

# **Black lung**

## white lies

### **Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland**

#### **Executive Summary**

(Including key findings and recommendations)

*The first priority and concern of all in the coal mining industry must be the health and safety of its most precious resource – the miner.*

Section 2(a), *Federal Coal Mine Safety and Health Act of 1969* US Public Law 91-173 (USA)

**Executive Summary, Report No. 2, 55th Parliament**  
**Coal Workers' Pneumoconiosis Select Committee**

**May 2017**

## **Coal Workers' Pneumoconiosis Select Committee**

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## Foreword

This report is an anatomy of yet another disaster in Queensland's coal mining industry.

'Black lung' is not quick, like a mine explosion, but an insidious disease that develops over many years.

However, like mine explosions, black lung is preventable. The results are no different – death, illness and enormous changes in working and family lives. Miners and their families are never the same again.

The committee received harrowing evidence from workers and their families resulting in tears from some of the toughest of coal miners and their partners, workmates, neighbours and friends. As a committee, we too shed tears of sorrow, disbelief and anger, because the system let down these men and women of The Deep.

Our bipartisan pursuit of the truth was dogged and we crashed through numerous obstacles to expose what have been catastrophic failings in public administration in Queensland.

We thank all individuals and organisations who assisted us, especially the coal miners and their families who courageously shared their personal stories, their medical histories and their dedication as coal cutters.

We also thank our committee staff and counsel assisting, who devoted these last few months to helping us forensically examine the evidence and make sense of the system failures, so that we could best aid and support our coal miners.

Together, we are very experienced Members of the Queensland Legislative Assembly. Working together on the black lung inquiry has been a journey of shared humanity; deeply humbling and a sincere honour for us all.

For the coal workers of Queensland.



**Jo-Ann Miller MP**

**Chair**



**Hon Lawrence Springborg MP**

**Deputy Chair**



## Executive Summary

### Introduction

This report contains the findings and recommendations of the Coal Workers' Pneumoconiosis (CWP) Select Committee (committee) of the Queensland Parliament on its inquiry into the re-identification of CWP in Queensland. The committee found that there has been a catastrophic failure, at almost every level, of the regulatory system intended to protect the health and safety of coal workers in Queensland. As a result of that failure, 21 Queensland coal miners have now been diagnosed with CWP – an insidious but entirely preventable disease. Many more coal miners are likely to be diagnosed with this latent onset disease in future. Significant reform of the regulatory framework for coal mining in Queensland is urgently needed.

### The committee inquiry and its process

The committee was established by the Queensland Parliament on 15 September 2016 to conduct an inquiry and report on the 're-emergence' of CWP amongst coal mine workers in Queensland.

The committee tabled an interim report on 22 March 2017.

On 23 March 2017, the parliament provided the committee with additional terms of reference in relation to other workforce cohorts and occupational respirable dust issues. The parliament also extended the reporting date for the committee's initial terms of reference from 12 April 2017 to 29 May 2017. This report follows on from the interim report and is the final report of the committee on the initial terms of reference.

This report sets out the committee's findings on its initial terms of reference and makes recommendations for wide-ranging and substantial changes to the regulation of coal mining in Queensland and the protection of the mining industry's most precious resource – its workers.

The committee received 47 submissions addressing its initial terms of reference.

To date, the committee has held 27 public, 15 private hearings and one departmental briefing. Over the course of these hearings, the committee has taken evidence from 190 witnesses.

The committee held 13 of these public hearings in Brisbane, during which it received evidence from government departments and agencies, medical specialists, occupational safety and health professionals, union representatives, academics, mining engineers, mine operators, retired and former coal miners, and coal mine workers presently employed in the industry. The committee also heard testimony from a number of individual coal mine workers who have been diagnosed with CWP, and their families.

The committee's 14 regional public hearings were held in regional centres and mining towns, including: Ipswich, Mackay, Rockhampton, Collinsville, Moranbah, Dysart, Middlemount, Tieri, Blackwater, and Emerald.

### The Queensland coal industry

Queensland is rich in natural resources of coal deposits, metallic and non-metallic minerals, and petroleum. An estimated 35 billion tonnes of high quality coal resources has been identified in reserves across the state.

Currently, there are 51 operating coal mines in Queensland, of which 11 are underground and 40 are open-cut mines.

Australia is the world's fourth largest producer, accounting for 7.2 per cent of global coal production in 2015. Queensland accounts for 52 per cent of Australia's black coal production, positioning the state as a significant regional producer. Ninety per cent of the 244 million tonnes of coal produced in Queensland in 2015-16 was sourced from the Bowen Basin.

Coal is our leading export, generating \$21.4 billion in export revenue in 2015-16. The coal industry contributed \$1.6 billion in royalties, out of a Queensland total of \$2.2 billion from the resources industry, in 2015-16. This represents over 10 per cent of the state's total taxation and royalty revenue.

The coal mining industry in Queensland employed 29,428 workers as at September 2016. Of these, 24,146 worked in open-cut or exploration coal mines and an additional 5,282 were employed in underground coal mines.

During the coal mining boom, mine operators and workers often appear to have focused on increased production targets, with sometimes inadequate regard for health and safety. In the same period, the number of contract employees working across the industry increased.

The committee heard from a number of sources that labour hire or contract mine workers are less likely to raise concerns about safety issues or to challenge decisions, due to the insecurity or lack of permanency in their employment arrangements – a perception that persists throughout Queensland's mining industry.

### **Coal workers' pneumoconiosis and coal mine dust lung diseases**

CWP is a type of pneumoconiosis solely caused by prolonged exposure to coal mine dust. It is one of a broad group of coal mine dust lung diseases (CMDLD) caused by exposure to respirable coal mine dust over several years. Disease develops from the deposit of dust particles and the reaction of the lung tissue to the dust.

There are three primary types of lung disease that are classified as pneumoconiosis:

- asbestosis, cause by the inhalation of asbestos dust particles
- silicosis, caused by the inhalation of silica dust particles, and
- CWP, caused by the inhalation of fine coal dust particles.

Emphysema, chronic bronchitis, lung function impairment, and diffuse dust-related fibrosis are other manifestations of CMDLD.

Numerous coal mine workers and their families informed the committee of significant dust on their bodies and their clothing after working a shift in a mine. Some reported coughing up black mucus for years after working in the coal industry.

Early detection of asymptomatic CWP is vital so that those still in the workforce can be removed from exposure and the possibility of their developing complex CWP reduced. Tragically, many sufferers of CWP continued to work in dusty conditions while their condition remained unidentified.

A diagnosis may be easily missed, or assumptions made that the loss of function associated with CWP is due to reduced fitness, age, or lifestyle factors such smoking. It remains unknown how many deaths have been wrongly attributed to lung diseases other than CWP.

As at 29 May 2017, 21 current and former coal mine workers in Queensland have been diagnosed with CWP or 'black lung' disease. In summary:

- all cases have been formally confirmed through the DNRM process
- two cases were described as 'complex', presenting with multiple conditions
- 17 cases involved miners who were actively working in the Queensland coal industry at the time of their diagnosis
- three were retired or former coal miners at the time of diagnosis
- current ages ranged from 38 to 74, with an average age of 56
- two cases involved open-cut coal mine workers with no underground experience
- four had substantial overseas coal mine experience (UK and USA)



- two had worked in New South Wales (NSW) coal mines as well as in Queensland
- two had worked in the Ipswich coal fields
- all had worked in Bowen Basin coal fields at some point in their careers, and
- all had previously undertaken Coal Mine Workers' Health Scheme (health scheme) assessments and been certified as fit for work in coal mines.

A detailed schedule of confirmed cases of CWP in Queensland, de-identified to protect the privacy of these miners and former miners, appears at Appendix G to this report.

The re-identification of this entirely preventable disease has, quite properly, shocked and dismayed all involved in the coal industry and the public generally.

The committee considers that the overwhelming weight of evidence gathered in the course of this inquiry suggests it is likely that many more Queensland miners and former miners will be diagnosed with CWP or a related CMDLD as a result of what has been a catastrophic failure of the regulatory and health surveillance systems intended to ensure the protection of coal industry workers.

The re-identification of the disease was first formally publicised in September 2015, when the then Commissioner for Mine Safety and Health reported that the 'first case of coal workers' pneumoconiosis in a Queensland coal miner in 30 years was reported this year'. That worker was diagnosed in May 2015.

Prior to this, it was widely accepted by coal mine operators, managers, workers and regulators that Australia had effectively eradicated CWP. This pre-conditioned most in the industry to under-estimate the extent of the potential risk that respirable coal mine dust still posed.

The committee noted the tragic irony that Queensland, with no apparent diagnosed cases of CWP for many years, had attracted the interest of occupational health experts in the United State of America (USA), who sought to study why a region with a similar coal mining industry to their own had no reported cases of CWP, while the USA had many thousands of cases per year.

Prior to 2015, coal miners in Queensland were routinely told that CWP had been eradicated.

Until the re-identification of CWP in 2015, the entire coal mining industry in Queensland (and NSW) seemed to believe that CWP had been eradicated in Australia, with the last cases reported in Queensland in the 1980s. This view was accepted by DNRM, Queensland Health, the Department of Industrial Relations, coal mine operators, the Queensland Resources Council (QRC), trade unions, and coal workers. This is particularly concerning given the continuing high rates of CWP diagnoses in the USA over the same period. However, it seems that all stakeholders accepted at face value that the health scheme had not identified any cases of CWP in Queensland since 1984, and therefore, that it must have been eradicated here.

However, the evidence gathered by the committee overwhelmingly suggests otherwise. It is highly unlikely CWP was ever eradicated in Queensland.

### **An improved regulatory framework**

There has been a catastrophic failure of the regulatory system that was intended to preserve and protect the health of coal miners. An improved regulatory system, including a truly independent regulator and fully functional health scheme, is clearly needed. Elements of the current system are working and should be maintained, but substantial structural change is necessary.

Queensland's coal mining industry needs a more effective system of oversight and compliance, including greater levels of transparency and accountability surrounding the roles and responsibility of all industry players.

Given the nature of the system breakdown in relation to CWP, it is clear that DNRM's attempts to amend or improve the system within the limits of the current regulatory structure have been

inadequate, resulting in a superficial treatment of some issues. This piecemeal approach will not be sufficient to restore workers' trust in the system or in the adequacy of the protection it affords them.

Importantly, it is clear that the responsibility for overseeing the health and safety of workers should not rest with the body also charged with promoting and supporting the industry; namely DNRM. While the objectives of a productive coal industry and a safe and healthy workforce are not altogether incongruous, this split focus is not in the best interest of either goal.

A dedicated and independent statutory mining safety and health body would be best positioned and most trusted by workers and the wider industry to address these aims without dilution. The committee notes the demonstrated benefits of such bodies in NSW and the USA.

The Commissioner for Mine Safety and Health must also be given proper statutory independence, free from administrative or political control by the department or Minister.

Currently, under part 5A, section 73A of the *Coal Mining Safety and Health Act 1999* (Qld) (CMSHA), a person may hold both the office of Commissioner and another position under the *Public Service Act 2008* (Qld). Until the appointment of the current Commissioner, all previous occupants of that role have simultaneously held senior roles within DNRM, including as Director-General or Deputy Director-General.

The committee considers this lack of statutory independence of the Commissioner has the potential to adversely impact on the extent to which a Commissioner is able to fully discharge her or his responsibilities to undertake compliance activities (including prosecutions), review the implementation of the legislation, and provide advice to the Minister on safety and health matters. The lack of statutory independence of the Commissioner compromises the perception of independence from DNRM and undermines the confidence of the mining industry and the public generally in the ability of the Commissioner to act independently of the department or the Minister.

In forming its structural recommendations, the committee has looked to other jurisdictions, including NSW and the USA, for guidance and examples of elements that could best apply in Queensland.

Only a truly independent regulatory body, charged with responsibility for ensuring the safety and health of Queensland's mine and resource industry workers, can restore public faith in the system.

Therefore, there should be a Mine Safety and Health Authority, established as a statutory authority and body corporate, with responsibility for ensuring the safety and health of mining and resource industry workers in Queensland. **(Recommendation 1)**

The Mine Safety and Health Authority should be established under its own legislation as a 'unit of public administration' for the purposes of the *Crime and Corruption Act 2001* (Qld) and a 'public authority' for the purposes of the *Right to Information Act 2009* (Qld). **(Recommendation 2)**

The Mine Safety and Health Authority should be governed by a board of directors, chaired by the Commissioner for Mine Safety and Health, and including representation of:

- coal mine operators
- metalliferous mine operators
- unions
- resources transportation and ports, and
- persons independent of the mining industry (including resources transportation and ports).

**(Recommendation 3)**

A parliamentary committee should oversee and monitor the operation of the Mine Safety and Health Authority. The Minister should be required to consult with the parliamentary committee regarding the appointment of the Commissioner and board. **(Recommendation 4)**

The Mine Safety and Health Authority should be established in Mackay, ensuring the Commissioner, senior management, the Mines Inspectorate, and the Coal Workers' Health Scheme and mobile units are all based in central Queensland. **(Recommendation 5)**

The Commissioner for Mine Safety and Health should be a senior officer of the Mine Safety and Health Authority and given proper statutory independence, with the Commissioner not subject to the direction of the Minister. **(Recommendation 6)**

The Mines Inspectorate, currently within DNRM, should be administratively relocated within the Mine Safety and Health Authority, ensuring statutory and administrative independence from DNRM. **(Recommendation 7)**

The Commissioner should have an express power to direct inspectors, including the chief inspector, inspection officers and authorised officers, in relation to the investigation of a possible offence or offences against the mining safety and health Acts. **(Recommendation 8)**

The Safety in Mines Testing and Research Station (SIMTARS) should be dissolved as an entity within DNRM.

The research, testing and certification, and training functions of SIMTARS should be administratively relocated within the Mine Safety and Health Authority.

The occupational hygiene services currently offered by SIMTARS on a fee for service basis should be discontinued. The officers who currently provide those services should be redeployed to the Mine Safety and Health Authority to undertake research and/or occupational hygiene inspection activities within the inspectorates. **(Recommendation 9)**

The Mine Safety and Health Authority should encompass and have responsibility for administering a new Coal Workers' Health Scheme, supported by a Memorandum of Understanding (MOU) with Queensland Health and the Office of Industrial Relations to ensure full and complete cooperation and appropriate data-sharing between those entities. **(Recommendation 10)**

The Mine Safety and Health Authority, including the Coal Workers' Health Scheme, should be supported by an expert Medical Advisory Panel (as recommended by the 2002 review of the Health Surveillance Unit) of suitably experienced and qualified medical specialists and internationally recognised experts, including at least two respiratory physicians (one of whom has internationally recognised experience and expertise in the prevention, identification, and treatment of CWP) and at least one specialist in occupational medicine. **(Recommendation 11)**

The Mine Safety and Health Authority should appoint a suitably qualified and experienced specialist physician, registered as such with the Australian Health Practitioners' Regulation Agency (AHPRA), as Executive Director – Medical Services to lead the Coal Workers' Health Scheme. The Executive Director – Medical Services should advise and assist the Commissioner and board of directors on medical matters, provide clinical guidance and leadership in relation to the health and health-related safety activities of the Authority, oversee the approval of health service providers under the Coal Workers' Health Scheme, and provide clinical oversight and guidance to Approved Medical Advisors and others performing assessments under the Coal Workers' Health Scheme. **(Recommendation 12)**

The Executive Director – Medical Services should be engaged by the Authority on a full-time basis and remunerated at a rate that is equivalent to a specialist of similar standing and responsibility employed by Queensland Health or a Queensland Hospital and Health Service. **(Recommendation 13)**

The Mine Safety and Health Authority should have a properly resourced and dedicated health research function, including epidemiological research into health conditions experienced by mine workers. These research functions should be undertaken in a collaborative way drawing upon and sharing research with leading international research bodies such as the National Institute for Occupational Safety and Health (NIOSH) in the USA. **(Recommendation 14)**

The Mine Safety and Health Authority should appoint a suitably qualified and experienced legal practitioner as General Counsel to provide general legal advice to the authority and board, and advise the Commissioner for Mine Safety and Health as to the exercise of statutory powers including in relation to prosecutions and other compliance activity. **(Recommendation 15)**

A proposed organisational chart for the Mine Safety and Health Authority appears at Appendix F to this report.

Much of the current regulatory framework for mine safety and health in Queensland, including the Mines Inspectorate, the health scheme, and part of SIMTARS is funded by a statutory safety and health fee (levy) established under the CMSHR.

The levy was introduced in 2008 to establish a framework to recover the costs of safety and health activities by the state government for the coal mining, quarrying, and explosives industries. The levy is charged to industry annually and is based on the number of workers in the industry and the budgeted cost of services. The number of workers is calculated from census forms which are required to be submitted by the responsible person for a coal mine at the end of each quarter. If the chief executive reasonably believes that the responsible person has given an incomplete or incorrect safety and health census, the mine can be called to account and the chief executive may invoice the responsible person for an amount they reasonably believe to be payable, on the basis of available facts and circumstances.

The levy is indexed to the Queensland Government's Customer Price Index rate (3.5 per cent per annum), and has not been otherwise adjusted in the decade since its establishment. In 2015-16, levy fees collected from the mining industry totalled \$38.96 million. In 2012-13, during the mining boom, total revenue reached \$44.93 million.

Mining and petroleum royalties, on the other hand, are payments made to the owner of resources for the right to extract them. As the State owns all petroleum and gas and most minerals, resource permit holders generally pay royalties to the Office of State Revenue, within Treasury. These payments are not a tax, but part of the cost of leasing the land – effectively, compensation to the State for the resource value extracted from their land. In setting royalty rates, governments aim to deliver an appropriate return for the sale of State mineral assets, while not unduly impeding the efficiency and competitiveness of the resources sector. Coal and mineral processing businesses, including those engaged in leaching, refining, smelting and other processing operations, are liable to pay royalties at a discounted rate.

A comparative review of revenue raised through mining royalties and by the levy from 2010-11 through to 2015-16 indicates that levy revenue has generally been equivalent to between one and two percent of revenue raised through royalties, at an average of 1.7 per cent for the six-year period.

The safety and health fee is not an appropriate method of funding a truly independent safety and health regulator with a fully functional mines inspectorate. The funding mechanism for these vital government functions should not be so closely tied to the number of workers employed in the mining industry at any given time.

The safety and health fee currently provided for by part 2A of chapter 2 of the Coal Mining Safety and Health Regulation 2001 (CMSHR) should be abolished. **(Recommendation 16)**

A designated proportion of coal and mineral royalties paid to the Queensland Government would be a more appropriate and robust funding mechanism than the current levy, to support the full-funding of safety and health activities within the mining industry.

The Mine Safety and Health Authority should be funded by a dedicated proportion of coal and mineral royalties paid to the Queensland Government, to be determined in consultation with industry and unions after an assessment of the operating costs of the Authority is undertaken. The dedicated proportion of the royalties should be fixed by regulation and reviewed periodically by the parliamentary committee responsible for the Mine Safety and Health Authority. **(Recommendation 17)**

Any surplus income derived from the dedicated proportion of royalties that is not allocated to or expended by the annual budget of the Authority should be invested with the Queensland Investment Corporation for the future research and operational needs of the Authority. **(Recommendation 18)**

### **Occupational exposure limit for coal mine dust**

The current occupational exposure limit (OEL) for respirable coal mine dust is set by the CMSHR. It requires a shift-adjusted average concentration of coal dust of not more than 3.0 milligrams per cubic metre ( $\text{mg}/\text{m}^3$ ) for the equivalent of an eight hour shift. The OEL for coal dust in Queensland is nominally the highest of any Australian jurisdiction. In NSW, it is  $2.5 \text{ mg}/\text{m}^3$ . In the USA, the legislated OEL is  $1.5 \text{ mg}/\text{m}^3$ . There is strong evidence that the limit should be  $1.0 \text{ mg}/\text{m}^3$ .

Although these various standards are not directly comparable due to a range of differences in sampling methodology and calculation, the *Monash Review of Respiratory Component of the Coal Mine Workers' Health Scheme* (the Monash Review) noted that on the face of it, Australia and New Zealand generally seem to have 'the highest value listed for respirable dust', and Queensland especially so.

In late 2016, Safe Work Australia (SWA) commenced a review of workplace OELs, including respirable coal dust and respirable silica. The committee understands SWA aims to release a consultation Regulatory Impact Statement (RIS) for public comment in October 2017. DNRM submitted that outcomes of this scientific evaluation and the SWA finding will inform any changes to the exposure standards in Queensland for respirable coal dust.

These issues of timing were also noted by the federal Senate Select Committee on Health (Senate Committee) in its fifth interim report, *Black Lung: 'It buggered my life'* (Senate Committee report), which proposed an interim OEL of  $2.5 \text{ mg}/\text{m}^3$  be imposed until the SWA review process could be completed. The QRC endorsed this position, suggesting that 'in the short-term, coal mining companies adopt the lowest Australian level ( $2.5 \text{ mg}/\text{m}^3$ ) for coal dust exposure'.

There is ample scientific evidence that the current OEL for respirable coal mine dust in Queensland is exposing coal mine workers to excessive risk of developing CWP, CMDLD and other respiratory disease. It is intolerable for Queensland coal mine workers to be expected to await the outcome of the SWA review before the Queensland OEL is reduced to meet international standards.

The Queensland OEL for respirable coal dust (including mixed mineral coal mine dust) should immediately be reduced such that it requires duty holders to ensure a 'coal worker' is not exposed to atmosphere containing respirable dust exceeding an average concentration, calculated under Australian Standard AS 2985, equivalent to the following for an eight hour period:

- for coal mine dust (including mixed mineral coal mine dust) –  $1.5 \text{ mg}/\text{m}^3$  air
- for silica –  $0.05 \text{ mg}/\text{m}^3$  air.

Section 89 of the CMSHR should immediately be amended to give effect to this recommendation.

Consideration should then be given to relocating the OEL provisions within the CMSHR. **(Recommendation 19)**

### **Coal dust management**

Over the last 30 years, advances in mining equipment technology and methodology have contributed to a significant increase in coal production in Queensland. This increased productivity has meant that more dust is being produced. While there has been limited publication or analysis of resulting respirable dust exposure levels, the available evidence points to the inevitable conclusion that exposure levels have similarly increased.

Stakeholders submitted that a wide range of suitable and effective mitigation technologies and dust control methods have been developed and can be used by industry to address these dust concerns. Professor David Cliff noted that the Australian Coal Association Research Program (ACARP) 'has spent probably \$20 million over the past 20 years investigating the various mechanisms for controlling

longwall dust'. The committee heard evidence that mining companies have also invested significantly in controls, particularly in recent years.

Submissions from equipment suppliers also highlighted emerging technologies which offer further opportunities to reduce dust and exposure levels. However, even proactive mine operators face difficulties in adapting to changing conditions and balancing more immediate safety concerns, including poor strata (roof) stability and gas risks (inhalation or ignition/explosion).

These challenges aside, dust control evidently was not prioritised nor made a significant focus of attention for many operators prior to the re-identification of CWP.

The Senate Committee found that operators and the QRC had generally displayed a 'cavalier attitude... towards dust monitoring and mitigation' and placed a 'low priority on their statutory responsibility to provide satisfactory personal protective equipment (PPE) and to ensure workers wear PPE and remove themselves from hazards'.

This committee's findings are consistent with the Senate Committee's findings. Operators apparently felt comfortable that the controls in place were sufficient and they engaged in limited review of their efficiency in the absence of health-based indicators to re-affirm the dangers of the respirable dust hazard and highlight shortcomings in mitigation efforts.

Workers suggested that the success of controls has been limited by multiple factors including:

- poor design or ineffectual implementation
- prioritisation of production over safety concerns
- a reported reluctance of workers to raise safety concerns, and
- inadequate procedures and worker training.

Mine entry records and directives issued by the Mines Inspectorate over the last five years suggest that dust engineering controls are 'either turned off or used sporadically, depending on a whole pile of concerns'. In underground settings poor positioning and maintenance of sprays, a lack of water pressure, and a failure to regularly change cutter picks were among several such cited factors. Regarding open-cut settings, the committee heard repeated testimony of insufficient use of suppression sprays on dusty roadways and the ongoing use of damaged vehicle cabins on operating equipment that do not provide an effective barrier or protection from respirable coal dust.

In open-cut environments, dust risks appear to have been especially neglected because of a false assumption that only underground workers could contract CWP.

A pro-active system of regulatory approval for dust mitigation and abatement plans, similar to that used in NSW, is preferable to the current reactive regulatory approach, which requires inspectors to discover incidents of dust exceedances after they have occurred and then consider coercive action such as the use of directives.

The CMSHA and CMSHR, as necessary, should be amended to provide that:

- a) An underground mine operator is required to submit to the authority a dust abatement plan and ventilation plan for approval by the Commissioner for Mine Safety and Health before any underground coal mining operations are commenced; and again, with appropriate amendment as necessary, before mining operations are commenced on any new longwall block.
- b) An above-ground (surface) mine operator is required to submit to the authority a dust abatement plan for approval by the Commissioner for Mine Safety and Health before any mining operations are commenced.
- c) The Commissioner for Mine Safety and Health must take into account the mine operator's compliance history and record of respirable dust monitoring results in deciding whether to approve, reject, or require amendments to the dust abatement and/or ventilation plans.

**(Recommendation 20)**

It should be an offence for a mine operator to commence or continue mining operations, without the prior approval by the Commissioner for Mine Safety and Health of the required dust abatement plan and, where applicable, the required ventilation plan for the relevant mining operation. **(Recommendation 21)**

Many of the workers who gave evidence to the committee expressed a view that an emphasis on production volumes and profits across the industry had contributed to a tendency for safety concerns to be overlooked and corrective actions postponed. Submitters and witnesses particularly highlighted the role of production targets and bonuses in discouraging action on safety concerns.

However, the committee notes that there is also recognition amongst stakeholders that occupational health and safety and high levels of production need not be competing aims, but rather can be mutually supportive when part of a sustainable production approach that recognises the long-term benefits of minimising health and safety-related productivity loss and compensation costs.

The committee notes that some high-producing mines have demonstrated a strong commitment to addressing respirable dust and establishing a culture of health and safety reporting. This is in keeping with recent USA coal industry research which has found that after controlling for other variables, a 10 per cent increase in real total revenue per hour worked was associated with decreases in the incidence rates of reported injuries (0.9 per cent), reported injuries with lost workdays (1.1 per cent), and the most serious injuries reported (1.6 per cent).

There appears to be a considerable gap in perception between senior managers and mine workers as to the degree to which workers feel comfortable reporting their concerns in relation to respirable dust levels. A number of workers expressed a view that individuals who raise their concerns tend to be 'punished' by way of relegation to lesser duties, or less favourable working conditions. The vulnerability of labour hire workers especially was a recurring theme in worker testimony. Despite reports from some site senior executives (SSEs) that they were confident that these workers can and often do raise issues on site, few workers appear to perceive this as the case.

Clearly, there is some disconnect between mine operators and their senior staff – who have repeatedly assured the committee that all workers are encouraged to report safety and health concerns – and mine workers who do not believe they can make such reports without being subject to adverse consequences.

Coal mine operators have not done enough to encourage all workers, including labour hire workers, to report safety and health concerns and assure them that such reports will not result in adverse consequences or reprisal action.

The Commissioner for Mine Safety and Health should actively promote awareness in the mining industry that it is an offence for any person to cause a detriment to another person because, or in the belief that, the other person made a complaint or has in any other way raised a coal mine safety issue. The Commissioner should also give special attention to the investigation of any complaints of such conduct and should consider prosecuting offences of this nature if there is sufficient evidence and it is in the public interest to do so. **(Recommendation 22)**

The industry currently has a number of avenues through which it can identify and share emerging developments in dust mitigation. However, the committee heard evidence suggesting that collaborative efforts across industry have at times been characterised by a lack of open information exchange and by general inertia. The committee found that other jurisdictions have more robust mechanisms for the sharing of information around emerging dust suppression technologies and related occupational health and safety research.

In the USA, the NIOSH Office of Mine Safety and Health and the Mine Safety and Health Administration (MSHA): Dust Division in Pittsburgh widely promote the findings of their extensive programs of research into dust mitigation and monitoring technologies and developments. The MSHA Dust Division in Pittsburgh utilises a full-scale above-ground longwall and continuous miner facilities to test and assess various dust mitigation techniques and technologies.

By comparison, DNRM's SIMTARS has a relatively constrained budget and focuses more on its established research expertise areas of explosive risks, management and emergency response, and mine rescue.

A centralised dust abatement database should be established in Queensland, similar to that recently implemented in NSW. Many operators already maintain such records for internal auditing purposes. Further, there should be a more comprehensive and well-funded research focus from SIMTARS researchers (to be undertaken within the new Research Division of the Authority), which would extend their world-leading expertise in explosions and mine rescue to incorporate a broader focus on occupational health issues.

Queensland's Mine Safety and Health Authority should establish a database of dust mitigation techniques and technologies used in Queensland coal mines to be used for auditing purposes and to inform research and analysis into the efficacy of engineering dust controls. **(Recommendation 23)**

The Mine Safety and Health Authority should research and review new dust mitigation techniques and technologies being used in jurisdictions such as NSW and the USA and publish its findings to ensure all those involved in coal mining in Queensland may be aware of world-leading dust mitigation practices. **(Recommendation 24)**

### **Monitoring of respirable coal dust exposure**

A systematic, transparent and auditable exposure monitoring program is an essential part of best practice dust management in coal mines, offering a means by which to assess exposure and consequently health risk, and to also evaluate the effectiveness of the system of controls in place.

Prior to the regulatory changes that commenced on 1 January 2017 (introduced in response to the re-identification of CWP in Queensland), mine operators were not required to report dust monitoring results to the Mines Inspectorate. When the results exceeded the time-weighted OEL, mine operators were required under the risk-based regulatory framework to review and refine their systems to ensure risk to workers was at an 'acceptable level'.

However, the evidence gathered by the committee clearly indicates that often exceedances were not investigated and did not result in any changes to work practices or operations.

The absence of any regulated oversight of respirable dust monitoring or mandatory reporting of exceedances prior to 1 January 2017 allowed a culture of complacency and disregard for the serious risk posed by respirable dust exposure to develop across industry. Risk-based self-regulation of respirable dust as a hazard has failed to protect coal mine workers from repeated and significant exceedances of the OEL for respirable coal mine dust.

Real-time personal dust monitoring devices are an essential tool in the ongoing effort to mitigate the production and dissemination of respirable dust in coal mines. Their use by coal mine workers promotes worker confidence in the dust monitoring data gathered for compliance purposes and empowers coal mine workers to take charge of their own respirable dust exposure.

It is most concerning that despite senior officers from DNRM and SIMTARS making regular visits to the United States (USA) for meetings and consultation with MSHA and NIOSH over at least the past decade, it does not appear that any of them sought out information about the extensive research being conducted in the USA into the use of real-time personal dust monitoring devices including the PDM3700 (and its predecessors). Had those officers brought such information back to Queensland following any of those international visits, the implementation of these devices in Queensland mines might have been much further advanced than it is now.

Real time personal dust monitors, such as the Thermo Scientific PDM3700, should be assessed having regard to the scientific information already available world-wide, and if possible, certified for use in underground coal mines as soon as possible. **(Recommendation 25)**



An industry working group including coal mine operators, unions and government should be tasked with exploring the use of real time personal dust monitors as a compliance tool, including canvassing amendments to *Recognised Standard 14: Monitoring of respirable coal dust (RS14)*, to enable the use of real time personal dust monitors for compliance monitoring and reporting. **(Recommendation 26)**

The definition of 'further sample' in section 89A(5) of the CMSHR should be amended to allow the use of real time personal dust monitors, such as the Thermo Scientific PDM3700, for resampling after a trigger event. **(Recommendation 27)**

The inadequacy of the provisions for self-monitoring and management of dust exposures in Queensland mines was a central theme in evidence to the inquiry. Without sufficient guidance or oversight from the Mines Inspectorate and the Commissioner for Mine Safety and Health, these internal processes were vulnerable to deterioration over time, effectively enabling the deficient practices highlighted in evidence from coal mine workers. A wide range of submitters called for expert independent monitoring or third party review of monitoring data. Some noted that under the current system, questions about the quality and reliability of monitoring have persisted, due largely to the potential for service providers to be conflicted or constrained in their operations by the instructions they receive and their financial reliance on mining operators.

Some of these conflicts have been addressed through the recent regulatory amendments requiring companies to provide all dust monitoring results to the Mines Inspectorate, and to provide details of any exceedances to the Inspectorate, the Industry Safety and Health Representative (ISHR) and the Site Safety and Health Representative (SSHR). The development of a dust monitoring database for collation and recording of results will also address issues surrounding shortcomings in record-keeping, and support analysis of exposure data and trends over time.

Additionally, the establishment from 1 January 2017 of RS14 provides for the setting out of clear minimum standards of practice in relation to monitoring, helping to address concerns about sometimes 'patchy' services and variability in the diligence of private sector service provision in the occupational hygiene sector.

The committee notes that there is significant faith in the monitoring services provided by SIMTARS. A number of submitters considered SIMTARS might appropriately take charge of all monitoring in the state, noting that it already provides training to other service providers on best practice in dust monitoring. However, the committee also considers that our state's research body on mining safety and health should be more appropriately focused on the identification and dissemination of research and technological breakthroughs, to support a responsive and cutting edge industry. In addition, the committee considers that SIMTARS' current fee-for-service offerings sit uncomfortably with these aims, and notes that there is a significant body of professional expertise within the private sector.

Accordingly, the committee considers that Queensland would be best served by requiring companies to engage licensed and qualified private providers to conduct monitoring, and incorporating additional safeguards to ensure the integrity of monitoring in Queensland. In particular, in order to ensure the independence of sampling actions, it is important that there is a complete separation between mining operators and private occupational hygiene service providers. Mining companies must not have a commercial or any other interest in the providers they engage or in an associated third party entity.

All commercial providers of atmospheric dust monitoring for the purposes of compliance with the regulation should be required to be approved by the Commissioner for Mine Safety and Health, having regard to the expertise and qualifications of the person or entity conducting the monitoring. **(Recommendation 28)**

Results of all atmospheric dust monitoring undertaken in compliance with the regulation should be provided directly by the approved entity engaged to undertake the tests to each of the following: the Mine Safety and Health Authority, the coal mine operator (or person conducting the business at which the testing was undertaken), the miner who wore the device from which the test sample was taken,

and the relevant ISHR, district workers' representative, or union delegate for the business at which the testing was undertaken. **(Recommendation 29)**

### **Enforcement and oversight of coal dust management**

It is important that the instances of inadequate mitigation and monitoring practices reported to this committee are recognised as failures not only of compliance with legislation, but also of enforcement of the legislation. Regulations are only effective if the responsibilities and requirements encompassed within them are clearly articulated to relevant parties, and reinforced through appropriate oversight and guidance around the measures necessary for statutory obligations to be met.

In the field of occupational health and safety, there is often a distinction between efforts to address safety issues, which involve more immediate risks of physical danger, and health issues, which typically involve longer term or chronic risks and effects. The committee heard evidence that the history of coal mining incidents and multiple fatalities in Queensland, including the explosions at the Kianga and Moura mines that underpinned the development of the current legislation, has meant safety has often been at the forefront of enforcement efforts in Queensland. It was submitted that the skills, resources and inspection culture of the Inspectorate reflects this historical emphasis.

The primary focus of DRNM inspectors and SIMTARS on mine safety, rather than miners' health and the risks posed to it by exposure to respirable dust, was also evident in the travel reports obtained by the committee under summons. The documents produced included proposal memoranda, travel reports, itineraries and correspondence. The content of the documents clearly demonstrates a focus on international cooperation and knowledge sharing around mine safety, explosion risks and strata management. Unfortunately, there did not appear to be any focus on the part of Queensland public servants on respirable dust mitigation or monitoring technologies. On review of the documents produced by DNRM there was only one cursory mention of respirable dust, and not a single reference to CWP or its prevalence in the USA mining workforce.

No person or entity has ever been prosecuted in Queensland for failing to meet a safety and health obligation in relation to respirable dust.

The use of compliance powers by the Mines Inspectorate to enforce respirable dust exposure standards has been inconsistent and undermined by imprecise and ineffective language in directives. Non-compliance with directives has not been met with any real regulatory response by the mines inspectorate or Commissioner for Mine Safety and Health.

The current proportion of unannounced inspections undertaken by the mines inspectorate is totally inadequate. There must be an immediate, sustained, and significant expansion in the use of unannounced inspections by the Mines Inspectorate. The Mines Inspectorate should increase the proportion of unannounced inspections to a rate of at least 50 per cent of total inspections. **(Recommendation 30)**

Further, inspection activities by ISHR, and their equivalents under the other mining safety and health Acts, are integral to a robust and reliable risk-based approach to the regulation of safety and health in the mining industry. Industry and public confidence in this system would be significantly improved if ISHRs (and their equivalents) were empowered to undertake unannounced inspections without the requirement to give the mine operator 'reasonable notice' of the proposed inspection.

As such, section 119(1)(b) of the CMSHA and section 116 of the *Mining and Quarrying Safety and Health Act 1999* should be amended to remove the requirement for ISHRs to give 'reasonable notice' to the mine operator before the power to enter a mine site is exercised. **(Recommendation 31)**

One of the risks associated with formal and ongoing engagement between a regulator and the industry it regulates is regulatory capture. This occurs where an officer involved in administering a regulatory regime develops a relationship with the industry and may be influenced to represent their interest in advance of the interests of the regulator. The influence need not be overt, but may lead to a situation

where necessary compliance action is not taken, or when taken, is less severe than the circumstances warrant.

The Senate Committee identified that the state's 'light touch regulatory model' allows for close relationships between the Mines Inspectorate and the companies whose activities are being regulated – a situation that 'has the potential to be fertile ground for regulatory capture', particularly given the influence of the mining industry in Queensland.

The committee did not find any evidence that regulatory capture had impacted upon the inspection or compliance activities of the Mines Inspectorate in relation to respirable coal mine dust. However, current integrity policies of the inspectorate should be enshrined in regulation so that mine workers and the public may have greater faith in the independence of the mines inspectorate.

Mines inspectors should be prohibited for a limited period – perhaps six months – from inspecting mines at which they had worked within the past two years. Regulation should prohibit a person from being appointed to a statutory role at a mine (for example as SSE, underground mine manager, OCE) within six months of the person having conducted inspection activities as an inspector at that mine.  
**(Recommendation 32)**

The Mines Inspectorate's role is to ensure that acceptable safety and health standards are established and practiced within the mining and quarrying industries. Appointed inspectors possess a range of vocational and tertiary qualifications, dependent on the inspectorate's need at the time they were recruited. Qualifications held by inspectors include; first or second class certificates of competency, underground mine managers certificate, open-cut examiner certificates, mining engineering degrees, electrical engineering degrees or diplomas, mechanical engineering degrees or diplomas, post graduate studies and professional certification in occupational hygiene or ergonomist qualifications. To ensure inspectors develop their skills and understanding of the issues facing the industry, an ongoing program of continuous professional development is undertaken. However, there is no general overall training program or course of education required for mining inspectors in Queensland.

During its visit to the USA, the committee delegation learned about the recruitment, education and training of Authorised Representatives (mine safety and health inspectors) in the USA. The National Mine Health and Safety Academy, in West Virginia, is the world's largest institution devoted to health and safety in mining. It is a central training facility for federal mine safety and health inspectors, mine safety professionals, other government agencies, and the mining industry.

The Academy is led by the Superintendent of the Academy and consists of five major units:

- Department of Instructional Services
- Department of Mining Technology
- Department of Instructional Materials
- Facilities Maintenance Branch
- Printing and Training Materials Distribution.

Entry to the Academy is open to anyone with five years' experience in the mining industry. The Academy program is an intensive residential education and training course, run over eight months. On completion of the program, inspectors become Authorised Representatives of the federal Secretary of Labor, with statutory powers under the Federal Code.

Once appointed, Authorised Representatives are generally long-term mines inspectors. The delegation was advised that there is little movement between the role of Authorised Representative and positions within industry as mine operator officials. This suggests the Academy program, coupled with a dedicated career path for inspectors, may be a useful and effective tool in avoiding regulatory capture.

The Academy accepts candidates from international mining regulators and had trained students from Peru, China, Ukraine and Columbia. However, the Superintendent was not aware of any Queensland

mine inspectors having undertaken training at the Academy, although he did recall visits from senior officials of the Mine Inspectorate and DNRM over the years.

The Mines Inspectorate should consider making training and education at the National Mine Health and Safety Academy in the USA available to current or future mines inspectors. **(Recommendation 33)**

### **Dust compliance auditing**

While the establishment of a central dust database has been identified as having the potential to significantly increase transparency and accountability in relation to industry dust management, submitters emphasised the need for mining inspectors to carry out some degree of quality assurance of dust results. Noting that inspectors have powers of entry, the scope for unannounced testing – as is being explored by Coal Services in NSW – might more effectively address concerns that companies may 'schedule' or in some other way reduce the degree of independence of monitoring processes.

The extent to which the mines inspectorate currently undertakes atmospheric dust monitoring inspections and audits the dust sampling results obtained by mine operators is inadequate to ensure public and worker confidence in the integrity of that system.

The use of accompanied inspections by inspectors with appropriate qualifications and experience in occupational hygiene significantly improves the quality and reliability of dust exposure sampling data and is an essential part of the inspection regime.

The Mines Inspectorate should significantly increase the frequency and extent of its atmospheric dust monitoring inspections, including by undertaking accompanied inspections where inspectors with appropriate qualifications and experience in occupational hygiene observe coal workers during the period of atmospheric monitoring. **(Recommendation 34)**

A comprehensive database of dust monitoring results should be established and maintained by the Mine Safety and Health Authority. **(Recommendation 35)**

The establishment of a Standing Dust Committee, similar to that established in NSW, is a critical reform to ensure ongoing industry engagement and vigilance in addressing respirable dust issues.

A Standing Dust Committee should be established to periodically review atmospheric dust monitoring results and trends and report to the board of the Mine Safety and Health Authority. The committee should be chaired by the Commissioner of Mine Safety and Health or a delegate, and include representatives of underground mine operators, above-ground coal mine operators, metalliferous mine operators, coal ports, unions, and persons independent of the current mining industry. **(Recommendation 36)**

The Standing Dust Committee should have power to refer particular dust exceedances or trends in dust monitoring results to the Commissioner for Mine Safety and Health for consideration as to whether further investigation or enforcement action, including prosecution, is required. **(Recommendation 37)**

### **Health arrangements for coal workers**

All Queensland coal mine workers are required under the CMSHA and CMSHR to undergo a Coal Mine Workers' Health Scheme medical assessment prior to the start of their employment at a coal mine, and then at least once every five years during their employment.

The health scheme was established in 1983 by the then Queensland Coal Board to protect the health of coal miners by requiring that all coal mine workers undergo periodic health assessments. The health scheme is prescribed under Division 6, part 2 of the CMSHR.

In April 1984, the Queensland Coal Board published a report highlighting 75 cases or suspected cases of CWP among Queensland coal miners. In the intervening years to 2015, there were no cases of CWP reported in Queensland, with the incidence of the disease appearing to all but vanish. During this

period, those tasked with monitoring the health of Queensland coal workers were not actively looking for the disease, and in many cases were insufficiently informed and ill-equipped to enable its diagnosis.

The health scheme in its current form (and prior to significant changes effective from January 2017) was introduced in 2001. Key features of the scheme from 2001 until the most recent amendments commencing on 1 January 2017 were:

- Chest x-rays were not a compulsory component of the health assessment for every worker.
- The Nominated Medical Advisor (NMA) made the decision regarding a requirement for a chest x-ray, based on a risk of dust exposure to the worker as determined by the employer.
- An ILO classification field was not required on the form, and an abnormal x-ray reading field was to be completed by the NMA, not a specialist radiologist. The form simply required a 'yes/no' response to whether an x-ray was taken, and an 'abnormal/normal' notation regarding the results of the x-ray.
- NMAs were appointed by mine employers, under direct contract between the employer and the NMA.
- An examining medical officer (EMO) could conduct the health assessment under the supervision of the NMA.
- A worker's 'fitness for duty' was signed off by the NMA.
- Periodic health assessments were to occur at least every five years.

The department's responsibilities for the scheme included:

- storage of health assessment records, including the health assessment form, chest x-ray and x-ray report
- storage of records of NMAs appointed by mine employers
- appointment of a medical specialist to review conflicting health assessments, where necessary.

The committee discovered that efforts to improve the efficiency and purpose of the so-called Heath Surveillance Unit (HSU) during this period (firstly following a review in 2002 and again during the development of a proposed RIS on mine safety in 2013) became indefinitely delayed due to:

- the prioritisation of other perceived higher and more immediate risks, and
- a lack of agreement among tripartite advisory committees.

During the course of this inquiry it became apparent that CWP is not a disease that affects only underground coal mine workers. Although there have not yet been any confirmed cases of CWP identified in non-mine coal workers in Queensland, the committee heard evidence of significant dust exposure among coal mining communities, coal port terminal workers, rail workers and tunnel construction workers.

The committee considers that the current Coal Mine Workers' Health Scheme should be renamed the Coal Workers' Health Scheme, recognising the important inclusion of all workers involved in the mining, handling, processing and transportation of coal. **(Recommendation 38)**

Following the re-identification of CWP in Queensland in 2015, the Minister for Natural Resources and Mines, the Hon. Dr Anthony Lynham MP, commissioned an independent review of the respiratory component of the Coal Mine Workers' Health Scheme by the Monash Centre for Occupational and Environmental Health in collaboration with the University of Illinois, Chicago (the Monash Review).

Regrettably, the approach taken by DRNM to engaging a team of recognised experts to conduct this independent review was seriously flawed. Notwithstanding that Dr Robert Cohen and his team from the University of Illinois had initially proposed the review of the health scheme following the first cases of CWP in Queensland being reported in late 2015, DNRM's preferred approach at the time was that Monash University would be the primary contractor for the review, with the university undertaking a subcontract with Dr Cohen. The committee cannot understand why DNRM determined that it should

not contract directly with Dr Cohen and his team in the USA, especially given the Monash team had no specific experience in coal mining occupational health research and no experience with CWP or CMDLD. Dr Cohen attested to a delay of approximately 'eight to ten months' to complete the contract process, during which time his team worked unpaid on the review.

The committee is dismayed that DNRM failed to accept the proposal initially offered by Dr Cohen, the world's leading expert on CWP, and his team to review the respiratory component of the Coal Mine Workers' Health Scheme. There does not appear to have been any proper basis for DNRM to insist on contracting with an Australian university in circumstances where the necessary skills were readily available and being generously offered by the world-leading expert in the field. The failure to do so ignored their recognised status as world leaders in the respiratory health of coal mine workers and unnecessarily delayed what was a critical review of a failing system. The suggestion that DNRM could not contract directly with an international university is clearly specious, as proven by the fact DNRM now contracts directly with Dr Cohen's team at the University of Illinois to provide B-reader x-ray assessments.

The Monash Review reported in July 2016 that it had discovered 'major system failures at virtually all levels of the design and operation of the respiratory component of the current health assessment scheme'. The report included 18 major recommendations for reform of the health scheme.

The Monash Review was a thorough and professional review of the respiratory component of the Coal Mine Workers' Health Scheme. Its findings and recommendations have been universally endorsed by those witnesses and organisations who gave evidence or made submissions to this inquiry relevant to that review.

The committee has adopted all but two of those recommendations, and adapted them as necessary to give effect to its own recommendations elsewhere in this report. (See **Recommendation 39**)

From 1 January 2017 the Queensland Government substantially amended the CMSHR to give effect to some of the Monash recommendations.

New features of the current scheme include:

- All new coal mine workers are to undergo a health assessment, including respiratory function test and x-ray, upon entry into the coal mining industry.
- Respiratory function tests and chest x-rays for above-ground coal mine workers are to occur at least every 10 years.
- Respiratory function tests and chest x-rays for underground coal mine workers are to occur at least once every five years.
- All medical examinations are to be performed by a person qualified and competent to conduct the examination.
- All x-rays are to be performed in accordance with the ILO Guidelines.

In addition, retiring coal mine workers may upon request voluntarily undergo a retirement examination at the expense of the employer.

#### **Department of Natural Resources and Mines and the Coal Mine Workers' Health Scheme**

The evidence gathered in the course of this inquiry has clearly demonstrated that DNRM did not adequately administer the CMSHA to ensure coal mine workers were not exposed to the serious health hazard of respirable coal mine dust. In doing so, DNRM failed to protect the health of coal mine workers with respect to respirable coal mine dust.

The Health Surveillance Unit, DNRM (HSU) was established in 1998 to administer the health scheme after the Queensland Coal Board was abolished. The HSU reports to the Executive Director of Mine Safety and Health within DNRM. The department's occupational physician works within the HSU.

The committee was deeply disturbed by the evidence uncovered in relation to the HSU. From its establishment, the HSU failed to undertake any actual health surveillance. It served as nothing more than a storage unit for miners' chest x-rays and health records.

Senior executives of DNRM gave evidence that the role of the HSU in relation to the health scheme has been purely administrative, with no meaningful data analysis or clinical review of the health assessment records received. As a consequence of this view that the HSU, despite its name, had no more than a records storage function, the responsibility for identifying problems, errors or trends in coal miners' health assessments was left entirely to the relevant mine operator, its NMA, and the individual mine worker.

This approach completely failed to meet the policy objectives of the health scheme, namely to monitor and ensure the health of coal mine workers.

Even data entry and basic administration was hopelessly under-resourced - to the point where at times the HSU was staffed by only one part-time administration officer at the lowest classification level available. In 2005, HSU operated with only one full-time equivalent (FTE) employee. While the staff level fluctuated to some extent, the highest level of resourcing for the HSU between 2005 and 2010 was three FTE staff.

As a result of this chronic and significant under-resourcing, a large backlog of data processing developed, so that by 2015 the department had 10 years of health records to process. The HSU became overwhelmed with health assessment records during the mining boom, and the committee heard that many health records of the HSU were 'stored in a janitor's cupboard next to the female toilets, and in shipping containers at the SIMTARS site at Redbank'. Environmental conditions meant that when efforts were finally made to retrieve and review those records, many were destroyed or unreadable.

In 2002 DNRM undertook a review of the HSU. This review identified a vast number of short-comings in the then system, including that there were no available records for mine workers who had either retired from the mining industry early, or changed work tasks as a result of workplace injury or illness. The review made 21 substantive recommendations for reform of the health surveillance scheme, many of which were never implemented and ultimately became the subject of similar recommendations in the Monash Review in 2016, some 14 year later.

The failure to fully implement the recommendations of the 2002 *Review of the Health Surveillance Unit* was a significant lost opportunity to improve the functioning of the Coal Mine Workers' Health Scheme and ensure the HSU actually undertook meaningful health surveillance. Had this been done, DNRM may have been alerted to cases of CWP and been in a position to take action much sooner than it ultimately did in 2015.

One of the recommendations of the 2002 review was for DNRM to appoint an occupational physician, on a part-time basis, for a period of up to two years to oversee the implementation of a 'full health surveillance program'. It was intended that the HSU be supported in the long term by a Medical Advisory Panel, consisting of up to four medical practitioners who were experienced in the mining and/or quarrying industries and including at least two persons holding a specialist registration in occupational medicine. However, that recommendation was never implemented.

The Occupational Physician's role is to provide expert medical advice and assist in the identification and assessment of occupational health hazards at mine sites.

The department appointed Dr David Smith, who was a member of the review team, as Occupational Physician. Dr Smith was Occupational Physician from 2004 until his retirement early in 2017. He was employed at 0.6 FTE.

When DNRM commenced a recruitment program to replace Dr Smith as Occupational Physician for the HSU, senior executives prepared a list of duties for the role. No one involved in the formulation of the list discussed it with Dr Smith or sought his advice as to what duties should be expected of his replacement. That is particularly galling since over the course of Dr Smith's 12 years in the role no

senior executive of DRNM ever had a discussion with him about his key duties and accountabilities. Nor had he ever participated in any form of performance review. Nevertheless, DNRM was satisfied that upon Dr Smith's retirement the role only needed to be filled on a part-time basis.

Ultimately, DNRM experienced significant difficulties in identifying and appointing a suitable candidate as Dr Smith's successor. The committee received evidence in private hearings regarding the process adopted by DNRM to appoint Dr Smith's replacement. The committee has serious concerns about the process adopted and considers that it fell well short of what the public would reasonably expect of a process to fill such an important role in the regulatory scheme intended to protect coal workers' health.

The Public Service Commissioner should review the process adopted by DNRM for the appointment of the current Occupational Physician and consider whether there was any breach of the *Public Service Act 2008* or other statutory instrument. **(Recommendation 40)**

The committee considers that the person charged with responsibility for leading and overseeing the Coal Workers' Health Scheme must be a senior medical practitioner, with qualifications and experience as a specialist physician. Nothing less can be accepted for such an important role.

The committee is gravely concerned that at present this key position within the health scheme remains filled only on a part-time status and is not remunerated at a rate equivalent to a specialist of similar standing employed within the public health sector.

The current position described as 'Occupational Physician' within DNRM should be abolished and the current functions of that role should be incorporated into the functions of the new Executive Director – Medical Services within the Mine Safety and Health Authority. **(Recommendation 41)**

As a result of under-resourcing of the HSU during the mining boom, it became overwhelmed by a large number of health assessment records and a massive backlog developed. The department estimated it holds 395,478 health records of 135,382 workers for the period from January 1983 to October 2016. As at May 2016 the department estimated 170,000 records were in a backlog of unprocessed records. The committee heard that the backlog mostly represented approximately 10 years of records from 2006, with the earliest un-entered record found to be from 2000.

As at February 2017, the department informed the committee that 111,319 records had been processed, leaving a backlog of approximately 60,000 records still to be processed. An estimated 3,500 records from the backlog are being processed per week. Thankfully, in processing the backlog of records and entering new records from 2016, the department has not discovered any previously unidentified cases of suspected or confirmed CWP.

The committee remains concerned that there are records from the backlog that may have notations indicating a suspected case of CWP and that these are not being identified as they are processed. The department is clearing the backlog, but acknowledges that it is not looking for missed cases of CWP, as 'that has not been the focus'. This is a significant missed opportunity.

DNRM did not adequately administer the CMSHA to ensure coal mine workers were not exposed to the serious health hazard of respirable coal mine dust. In so doing, DNRM failed to protect the health of coal mine workers with respect to respirable coal mine dust.

Health assessment data should be captured and stored digitally in a health assessment database in a manner that allows regular and meaningful surveillance, so that it may be used to identify trends in disease, inform policy decisions and identify regional areas or individual mines for potential scrutiny. **(Recommendation 42)**

### **Coal workers' health assessments**

From 1993, the Coal Industry Employees' Health Scheme required coal mine managers to instruct the NMA to undertake a health assessment of a new employee. A chest x-ray was required of those entrants whose proposed duties included working in an underground mine or working in an



environment which, in the opinion of the NMA, was likely to involve exposure to dust. A key feature of the health scheme from 2001 was that the NMA made the decision regarding a requirement for a chest x-ray, based on a 'risk of dust exposure' to the worker as determined by the employer. This 'risk of dust exposure' assessment was part of the wider regulatory framework that has been described as risk based.

The committee heard that under the scheme prior to 2017, a health assessment was required every five years and a chest x-ray was required in consultation with the NMA to determine the level of risk in the mine, in terms of level of exposure to dust, in order for a worker to receive a chest x-ray. This meant that not every coal mine worker was x-rayed. Only those workers deemed to be at risk from dust exposure were required, necessarily, to be x-rayed under the scheme. In practice, it was the employer who determined whether or not a worker was at risk of dust exposure.

This arrangement is unacceptable in light of the re-identification of CWP. Health assessments under the Coal Workers' Health Scheme should be required for all coal workers, removing the current exception for workers employed for a 'low risk task'. **(Recommendation 43)**

Under the current health scheme, coal mine workers are required to undertake a health assessment upon commencing work in a coal mine for the first time, and then periodically - every 5 years for underground miners and every 10 years for above-ground miners.

The committee is satisfied there is a sufficient basis to require underground coal mine workers to undertake full health assessments including spirometry and chest x-ray or other approved imaging every three years. This recognises the overwhelming prevalence of CWP cases amongst underground coal miners.

The committee considers that all other coal workers, including above-ground mine workers, coal handling and transport workers, and coal-fired power station workers, should be required to undertake full health assessments, including spirometry and chest x-ray or other approved imaging, at least every six years.

All coal workers should be required to undertake a health assessment prior to commencing work in the coal industry, including coal transportation and handling outside coal mines. **(Recommendation 44)**

All underground coal mine workers should be required to undertake a health assessment every three years. **(Recommendation 45)**

All other coal workers (above-ground workers) should be required to undertake a health assessment at least every six years. **(Recommendation 46)**

During the course of this inquiry the committee noted Queensland Health's BreastScreen Queensland program as an example of a best practice public health screening program.

In addition to the program's network of screening and assessment service sites, BreastScreen Queensland provides mobile and relocatable screening services across Queensland. They publish a screening schedule to regional areas six months in advance on their website.

NIOSH operates a fleet of mobile screening vans to coal mine workers in coal mining regions in the USA. At no cost to the worker, the screening includes a work history questionnaire, chest x-ray, spirometry testing and blood pressure testing. NIOSH provides this service to approximately one thousand mine workers per year.

The Coal Workers' Health Scheme should obtain and utilise at least one Coal Workers' Health Scheme mobile unit, similar to those used by NIOSH, capable of delivering chest x-ray, spirometry, and general health assessments for coal workers and former coal workers in regional Queensland. **(Recommendation 47)**

The Coal Workers' Health mobile units should be properly staffed and maintained under the Coal Workers' Health Scheme. **(Recommendation 48)**

The cost of health assessments undertaken at the Coal Workers' Health Scheme mobile units should be met by the Coal Workers' Health Scheme. **(Recommendation 49)**

The committee notes that since the identification of CWP in 2015, DNRM has made information and factsheets about CWP and coal miners' health assessments available on its website. The department has also published a factsheet specifically for retired miners. However, throughout the course of this inquiry the committee secretariat has continued to field queries from mine workers and former mine workers concerned for their respiratory health on how they may obtain a respiratory health assessment and who is responsible for paying for such assessments. As at May 2017, there is no dedicated helpline service providing free and confidential advice to miners and their families concerning CWP and the health assessment process.

The entity responsible for the Coal Workers' Health Scheme should provide a public information service, consisting of a toll-free telephone helpline and online service, to give free and confidential advice to mine workers, former mine workers and their families who have concerns about their respiratory health **(Recommendation 50)**

Under the current Health Scheme, coal mine worker health assessments can be undertaken by, or under the supervision of, an NMA. NMAs are appointed by employers, including mining operators and contractors who employ coal mine workers. There is currently no requirement for the Commissioner for Mine Safety and Health, or any other regulator, to formally approve the appointment of medical practitioners as NMAs. Nor is there any formal system for vetting the addition of NMAs to the list held by DNRM. Selection and appointment of NMAs is entirely at the discretion of the mine operator, contractor or labour hire firm. The evidence obtained by the committee during this inquiry confirms the findings of the Monash Review and demonstrates the serious failings of the current health scheme.

An NMA must be a medical practitioner, but there are currently no other prescribed minimum qualifications or professional requirements, including having experience in occupational medicine or knowledge of coal mine operations.

The committee was troubled by evidence that the regulation allows for registered nurses and other non-doctors, who are designated as EMOs, to perform health assessment examinations that are later certified by a medical doctor as NMA without the doctor ever actually seeing the patient. This appears to be common practice because 'that is how the system is set up'.

None of the dozens of coal mine workers and former coal mine workers who gave evidence to the committee could recall being asked during a coal mine workers' health scheme health assessment for a detailed occupational history or history of occupational exposure to dust.

Tragically, several of the 21 Queensland coal workers now diagnosed with CWP recalled having health assessments and x-rays where they were certified as fit to work with no discussion of their occupational exposure to dust or the possibility they might have CMDLD.

The current regulatory regime fails to provide sufficient safeguards to ensure that medical practitioners engaged to perform health assessments under the health scheme possess the necessary skills and experience to properly perform those assessments.

There are far too many NMAs currently registered with DNRM to ensure they have sufficient exposure to and experience of coal mine workers to properly perform health assessments under the health scheme.

The absence of any requirement for NMAs to be approved by a regulatory body has allowed significant failures in the health scheme to develop and persist.

'Nominated Medical Advisors' should be renamed and redefined as 'Approved Medical Advisors'. **(Recommendation 51)**

Approved Medical Advisors must be approved as such by the Commissioner for Mine Safety and Health. **(Recommendation 52)**

A subset of Approved Medical Advisors with appropriate qualifications and experience in diagnosing occupational respiratory diseases should be approved by the Commissioner for Mine Safety and Health to conduct respiratory health assessments and designated as Approved Medical Advisor – Respiratory (AMA-R). **(Recommendation 53)**

The committee heard that high quality chest x-rays and spirometry (lung function testing) are vital components of a successful respiratory health surveillance program. The Monash Review found grave deficiencies in the standard of x-rays taken for the health scheme and in the competence of medical professionals interpreting the scans. Similar deficiencies in spirometry quality were apparent. The committee was shocked to hear evidence in March 2017 that around 20 per cent of new x-rays taken under the health scheme and sent from Queensland to the USA for reading by accredited B-readers continue to be of such poor quality they are unreadable.

The committee considers that comprehensive and specific training is essential to ensure those who are engaged to read and assess chest x-rays under the health scheme are able to do so properly. However, it is not necessary for Queensland to 're-invent the wheel', expending limited resources on providing training that is already available elsewhere.

It is clear there has been widespread systemic failure across all aspects of the health scheme. Significant further reform is immediately needed.

All health assessments under the health scheme should include spirometry testing undertaken by an appropriately qualified and experienced person or provider, approved by the Commissioner for Mine Safety and Health. **(Recommendation 54)**

All health assessments under the Coal Workers' Health Scheme should include a chest x-ray taken by an appropriately qualified and experienced person or provider, approved by the Commissioner for Mine Safety and Health. **(Recommendation 55)**

All coal workers' chest x-rays taken for the purposes of the Coal Workers' Health Scheme should be read and interpreted by an appropriately qualified and experienced radiologist approved by the Commissioner of Mine Safety and Health. **(Recommendation 56)**

All coal workers' chest x-rays taken for the purposes of the Coal Workers' Health Scheme should be assessed and classified for pneumoconioses using the International Labour Organisation (ILO) system for classification of radiographs by appropriately qualified persons approved for such purpose by the Commissioner for Mine Safety and Health. **(Recommendation 57)**

It is essential that, in establishing the improved Coal Workers' Health Scheme, and giving effect to these recommendations, precious time is not wasted re-inventing systems, processes and policies that have already been established elsewhere and may be usefully adapted to the Queensland context. The committee is mindful that to every extent, the Coal Workers' Health Scheme must be designed and implemented to achieve the best possible health outcomes for our coal workers.

Dr Robert Cohen has indicated his desire and willingness to help establish a world's best practice Coal Workers' Health Scheme here in Queensland. His involvement, or that of an equivalent world-leading expert in coal worker health, would help ensure industry, worker, and community confidence in the new Scheme.

Dr Robert Cohen, or another internationally recognised expert on the surveillance and management of coal workers' health, should be engaged to consult with and advise government on the establishment of the improved Coal Workers' Health Scheme and the implementation of these recommendations as soon as practicable. **(Recommendation 58)**

### **Queensland Health**

The committee considers there is also an important role in the reforms to the Coal Workers' Health Scheme for the Chief Health Officer, Queensland.

Cases of CWP/CMDLD identified or diagnosed by medical professionals should be compulsorily reported to the Chief Health Officer, Queensland, as a notifiable disease under the *Public Health Act 2005*. **(Recommendation 59)**

The legislative framework should require the Chief Health Officer to report on an annual basis to the Mine Safety and Health Authority and to the parliamentary committee with responsibility for the authority on Queensland Health's activities in relation to CMDLD, including CWP. **(Recommendation 60)**

#### **Industry stakeholders**

The Coal Mining Safety and Health Advisory Committee (CMSHAC) was established in 2001. It is a statutory committee made up of representatives from industry, unions and government, with its primary role being to give advice and make recommendations to the Minister about promoting and protecting the safety and health of persons at mines. Between 2002 and 2015, any changes to content and requirements of the health assessment form were the subject of consultation with the CMSHAC.

The committee heard evidence that a number of key reforms to the Coal Workers' Health Scheme have failed to be implemented because they did not enjoy tripartite support within the CMSHAC. Whether or not there is merit in that suggestion, it is apparent that the CMSHAC (and similar committees established under the other mining safety and health Acts) would no longer serve a useful purpose under the new regulatory framework proposed by the committee. The statutory functions of these committees could easily be transferred to the board of the Mining Safety and Health Authority, which includes widespread industry representation including mine operators and unions.

The CMSHAC and similar committees established under the mining safety and health Acts should be abolished and their statutory functions transferred to the board of the Mine Safety and Health Authority. **(Recommendation 61)**

#### **Workers' compensation**

The *Workers' Compensation and Rehabilitation Act 2003* (Qld) (WCRA) and associated regulation establishes Queensland's system of workers' compensation. The WCRA requires an employer to insure or self-insure against work-related injury sustained by a worker, where the work is a significant contributing factor to the injury. Statutory benefits (including lost wages, medical expenses, and a lump sum in cases of permanent impairment) are available under the WCRA where a worker can show that his or her employment was a significant contributing factor to their disease. The scheme is a no fault scheme, which means that an injured worker does not have to prove any negligence by their employer or other party for the injured party to be entitled to statutory benefits.

CWP and the other CMDLD are defined as 'latent onset injuries' under s36A of the WCRA. As such, an entitlement to workers' compensation arises when a doctor first diagnoses the condition.

A worker can seek common law damages where they can show negligence on the part of the employer (or a third party). Should the worker be able to establish negligence, they can pursue common law damages against their employer or other party responsible for causing their disease. Damages may be for pain and suffering, loss of income and future loss of earning capacity. There are no time limits within which a worker must bring a common law claim for a 'dust disease'. However, a worker who is assessed as having less than 20 per cent permanent impairment must choose between a statutory lump sum and common law damages.

The Queensland Office of Industrial Relations (OIR) advised in April 2017 that there had been 41 claims lodged for CMDLD among Queensland coal mine workers. Of these, six were lodged with self-insurers and the remainder with WorkCover Queensland (WorkCover). As at April 2017, WorkCover had accepted eight claims with a diagnosis of CWP. An additional 14 claims were pending. Of the six claims made to self-insurers, three had been accepted as CWP, two had been accepted with an alternative diagnosis, and one was pending a decision.

The committee heard evidence that there are some significant failings of the workers' compensation scheme affecting coal mine workers diagnosed with or concerned about CWP and CMDLD.

There are significant costs associated with screening and diagnosis for CWP. Some miners have experienced difficulties having these costs met through workers' compensation.

Workers who have made a claim and received some form of compensation, either in lump sum or as common law damages, are not able to reopen their claim should their CWP progress or symptoms deteriorate.

There is currently no mechanism for workers diagnosed with CWP or CMDLD to access any lump sum compensation payment if they are not assessed as having any permanent incapacity for work, regardless of the fact that a CWP diagnosis permanently precludes the worker from working in a dusty mining environment.

The Industrial Relations Minister, the Hon. Grace Grace MP, convened a workers' compensation stakeholder reference group to address the issues and make recommendations for reform of the current workers' compensation scheme. The group recommended:

- the introduction of a medical examination process for former or retired coal mine workers who have concerns that they may have CWP who retired or left the mining industry prior to 1 January 2017, with costs to be borne by insurers
- statutory clarification that a worker with simple CWP who experiences disease progression can apply to reopen their claim to access further benefits under the workers' compensation scheme
- enhanced rehabilitation and return to work programs for those diagnosed with simple CWP, to assist them back into suitable alternative employment
- the alignment of the workers' compensation scheme with arrangements for the health scheme.

The committee is satisfied that the legislative arrangements of the current workers' compensation scheme in Queensland are not adequate to provide for the needs of retired coal miners, the needs of miners who may not be entitled to a lump sum payment due to the absence of permanent impairment, or the needs of miners who have already accepted some form of compensation but whose lung disease has since progressed.

The committee considers that these proposed reforms to the current workers' compensation scheme, rather than the establishment of a 'victims fund' or other new compensation scheme for coal workers, are the best response to the current deficiencies in the workers' compensation scheme to meet the needs of those diagnosed with CWP or CMDLD.

On that basis, the committee adopts the recommendations of the workers' compensation stakeholder reference group, adapted as follows:

The *Workers' Compensation and Rehabilitation Act 2003* and *Workers' Compensation and Rehabilitation Regulation 2014* should be amended as necessary to provide for:

- a) the introduction of a medical examination process, with costs to be borne by insurers, for former or retired coal workers who have concerns that they may have CWP or CMDLD and who retired or left the mining industry prior to the commencement of the proposed new provisions of the Coal Workers' Health Scheme for retired miners
- b) statutory clarification that a worker with CWP or CMDLD who experiences disease progression can apply to reopen their workers' compensation claim to access further benefits under the workers' compensation scheme
- c) enhanced rehabilitation (including, where appropriate, pulmonary rehabilitation) and return to work programs for those diagnosed with CWP or CMDLD, to assist them back into suitable alternative employment
- d) the alignment of the workers' compensation scheme with proposed new arrangements for the Coal Workers' Health Scheme. **(Recommendation 62)**

### **Retired and former miners**

During the course of this inquiry the committee heard of the importance to the mining workforce of mining communities, including their families and friends, where the shared knowledge of mining safety and health is valued and where people support and assist each other. Mining communities have collectively felt the strain during the mining boom and in the current economic climate. The committee acknowledges the important role of the CFMEU Mining and Energy Division in maintaining contact with retired and former miners and ensuring their collective experience and knowledge is not lost to the industry.

In terms of access to the health scheme by retired and former miners, there is currently no regulated requirement for coal mine workers who leave the industry (either to work in another industry or to retire) to be assessed on their departure or subsequently monitored in terms of their respiratory health. At present, it is the responsibility of the individual to seek further monitoring.

From 1 January 2017, retired and former mine workers can access health assessments after their employment has ended. Coal workers can have a 'retirement examination' within three months of their retirement. The option is available to workers who have worked in the coal mining industry for at least three years.

The committee considers that it is crucial that these initiatives are enshrined in legislation, through appropriate statutory amendments to the CMSHA, CMSHR and related instruments and scheme documentation.

The Coal Workers' Health Scheme should be extended to provide for continuing health assessments of retired and former coal workers, on a voluntary basis, under the scheme. These assessments should include the same elements and criteria as routine assessments under the scheme, and be provided for in addition to the retirement examinations provided for by the current scheme. **(Recommendation 63)**

In recommending the statutory extension of the Coal Workers' Health Scheme, the committee recognises that there can be difficulties in locating and therefore communicating with retired and former coal mine workers. DNRM advised the committee that it commenced targeted advertising campaigns to raise awareness of CWP amongst retired workers and to encourage them to obtain medical advice if they have any concerns.

Noting these challenges, the committee considers that it is crucial that DNRM continues to actively promote the availability of free health assessments to retired and former mine workers until the Mine Safety and Health Authority is established.

The entity responsible for the Coal Workers' Health Scheme should take all reasonable steps to ensure that free health assessments are promoted to, and accessible for, retired and former miners. **(Recommendation 64)**

### **Other coal workers and communities**

Whilst the main focus of the inquiry so far has been on coal mine workers, the committee heard of coal dust exposure among coal mining communities, coal port terminal workers, and rail workers involved in the transportation of coal. The evidence raises major cause for concern for these other occupational groups.

Consequently, on the committee's urging, the terms of reference for the committee's inquiry were extended on 23 March 2017 to include occupational respirable dust exposure for coal rail workers, coal port workers, coal-fired power station workers and other workers. As noted earlier, these aspects will be the subject of a further report by the committee to be delivered by 29 September 2017.

However, based on the evidence already considered in this inquiry, the committee considers that the requirements of the CMSHA and CMSHR relating to respirable coal dust monitoring and reporting, and health surveillance, should apply to all coal workers.

An expanded or additional category of workers, defined as 'coal worker', should be established to include workers involved in the transportation and handling of coal outside a 'coal mine' including rail workers (e.g.: coal train loaders and drivers), port workers (eg: dozer, stacker/reclaimer, and ship loader operators), power station workers, and maritime workers (eg: tug and line boat crew). **(Recommendation 65)**

The definition of 'coal worker' for these purposes should ensure these workers are protected by the legislated OEL, their working environments are subject to mandatory atmospheric monitoring of respirable dust and mandatory reporting of the results of that monitoring, and by the Coal Workers' Health Scheme. **(Recommendation 66)**

#### **Fact finding by a select committee**

Select committees of the parliament are rare. It is rarer still for a select committee to be charged by the parliament with terms of reference requiring the committee to inquire into facts and events that have led to serious failures of public policy resulting in serious illness or death. Such tasks are usually left to Commissions of Inquiry with significantly greater time and resources than are afforded to a select committee. The initial terms of reference for this inquiry required the committee to undertake a process of fact-finding – akin to the process that would ordinarily be undertaken by a Commission of Inquiry – to determine:

- the adequacy of arrangements to prevent and eliminate CWP in Queensland
- the roles and actions of government departments and agencies, mine operators, nominated medical advisers, radiologists, industry safety and health representatives and unions in those arrangements
- the efficacy of methodologies and processes used in the coal mining industry for dust measurement and mitigation.

In light of the special nature of this inquiry, it is necessary and appropriate to make comment regarding those who have participated in the inquiry and contributed to the evidence upon which the committee's findings and recommendations are based.

#### Miners

Much of the evidence given to the committee by current and retired coal workers was taken during hearings conducted in regional Queensland in November and December 2016. By travelling to key mining communities for these hearings, the committee aimed to minimise geographical barriers to participation and to better ensure miners and other coal workers, and their families, were able to tell their stories. The committee recognises that many workers nevertheless travelled significant distances and made various personal or professional sacrifices in order to appear. Many witnesses attended public hearings to give evidence immediately before or after a 12 hour shift.

The committee was particularly moved by the evidence given by CWP sufferers and their families. The committee is greatly indebted to these witnesses, who bravely shared very personal accounts of their declining health and their experiences of (mis)treatment by medical professionals, insurers and government officials, prior to and following their diagnosis. The physical and emotional toll of travelling to hearings and recounting these experiences was not lost on the committee. The testimony of the wives and partners of miners – like Mrs Sue Byron, Mrs Daphne Verrall and Mrs Kim Smyth – especially provided crucial insights into the devastating and wide-ranging effects of CWP not only on the person diagnosed, but on their family and wider community.

The committee expresses its admiration and gratitude to all coal workers and their families who gave evidence, in both public and private hearings, for their vital contribution to this inquiry. Without their willingness to come forward and tell their stories, the committee could never have fulfilled its terms of reference.

### Unions

The CFMEU Mining and Energy Division particularly played an important role in promoting the committee's inquiry activities and public hearings, and supporting mine workers and other expert witnesses to participate in these hearings and help inform the committee's deliberations.

### Mine operators

The committee received submissions from current Queensland mine operators including Vale Australia Pty Ltd, Caledon Coal, Peabody Energy, Anglo American, BHP Billiton, and Glencore. The committee also received two submissions from the representative body of mine operators, the QRC. The submissions received from mine operators, while understandably keen to protect their own interests and present their responses to CWP in the best light, were nonetheless of great assistance to the committee in fulfilling its terms of reference.

The committee invited senior executives from five major coal mine operators to attend and give evidence in person before the committee. Initially, all five companies agreed to do so voluntarily. However, the committee was most disappointed that BHP Billiton - Australia's largest coal mine operator - after initially indicating its willingness to cooperate fully with the committee, subsequently declined to voluntarily provide further evidence relevant to its operations at Broadmeadow mine. Instead, the committee exercised its power to require the attendance of those executives by summons. [The committee notes, but does not accept, the explanation subsequently provided by BHP Billiton that 'it appears the source of the issue was a misunderstanding with the committee secretariat in relation to the nature of the invitation to appear... ']

### Department of Natural Resources and Mines

From the commencement of this inquiry, there has been a substantial divergence between the pledges of DNRM officials to provide ready assistance to the committee's inquiry, and the degree to which such assistance or information was in fact forthcoming.

The committee was appalled by the level of disregard for its work demonstrated by some senior officers of DNRM. Despite repeated assurances from DNRM that it would work expeditiously to assist the committee in any way possible, the committee has been met with resistance and obstruction by some officers of DNRM. Key departmental witnesses, vital to understanding the system failure at HSU were not advised they would be required to give evidence, were then produced only under threat of summons, and were not properly prepared by DNRM prior to their appearances before the committee. Frequently senior officers have been unprepared and unable to answer important questions relevant to the committee's inquiry and where answers were given, often the officers were argumentative and resistant to acknowledging the wide-ranging failures of their department.

This appears to be a reflection of a culture and attitude that has built up over 30 years.

In addition, the committee was disappointed on some occasions to discover new or updated information in relation to DNRM's response to committee enquiries or questions in a second-hand manner, including through media releases, new publications on the department's website, or informal advice from stakeholders, rather than through direct communication from DNRM. Further, the committee's delegation to the USA learned about interactions between DNRM and NIOSH, MSHA and the University of Illinois Black Lung Center of Excellence, that should properly have been reported to the committee by departmental officers. During the inquiry this information was of extraordinary assistance to the committee. Had it not been disclosed to the committee's delegation in the USA, it is likely the committee would never have learned it and this report would have been deficient.

These inconsistencies were a source of significant frustration for committee members, given the seriousness of the inquiry and its effects on Queensland mine workers and their families. The issues at hand required a dedicated commitment to uncovering the factors and events contributing to the systemic failures in addressing CWP, regardless of where or with whom fault may lie. The committee



is concerned that efforts to avoid blame and delays associated with message management within DNRM may have hindered an appropriately transparent and open inquiry process.

The committee is extremely concerned that public service officers were not properly prepared or aware of their obligations under the Code of Practice to assist the committee's inquiry by providing full and honest answers to questions wherever possible.

The cooperation of DNRM, and some of its senior executive officers, with the work of this committee fell well below the standard required of public service officers assisting a parliamentary committee.

The committee recommends that the Public Service Commissioner review the transcripts of public and private hearings of the committee involving Queensland public servants and consider the extent to which those officers cooperated with and assisted the committee, including whether or not any public servant misled the committee or otherwise breached the *Code of Practice for Public Service Employees Assisting or Appearing Before Parliamentary Committees*. **(Recommendation 67)**

The committee has uncovered widespread administrative failings. As with all select committees, the committee was established to examine particular terms of reference and only for a limited time. From its establishment to the date of this report the committee was given a period of a little over eight months. Had a commission of inquiry been established to examine the issues addressed by the committee, the timeframe would no doubt have been considerably longer. Experience demonstrates that commissions of inquiry can easily cost government upwards of \$10 million. This committee has been resourced in part from general resources of the parliament, and extra costs to the present time of perhaps one-twentieth of that figure. This inquiry demonstrates the efficiency and effectiveness of the use of parliamentary committees for inquiries of this nature.

Parliamentary committee inquiries of the nature of this inquiry are very rare, indeed almost without precedent. This committee believes there is a need for a stand-alone committee to investigate incidents and events in public administration.

The committee recommends that there be established, as a statutory committee of the parliament, a Committee on Public Administration. The committee is to have the power to investigate matters of public administration, on its own motion or on reference from the Assembly. The committee is to consist of three members nominated by the Leader of the House and three members nominated by the Leader of the Opposition. The committee is to have the power to call for persons, documents and other items. **(Recommendation 68)**



## Key Findings

Since May 2015, 21 current and former coal mine workers in Queensland have been diagnosed with CWP or 'black lung' disease – an entirely preventable disease that is caused exclusively by excessive and prolonged exposure to respirable coal mine dust.

Two confirmed cases of CWP involve coal miners who worked exclusively in open-cut coal mines, proving that CWP does not occur solely in underground coal mine workers.

There will almost certainly be many more cases of CWP identified amongst current and former Queensland coal mine workers.

It is highly unlikely that CWP was ever eradicated in Queensland. It did not 're-emerge' in 2015 but was merely re-identified, after responsible Queensland authorities failed to look for it or properly identify it for more than 30 years.

Only a truly independent regulatory body, charged with responsibility for ensuring the safety and health of Queensland's mine and resource industry workers, can restore public faith in the system.

The safety and health fee is not an appropriate method of funding a truly independent mine safety and health regulator with a fully functional mines inspectorate.

The funding mechanism for these vital government functions should not be so closely tied to the number of workers employed in the mining industry at any given time.

There is ample scientific evidence that the current occupational exposure limit (OEL) for respirable coal mine dust in Queensland is exposing coal mine workers to excessive risk of developing CWP, CMDLD and other respiratory disease.

Many coal mine workers do not believe they can freely report health or safety concerns without risking adverse consequences or reprisal action. Coal mine operators have not done enough to encourage all workers, including labour hire workers, to report safety and health concerns and assure them that such reports will not result in adverse consequences or reprisal action.

The absence of any regulated oversight of respirable dust monitoring or mandatory reporting of exceedances prior to 1 January 2017 allowed a culture of complacency and disregard for the serious risk posed by respirable dust exposure to develop across industry. Risk-based self-regulation of respirable dust as a hazard has failed to protect coal mine workers from repeated and significant exceedances of the OEL for respirable coal mine dust.

Real-time personal dust monitoring devices are an essential tool in the ongoing effort to mitigate the production and dissemination of respirable dust in coal mines. Their use by coal mine workers promotes worker confidence in the dust monitoring data gathered for compliance purposes and empowers coal mine workers to take charge of their own respirable dust exposure.

The use of compliance powers by the mines inspectorate to enforce respirable dust exposure standards has been inconsistent and undermined by imprecise and ineffective language in directives.

Non-compliance with directives has not been met with any real regulatory response by the Mines Inspectorate or Commissioner for Mine Safety and Health.

The current proportion of unannounced inspections undertaken by the mines inspectorate is totally inadequate. There must be an immediate, sustained, and significant expansion in the use of unannounced inspections by the mines inspectorate.

Inspection activities by Industry Safety and Health Representatives, and their equivalents under the other mining safety and health Acts, are integral to a robust and reliable risk-based approach to the regulation of safety and health in the mining industry. Industry and public confidence in this system would be significantly improved if ISHRs (and their equivalents) were empowered to undertake unannounced inspections without the requirement to give the mine operator 'reasonable notice' of the proposed inspection.

There is no evidence that regulatory capture has impacted upon the inspection or compliance activities of the mines inspectorate in relation to respirable coal mine dust. However, current integrity policies of the inspectorate should be enshrined in regulation so that mine workers and the public may have greater faith in the independence of the Mines Inspectorate.

The extent to which the Mines Inspectorate currently undertakes atmospheric dust monitoring inspections and audits the dust sampling results obtained by mine operators is inadequate to ensure public and worker confidence in the integrity of that system.

The use of accompanied inspections by inspectors with appropriate qualifications and experience in occupational hygiene significantly improves the quality and reliability of dust exposure sampling data and is an essential part of the inspection regime.

The establishment of a Standing Dust Committee in Queensland is a critical reform to ensure ongoing industry engagement and vigilance in addressing respirable dust issues.

There was no proper basis for DNRM not to accept the proposal from Dr Cohen and the University of Illinois to review the respiratory components of the Coal Mine Workers' Health Scheme. The failure to do so ignored their recognised status as world leaders in the respiratory health of coal mine workers and unnecessarily delayed what was a critical review of a failing system.

The Monash Review was a thorough and professional review of the respiratory component of the Coal Workers' Health Scheme. Its findings and recommendations have been universally endorsed by those witnesses and organisations who have given evidence or made submissions to this inquiry in reference to that Review.

The failure to fully implement the recommendations of the 2002 *Review of the Health Surveillance Unit* was a significant lost opportunity to improve the functioning of the Coal Workers' Health Scheme and ensure the HSU actually undertook meaningful health surveillance. Had this been done, DNRM may have been alerted to cases of CWP and been in a position to take action much sooner than it ultimately did in 2015.

DNRM did not adequately administer the *Coal Mining Safety and Health Act 1999* to ensure coal mine workers were not exposed to the serious health hazard of respirable coal mine dust. In so doing, DNRM failed to protect the health of coal mine workers with respect to respirable coal mine dust.

The allowance for some coal mine workers to be excluded from routine chest x-ray screening if not considered to be 'at risk' of dust exposure is unacceptable in light of the re-identification of CWP.

There is a sufficient basis to require underground coal mine workers to undertake full health assessments including spirometry and chest x-rays or other approved imaging every three years. This recognises the overwhelming prevalence of CWP cases amongst underground coal miners.

All other coal workers, including above-ground coal mine workers, coal handling, port, and transport workers, and coal-fired power station workers, should be required to undertake full health assessments, including spirometry and chest x-rays or other approved imaging, at least every six years.

The current regulatory regime fails to provide sufficient safeguards to ensure that medical practitioners engaged to perform health assessments under the Coal Mine Workers' Health Scheme possess the necessary skills and experience to properly perform those assessments.

There are far too many Nominated Medical Advisors currently registered with DNRM to ensure they have sufficient exposure to and experience of coal mine workers to properly perform health assessments under the health scheme.

The absence of any requirement for NMAs to be approved by a regulatory body has allowed significant failures in the health scheme to develop and persist.

There has been widespread systemic failure across all aspects of the Coal Mine Workers' Health Scheme. Significant further reform is immediately needed.

The Coal Mining Safety and Health Advisory Committee (and similar committees established under the other mining safety and health Acts) would no longer serve a useful purpose under the new regulatory framework proposed by the committee. The statutory functions of these committees could easily be transferred to the Board of the Mining Safety and Health Authority, which includes widespread industry representation including mine operators and unions.

The legislative arrangements of the current workers' compensation scheme in Queensland are not adequate to provide for the needs of retired coal miners, the needs of miners who may not be entitled to lump sum payment due to the absence of permanent impairment, or the needs of miners who have already accepted some form of compensation but whose lung disease has since progressed.

The cooperation of DNRM, and some of its senior executive officers, with the work of this committee fell well below the standard required of public service officers assisting a parliamentary committee.

Despite repeated assurances from DNRM that it would work expeditiously to assist the committee in any way possible, the committee has been met with resistance and obstruction by some officers of DNRM. Documents requested have not been produced in a timely manner, requiring the issue of a summons. Key departmental witnesses, vital to understanding the failure of the health scheme, were not advised they would be required to give evidence, were then produced only under threat of summon, and were not properly prepared by DNRM prior to their appearances before the committee. Frequently senior officers of DNRM have been unprepared and unable to answer important questions relevant to the committee's inquiry and where answers were given, often the officers were argumentative and resistant to acknowledging the wide-ranging failures of their department.

There is a need for a stand-alone statutory committee of the Queensland parliament to investigate incidents and events in public administration.



## Recommendations

### Recommendation 1

There should be a truly independent Mine Safety and Health Authority, established as a statutory authority and body corporate, with responsibility for ensuring the safety and health of mining and resource industry workers in Queensland.

### Recommendation 2

The Mine Safety and Health Authority should be established under its own legislation as a 'unit of public administration' for the purposes of the *Crime and Corruption Act 2001* and a 'public authority' for the purposes of the *Right to Information Act 2009*.

### Recommendation 3

The Mine Safety and Health Authority should be governed by a Board of Directors, chaired by the Commissioner for Mine Safety and Health, and including representation of:

- coal mine operators
- metalliferous mine operators
- unions
- resources transportation and ports, and
- persons independent of the mining industry (including resources transportation and ports).

### Recommendation 4

A parliamentary committee should oversee and monitor the operation of the Mine Safety and Health Authority. The Minister should be required to consult with the parliamentary committee regarding the appointment of the Commissioner and Board.

### Recommendation 5

The Mine Safety and Health Authority should be established in Mackay, ensuring the Commissioner, senior management, Mines Inspectorate, Coal Workers' Health Scheme, and mobile units are all based in central Queensland.

### Recommendation 6

The Commissioner for Mine Safety and Health should be a senior officer of the Mine Safety and Health Authority and given proper statutory independence, with the Commissioner not subject to the direction of the Minister.

### Recommendation 7

The Mines Inspectorate, currently within DNRM should be administratively relocated within the Mine Safety and Health Authority, ensuring statutory and administrative independence from DNRM.

### Recommendation 8

The Commissioner should have an express power to direct inspectors, including the chief inspector, inspection officers and authorised officers, in relation to the investigation of a possible offence or offences against the mining safety and health Acts.

### Recommendation 9

The occupational hygiene services currently offered by SIMTARS on a fee for service basis should be discontinued. The officers who currently provide those services should be redeployed to the Mine Safety and Health Authority to undertake research and/or occupational hygiene inspection activities within the inspectorates.

**Recommendation 10**

The Mine Safety and Health Authority should encompass and have responsibility for administering the Coal Workers' Health Scheme, supported by a Memorandum of Understanding with Queensland Health and the Office of Industrial Relations, to ensure full and complete cooperation and appropriate data sharing between those entities.

**Recommendation 11**

The Mine Safety and Health Authority, including the Coal Workers' Health Scheme, should be supported by an expert Medical Advisory Panel (as per recommendation 17 of the 2002 review of the Health Surveillance Unit) of suitably experienced and qualified medical specialists and internationally recognised experts, including at least two respiratory physicians (one of whom has internationally recognised experience and expertise in the prevention, identification, and treatment of CWP) and at least one specialist in occupational medicine.

**Recommendation 12**

The Mine Safety and Health Authority should appoint a suitably qualified and experienced specialist physician, registered as such with the Australian Health Practitioners' Regulation Agency, as Executive Director – Medical Services to lead the Coal Workers' Health Scheme. The Executive Director – Medical Services should: advise and assist the Commissioner and Board of Directors on medical matters, provide clinical guidance and leadership in relation to the safety and healthy activities of the Authority, oversee the approval of health service providers under the Coal Workers' Health Scheme, and provide clinical oversight and guidance to Approved Medical Advisors and others performing health assessments under the Coal Workers' Health Scheme.

**Recommendation 13**

The Executive Director – Medical Services should be engaged by the Mine Safety and Health Authority on a full-time basis and remunerated at a rate that is equivalent to a specialist of similar standing and responsibility employed by Queensland Health or a Queensland Hospital and Health Service.

**Recommendation 14**

The Mine Safety and Health Authority should have a properly resourced and dedicated health research function, including epidemiological research into health conditions experienced by mine workers. These research functions should be undertaken in a collaborative way, drawing upon and sharing research with leading international research bodies such as NIOSH.

**Recommendation 15**

The Mine Safety and Health Authority should appoint a suitably qualified and experienced legal practitioner as General Counsel to provide general legal advice to the Authority and Board, and advise the Commissioner for Mine Safety and Health on the exercise of statutory powers including in relation to prosecutions and other compliance activity.

**Recommendation 16**

The safety and health fee currently provided for by part 2A of chapter 2 of the Coal Mining Safety and Health Regulation 2001 should be abolished.

**Recommendation 17**

The Mine Safety and Health Authority should be funded by a dedicated proportion of coal and mineral royalties paid to the Queensland Government, to be determined in consultation with industry and unions after an assessment of the operating costs of the Authority is undertaken.

The dedicated proportion of the royalties should be fixed by regulation and reviewed periodically by the parliamentary committee responsible for the Mine Safety and Health Authority.



**Recommendation 18**

Any surplus income derived from the dedicated proportion of royalties that is not allocated to, or expended from, the annual budget of the Authority should be invested with the Queensland Investment Corporation for the future research and the operational needs of the Authority.

**Recommendation 19**

An Occupational Exposure Limit (OEL) for respirable coal dust (including mixed mineral coal mine dust) should be set requiring duty holders to ensure a 'coal worker' is not exposed to atmosphere containing respirable dust exceeding an average concentration, calculated under AS 2985, equivalent to the following for an 8-hour period—

- for coal dust – 1.5mg/ m<sup>3</sup> air, and
- for silica – 0.05mg/m<sup>3</sup> air.

Section 89 of the Coal Mining Safety and Health Regulation 2001 should immediately be amended to give effect to this recommendation.

Consideration should then be given to relocating the OEL provisions within the *Coal Mining Safety and Health Act 1999*.

**Recommendation 20**

- a) An underground mine operator should be required to submit to the Authority a dust abatement plan and ventilation plan for approval by the Commissioner for Mine Safety and Health before any underground coal mining operations are commenced; and again, with appropriate amendment as necessary, before mining operations are commenced on any new longwall block.
- b) An above-ground (surface) mine operator should be required to submit to the Authority a dust abatement plan for approval by the Commissioner for Mine Safety and Health before any mining operations are commenced.
- c) The Commissioner for Mine Safety and Health should take into account the mine operator's compliance history and record of respirable dust monitoring results in deciding whether to approve, reject, or require amendments to the dust abatement and/or ventilation plans.

**Recommendation 21**

It should be an offence for a mine operator to commence or continue mining operations, without prior approval by the Commissioner for Mine Safety and Health of the required dust abatement plan and, where applicable, the required ventilation plan for the relevant mining operation.

**Recommendation 22**

The Commissioner for Mine Safety and Health should actively promote awareness in the mining industry that it is an offence for any person to cause a detriment to another person because, or in the belief that, the other person has made a complaint or has in any other way raised a coal mine safety issue.

The Commissioner should give special attention to the investigation of any complaints of such conduct and consider prosecuting offences of this nature if there is sufficient evidence and it is in the public interest to do so.

**Recommendation 23**

The Mine Safety and Health Authority should establish and maintain a database of dust techniques and technologies used in Queensland coal mines to be used for auditing purposes and to inform research and analysis into the efficacy of engineering dust controls.

**Recommendation 24**

The Mine Safety and Health Authority should research and review new dust techniques and technologies being used in jurisdictions such as New South Wales and the United States and publish its findings to ensure all those involved in coal mining in Queensland may be aware of world-leading dust mitigation practices.

**Recommendation 25**

Real time personal dust monitors, such as the Thermo Scientific PDM3700, should be assessed having regard to the scientific information already available world-wide, and if possible certified for use in underground coal mines as soon as possible.

**Recommendation 26**

An industry working group including coal mine operators, unions and government should be tasked with exploring the use of real time personal dust monitors as a compliance tool, including canvassing amendments to Recognised Standard 14 on monitoring respirable dust in coal mines, to enable the use of real time personal dust monitors for compliance monitoring and reporting.

**Recommendation 27**

The definition of 'further sample' in section 89A(5) of the Coal Mining Safety and Health Regulation 2001 should be amended to allow the use of real time personal dust monitors, such as the Thermo Scientific PDM3700, for resampling after a trigger event.

**Recommendation 28**

All commercial providers of atmospheric dust monitoring for the purposes of compliance with the regulation should be required to be approved by the Commissioner for Mine Safety and Health, having regard to the expertise and qualifications of the person or entity conducting the monitoring.

**Recommendation 29**

Results of all atmospheric dust monitoring undertaken in compliance with the regulation should be provided directly by the approved entity engaged to undertake the tests to each of the following; the Mine Safety and Health Authority; the coal mine operator (or person conducting the business at which the testing was undertaken); the miner who wore the device from which the test sample was taken; and the relevant Industry Safety and Health Representative, district workers' representative, or union delegate for the business at which the testing was undertaken.

**Recommendation 30**

The Mines Inspectorate should increase the proportion of unannounced inspections to a rate of at least 50 per cent of total inspections.

**Recommendation 31**

Section 119(1)(b) of the *Coal Mining Safety and Health Act 1999* and section 116 of the *Mining and Quarrying Safety and Health Act 1999* should be amended to remove the requirement for industry safety and health representatives to give 'reasonable notice' to the mine operator before the power to enter a mine site is exercised.

**Recommendation 32**

Mines inspectors should be prohibited for a limited period – perhaps six months – from inspecting mines at which they worked within the past two years.

Regulation should prohibit a person from being appointed to a statutory role at a mine (e.g. SSE, Underground Mine Manager, OCE) within six months of the person having conducted inspection activities as an inspector at that mine.

**Recommendation 33**

The Mines Inspectorate should consider making training and education at the National Mine Health and Safety Academy in the USA available to current or future mines inspectors.

**Recommendation 34**

The Mines Inspectorate should significantly increase the frequency and extent of its atmospheric dust monitoring inspections, including by undertaking accompanied inspections where inspectors with appropriate qualifications and experience in occupational hygiene observe coal workers during the period of atmospheric monitoring.

**Recommendation 35**

A comprehensive database of dust monitoring results should be established and maintained by the Mine Safety and Health Authority.

**Recommendation 36**

A Standing Dust Committee, similar to that established in New South Wales, should be established to periodically review atmospheric dust monitoring results and trends and report to the Board of the Mine Safety and Health Authority.

The committee should be chaired by the Commissioner of Mine Safety and Health or a delegate, and include representatives of underground mine operators; above-ground coal mine operators; metalliferous mine operators; coal ports; unions; and persons independent of the current mining industry.

**Recommendation 37**

The Standing Dust Committee should have power to refer particular dust exceedances or trends in dust monitoring results to the Commissioner for Mine Safety and Health for consideration as to whether further investigation or enforcement action, including prosecution, is required.

**Recommendation 38**

The current Coal Mine Workers' Health Scheme should be renamed the Coal Workers' Health Scheme, recognising the important inclusion of all workers involved in the mining, handling, processing and transportation of coal.

**Recommendation 39**

The recommendations of the Monash Review, adapted as necessary to give effect to the recommendations of the committee set out in this report, should be adopted and implemented into the Coal Mine Workers' Health Scheme as follows:

- a) The main purpose of the respiratory component of the scheme should explicitly focus on the early detection of CMDLD among current and former coal workers. (Monash recommendation 1)
- b) Clinical guidelines for follow-up investigation and referral to an appropriately trained respiratory or other relevant specialist of suspected CMDLD cases identified among current and former coal workers should be developed and incorporated into the scheme. (Monash recommendation 2)
- c) CWP and other CMDLDs identified by the scheme in current and former coal workers should be reported to the Mine Safety and Health Authority. (Monash recommendation 3)
- d) There should be a separate respiratory section of the health assessment form which includes all respiratory components, including the radiology report using the ILO format and the spirogram tracings and results. (Monash recommendation 4)
- e) The form should include a comprehensive respiratory medical history and respiratory symptom questionnaire. (Monash recommendation 5)

- f) There should be a much smaller pool of approved doctors undertaking the respiratory component of health assessments under the scheme, taking into account geographical considerations and other workforce needs. (Monash recommendation 7)
- g) Doctors should undergo a formal training program, including visits to mine sites, prior to being approved by the Mine Safety and Health Authority, to ensure they reach a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the scheme. (Monash recommendation 8)
- h) The approval of doctors to undertake the respiratory health assessments for the early detection of CMDLD under the scheme should become the sole responsibility of the Mine Safety and Health Authority. (Monash recommendation 9)
- i) Doctors approved to undertake respiratory health assessments should have a different designation from 'NMA', namely AMA-R (Approved Medical Advisor – Respiratory) reflecting their specific responsibility for respiratory health assessments under the new scheme. (Monash recommendation 10)
- j) Chest x-rays should be performed by appropriately trained staff to a suitable standard of quality and performed and interpreted according to the current ILO classification by radiologists and other medical specialists classifying chest x-rays for the scheme. (Monash recommendation 11 – See also Recommendations 43 to 46 of this report below)
- k) Spirometry should be conducted by appropriately trained staff and performed and interpreted according to current ATS/ERS standards. (Monash recommendation 12)
- l) The Coal Workers' Health Scheme should transition to an electronic system of data entry and storage (health assessments database), whereby doctors undertaking these respiratory assessments enter the data for their assessment and can access previously collected data for the coal worker and to facilitate auditing. (Monash recommendation 13)
- m) All coal workers, including contractors, subcontractors and labour hire employees should be registered in the Coal Workers' Health Scheme health assessments database on entry into the industry for the purposes of ongoing medical surveillance. (Monash recommendation 14)
- n) The Coal Workers' Health Scheme should conduct ongoing individual and group surveillance of health data collected under the scheme, to detect early CMDLD and analyse trends to disseminate to employers, unions and coal mine workers. (Monash recommendation 15)
- o) Coal workers should have exit respiratory health assessments (retirement examination) regardless of whether they leave the industry due to ill-health, retirement or other reasons. (Monash recommendation 16)
- p) An implementation group, including representatives of stakeholders and relevant medical bodies, should be established to ensure that the necessary changes to correct the identified deficiencies with the respiratory component of the current scheme are implemented in a timely manner. (Monash recommendation 17)
- q) There should be a further review of the revised respiratory component of the scheme within 3 years to ensure that it is designed and performing according to best practice. (Monash recommendation 18)

**Recommendation 40**

The Public Service Commissioner should review the process adopted by DNRM for the appointment of the current 'Occupational Physician' and consider whether there was any breach of the *Public Service Act 2008* or other statutory instrument.

**Recommendation 41**

The current position described as 'Occupational Physician' within DNRM should be abolished and the current functions of that role should be incorporated into the functions of the new Executive Director – Medical Services within the Mine Safety and Health Authority.

**Recommendation 42**

Health assessment data should be captured and stored digitally in a health assessment database in a manner that allows regular and meaningful surveillance, so that it may be used to identify trends in disease, inform policy decisions and identify regional areas or individual mines for potential scrutiny. (See also [Recommendation 39\(I\)](#))

**Recommendation 43**

Health Assessments under the Coal Workers' Health Scheme should be required for all coal workers, removing the current exception for workers employed for a 'low risk task'.

**Recommendation 44**

All coal workers should be required to undertake a health assessment prior to commencing work in the coal industry, including coal transportation and handling outside coal mines.

**Recommendation 45**

All underground coal mine workers should be required to undertake a health assessment every three years.

**Recommendation 46**

All other coal workers should be required to undertake a health assessment at least every six years.

**Recommendation 47**

The Coal Workers' Health Scheme should obtain and utilise at least one Coal Workers' Health Mobile Unit, similar to those used by NIOSH, capable of delivering chest x-ray, spirometry, and general health assessments for coal workers and former coal workers in regional Queensland.

**Recommendation 48**

The Coal Workers' Health Mobile Units should be properly staffed and maintained under the Coal Workers' Health Scheme, and operate out of the Scheme's headquarters in Mackay.

**Recommendation 49**

The cost of health assessments undertaken at the Coal Workers' Health Mobile Units should be met by the Coal Workers' Health Scheme.

**Recommendation 50**

The entity responsible for the Coal Workers' Health Scheme should provide a public information service, consisting of a toll-free telephone helpline and online service, to give free and confidential advice to mine workers, former mine workers and their families who have concerns about their respiratory health.

**Recommendation 51**

'Nominated Medical Advisors' should be renamed and redefined as 'Approved Medical Advisors'.

**Recommendation 52**

Approved Medical Advisors should be approved as such by the Commissioner for Mine Safety and Health.

**Recommendation 53**

A subset of Approved Medical Advisors with appropriate qualifications and experience in diagnosing occupational respiratory diseases should be approved by the Commissioner for Mine Safety and Health to conduct respiratory health assessments and designated 'Approved Medical Advisor – Respiratory (AMA-R)'. (See also [Recommendation 39\(i\)](#)).

**Recommendation 54**

All health assessments under the Coal Workers' Health Scheme should include spirometry testing undertaken by an appropriately qualified and experienced person or provider, approved by the Commissioner for Mine Safety and Health.

**Recommendation 55**

All health assessments under the Coal Workers' Health Scheme should include a chest x-ray or other medical image taken by an appropriately qualified and experienced person or provider, approved by the Commissioner for Mine Safety and Health.

**Recommendation 56**

All coal workers' chest x-rays or other medical images taken for the purposes of the Coal Workers' Health Scheme should be read and interpreted by an appropriately qualified and experienced radiologist approved by the Commissioner of Mine Safety and Health.

**Recommendation 57**

All coal workers' chest x-rays or other medical images taken for the purposes of the Coal Workers' Health Scheme should be assessed and classified for pneumoconioses using the International Labour Organisation (ILO) system for Classification of Radiographs by appropriately qualified persons approved for such purpose by the Commissioner for Mine Safety and Health.

**Recommendation 58**

Dr Robert Cohen, or another internationally recognised expert on the surveillance and management of coal workers' health, should be engaged to consult with and advise government on the establishment of the improved Coal Workers' Health Scheme and the implementation of these recommendations as soon as practicable.

**Recommendation 59**

Cases of CWP/CMDLD identified or diagnosed by medical professionals should be compulsorily reported to the Chief Health Officer, Queensland, as a 'Notifiable Disease' under the *Public Health Act 2005*.

**Recommendation 60**

The legislative framework should require the Queensland Chief Health Officer to report to the Mine Safety and Health Authority and the parliamentary committee with responsibility for the Authority on an annual basis on Queensland Health's activities in relation to CMDLD, including CWP.

**Recommendation 61**

The Coal Mining Safety and Health Advisory Committee and similar committees established under the mining safety and health Acts should be abolished and their statutory functions transferred to the Board of the Mine Safety and Health Authority.

**Recommendation 62**

The *Workers' Compensation and Rehabilitation Act 2003* and *Workers' Compensation and Rehabilitation Regulation 2014* should be amended as necessary to provide for:

- a) the introduction of a medical examination process, with costs to be borne by insurers, for former or retired coal workers who have concerns that they may have CWP or CMDLD and who retired or left the mining industry prior to the commencement of the proposed new provisions of the Coal Workers' Health Scheme for retired miners
- b) statutory clarification that a worker with CWP or CMDLD who experiences disease progression can apply to reopen their workers' compensation claim to access further benefits under the workers' compensation scheme
- c) enhanced rehabilitation (including, where appropriate, pulmonary rehabilitation) and return to work programs for those diagnosed with CWP or CMDLD, to assist them back into suitable alternative employment
- d) the alignment of the workers' compensation scheme with proposed new arrangements for the Coal Workers' Health Scheme.

**Recommendation 63**

The Coal Workers' Health Scheme should be extended to provide for continuing health assessments of retired and former coal workers, on a voluntary basis, under the scheme. These assessments should include the same elements and criteria as routine assessments under the scheme, and be provided for in addition to the 'retirement examinations' provided for by the current scheme.

**Recommendation 64**

The entity responsible for the Coal Workers' Health Scheme should take all reasonable steps to ensure that free health assessments are promoted to, and accessible for, retired and former miners.

**Recommendation 65**

An expanded or additional category of workers, defined as 'coal worker', should be established to include workers involved in the transportation and handling of coal outside a 'coal mine' including rail workers (e.g.: coal train loaders and drivers), port workers (e.g.: dozer, stacker/reclaimer, and ship loader operators), power station workers, and maritime workers (e.g.: tug and line boat crew).

**Recommendation 66**

The definition of 'coal worker' for these purposes should ensure these workers are protected by the legislated OEL; their working environments are subject to mandatory atmospheric monitoring of respirable dust and mandatory reporting of the results of that monitoring; and the Coal Workers' Health Scheme.

**Recommendation 67**

The committee recommends that the Public Service Commissioner review the transcripts of public and private hearings of the committee involving Queensland public servants and consider the extent to which those officers cooperated with and assisted the committee, including whether or not any public servant misled the committee or otherwise breached the *Code of Practice for Public Service Employees Assisting or Appearing Before Parliamentary Committees*.

**Recommendation 68**

The committee recommends that there be established, as a statutory committee of the parliament, a Committee on Public Administration. The committee is to have the power to investigate matters of public administration, on its own motion or on reference from the Assembly. The committee is to consist of three members nominated by the Leader of the House and three members nominated by the Leader of the Opposition. The committee is to have the power to call for persons, documents and other items.