category	30 June 2024 Base $million	30 June 2024 -1% investment return $million
Assets		
Current Assets	14.2	14.2
Present Value of future Coal Services Contributions for Pre 2000 pensions	1.4	1.5
Total Assets	**15.6***	**15.7^**
Liabilities - Actuarial Value of Accrued Benefits		
Active defined benefit members	1.9	1.9
Dormant defined benefit members	4.4	4.4
Pensioners from Defined Benefit Category		
- Pre 2000 Pensions	1.4	1.5
- 2000 Increases	0.9	1.0
- CPI Increases	2.5	2.6
Total Pension liability	4.8	5.1
Present value of future expenses for defined benefit members	0.9	0.9
Tax on Coal Services Future Pension Contributions	0.2	0.2
Total Liabilities	**12.2**	**12.5**
Surplus	**3.4**	**3.2**

* The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $1.350m at 30 June 2024 (on the base assumptions), which is different to the amount in the accounts of $1.410m.

^ The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $1.468m at 30 June 2024 (on the -1% discount assumptions), which is different to the amount in the accounts of $1.410m.

The actual investment return achieved by the Defined Benefit Category in future may vary (positively or negatively) from the rate assumed at this investigation by much more than the (negative) 1% pa illustrated in the example above.

Broadly half the liabilities in respect of Active and Dormant defined benefit members are currently linked to investment returns as they are vesting their refund of accumulated contributions account, which is credited at the fund earning rate. For the remaining Active and Dormant members, the assumed investment return is higher than the assumed increase in Prescribed Amount. Therefore, the liabilities of the Active and Dormant members are currently not sensitive to changes in the investment return assumption.

Investment Volatility

Overall, the majority of the liabilities are not linked to investment returns but are instead CPI related benefits. The Defined Benefit Category's vested benefits coverage is therefore sensitive to changes in the investment returns due in part to the pension liabilities.

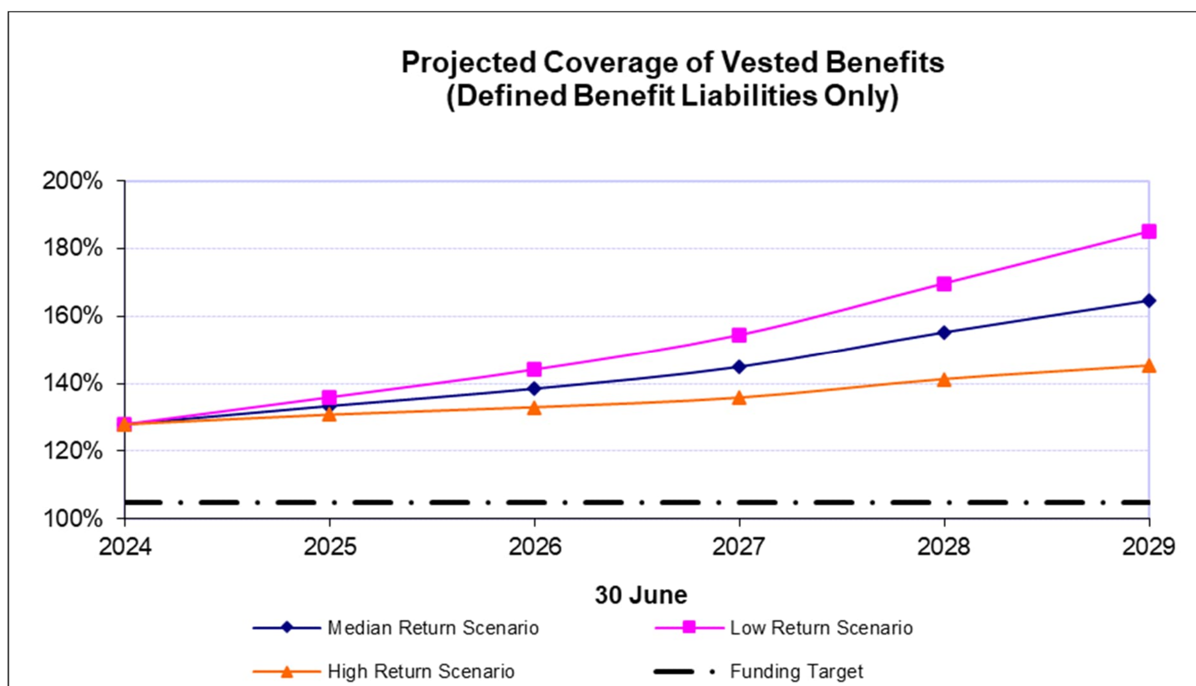
I have considered the impact of investment volatility on the financial position over the next few years using a "high return" and a "low return" scenario. The returns under both scenarios have been derived from assumptions about the likely risk attached to the Defined Benefit Category's defined benefit investment strategy.

Using the investment return model and assumptions adopted, there is approximately a 10% chance of the Defined Benefit Category's cumulative investment return being less than the "low return" scenario over the next 5 years. Similarly, there is approximately only a 10% chance of the Defined Benefit Category's cumulative investment return being greater than the "high return" scenario over the next 5 years.

1 July 2024 to 30 June	Assumed Cumulative Investment Return (%)		
	"Low Return"	Valuation	"High Return"
2029	13.1%	21.7%	31.9%

The extent of variation allowed for in these projections reflects the Defined Benefit Category's asset mix and Mercer's views on potential variability in investment results in various investment sectors.

The graph below shows the effect on the projected ratio of assets to Vested Benefits for defined benefit members under the "high return" and "low return" scenarios taking the average annual return of the assumed 5-year cumulative investment return, with all other investigation assumptions remaining unchanged.



Based on fluctuations in investment returns only, and assuming other experience is in line with the assumptions adopted for this investigation, there is approximately an 80% chance that the coverage of assets over Vested Benefits at 30 June 2029 will fall in the range from 145% to 185%.

Please note that the Low Return Scenario and the High Return Scenario shown above are illustrations only and show what may occur under assumed future experiences which differ from our baseline assumptions. These scenarios do not constitute upper or lower bounds and the actual future coverage of Vested Benefits may differ significantly from the range shown above, depending on actual future experience.

In fact, in any single year over the 5-year time horizon, there is a 10% chance that the investment return could be less than minus 0.6% based on the current Defined Benefit Category asset allocation.

In my view, the Trustee should be satisfied with the expected level of security over the next few years if the Employer contributes at the recommended levels. If it is legally possible for Coal Services to stop paying the pre 2000 pensions, it is likely that the security funding position would still be above the financing objective over the 5 year horizon.

7

Insurance Policy and Related Risks

Up until 1 July 2016, the death and disability reserve was in place to meet the cost of the following self-insurance arrangements:

- Claims incurred but not reported or paid up to 30 June 2016; and
- A top-up provision for death and disability benefits for cases where the external fixed level of insurance introduced in 2006 was not sufficient to cover the defined death and disability benefit for accumulation and defined benefit members.

As a result of APRA no longer permitting self-insurance for accumulation members from 1 July 2016, the Trustee agreed to externally insure the additional death and disability benefits not covered by the existing level of insurance for all members. There is some self-insurance in relation to claims incurred but not paid or reported prior to 30 June 2016. The death and disability reserve is now also used to meet the premiums relating to this additional cover.

A review of the death and disability reserve was carried out as at 30 June 2021 in a separate letter dated 2 November 2021. At 30 June 2021, the reserve was $5.304m and the review showed that the reserve is well in excess of what is required. There is currently a review underway with an effective date of 30 June 2024.

Conclusion

The Defined Benefit Category’s insurance arrangements are adequate.

8

Pension Liabilities and Related Risks and Other Risks

Indexation risk

This risk is borne by the Employer. Lifetime pensioner benefits are indexed in line with changes in the Consumer Price Index (CPI). Accrued benefits for active and some dormant members increase in line with the Prescribed Amount which is indexed in line with changes in CPI.

If price inflation rises more rapidly than assumed, increasing benefit amounts, additional employer contributions may be required. The table below shows the impact on the funding position of the Defined Benefit Category if the assumed future CPI indexation was 1% pa higher with no other changes to the assumptions.

Defined Benefit Category	30 June 2024 Base $million	30 June 2024 +1% CPI $million
Assets		
Current Assets	14.2	14.2
Present Value of future Coal Services Contributions for Pre 2000 pensions	1.4	1.4
Total Assets	**15.6***	**15.6***
Liabilities - Actuarial Value of Accrued Benefits		
Active defined benefit members	1.9	1.9
Dormant defined benefit members	4.4	4.4
Pensioners from Defined Benefit Category		
- Pre 2000 Pensions	1.4	1.4
- 2000 Increases	0.9	0.9
- CPI Increases	2.5	2.8
Total Pension liability	4.8	5.1
Present value of future expenses for defined benefit members	0.9	0.9
Tax on Coal Services Future Pension Contributions	0.2	0.2
Total Liabilities	**12.2**	**12.5**
Surplus as at 30 June 2024	**3.4**	**3.1**

* The total asset value includes advance credit for the future contributions paid directly by Coal Services on a pay as you go basis in respect of the pre 2000 pensions (refer to Sections 1, 2 and 9). I have valued these to be $1.350m at 30 June 2024 (on the base assumptions), which is different to the amount in the accounts of $1.410m.

Longevity risk

This risk is borne by the Employer. The risk is that the average future lifetime of pensioners is higher than anticipated, increasing the period of time over which payments are made (compared to that expected) and thereby requiring additional employer contributions.

For example, if all current and potential pensioners are assumed to pass away at a 10% lower rate living longer than expected, with no change in other assumptions, then Actuarial Value of Accrued Benefits would increase by $273,000, with a resulting reduction in the coverage of Actuarial Value of Accrued Benefits to 126%.

Impact of using a Buy-In Contract to Fund the Pension Liability

The basis used to value defined benefit pension entitlements for the purposes of this investigation is considered suitable taking into account the Defined Benefit Category current circumstances, including the existing assets and assuming the ongoing support of the Employer. However, The Trustee could reduce these risks by purchasing a buy-in contract for the lifetime pensioners of the Defined Benefit Category.

In a buy-in contract, a premium is paid to an insurer and a bulk annuity contract is issued to the Defined Benefit Category. The annuity contract is considered an investment held by the Defined Benefit Category. The payment of pensions is still the responsibility of the Trustee, paid to retirees from the Defined Benefit Category assets and not directly by the insurer. The insurer then pays the Defined Benefit Category the value of the pensions agreed in the bulk annuity contract. Therefore, the assets and liabilities associated with the contract remain on the balance sheet but are very well matched.

To illustrate the cost of purchasing a buy-in contract I have downloaded Challenger (the main annuity provider in Australia) annuity rates from their advisor portal. Based on this information the approximate pension liability would be valued at $5.5 million (i.e. $0.7 million higher than their valuation in this investigation), with a resulting reduction in the coverage of Vested Benefits from 128% to 122%.

This valuation is based on Challenger's retail pricing for a comparable benefit and pensioner age profile. It is possible that a lower valuation is achievable through negotiation with Challenger or with various annuity providers. There is also a risk that Challenger's retail offering does not fully cater to the Defined Benefit Category's pension benefits arrangement so the actual cost of purchasing a buy-in contract could be higher.

Purchasing a buy-in contract is likely to be affordable but will reduce the overall funding position of the Defined Benefit Category. Therefore, the Trustee may want to consider a buy-in as an option to reduce the investment, inflation and longevity risks associated with the Defined Benefit Category.

There are additional risks associated with a buy-in that would need to be considered, such as:

- Counterparty risk – the risk that the annuity provider defaults on their obligations.
- Mismatch risk – the risk that the annuity provider cannot provide annuities that match the lifetime pensioners benefits exactly.

In addition, there are likely to be additional costs relating to purchasing a buy-in contract.

Legislative risk

The risk is that legislative changes could be made which increase (or decrease) the cost of providing the defined benefits – for example an increase in the rate of tax on superannuation funds. This risk is borne by the Employer. There is little action that can be taken to mitigate the actions in advance as their impact and timing are unknown.

9

Assets

Assets

The net market value of the assets as at 30 June 2024 amounted to $15,594,000 (based on the data provided by the administrator for the Defined Benefit Category) derived as follows:

Calculation of Defined Benefits Assets at 30 June 2024	
Net market value of the Defined Benefit Category's assets as at 30 June 2024	**$15,654,000**
Less Advance credit for Pre 2000 Pensions in the Accounts*	$1,410,000
Plus Advance credit for Pre 2000 Pensions*	$1,350,000
Net assets to support the defined benefit liabilities of the 30 June 2024	**$15,594,000**

* Pre-2000 pensions are met on a pay as you go basis by Coal Services. Therefore, I have taken advance credit for these pension payments in the asset value. I calculated this to be ($1.350m) whereas the accounts had a different figure for the Pre 2000 pensions ($1.410m).

Operational risk reserves

I have assumed that the Operational Risk Financial Requirement (ORFR) is held at the Mine Superannuation Fund level and that the assets above are net of the ORFR. The scope of this investigation does not include a review of the adequacy of assets held to meet the ORFR or the ORFR strategy.

10

Actuarial Assumptions

The ultimate cost to the Employer of providing Defined Benefit Category benefits is:

- the amount of benefits paid out; plus
- the expenses of running the Defined Benefit Category, including tax;

less

- the return on investments.

The ultimate cost to the Employer will not depend on the actuarial investigation assumptions or methods used to determine the recommended Employer contribution rate, but on the actual experience of the Defined Benefit Category. The financing method and actuarial assumptions adopted will however affect the timing of the contribution requirements from the Employer.

The actuarial process includes projections of possible future Defined Benefit Category assets and benefit liabilities on the basis of actuarial assumptions about future experience.

These assumptions include investment return, future Prescribed Amount and Reference Rates, crediting rates, rates at which members cease service for different reasons, pension increases and various other factors affecting the financial position of the Defined Benefit Category.

It is not expected that these assumptions will be precisely borne out in practice, but rather that in combination they will produce a model of possible future experience that is considered a suitable basis for setting contribution rates.

Economic assumptions

The most significant assumption made in estimating the cost of defined benefits is the difference between:

- the assumed rate of investment earnings; and
- assumed rate of increase of the CPI.

This difference is commonly referred to as the “gap”.

The key economic long term assumptions adopted for this investigation and the 2021 investigation are:

	30 June 2024	30 June 2021
Investment returns (after tax, investment and asset based administration fees)		
- In force (Active / Dormant)	4.0% p.a.	1.5% p.a.
- Post retirement	4.7% p.a.	2.1% p.a.
Crediting rate (after tax and investment fees)	4.0% p.a.	1.5% p.a.
Increase in Prescribed Amount (CPI)	2.5%* p.a.	2.0% p.a.
Pension increase rate (CPI)	2.5%* p.a.	2.0% p.a.
Increases in Reference Rate (AWOTE)	3.5% p.a.	2.75% p.a.

* 3.5% pa in the first year, 2.5% pa thereafter.

The assumption for investment returns is based on the expected long-term investment return for the Defined Benefit Category's current benchmark investment mix, calculated using Mercer's assumptions of the means and standard deviations of returns from the various underlying asset classes and the correlations of returns between those asset classes, allowing for the term of the liabilities. The investment returns for in-force and post-retirement are considered separately.

The assumption for CPI is based on long term economic forecasts for CPI indexation.

The Reference Rate assumption is based on long term economic forecasts for future increases in average weekly earnings (AWOTE) with consideration to the maturity of the membership.

Other assumptions

New members

The Defined Benefit Category's defined benefit section is closed to new entrants. No allowance has been made for new members.

Expenses

In the previous investigation, the administration and associated expenses for all members were assumed to be 0.325% of the Reference Rate per member. The expenses of administering a defined benefit plan tend to be fixed as the numbers of members gets smaller and therefore, I have moved away from expenses being linked to the number of members. Instead, I have taken the administration charge for the year to 30 June 2025 and assume that this will increase in line with the increase in Consumer Price Index (CPI) throughout the duration of the plan. Overall, I have allowed for expenses in the balance sheet of $880,000.

Tax

It is assumed that the current tax rate of 15% continues to apply to the Defined Benefit Category's assessable income, along with current tax credits and deductions.

All future employer and Coal Services contributions are assumed to be subject to 15% contribution tax, after deduction of insurance premiums and administration and management costs. All contribution recommendations quoted in this report are gross of contribution tax. In the summary of the financial position of the Defined Benefit Category, I show the tax on the present value of future contributions as a liability.

No allowance has been made for:

- Any surcharge liability as members' benefits will be reduced by a surcharge offset amount equal to the surcharge payments made, accumulated at the Defined Benefit Category crediting rate. Surcharge was abolished with effect from 1 July 2005.
- Excess contributions tax, as this is payable by the member.

Death and Disablement in Service

In the previous investigation, death and disability in service rates were applied. In this investigation no specific allowance has been made for Death and Disablement in service. This adjustment reflects the now negligible impact that assumptions regarding death and disablement have on the value of the liabilities calculated for the remaining cohort.

Retirement

It is assumed that Employer consent is granted for early retirement, where required. The rates at which members are assumed to leave the Defined Benefit Category due to retirement have been revised since the previous investigation. This revision has been based on experience of when the members have retired and are set out below:

Age Last Birthday x	Proportion of members age x at beginning of year assumed to leave the Defined Benefit Category during the year on account of early retirement %
55	0.05
60	0.20
65	0.20
66	0.20
67	0.20
68	0.20
69	0.50
70+	1.00

Resignation

The rates at which members leave the Defined Benefit Category due to resignation have been revised since the previous investigation. The changes reflect experience of the membership. Specimen rates at which members are assumed to leave the Defined Benefit Category due to resignation are set out below.

Age Last Birthday x	Proportion of members age x at beginning of year assumed to leave the Defined Benefit Category during the year on account of resignation %
45	0.02
50	0.02
55	0.00
60	0.00
70+	0.00

Retrenchment

The previous investigation's retrenchment assumption of 5% per annum for the first two years from the valuation date has been removed. I have made no allowance given I am not aware of any upcoming retrenchment exercises affecting members of the Defined Benefit Category.

Dormant members

In the previous investigation, it was assumed that dormant members exited the plan immediately, unless they had withdrawn from the Defined Benefit Category within the past five years. Based on historical experience, I have revised this assumption in the current investigation. Specifically, I now assume that dormant members under the age of 55 will leave in accordance with resignation assumption above, while those aged 55 and older will leave in line with the retirement assumption discussed earlier.

Mortality

Mortality has been assumed to follow that of the Mercer Standard Pensioner 2017-22 tables with an allowance for mortality improvements based on the average of 25 years and 125 years Australian Life Tables 2015-17, which reflects the latest tables available. This has been updated since the 2021 investigation where I allowed for Mercer 2012-2017 tables and mortality improvements based on 25 years Australian Life Tables 2015-17.

In this investigation the Mercer Standard Pensioner Table has been updated to the latest Mercer study. The Australian Life Tables 2015-17 still remains the most recent mortality improvements published, however the average of 25 and 125 years have been used to reflect that mortality improvements rates have declined for the general population.

Changes in Assumptions since the Previous investigation

The following table sets out changes in assumptions from those used in the previous investigation and the reasons for the changes.

The impact of the changes to assumption were as follow:

- Economic assumptions reduced the overall impact on the surplus by $533,000.
- Demographic assumptions, including revisions to retirement, resignation, retrenchment, death and disability in service, dormant members, and mortality reduced the Actuarial Value of Accrued Benefits by $226,000.
- Expense assumption increased the Actuarial Value of Accrued Benefits by $663,000.

Assumption	30 June 2024 investigation	30 June 2021 investigation	Reason for change	Impact on Actuarial Value of Accrued Benefits
In Force (Active / Dormant) Investment returns	4.0% pa	1.5% pa	Change in investment outlook	Small decrease in value of active liability
Accumulation Crediting rates	4.0% pa	1.5% pa	Align with defined benefit investment returns	No impact
Post retirement investment returns	4.7% pa	2.1% pa	Change in investment market conditions	Decrease in value of pension liability
Increase in Prescribed Amount (CPI)	3.5% pa in the first year, 2.5% pa thereafter	2.0% pa	Change in long term economic forecasts	Slight increase in value of active liability
Pension increase rate (CPI)	3.5% pa in the first year, 2.5% pa thereafter	2.0% pa	Change in long term economic forecasts	Increase in value of pension liability
Increases in Reference Rate (AWOTE)	3.5% pa	2.75% pa	Change in long term economic forecasts	Increase in value of pension liability
Expenses	Discounted fixed value increasing with CPI	Percentage of Reference Rate	Reflects experience	Increase in value of liabilities
Death and Disability	Assumption removed	Age based leaving rates	Immaterial impact on liabilities	Immaterial impact on liabilities
Retirement and Resignation	Age based leaving rates	Age based leaving rates	Revision based on DB Category historical experience	Small decrease in active liability

Assumption	30 June 2024 investigation	30 June 2021 investigation	Reason for change	Impact on Actuarial Value of Accrued Benefits
Retrenchment	Assumption removed	5% per annum for the first 2 years from valuation date	No known upcoming retrenchment exercise	Immaterial impact to liabilities
Dormant Members	Age based leaving rates	Exited the plan immediately in most circumstances	Revision based on DB Category historical experience	Immaterial impact to liabilities
Pensioner Mortality	Mercer 2017-22 Pensioner Mortality 25-year to 125-year average improvement factors from Australian Life Tables 2015-17	Mercer 2012-17 Pensioner Mortality 25-year improvement factors from Australian Life Tables 2015-17	Updated mortality tables and review of improvement rates available	Decrease in value of pension liability

11

The Regulator and Prudential Standards

The regulator (APRA) has issued a number of Prudential Standards for the superannuation industry, including Prudential Standard (SPS 160) relating to the financial management and funding of defined benefit plans. I have commented below on the requirements arising from SPS 160.

Shortfall Limit

The Trustee must determine a “Shortfall Limit” for each fund, being:

> “the extent to which the fund can be in an unsatisfactory financial position with the Trustee still being able to reasonably expect that, because of corrections to temporary negative market fluctuations in the value of the fund assets, the fund can be restored to a satisfactory financial position within a year”.

I understand that the Defined Benefit Category’s Shortfall Limit, determined by the Trustee on the basis of previous actuarial advice, is coverage of Defined Benefit Vested Benefits of 100%.

The Shortfall Limit is expressed as a percentage coverage level of defined benefit vested benefits by defined benefit assets and it is appropriate to consider the following when determining if the shortfall limit remains appropriate:

- The guidance provided in the relevant Actuaries Institute Information Note: Shortfall Limit in Superannuation Prudential Standard 160 dated July 2020;
- The investment strategy for defined benefit assets, particularly the benchmark exposure of 25% to “growth” assets;
- The results of this investigation regarding the extent to which the current and projected defined benefit Vested Benefits are not linked to the investment return on defined benefit assets (i.e. CPI based benefits and defined benefit pensions) and the current and projected relativity between Vested Benefits and Minimum Requisite Benefits.

Based on the above, I recommend maintaining the current Shortfall Limit.

The projections also indicate that the level of Minimum Requisite Benefits is not expected to be a constraint in determining the Shortfall Limit.

I will reassess the suitability of the adopted Shortfall Limit as part of the next regular actuarial investigation. The Shortfall Limit should be reviewed earlier if there is a significant change to the

investment strategy for defined benefit assets or if the Trustee otherwise considers it appropriate to do so.

Monitoring Process

SPS 160 also requires the Trustee to determine and implement a process for monitoring the defined benefit Vested Benefits coverage against the Shortfall Limit for each plan. If this monitoring process indicates that defined benefit vested benefits coverage has (or may have) fallen below the Shortfall Limit, then under SPS 160:

- An “Interim Actuarial Investigation” may be required (depending on the timing of the next regular actuarial investigation).
- A Restoration Plan is required to be put in place if an Interim Actuarial Investigation finds the plan has breached its Shortfall Limit. The Restoration Plan must be designed to return the Fund to a “satisfactory financial position”, so that the Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years and this must be submitted to APRA.

I understand that the Trustee has adopted a monitoring process which includes the following:

- Monitoring of the financial position is undertaken annually;
- If the Trustee’s estimate indicates that the Shortfall Limit has, or may have been breached, action will be taken as required by SPS 160;
- For funds in a satisfactory financial position where there has been a significant reduction in the Trustee’s estimate of defined benefit vested benefits coverage, the Trustee will request a review of the financial position and formal advice from the Fund actuary as to whether or not the current contribution program remains appropriate;
- For funds in an unsatisfactory financial position, the Trustee will request a review of the financial position and advice from the Fund actuary each quarter as to whether or not the current contribution program remains appropriate or any other action should be taken;

I consider that the adopted monitoring process is appropriate.

The Trustee should also continue to monitor the “Notifiable Events” specified in the Defined Benefit Category’s Funding and Solvency Certificate and advise the Actuary should any actual or potential Notifiable Events occur.

Requirements due to Unsatisfactory Financial Position

Restoration Plan

Under SPS 160, a Restoration Plan is also required to be put in place if the actuary finds in a regular Actuarial Investigation that a fund:

- Is in an unsatisfactory financial position (whether or not the Shortfall Limit has been breached); or
- Is likely to fall into an unsatisfactory financial position.

The Restoration Plan must be designed to return the fund to a "satisfactory financial position", so that Vested Benefits are fully covered, within a reasonable period that must not exceed 3 years from the investigation date.

An SPS 160 Restoration Plan is not required if the fund is technically insolvent (in which case the insolvency rules must be followed). If an SPS 160 Restoration Plan is already in place then any changes to the contribution program (including its period) must be made within the framework of that Restoration Plan.

As indicated by the financial position and the projections, I consider that:

- The Defined Benefit Category is not in an unsatisfactory financial position; and
- The Defined Benefit Category is not likely to fall into an unsatisfactory financial position.

Hence the special requirements of SPS 160 for funds in an unsatisfactory financial position do not apply at this investigation.

Actuary's Reporting Requirements

Section 130 of the SIS Act requires that if an actuary forms the opinion that a Defined Benefit Category's financial position may be unsatisfactory, or may be about to become unsatisfactory, and that opinion was formed in performing an actuarial function, the actuary must advise both the Trustee and the regulator (APRA) in writing immediately (an unsatisfactory financial position applies where assets are less than Vested Benefits).

These requirements do not currently apply as I am of the opinion that the Defined Benefit Category's financial position is not unsatisfactory (or about to become unsatisfactory).

The Defined Benefit Category's assets are sufficient to fully cover the SG Minimum Benefits at 30 June 2024. Therefore, the Defined Benefit Category is not considered to be technically insolvent.

Statements Required by SPS 160

This section provides statements required to be made under APRA Prudential Standard SPS 160. Values cited relate to the Defined Benefit Category as a whole (inclusive of all accumulation members and accounts).

(a) The value of the Defined Benefit Category's assets as at 30 June 2024 was $15,594,000. This value excludes assets held to meet the Operational Risk Financial Requirement.

(b) In my opinion, the value of the liabilities of the Defined Benefit Category in respect of accrued benefits as at 30 June 2024 was $12,202,000. Hence I consider that the value of the assets at 30 June 2024 is adequate to meet the value of the accrued benefit liabilities of the Defined Benefit Category as at 30 June 2024. Taking into account the circumstances of the Defined Benefit Category, the details of the membership and the assets, the benefit structure of the Defined Benefit Category and the industry within which the Employers operate, I consider that the assumptions and valuation methodology used are appropriate in relation to the determination of the accrued benefit liabilities for the purposes of this report. Further comments on the assumptions and valuation methodology are set out in Section 10 of this report. Assuming that the Employers contribute in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation which I consider to be reasonable expectations for the Defined Benefit Category, I expect that assets will remain sufficient to cover the value of accrued benefit liabilities over the period to 30 June 2027.

(c) In my opinion, the value of the liabilities of the Defined Benefit Category in respect of vested benefits as at 30 June 2024 was $12,194,000. Hence, I consider that the value of the assets at 30 June 2024 is adequate to meet the value of the vested benefit liabilities of the Defined Benefit Category as at 30 June 2024. Assuming that the Employers contribute in accordance with my recommendations, then, based on the assumptions made for this actuarial investigation, I expect that assets will remain sufficient to cover the value of vested benefit liabilities over the period to 30 June 2027. Hence, I consider that the financial position of the Defined Benefit Category should not be treated as unsatisfactory as defined in SPS 160.

(d) In my opinion, the value of the liabilities of the Defined Benefit Category in respect of the minimum benefits of the members of the Defined Benefit Category as at 30 June 2024 was $10,844,000. Hence the Defined Benefit Category was not technically insolvent at 30 June 2024.

(e) A projection of the likely future financial position of the Defined Benefit Category over the 3-year period following 30 June 2024, based on what I consider to be reasonable expectations for the Defined Benefit Category for the purpose of this projection, is set out in Section 5 of this report.

(f) Based on the results of this investigation, I consider that the Shortfall Limit does not require review and should continue to be 100% coverage of Defined Benefit Vested Benefits. Comments are set out earlier in this section.

(g) In respect of the 3-year period following 30 June 2024, I recommend that the following minimum contributions be paid to the Defined Benefit Category:

- Coal Services Pty Ltd should continue to meet the cost of pre 2000 pensions as they fall due and;
- the Employers should continue to contribute to the Accumulation category in line with the Superannuation Guarantee requirements.

(h) The Defined Benefit Category is used for Superannuation Guarantee purposes:

- all Funding and Solvency Certificates required under Division 9.3 of the SIS Regulations have been issued for the period from the date of the last investigation to 30 June 2024;
- I expect to be able to certify the solvency of the Defined Benefit Category in any Funding and Solvency Certificates that may be required in the three year period from 30 June 2024.

(i) In my opinion, there is a "high degree of probability" as at 30 June 2024, the Defined Benefit Category will be able to meet the pension payments as required under the Defined Benefit Category's governing rules.

Actuarial Certification

Purpose

I have prepared this report exclusively for the Trustee of the Defined Benefit Category of Mine Superannuation Fund for the following purposes:

- To present the results of an actuarial investigation of the Defined Benefit Category as at 30 June 2024;
- To review experience of the Defined Benefit Category for the period since the previous actuarial investigation (effective as at 30 June 2021);
- To recommend contributions to be made by the Employers intended to allow the Defined Benefit Category to meet its benefit obligations in an orderly manner, and to reach and maintain an appropriate level of security for members' accrued benefit entitlements;
- To satisfy the requirements of the Fund's Trust Deed for actuarial investigations of the Defined Benefit Category's financial position; and
- To meet legislative requirements under relevant Commonwealth superannuation legislation.

It has been prepared in accordance with the requirements of the Trust Deed, the Superannuation Industry (Supervision) Act 1993 and associated regulations (SIS legislation), Prudential Standard SPS 160 issued by APRA and Professional Standard 400 issued by the Actuaries Institute setting out requirements for actuarial investigations of defined benefit superannuation funds under SIS legislation.

The previous actuarial investigation was conducted as at 30 June 2021 by me and the results are contained in a report dated 8 November 2021.

Background information

The Mine Superannuation Fund (the Fund) (Formerly AUSCOAL Superannuation Fund, and Mine Wealth + Wellbeing Superannuation Fund) commenced on 1 July 2005 as a result of the merger of the Coalsuper Retirement Income Fund ("Coalsuper") and the Queensland Coal Superannuation Fund ("QCOS").

Coalsuper was established in February 1995 as a result of the merger of the Coal and Oil Shale Mining Industry (Superannuation) Accumulation Fund ("COSAF") and the NSW Coal and Oil Shale Mineworkers Superannuation Scheme ("Miners Pension Fund").

The Miners Pension Fund, established by the Coal and Oil Shale Mine Workers (Superannuation) Act 1941 ("the Act"), was a defined benefits scheme, providing benefits expressed as a multiple of a 'Prescribed Amount' for service up to 3 January 1993. These benefits are now provided under the Defined Benefit Category of the Fund.

In 2008 the Act was amended by the Coal and Oil Shale Mine Workers (Superannuation) Amendment Act 2008 No 35 (NSW) (2008 Amending Act).

The 2008 Amending Act inserted a new clause 2A into the Act which states:

“2A The following agreements do not have any legal effect from the commencement of this section insofar as they require contributions to be made to the Accumulation Category or the Defined Benefit Category of the Amalgamated Fund as referred to in the AUSCOAL Trust Deed or to another fund to which the mine worker has elected to contribute:

(a) the Restructuring Agreement,
(b) the 1999 Superannuation Agreement,
(c) the Industrial Agreement made on 6 September 1988 between N.S.W. Colliery Proprietors’ Association Limited and 8 trade unions,
(d) the Industrial Agreement made on 14 May 1991 between New South Wales Coal Association, Cornwall Coal Company No Liability and 4 trade unions.”

As a result of the 2008 Amending Act, from 1 July 2006, these agreements have ceased to have effect. The implications of the 2008 Amending Act were to eliminate the requirement for employers and members to pay contributions into the Special Account and Special Rate Account from 1 July 2006.

However, I understand that the legal advice in respect of the Amending Act is that the Safety Net Guarantee and the Pre 2000 Benefit Guarantee continue to remain in place even though employers and members have ceased to pay contributions into the Special Account and Special rate Account from 1 July 2006.

For the purposes of this valuation, I have assumed that all members who transferred to the Accumulation Category (previously known as Part 2) retain an entitlement to the Transfer Guarantee under the defined Benefit Category (previously known as Part 3) of the Fund.

This actuarial investigation has been carried out on the Defined Benefit Category of the Fund at the request of the Fund’s Trustee, in order to comply with the Superannuation Industry (Supervision) Act (SIS) and with the requirements of the Fund’s Trust Deed that an actuarial valuation should be carried out at intervals not exceeding three years.

Unless otherwise specified, the information, results and comments in this report refer to the Defined Benefit Category of the Fund. As mentioned above, this Defined Benefit Category provides benefits for pre 3 January 1993 service. It has been closed to new entrants since that date and was restructured in 1999/2000 and with effect from 1 July 2006 as detailed above.

The Fund is governed by a Trust Deed dated 31 January 1995 and subsequent amendments. A summary of the main benefit provision is set out in Appendix A.

The Fund is administered as a ‘complying fund’ in accordance with the requirements of the Superannuation Industry (Supervision) Act (SIS). In future, it will continue to be regulated under SIS.

Additional information

Significant events since the investigation date – I am not aware of any significant events that have occurred since 30 June 2024 which would have a material impact on the recommendations in this report.

Next actuarial investigation - Required at a date no later than 30 June 2027. The funding position is updated annually and the contribution requirements will be assessed as part of that process.

Next Funding and Solvency Certificate – required at or before the expiry of the current Funding and Solvency Certificate (which requires replacement before 30 June 2025).

Next Benefit Certificate – required at or before the expiry of the current Benefit Certificate (which expires 30 June 2028). The current Benefit Certificate is designed to accommodate changes to the legislated Superannuation Guarantee schedule.

Actuary's certifications

Professional standards and scope

This report has been prepared in accordance with generally accepted actuarial principles, Mercer internal standards, and the relevant Professional Standards of the Actuaries Institute, in particular PS400 which applies to *"...actuarial investigations of the financial condition of wholly or partially funded defined benefit superannuation funds."*

Use of report

This investigation report should not be relied upon for any other purpose or by any party other than the Trustee. A copy should be made available to the Employers who contribute to the Defined Benefit Category for information. The Employers may consider obtaining separate actuarial advice on the recommendations contained in the report. Mercer is not responsible for the consequences of any other use. This report should be considered in its entirety and not distributed in parts.

The advice contained in this report is given in the context of Australian law and practice. No allowance has been made for taxation, accountancy or other requirements in any other country.

Actuarial Uncertainty and Assumptions

An actuarial investigation report contains a snapshot of a fund's financial condition at a particular point in time, and projections of the fund's estimated future financial position based on certain assumptions. It does not provide certainty in relation to a fund's future financial condition or its ability to pay benefits in the future.

Future funding and **actual** costs relating to the fund are primarily driven by the Fund's benefit design, the **actual** investment returns, the **actual** rate of CPI and any discretions exercised by the Trustee or the Employer. The fund's actuary does not directly control or influence any of these factors in the context of an actuarial investigation.

The fund's future financial position and the recommended Employer contributions depend on a number of factors, including the amount of benefits the fund pays, the cause and timing of member withdrawals, expenses, the level of taxation and the amount earned on any assets invested to pay the benefits. These amounts and others are uncertain and unknown at the investigation date but are predicted to fall within a reasonable range of possibilities.

To prepare this report, assumptions are used to select a single scenario from the range of possibilities. The results of that single scenario are included in this report.

However, the future is uncertain and the fund's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. For this reason this report also shows the impact on the likely contribution requirements/funding levels if one alternative set of assumptions were to be adopted.

Actuarial assumptions may also be changed from one investigation to the next because of mandated requirements, fund experience, changes in expectations about the future and other factors. I did not perform, and thus do not present, an analysis of the potential range of future possibilities and scenarios.

Because actual Fund experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit related issues should be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a set of investigation results.

Data and Fund Provisions

To prepare this report, I have relied on financial and participant data provided by the Fund's administrator. The data used is summarised in this report. I have reviewed the financial and participant data for internal consistency and general reasonableness and believe it is suitable for the purpose of this report. I have not verified or audited any of the data or information provided. I have also relied upon the documents, including amendments, governing the Fund as provided by the Trustee. The Trustee is ultimately responsible for the validity, accuracy and comprehensiveness of this information. If the data or Fund provisions are not accurate and complete, the investigation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a revision of this report.

Further Information

Please contact me to provide any supplementary information or explanations about this actuarial investigation as may be required.

Prepared by

Angela Hartl
Fellow of the Institute of Actuaries of Australia

18 November 2024

I have reviewed this report under Mercer's professional Peer Review Policy. I am satisfied that it complies with applicable professional standards and uses assumptions and methods which are suitable for the purpose.

Richard Codron
Fellow of the Institute of Actuaries of Australia

APPENDIX A

Membership Information

The membership of the Defined Benefit Category has changed since 30 June 2021 as follows:

Active members at 30 June 2021	**91**
Active members to dormant members	-9
Exit	-14
New Entrants	0
Dormant members to Active members	12
Active members at 30 June 2024	**80**
Dormant members at 30 June 2021	**477**
Dormant members to active members	-12
Exit	-115
Active members to dormant members	9
Dormant members at 30 June 2024	**359**
Total	**439**
Average age at 30 June 2024	60.3 years

The 80 active members are active defined benefit members who did not opt to transfer their defined benefits accrued pre 2 January 1993 to the Accumulation Section on 1 July 2000.

The 359 dormant members are members who did not opt to transfer their defined benefits accrued pre 2 January 1993 to the Accumulation Section on 1 July 2000. 257 of these members are entitled to a refund of contributions only therefore their benefits are Accumulation in nature.

Pensioner Members

The pensioner membership at 30 June 2024 is summarised in the following table:

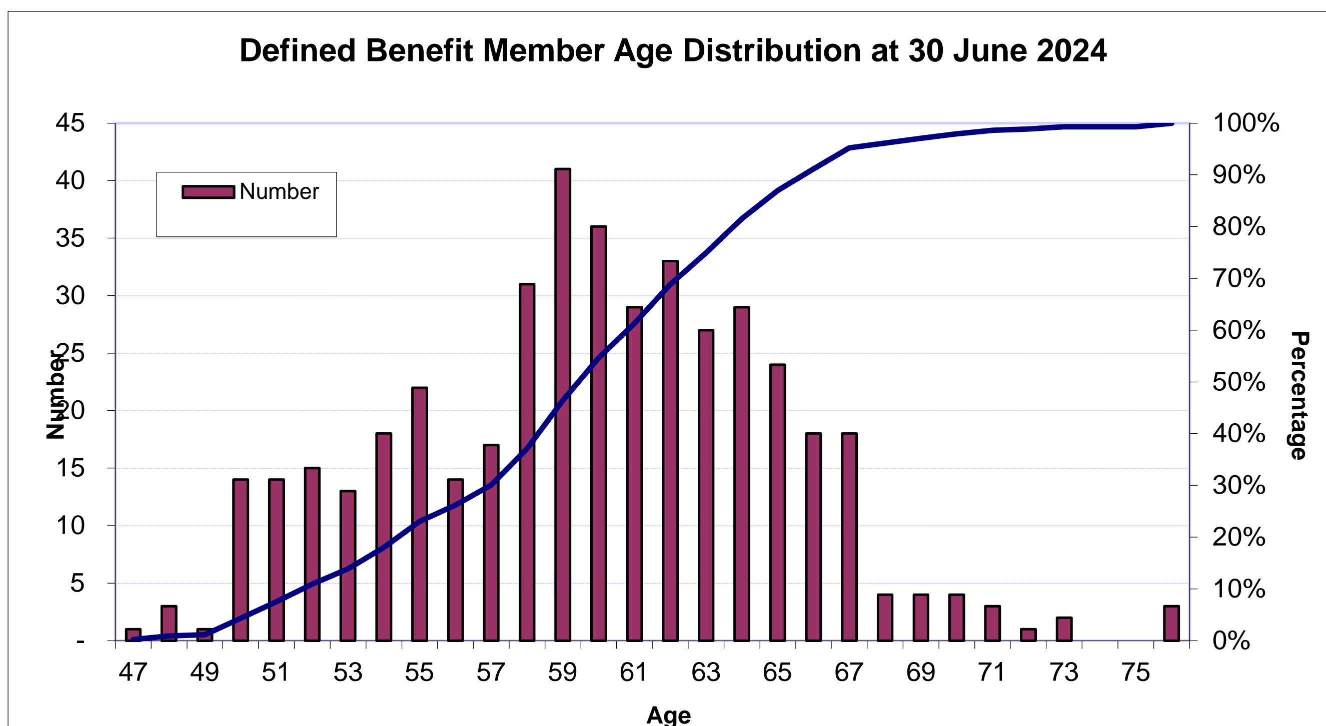
Age	Number of Pensioners
Less than 65	0
65-74	8
75-84	28
85-94	55
95 and over	29
Total	**143**

This compares to 215 pensioners in 2018. The annual pension amounts at 30 June 2024 total $0.705m and the average age of pensioners is 88.8.

The membership data used for this investigation was taken from the database used to administer the Defined Benefit Category. I have carried out some broad “reasonableness” checks on the data and I am satisfied with the quality of the data and its suitability for this purpose.

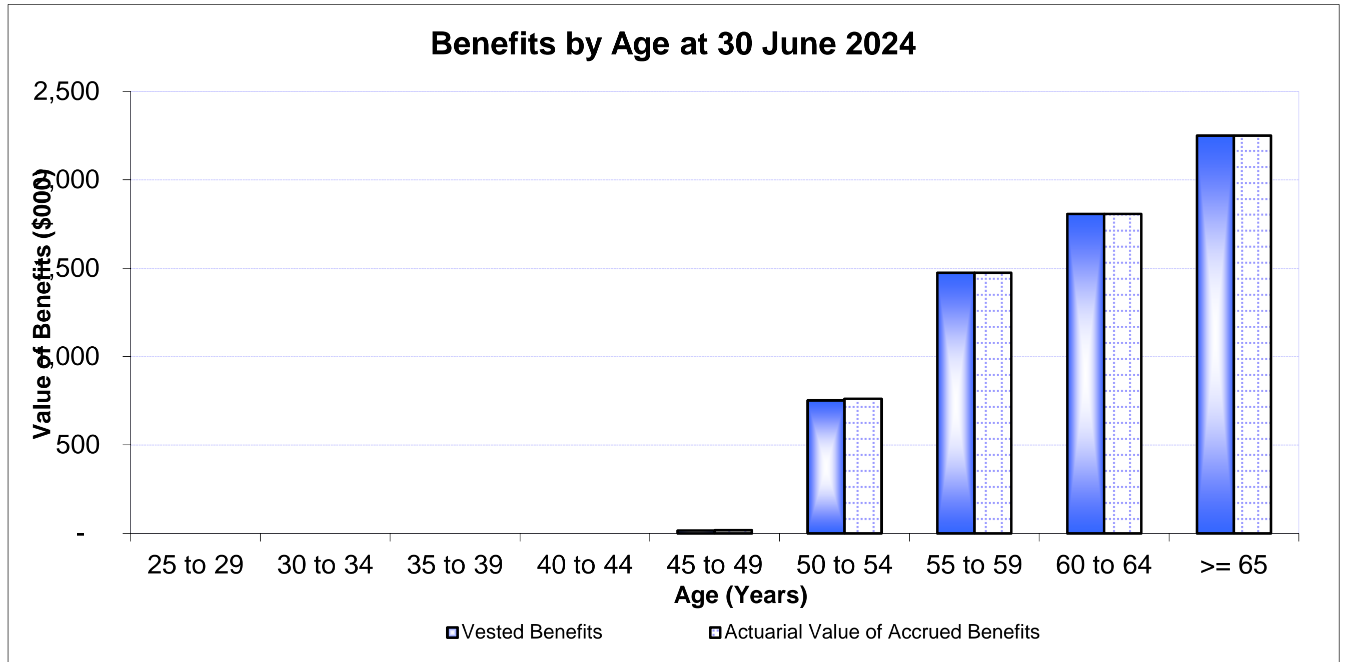
Active and Dormant defined benefit member age profile

The 30 June 2024 defined benefit membership split by age is shown in the following graph:



Actuarial Value of Accrued Benefits age profile

The following graph shows the Vested Benefits and Actuarial Value of Accrued Benefits of active and dormant defined benefit members (excluding additional accounts) at 30 June 2024, split by age.



APPENDIX B

Design

Summary of benefits

A summary of the main benefit provisions in respect of defined benefit members is set out below. A full description of the benefits provided by the Defined Benefit Category of the Fund is set out in the Fund's Participation Agreement, as amended from time to time. Reference should be made to the formal governing documents for definitive statements.

Lump Sum Benefits (applying to current contributors)

The basis for the calculations of lump sum benefits was changed with effect from 3rd January 1993 and from 1 July 2000. The 'Prescribed Amount' became $250 (as at 3 January 1993) varied quarterly in accordance with movements in the Consumer Price Index (all groups, average of eight capital cities) with a six month delay. As at 30 June 2024 the Prescribed Amount is $572.06.

PART 3 MEMBERS WHO DID NOT OPT TO TRANSFER THEIR DEFINED BENEFIT AT 1 JULY 2000

Those who retire on reaching age 55 or more, or for a retrenched dormant member

From 3 January 1993, Special Accounts were established under the Accumulation Category into which contributions payable under the Restructuring Agreement were made. Under the new arrangements, a member always receives the value of their Accumulation fund, and in addition receives the greater of:

- a lump sum benefit from the Defined Benefit Category based on the 'Prescribed Amount' and the number of complete months of service to 2 January 1993.
- a lump sum benefit from the Defined Benefit Category based on the 'Prescribed Amount' and the total number of complete months up until the member's time of exit, less the notional Special Account balance under the Accumulation Category.

The retiring member had to be over 40 years of age at 2 January 1993, to be eligible for the second of the two components listed above. This is the "1993 - safety net" provision.

In order for the member to be entitled to the Safety Net provision on an ongoing basis, members had to contribute weekly to the Special Account at 3% of the Reference Rate. Employers were required to pay weekly contributions of 7.5% of the Reference Rate.

These contributions are now notional as employer and employees stopped contributing to the Special Account after the 2008 restructuring agreement.

Those who retire through total and permanent disablement before attaining age 55

The benefit on total and permanent disablement which causes the mine worker to be unable to continue working as a mine worker is a lump sum equal to the greater of:

- a lump sum benefit from the Defined Benefit Category based on the 'Prescribed Amount' and the number of complete months of service to 2 January 1993.
- the 'Prescribed Amount' multiplied by the contributor's total number of completed calendar months of employment in the industry calculated as though he were to stay in the industry up to age 55. From this amount must be deducted the contributor's notional Special Account balance from the Accumulation Category, and the amount of any insurance payable under the Accumulation Category.

Those who leave the industry through partial and permanent disablement

The benefit is a lump sum equal to the greater of:

- a lump sum benefit from the Defined Benefit Category based on the 'Prescribed Amount' and the number of complete months of service to 2 January 1993.
- the 'Prescribed Amount' for each completed calendar month of employment in the industry. From this amount must be deducted the contributor's notional Special Account balance from the Accumulation Category.

Those who die before retirement or death of a retrenched dormant member who chose not to take the retrenchment benefit

The benefit is a lump sum equal to the greater of:

- the 'Prescribed Amount' multiplied by the completed months of service up until 2 January 1993; and
- the 'Prescribed Amount' multiplied by 240 less the notional Special Account balance under the Accumulation Category less any insurance under the Accumulation Category. An additional lump sum equal to 80 times the Prescribed Amount is payable for each dependent child subject to a maximum total benefit of 480 times the Prescribed Amount. Where the deceased contributor does not leave a spouse, the benefit for each dependent child is doubled. Certain other lump sum benefits may also be payable to other dependants, provided the maximum total benefit of 480 times the Prescribed Amount is not exceeded.

Those who resign before age 55

Members leaving the industry who are not entitled to any other benefit, may claim a refund of accumulated contributions paid before 3 January 1993. Interest is credited at the fund earning rate.

Members may also choose to preserve their benefit in the Defined Benefit Category in anticipation of rejoining at some later date. These contributors retain a credit for their past service, which they retain upon rejoining. If a dormant member does not re-enter the industry, he is only entitled to a refund of contributions with interest.

Those who are retrenched before age 55

The benefit payable on retrenchment is the greater of:

- a lump sum benefit from the Defined Benefit Category based on the ‘Prescribed amount’ and the number of complete months of service to 2 January 1993.
- a lump sum benefit from the Defined Benefit Category based on the ‘Prescribed Amount’ and the total number of complete months up until the members time of exit, less the notional Special Account balance under the Accumulation Category.

The retrenched member had to be over 40 years of age at 2 January 1993, to be eligible for the second of the two components listed above.

PART 2 MEMBERS WHO OPTED TO TRANSFER THEIR PRE 93 DEFINED BENEFIT AT 1 JULY 2000

Many members accepted a transfer, with a pre-2000 defined benefits safety net, of a credit from the Defined Benefit Category into the accumulation benefits of the Accumulation Category from 1 July 2000.

Those who transferred received a transfer value credit to an accumulation account in the Accumulation Category. This transfer value was a discounted accrued pre-1993 defined benefit amount, subject to a minimum of the vested the Defined Benefit Category benefit. For those over age 55, this was their accrued retirement benefit. Assets totaling these amounts were transferred to the Accumulation Category, for subsequent accumulation with investment return to each member’s credit as the benefit payment thereafter in lieu of the Defined Benefit Category promised benefit.

A “pre 2000 Benefits Guarantee” is provided for these transfers of additional payment from the Defined Benefit Category, if required, to provide a total minimum of the benefit that would have been paid had transfer not occurred in respect of their defined benefits accrued to 2 January 1993. This is particularly relevant for retrenchments.

For members to be entitled to the “pre 2000 Benefits Guarantee” on an ongoing basis, members had to contribute to the “Special Rate Account” weekly to the “Special Rate Account” at 5% of the Reference Rate. Employers were required to pay 1% of the Reference Rate to help fund the restructured liabilities in the Defined Benefit Category.

These contributions are now notional as employer and employees stopped contributing to the Special Rate Account after the 2008 restructuring agreement.

The Pre 2000 Benefit Guarantee on retirement, retrenchment, death or ill-health is equal to:

The greater of zero and the following:

- A lump sum based on the ‘Prescribed amount’ and the number of complete months of service to 2 January 1993; less
- The sum of the Transfer Account plus the Notional Special Rate Account at payment date.

The pre 2000 Benefit Guarantee for members who were age 40 or over at 2 January 1993, and who are also eligible to the “1993 - safety net” provision is equal to equal to the greater of zero and the following:

- A lump sum benefit based on the ‘Prescribed amount’ and the number of complete months of service to 2 January 1993; plus
- A lump sum based on the number of complete months of service from 30 January 1993 less the value of Notional Special Account: less
- The sum of the Transfer Account plus Notional Special Rate Account at payment date.

Benefits on withdrawal before age 55

Members leaving the industry who are paid their entitlement on exit will not be entitled to the “Pre 2000 Benefits Guarantee” if they rejoin the industry at a later date.

Members leaving the industry may choose to preserve their benefit in the Defined Benefit Category of the Fund in anticipation of rejoining the industry at some later date. I understand that if the member rejoins the industry they will still be eligible to the “Pre 2000 Benefit Guarantee”. If they do not re-enter the industry and require payment of their benefit they will not be entitled to the “Pre 2000 Benefit Guarantee” when the payment is made.

PENSIONS (Pension benefits applying in respect of existing pensioners and their widows)

Those who retired on reaching a retiring age

A pension is payable for the lifetime of the pensioner. The rates of pension are updated on 1 March and 1 September each year to take account of changes in the Reference Rate and the maximum social security pension. The new rates of pension are derived by deducting the married, and single, maximum rates of social security pension from 55%, and 35%, of the Reference Rate respectively. Rates of pension are not updated if they would thereby be reduced. These basic pension rates are $49.70 per week for married and $36.15 for singles.

The employer financed increases were $10.00 per week for both married and singles from 1 January 2000.

Those who retire through ill-health

A pension is payable for the lifetime of the pensioner. Until age 65, the pensions payable at the rate of 55% of the Reference Rate (married pensioner) and 35% of the Reference Rate (single pensioner), but in each case, the pension is reduced by the pensioner's actual social security entitlement. From age 65, the pension is the same as that payable to a pensioner who retires on reaching a retiring age. All pensioners are now over age 65.

Widows

A pension is payable until the death or remarriage of a widow of a contributor who died prior to 26 March 1978 or a widow of a pensioner. The basic widow's rate is $21.10 per week.

The employer financed increase was $25.05 per week from 1 January 2000.

Allowances for dependent children

An addition of 5% of the Reference Rate for each dependent child is made to the pension of a pensioner or a widow. This allowance is payable until the child reaches age 16, and may then be extended for a further 2 years at the Trustee's discretion. Certain allowances are also payable to housekeepers where a pensioner or his wife, or a widow, is an invalid. The basic pre 2000 rate is $25.25 per week.

CPI indexation on the whole of the above pensions was granted from 1 January 2000. From 1 July 2008, Coal services agreed to fund any future liabilities arising from the CPI indexation through a series of payments (these additional contributions were $274,500 per quarter up to 30 June 2015)

Benefits payable are subject to the Minimum Requisite Benefits detailed in the Defined Benefit Category's Benefit Certificate, the current version of which is dated 1 July 2008.

The Superannuation Guarantee (Administration) Act 1992

This Act requires employers to provide minimum superannuation benefits that are fully vested in their employees within a complying superannuation fund.

The contribution rates recommended in this report and the projected financial positions allow for benefits being augmented as necessary to meet the minimum Superannuation Guarantee (SG) benefit described in the Defined Benefit Category's current Benefit Certificate.

Under current legislation the SG rate will be 11.5% until 30 June 2025 and it will then increase by 0.5% to 12% pa where it is currently set to remain.

APPENDIX C

Information for AASB 1056 Purposes

Defined Benefit Category

The following information has been prepared for the purposes of Australian Accounting Standard AASB 1056 to enable the calculation of Member Liabilities at the specified reporting dates for inclusion in the relevant financial statements of the Mine Superannuation Fund.

To assist Mine Superannuation Fund to comply with AASB 1056 reporting standard within the required timescales, Mercer has provided a document ("*Mine Wealth + Wellbeing Superannuation Fund AASB1056 Estimated Past Service Liability*") dated March 2017 setting out a methodology for estimating the past service liability at the reporting date based on the results of the previous valuation. This has been restated below for completeness.

The total Defined Benefit liability is made up the following liability:

- Part 3 Active members
- Part 3 Dormant Members
- Part 2 Transfer Guarantee Members
- Pension Liability
- Expenses
- Tax

Part 3 Active & Dormant Members

Data required

- Benefits paid from Active status – Benefits_Active
- Benefits paid from Dormant status – Benefits_Dormant
- Investment return assumption for active members at previous valuation date - $i_{(20xx-1)}$
- Increase in Prescribed Amount assumption at previous valuation date – $PA_{(20xx-1)}$
- Actual increase in Prescribed Amount over the period - PA_Inc
- Investment return on resignation benefits i.e. refund of contribution accounts - Inv_RoC

Part 3 Benefits

- Active members: The following formula should be used to calculated the past service liability for active members.

$$(Active)PSL_{30June(20xx)} = (Active)PSL_{30June(20xx-1)} \text{ x } (1+ i_{(20xx-1)}) \text{ x}(1+PA_Inc)/(PA_{(20xx-1)}) - Benefits_Active$$

- Dormant members: A proportion of dormant members are entitled to a refund of their accumulated contributions paid before 3 January 1993 only. At the previous valuation the split between defined benefit and refund of contributions will be given. The estimated past service liability at the AASB 1056 reporting date should be.

$$(Dormant)PSL_{30June(20xx)} = X\% \text{ x } (Dormant)PSL_{30June(20xx-1)} \text{ x } (1+PA_Inc) + Y\% \text{ x } (Dormant)PSL_{30June(20xx-1)} \text{ x } (1+Inv_RoC) - Benefits_Dormant$$

Where x% is the proportion of the liability in respect of members who are entitled to a defined benefit lump sum on retirement and y% is the proportion of the liability in respect of members who are entitled to refund of contributions at retirement, i.e. at 30 June 2024 x = $\frac{102}{359} = 28\%$ and y = $\frac{257}{359} = 72\%$.

Transfer Guarantee members

Unless there have been large negative returns over the year on the member notional accumulation account, for simplicity set the liability for Transfer Guarantee members equal to the liability for Transfer Guarantee members at the previous valuation date i.e. the estimated liability at 30 June 2024 for Transfer Guarantee members is $0m.

Pensioners

Data required

- Investment return assumption for pensioners from the previous valuation - $i_{(20xx-1)}$
- Increase in CPI pension assumption from the previous valuation - $CPI_{(20xx-1)}$
- Increase in CPI pension over the period – CPI_Inc
- Pension payments over the period (include pre2000 pension payments paid by Coal Services) – Pension_Payments

Estimated pensioner liability at AASB 1056 reporting date should be calculated as:

$$(Pension)PSL_{30June(20xx)} =$$

$$(Total\ Pension\text{-}CPI\ Pension PSL_{30June(20xx-1)} \times (1 + i_{(20xx-1)}) +$$

$$(CPI\ Pension)PSL_{30June(20xx-1)} \times (1 + i_{(20xx-1)}) \times (1 + CPI_Inc)/(1 + CPI_{(20xx-1)}) - Pension_payments$$

Expenses and Tax on Coal Services contributions

Expenses and tax amounts have changed from the 2021 valuation, increasing from $0.3m to $0.9 and decreasing from $0.4m to $0.2m respectively.

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