



Addressing mine dust lung disease

Report 9: 2019–20



Your ref:
Our ref: PRJ01474

5 December 2019

The Honourable C Pitt MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

Dear Speaker

Report to parliament

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*, and is titled Addressing mine dust lung disease (Report 9: 2019–20).

In accordance with s. 67 of the Act, would you please arrange for the report to be tabled in the Legislative Assembly.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Brendan Worrall".

Brendan Worrall
Auditor-General

Contents

Audit objective and scope	1
Glossary	5
Introduction	6
Summary of audit findings	8
Actions taken to date	8
Audit conclusions	15
1. Prevention, detection, and support	16
Introduction	16
Dust monitoring and controls (prevention)	17
Health assessments (early detection)	23
Workers' compensation and rehabilitation	31
Addressing broader industry implications	34
2. Oversight and reporting	37
Introduction	37
Overseeing resources and safety regulation	37
Coordinating and reporting progress	40
Appendices	44
A. Full responses from entities	45
B. Audit objectives and methods	61
C. Roles and responsibilities	64
D. QAO assessment of recommendations	66
E. Government response to original reviews and reported status	114
F. Recommendations by theme	136
G. Findings from previous reports	137
H. Dust monitoring data	141

Audit objective and scope

Objective

In this audit, we assessed how effectively public sector entities have implemented recommendations from the following independent reviews aimed at reducing the risk and occurrence of mine dust lung disease:

- Monash Centre for Occupational and Environmental Health, *Review of Respiratory Component of the Coal Mine Workers' Health Scheme*, July 2016 (Monash review)
- Coal Workers' Pneumoconiosis (CWP) Select Committee reports:
 - Report No. 2, *Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*, May 2017
 - Report No. 4, *Inquiry into occupational respirable dust issues*, September 2017.

The CWP Select Committee tabled five reports in 2016 and 2017. Reports 2 and 4 are relevant to this audit.

In 2017, the Queensland Government stated that it supported all Monash review recommendations and supported, or supported in principle, all the CWP Select Committee recommendations. The broad range of recommendations relate to the portfolio responsibilities of the Department of Natural Resources, Mines and Energy (DNRME); Queensland Health; the Office of Industrial Relations; the Department of State Development, Manufacturing, Infrastructure and Planning; the Department of Environment and Science; and the Public Service Commission.

We also assessed how effectively the responsible public sector entities are monitoring and reporting on progress.

This audit also addresses a recommendation from the Monash review to conduct an independent three-year review of the Queensland Government Coal Mine Workers' Health Scheme.

Scope

DNRME is the government agency responsible for the health and safety of coal mine workers. Most of the recommendations from the three reviews were directed to DNRME (formerly the Department of Natural Resources and Mines), but other entities are also responsible for implementing recommendations.



Figure 1 sets out the government entities who share responsibility for implementing the recommendations from the three reports, including the number of recommendations assigned to each entity.

Figure 1
Government entities responsible for implementing recommendations

Report	Government entity	Number of recommendations
Monash Review of Respiratory Component of the Coal Mine Workers' Health Scheme 18 recommendations	Department of Natural Resources, Mines and Energy	18
CWP Select Committee: Report No. 2, Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Qld 66 recommendations [^]	Department of Natural Resources, Mines and Energy	57*
	Commissioner for Mine Safety and Health	1
	Department of Education (Office of Industrial Relations)	4
	Queensland Health	2
CWP Select Committee: Report No. 4, Inquiry into occupational respirable dust issues Five recommendations	Public Service Commission	2
	Department of Education (Office of Industrial Relations)	2
	Department of Natural Resources, Mines and Energy	1
	Department of Environment and Science	1
	Department of State Development, Manufacturing, Infrastructure and Planning	1
Total recommendations		89

Note: *The project management office developed advice on 19 of the 57 recommendations allocated to DNRME to implement.

[^]Two recommendations in the CWP Select Committee Report No.2 directed to the Queensland Parliament are out of scope.

Source: Queensland Audit Office.

Of the 68 recommendations made in the CWP Select Committee's second report, two were addressed to the Queensland Parliament. These recommendations are outside the scope of this audit. We refer to 66 of the committee's recommendations throughout the report, and a total of 89 recommendations for the three reviews.



We consulted industry representatives and subject matter experts (listed in Appendix B).

The Monash Centre for Occupational and Environmental Health at Monash University contributed to this audit as subject matter experts as they undertook the original Monash review.

Monash University complied with relevant independence policies and procedures, including those required by us, the Queensland Public Service, and the Accounting Professional and Ethical Standards Board. We actively managed any conflicts of interest (actual or perceived) during the audit.

DNRME sought further advice from Monash University after the original Monash review. To mitigate any self-review threat by Monash University, we have precluded Monash’s involvement in assessing those four recommendations.

The audit acknowledges that workers are exposed to occupational dust hazards in a range of industries. However, we have examined the implications only for coal workers exposed to coal dust and silica.

Assessing implementation status

We assessed whether each recommendation has been fully implemented, partially implemented, not implemented (with the recommendation either accepted or not accepted), or is no longer applicable. The definition of each is provided in Figure 2 below.

Figure 2
Definitions of implementation status

Status	Definition
Fully implemented	Recommendation has been implemented, or alternative action has been taken that addresses the underlying issues and no further action is required. Any further actions are business as usual.
Partially implemented	Significant progress has been made in implementing the recommendation or taking alternative action, but further work is required before it can be considered business as usual. This also includes where the action taken was less extensive than recommended, as it only addressed some of the underlying issues that led to the recommendation.
Not implemented	<i>Recommendation accepted</i> No or minimal actions have been taken to implement the recommendation, or the action taken does not address the underlying issues that led to the recommendation.
	<i>Recommendation not accepted</i> The government or the agency did not accept the recommendation.
No longer applicable	Circumstances have fundamentally changed, making the recommendation no longer applicable. For example, a change in government policy or program has meant the recommendation is no longer relevant.

Source: Queensland Audit Office.



We assessed whether entities have taken action in line with government-stated timeframes or otherwise reasonable timeframes based on the nature of the action required, such as changing laws.

Our assessment was based on the actions and time taken by the individual entities who were assigned responsibility by the government to implement improvements. If recommendations have not been implemented, we examined whether decision-making processes were appropriate and whether the issues in the reviews have been addressed through alternative actions.

Reference to comments

In accordance with s. 64 of the *Auditor-General Act 2009*, we provided a copy of this report to relevant entities. In reaching our conclusions, we considered their views and represented them to the extent we deemed relevant and warranted. Any formal responses from the entities are at Appendix A.



Glossary

Term	Definition
B-reader	Radiologists who undertake extra training in order to review chest x-rays according to an international classification standard. When two B-readers examine a chest x-ray, it is referred to as dual reading process.
Coal mine	A mine subject to the <i>Coal Mining Safety and Health Act 1999</i> and associated regulation. Includes underground and surface mines.
Coal Mining Safety and Health Advisory Committee	The committee advises the minister on the safety and health of coal mine workers. It is made up of government, industry, and union representatives (referred to as 'tripartite' membership).
Coal mine worker	A person who carries out work at a coal mine. A coal worker is a person involved in other coal-related production industries such as transporting coal by rail or sea.
Coal workers' pneumoconiosis	An irreversible and progressive work-related lung disease caused by inhaling coal dust over a period of years. Also known as black lung disease.
Dust exceedance	When a dust sample result shows that the average concentration of respirable dust in the atmosphere of the work environment exceeds the levels stated in Coal Mining Safety and Health Regulation 2017.
Hazard	A thing or situation with potential to cause injury or illness to a person.
Inhalable dust	Particles of dust that enter the mouth and nose during normal breathing, but do not penetrate the airways of the lungs. Inhalable dust is visible to the naked eye.
Metalliferous mines	Surface and underground mines producing iron ore, copper, tin, nickel, gold, silver, and zinc.
Mine dust lung disease	Includes a range of diseases, including coal workers' pneumoconiosis and silicosis, mixed dust pneumoconiosis, and chronic obstructive airways disease (including emphysema and chronic bronchitis).
Occupational lung disease	An occupational or work-related lung condition that has been caused or made worse by the materials a person is exposed to within the workplace.
Onset	In medical terms, onset refers to the first appearance of signs or symptoms of an illness or disease.
Respirable crystalline silica	A form of silica dust that is created at coal mine sites and through construction activities such as engineering of stone benchtops. Ongoing exposure can cause silicosis and increased risk of lung cancer.
Respirable dust	Particles of dust that penetrate the airways of the lungs and reach the alveoli. Respirable dust is not visible to naked eye.
Silicosis	An irreversible and progressive work-related lung disease caused by inhaling respirable crystalline silica.
Similar exposure groups	A group of workers who have the same general exposure to risk. This can be in terms of the similarity and frequency of the tasks they perform, the materials and processes with which they work, or the similarity of the way they perform those tasks.
Spirometry	A medical test to measure the air capacity and flow rate of the lungs.

Introduction

For many years, governments in Australia and overseas have acknowledged that mine workers are at risk of developing occupational lung diseases from inhaling hazardous dust.

Disease can be caused by long-term exposure to respirable dust generated during mining and quarrying activities. Onset of disease may occur quickly in circumstances of high exposure or in individuals who are more susceptible to lung conditions. There is no known cure, so early detection helps identify workers who need treatment and need to be removed from risk of further dust exposure.

There are several diseases, collectively called mine dust lung disease. These include:

- coal workers' pneumoconiosis (also referred to as 'black lung disease')
- chronic obstructive pulmonary disease
- silicosis
- asbestosis.

Until 2015, coal workers' pneumoconiosis (CWP) was thought to have been eradicated in Queensland. Its recurrence was first identified in 2015 when there were formal reporting requirements in place, but there was no effective way to identify cases of CWP in workers.

DNRME publicly reports confirmed cases of mine dust lung disease. As at 31 October 2019, it reported 116 workers from 2015 to 2019 had been diagnosed with the disease for all mining, including coal, metalliferous, and quarries.

Industry (employers in the end-to-end production of coal), the medical profession, unions, and government regulators all share responsibility for addressing mine dust lung disease.

The independent reviews

A Commonwealth senate inquiry was conducted in 2016 after CWP was formally identified in Queensland. It made several recommendations directed to the Queensland Government and other state governments. Its view was that CWP was a national issue that needed best practice standards of dust control and monitoring to improve health outcomes for workers.

At the same time as the Commonwealth senate inquiry, an independent review (the Monash review) examined the respiratory section of the Coal Mine Workers' Health Scheme in Queensland. In 2017, the Queensland Parliament established a CWP Select Committee that produced two state parliamentary reports on the subject.

The reports identified multiple gaps in how the coal industry has historically been regulated. They concluded the government needed to improve how it:

- managed coal mine worker medical records
- conducted and monitored compliance activities in mines in relation to the respirable dust hazard
- provided workers with access to adequate medical testing.

The Queensland Government was presented with 91 recommendations aimed at improving the health of coal and other workers. This audit considers 89 of the total recommendations.

The parliamentary inquiries also raised questions about broader health risks for workers involved in the end-to-end production of coal and about other emerging occupational dust lung diseases, such as silicosis. After publicly supporting the reports, the government began implementing the recommendations.



In April 2018, the Queensland Parliament's State Development, Natural Resources and Agricultural Industry Development Committee asked the Queensland Audit Office to follow up on the government's progress. This audit focuses on mine dust lung disease, but there are broader implications for workers in other industries (such as the engineered stone benchtop industry), who may be exposed to silica dust.

Silica exposure is now recognised as a cancer risk and is considered more harmful to a person's health than coal dust. Coal mine workers can also be exposed to silica as part of coal mine operations. DNRME has collected data that demonstrates coal mine workers are at higher risk of silica exposure than coal dust exposure.

*Coal mine workers can access information about the health scheme via the website **Miners' Health Matters**: <https://www.dnrme.qld.gov.au/miners-health-matters> or by phone on (07) 3818 5420.*

People who have worked in the engineered stone benchtop industry can phone WorkCover Queensland for a free health assessment on 1300 362 128.



Summary of audit findings

The government has made progress in implementing most of the 89 recommendations. Figure 3 summarises our assessment of the current implementation status.

Appendix D details individual recommendations and our assessment of their implementation.

Figure 3
Implementation status: Summary

QAO assessment	Monash review	CWP Select Committee Report No. 2	CWP Select Committee Report No. 4	Total
Fully implemented	12	20	4	36
Partially implemented	6	18	1	25
Not implemented (recommendation accepted)	-	1	-	1
Not implemented (recommendation not accepted)	-	27	-	27
No longer applicable	-	-	-	
Total recommendations	18	66*	5	89

Note: *Of the 68 recommendations from the CWP Select Committee Report No. 2, two recommendations are out of scope because they were directed to the Queensland Parliament rather than to government entities.

Source: Queensland Audit Office.

Actions taken to date

The government has made important progress in implementing the changes recommended in the reviews to improve coal mine workers' health and safety. As noted in Figure 3 above, work has been undertaken to implement 61 of the 89 recommendations (assessed as fully or partially implemented).



Improving prevention, detection, and rehabilitation

Both the Monash review and the Coal Workers' Pneumoconiosis (CWP) Select Committee recommended changes to the Coal Mine Workers' Health Scheme to make sure it focused on assessing the health of workers, rather than just their fitness for work.

The Department of Natural Resources, Mines and Energy (DNRME) has demonstrated significant progress across many aspects of the Coal Mine Workers' Health Scheme, including providing better access to information for current and former coal mine workers. Through public websites and engagement, it has made information about health and safety easier to access and understand for people working in the industry.

Prevention

Some progress has been made on the CWP Select Committee's Report No. 2, which recommended improvements to dust monitoring and controls. The Select Committee recommended reducing the occupational exposure limit for coal dust and DNRME has published this as an interim measure. But DNRME is waiting for Safe Work Australia to finalise its recommendations for workplace exposure standards before determining whether the coal dust and silica exposure limits will be reduced even further.

The Mines Inspectorate has established a database to collect both coal dust and silica monitoring data to inform prevention efforts. It aggregates the data and then publishes it on its website. This has improved transparency and provided the ability to compare dust levels at all coal mines.

In 2017–18, the Coal Mining Safety and Health Advisory Committee commenced a quarterly review of dust results from the respirable dust database. The review process examines not only dust results, but also the performance of the database itself. In its 2017–18 annual report, the advisory committee reported that the quarterly review of dust results identified a general decrease in the exposure of miners to dust and mine dust exceedances, with average exposure rates and exceedance rates for the year below the requisite levels.

Some reforms to dust monitoring and compliance activities have not yet been fully implemented because they also require detailed consideration by experts and industry.

In addition, after further consideration, DNRME did not accept 12 of the 19 dust monitoring and management recommendations. This means that 12 changes the committee recommended will not be made. In most cases, DNRME could demonstrate that stakeholders and government had been consulted and had agreed that existing arrangements were adequate. But DNRME has not publicly reported where it has made decisions not to implement recommendations. For example, the decision to endorse using real-time dust monitoring devices for compliance purposes in open-cut mines and quarries.

Detection

Many changes have been made, or are about to be made, to the Coal Mine Workers' Health Scheme. Previously, coal mine workers were required to undertake health assessments on entering the industry and then every five years as a minimum. However, chest x-rays and respiratory function checks were not mandatory. Since January 2017, all miners have had access to free health assessments under the scheme. Mandatory chest x-rays of every coal mine worker are examined against international standards—in both surface and underground mines—every five years.

When miners retire, they can now continue to receive free health assessments every five years (or as frequently as medically advised) for the rest of their life. The free health assessments are also extended to retired mineral mine and quarry workers. This is paid for by DNRME.



To improve the quality of medical examinations, DNRME, in consultation with the Thoracic Society of Australia and New Zealand and the Royal Australian and New Zealand College of Radiologists, developed new standards and training for physicians who undertake the health assessments. Most recommendations from the Monash review that sought to improve the quality of health assessments for coal mine workers have been substantially completed.

Doctors rely on a number of different screening tests to make a preliminary diagnosis of mine dust lung disease, including chest x-rays, spirometry (to assess lung function), and a medical and occupational history questionnaire. Doctors can refer workers for follow-up tests or referrals to medical specialists while they wait for final x-ray reports, as part of clinical guidelines.

The clinical pathway was approved by the Queensland Chief Health Officer and the Royal Australasian College of Physicians. The guidelines set out a clinical pathway to ensure that workers see the right physicians at the right time if they have an abnormal test result (such as a chest x-ray) or other symptoms. The guidelines assist doctors in reaching a diagnosis of potential cases of mine dust lung disease in a reasonable timeframe. This helps to reduce potential anxiety for workers and their families and provides a more consistent approach.

From July 2016 until March 2019, DNRME sent chest x-rays to Chicago for review by experts (referred to as a 'dual read process') to address deficiencies in health screening identified in the Monash review. However, there was a considerable time gap in 2017 and 2018 for workers getting the second read results. We calculated that, on average, it took 195 calendar days (220 median) from the time DNRME sent a chest x-ray to the United States until the date it received a report. DNRME instead measured the number of business days (reporting an average of 141 business days). The data available did not measure the time between the workers' first chest x-ray and receiving the second read results.

In March 2019, DNRME engaged Lungscreen Australia to conduct the second read of the chest x-rays, instead of sending them to the United States. This considerably reduced the length of time for second reads to weeks not months. Since October 2019, Lungscreen Australia has further improved turn-around times to less than one week for normal chest x-rays. For urgent chest x-rays, DNRME has since reported turn-around time is 1.99 days, but we have not validated this number.

The overall quality of spirometry testing has improved since the Monash review. In September 2019, DNRME received its first quality control report for an accredited spirometry provider, and it was found that this provider was non-compliant. This demonstrates the value of compliance audits and the need to continue auditing all spirometry providers.

Both the Monash review and CWP Select Committee made recommendations that DNRME improve how health data is collected and used to identify early onset of the disease. There is no cure for these diseases, but early detection enables workers to reduce further dust exposure and slow the progression of the disease. DNRME has made progress in collecting and making health data available, but still needs to complete the roll out of its long-term technology solution that will more efficiently analyse coal mine workers' health data. It will allow doctors quick and easy access to patients' previous health records and facilitate quality control monitoring. The integrated information system is not expected to be operational before October 2020, and some components, such as monitoring population health trends, will not be in place until 2022.

The Royal Australian and New Zealand College of Radiologists acknowledges that coal mine dust lung disease is a preventable disease but relies on comprehensive health surveillance to build on the existing screening program.

To retain the focus on medical health surveillance, rather than on fitness for work, DNRME needs to reconsider the Monash review and CWP Select Committee recommendations to introduce clinical governance over the health scheme. While there is evidence of DNRME consulting with a range of stakeholders, including medical professionals, over the last three years, there has been no designated medical expert or any expert group that has had formal responsibility for overseeing the scheme or to monitor the impact of all the changes over the last three years.



Workers' rehabilitation and compensation

Improving dust monitoring and reporting helps to support doctors and employers to make decisions to provide safe work environments for workers who are diagnosed with mine dust lung disease.

Like DNRME, the Office of Industrial Relations has conducted many public engagement initiatives to improve awareness among its worker and industry stakeholders about rehabilitation and return to work programs. It is currently developing guidance for employers, insurers, and doctors about what constitutes safe exposure conditions for workers returning to work.

These findings are detailed in Chapter 1.

Addressing broader industry implications

Other coal-related industries

The CWP Select Committee made several comments in its Report No.2 about the need for continued health surveillance for any worker involved in handling or transporting coal (referred to as 'other coal workers'). It made three recommendations about expanding the Coal Mine Workers' Health Scheme (administered by DNRME) to provide other coal workers with the free and mandated health assessments that are now accessed by coal mine workers.

In the Select Committee's extended terms of reference as part of its Report No.4, it affirmed the comments and recommendations made in its second report regarding coal rail workers. While it acknowledged that health risks were low due to the systems in place to reduce workers' exposure to dust, the Select Committee also noted that it is essential that the health of workers—past and present—be carefully monitored on an ongoing basis that reflects the long latency of mine dust lung diseases.

The government has not implemented these recommendations. The Office of Industrial Relations, in consultation with DNRME, determined that existing work health and safety protections were adequate, and that the risks were different.

While the work health and safety laws do provide safeguards for workers in coal-related industries and allow for all workers to have health assessments, it is only if their employer determines there is a risk to the employee's health, for example dust exposure risk. But this does not capture other coal workers who have retired.

CWP Select Committee Report No. 4 also recommended the introduction of codes of practice for stevedoring (stevedoring involves the loading or unloading of cargo (such as coal) from a ship) and coal-fired power stations. The Office of Industrial Relations has successfully implemented both of these codes of practices.

Health monitoring

The CWP Select Committee recognised that the risk of coal dust and silica exposure was not limited to the coal mines. The responsible entities have largely implemented the Select Committee's recommendations to address the broader industry implications.

Queensland Health has established a register to capture dust lung disease and other occupational respiratory diseases. It is now a requirement that physicians report diagnosed cases of occupational exposure to inorganic dust (for example, silica exposure in the stone benchtop manufacturing industry as well as the mining industry). This provides greater oversight from a health monitoring perspective.

Community impacts

Air quality concerns have been addressed by the Department of Environment and Science after reviewing the positioning of air quality monitoring stations across Queensland. In February



2019, a monitoring station was established in Blackwater and another monitoring station is planned for Emerald by June 2020.

The Department of State Development, Manufacturing, Infrastructure and Planning conducted a review of the planning framework used by local governments to protect communities from dust. They endorsed that the planning framework includes processes and mechanisms for local governments to protect communities from dust and identified actions that will assist local governments to continue or improve their use of these processes.

These findings are detailed in Chapter 1.

Improving industry oversight

DNRME is responsible for regulating mining, land, and water resources in Queensland. The CWP Select Committee, in Report No. 2, concluded that government should separate DNRME's compliance activities (including its Mines Inspectorate) from its responsibility to promote and support the industry. The Select Committee recommended that a new independent regulator and funding model be introduced.

Recognising the complexity of the reforms, the government established a specialist independent project management office to consider some of the Select Committee's recommendations that proposed structural and funding changes. The project management office engaged with experts, affected stakeholders, and the public, and developed options to guide government's decisions about the most effective model. It delivered its final report to government in June 2018. It was publicly released in February 2019.

DNRME, as the entity assigned responsibility for implementing the new regulatory model, has effectively acted on the project management office's final report and developed a new governance model. The model, now approved by government, effectively meets the intent of the Select Committee to create greater independence and accountability in the industry. However, the final model did not incorporate 11 of the 19 governance recommendations made by the Select Committee (refer to Appendices D and F). DNRME has understandably taken time to consult with all interested stakeholders and to allow government to consider all options.

Despite government approving the new governance model in November 2018, some recommendations from the Select Committee's report are not yet fully implemented. Proposed laws were introduced into Queensland Parliament on 4 September 2019 and have been approved by the Queensland Parliament's State Development, Natural Resources and Agricultural Industry Development Committee. The bill has not yet been passed. Government also still needs to decide on a long-term funding model for the new regulator.

These findings are detailed in Chapter 2.

Monitoring and reporting implementation progress

In addition to assessing the implementation status of recommendations from the three reviews, we also assessed how effectively the responsible public sector entities are monitoring and reporting on progress.

Communicating status of recommendations

DNRME currently refers to the status of recommendations as 'actioned' and 'implemented' to describe where:

- action has been taken and the recommendation has been implemented, or
- alternative action has been taken to achieve the intent of the recommendation.

Based on these statements, we expected there to be no further action needed to address the intent of the recommendations.



Since July 2018, DNRME has reported that government has implemented all the Monash review recommendations. DNRME has reiterated the view that it has delivered and/or implemented all Monash review recommendations throughout this audit. This is despite DNRME's documented advice to government that some initiatives, such as its integrated information management system and chest x-ray audit program, will not be completed until 2020 to 2022.

The Commissioner for Mine Safety and Health has also reported in her annual performance report to government that DNRME has fully implemented the recommendations.

Since July 2019, DNRME's internal status tracker for the CWP Select Committee's Report No. 2 states that 67 of the 68 recommendations are 'actioned/implemented' and the government has separately reported that it has actioned all the Select Committee recommendations.

Prior to this audit, in 2018, DNRME commissioned consultants to conduct two external reviews to assess the status of the Monash review and the CWP Select Committee report recommendations. The consultants were only asked to consider whether the *intent* of recommendations had been met through planned actions, rather than whether action had been completed. One consultant report redefined the intent of the Monash review recommendations to match the actions that DNRME had already taken. Despite this, DNRME and the Commissioner for Mine Safety and Health have relied on multiple definitions of 'delivered', 'actioned' and 'implemented' from these consultant reports to report internally and publicly on status.

Appendix E sets out how consistent DNRME and other responsible entities' reported status of recommendations are compared with QAO's assessment.

In the absence of consistent, documented definitions of implementation status, DNRME's current reporting implies there is no further work to be done to fully implement the Monash review recommendations.

The Office of Industrial Relations has not published any status updates related to the Select Committee's Report No. 4.

Decisions to not implement recommendations

In 2017, the Queensland Government publicly stated that it supported all Monash review recommendations and supported or supported in principle all the CWP Select Committee recommendations.

But 27 of the 66 recommendations from the CWP Select Committee Report No. 2 were not implemented due to subsequent decisions by entities or government to not accept them.

Most of the decisions to not implement recommendations were well documented, including through minister or Cabinet approval. In these cases, such as the new independent regulator model, entities demonstrated they had fully considered practical implications, such as funding or operational limitations.

Some recommendations, such as expanding the Coal Mine Workers' Health Scheme to include other coal workers, impact more than one entity. But the decision not to implement the recommendations were not considered by Cabinet and instead made at department (senior executive) or minister level.

Given that Cabinet has responsibility for developing and coordinating the policies of the government, and that the government had publicly stated its support for all recommendations (including those subject to further consultation), we had expected that Cabinet would have been required to endorse decisions of this nature.

There is no central or public record of information documenting the rationale for not implementing recommendations that were previously supported by government. In the interest of transparency, entities should include this in the public reporting to accurately reflect the government's positions on the recommendations.



Whole-of-government coordinating and reporting

DNRME, through its minister, has been responsible for continuing to implement the government's reforms in response to the re-identification of coal workers' pneumoconiosis. It has responsibility for implementing all the recommendations from the Monash review and most of the CWP Select Committee Report No. 2. In total, DNRME is responsible for implementing 76 of the total 89 recommendations (85 per cent) directed to government.

The Office of Industrial Relations was assigned responsibility for CWP Select Committee Report No. 4.

Given the public interest and independent inquiries held into mine dust lung diseases, we had expected there to be central coordination of the monitoring and reporting of the status of work undertaken by all responsible entities and how much funding has been allocated and spent. But this has not occurred.

Updates have been provided to the Premier for Cabinet briefings and when questions have been raised by parliament or the public. As noted above, progress reports lack consistency due to the use of different definitions by different entities.

These findings are detailed in Chapter 2.

Appendix D details the assessments reported by entities and Appendix E details how these compare to QAO's assessment for each recommendation.



Audit conclusions

In the last three years, the Queensland Government has invested significant time and effort, and committed over \$35 million to implementing the recommendations of the three reports from the reviews.

Through effectively implementing or progressing most of the recommendations, the government has improved how it protects the health and safety of coal mine workers and is contributing to reducing the risk of the disease. Most of the actions taken have been timely. Forty per cent of the recommendations have been fully implemented. Twenty-eight per cent of the recommendations are in progress (partially implemented) and are on track to meet the intent of the recommendations. The government initially supported, or supported in principle, all recommendations, but nearly one-third (31 per cent) of recommendations have since not been accepted and not implemented.

There is still work to be done to deliver all the reforms. This includes establishing an independent regulator and funding model and developing criteria to assist those responsible for ensuring workers can return to work. DNRME is also currently developing new information systems to detect early signs of work-related health issues that can be used for mine inspections, audits, and implementing better health and safety controls.

As the entity responsible for implementing most of the recommendations, DNRME has dedicated significant resources to progress the work. In some cases, such as establishing a new governance model, it is waiting on the outcome of government processes to introduce new laws and regulations and approve budgets. However, after three years, some of the recommendations have still not been implemented, for example some changes to dust monitoring practices and health assessments have not been finalised.

The Office of Industrial Relations successfully introduced codes of practice for stevedoring (stevedoring involves the loading or unloading of cargo (such as coal) from a ship) and coal-fired power stations. It has commissioned expert medical advice to provide recommendations about returning workers to a mine site with a diagnosis of CWP or coal mine dust lung disease. This advice will form the basis of guidance to assist treating specialists, mining employers, and workers diagnosed with mine dust lung disease in returning to work.

The entities responsible for implementing a smaller number of recommendations—Queensland Health; the Department of State Development, Manufacturing, Infrastructure and Planning; the Department of Environment and Science; and the Public Service Commission—have effectively implemented the recommendations from the Select Committee.

The three reports all saw government creating a more integrated approach to addressing coal mine workers' health and safety. But the lack of shared, agreed definitions across the entities responsible for recommendations has resulted in a variety of terms being used such as 'fully actioned' or 'implemented' or 'delivered'. This means there is no clear, accurate reporting on the status of the work. There is also no collective view or monitoring across all responsible entities of how much government has spent on implementing the reforms—despite committing \$35 million.

Given the number of recommendations that still need to be fully implemented, and emerging related health issues (such as silicosis), responsible entities should be providing complete and comprehensive reports to one agency to monitor the remaining work program and keep a record of decisions not to implement recommendations.



1. Prevention, detection, and support

Introduction

The Monash University Centre for Occupational and Environmental Health, in collaboration with the University of Illinois, Chicago, published the *Review of Respiratory Component of the Coal Mine Workers' Health Scheme* (the Monash review) in 2016. The review found the respiratory component of the Coal Mine Workers' Health Scheme focused on fitness to work rather than on detecting and managing early mine dust lung disease. It also found several limitations, including that health information was not being effectively used to monitor trends in mine dust lung disease (referred to as 'group health surveillance').

The Monash review recommended that the Queensland Government introduce a range of reforms to improve chest x-rays, lung function testing (called spirometry), training and accreditation of medical practitioners, surveillance, and digital records management.

The Coal Workers' Pneumoconiosis Select Committee (Select Committee) agreed with the Monash review and identified additional limitations in its Report No. 2 (*Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*) about how the Department of Natural Resources, Mines and Energy (DNRME) was administering the Coal Mine Workers' Health Scheme. Its report referred to:

- 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 role of the Health Surveillance Unit at DNRME was purely administrative, with no meaningful data analysis or clinical review being undertaken of the health assessment records it received. This was contrary to the policy objectives of the health scheme, which were to monitor and ensure the health of coal mine workers.

The Monash review and the Select Committee both commented on the large backlog of health assessments that DNRME was processing at the time of their respective reports. The Select Committee supported the Monash review recommendations.

In terms of preventing and monitoring risks of dust lung disease and supporting workers' return to work, the Select Committee also found:

- Coal mine operators did not have clear or consistent guidance from inspectors about actions required to demonstrate dust monitoring compliance, and the industry developed a culture of complacency and disregard for the serious risk posed by respirable dust exposure.
- Before legislative changes were introduced in January 2017, there was an absence of any regulated oversight of respirable dust monitoring or mandatory reporting of dust exceedances.
- The primary focus of the regulator, DNRME, was on mine safety, rather than on miners' health and the risks posed by exposure to respirable dust. Of the range of compliance options that the Mines Inspectorate can use, the Select Committee's report noted that no person or entity had been prosecuted in Queensland for failing to meet a safety and health obligation related to respirable dust.

Refer to Appendix G for summary of key findings and recommendations from the Monash review and the CWP Select Committee reports.



This chapter assesses whether entities have effectively reduced the risk and occurrence of mine dust lung disease. It also assesses the effectiveness of arrangements to support workers' return to work.

Appendices D and E contain the complete list of recommendations and our assessments.

Dust monitoring and controls (prevention)

Of the 66 in-scope recommendations made in the Select Committee Report No. 2, 19 recommendations focused on dust monitoring and management.

The recommendations related to:

- improving respirable dust monitoring and management (13 recommendations)
- improving the enforcement and oversight of coal dust management (six recommendations).

Figure 1A summarises our assessment of the current implementation status for recommendations about dust monitoring and controls.

Figure 1A
Implementation status: Dust monitoring and controls

QAO assessment	Select Committee Report No. 2
Fully implemented	4
Partially implemented	2
Not implemented (recommendation accepted)	1
Not implemented (recommendation not accepted)	12
Total	19

Note: For QAO's detailed assessment of each recommendation, refer to Appendix D. For the government's response and status of implementation for each recommendation, refer to Appendix E.

Source: Queensland Audit Office.

Progress made

Dust monitoring and management practices

Coal dust occupational exposure limits

The Select Committee recommended reducing the occupational exposure limit for coal dust to 1.5mg/m³ of air. At the time, the government, in consultation with DNRME, decided not to adopt these limits until Safe Work Australia released its final limits.

In November 2018, the government reduced the limit for coal dust from 3.0 mg/m³ to 2.5 mg/m³ as an interim measure while Safe Work Australia undertook a review of airborne contaminants including coal dust and silica.

In February 2019, Safe Work Australia proposed a draft coal dust limit of 0.9 mg/m³ and invited public consultation on the draft limits.



DNRME is consulting with industry about the potential impacts of the reduced limits expected in Safe Work Australia's final report in March 2020. Safe Work Australia's current proposal is that the occupational exposure limit for respirable coal dust be reduced to 1.5 mg/m³. On 18 September 2019, the Minister for Natural Resources, Mines and Energy confirmed Queensland's support for this proposal.

Encouraging miners to report safety issues

The Select Committee recommended that coal mine workers be encouraged to report safety issues. Since the report, we note there is a heightened focus by DNRME, industry, and union stakeholders to encourage miners to report safety issues. This focus has been renewed again following recent fatalities in Queensland mines.

The Commissioner for Mine Safety and Health (the commissioner) has actively promoted that: 'It is an offence to cause detriment to another person because they have made a complaint or have raised a mine safety issue'. The commissioner regularly visits mine sites and attends industry forums to communicate this message.

The government, industry, and unions agree this is an area that requires continuous focus to encourage a culture that accepts the reporting of health and safety issues. While the commissioner accepts anonymous complaints, reporting processes are not equivalent to whistle-blower protections for workers.

Reporting dust exposure data

Dust monitoring database

The Select Committee recommended DNRME establish a database to collate dust monitoring data collected across mine sites to improve its monitoring of dust exposure limits.

Since 1 January 2017, all Queensland coal mine operators have been required to provide quarterly reports to DNRME's Chief Inspector of Coal Mines on the results of their respirable dust monitoring. They must also report when dust levels exceed occupational exposure limit levels set in regulation.

The Mines Inspectorate has established a database to collect both coal and silica monitoring data. Examples of DNRME's dust monitoring reports are included in Appendix H. It aggregates the data and then publishes it on its website. This has provided improved transparency and the ability to compare dust levels at all coal mines. DNRME presents quarterly data to the Coal Mining Safety and Health Advisory Committee for review, and briefs government on dust monitoring results. In its 2017–18 annual report, the committee reported that this quarterly review of the dust results has identified a general decrease in the exposure of miners to dust and dust exceedances, with average exposure rates and exceedance rates for the year below the requisite levels.

However, there is an opportunity to increase the level of information shared with industry about dust monitoring data to improve dust monitoring and mitigation technologies. Industry stakeholders reinforced this view during the audit. They noted that there are opportunities to share best practices if there is greater exchange of information about data sampling results and methodology, including examples of engineering practices that have effectively reduced dust exposure risks. There are also opportunities to more strategically monitor emerging health risks and guide compliance activities, such as audits and inspections.

In 2016–17, the commissioner reported that the database is used to inform quality control measures at work group, mine, and operator levels. This may be happening in some places, but we did not see evidence of the database being used in this way during the audit.



What still needs to be done

Dust monitoring and management practices

Silica occupational exposure limits

In addition to addressing coal dust limits, the Select Committee recommended reducing the occupational exposure limit for silica to 0.05mg/m³ of air. The government decided not to adopt these limits until Safe Work Australia released its final limits.

Workers can be exposed to silica dust as well as coal mine dust while working in coal mines. It is referred to as 'respirable crystalline silica', and can lead to silicosis, which is another occupational dust lung disease. Silica is considered more toxic than coal mine dust, so exposure limits are lower.

In Queensland, the workplace exposure standard for silica in coal mines is 0.1 mg/m³. The government is waiting for the final outcomes of Safe Work Australia's review until it revises its silica limit.

Safe Work Australia's proposed silica limit is 0.02 mg/m³ for all industries, including coal mines. The government, industry, and trade unions have reported concerns about adopting Safe Work Australia's proposed limit for silica, because it will be difficult to effectively implement, monitor, and enforce. This is, in part, because the available technology is not able to detect or record dust particles at that level.

Safe Work Australia's final report is expected to be released in March 2020. At the time of this report, it has not made a final decision on what limits it will accept.

Real-time personal dust monitors

There are still outstanding actions regarding the use of real-time personal dust monitors.

Current dust monitoring tools for coal and silica dust require samples to be sent to laboratories for analysis. On average, it takes 14 days for coal mine operators to receive these results. This means that workers are not immediately aware when they have been exposed to high levels of hazardous dust and it is difficult for mine operators to quickly adjust processes or workers' positioning in response to high levels of exposure. This also impacts the effectiveness of return to work programs for workers who have been diagnosed with mine dust lung symptoms and need to constantly monitor their exposure to dust.

Real-time personal dust monitors can be used to monitor individual workers' exposure to occupational dust in above-ground coal mines. In underground mines, they can only be used in limited circumstances due to safety reasons.

DNRME publishes minimum standards to mine operators outlining ways to effectively manage risks at coal mines. Operators can manage risks in different ways, but must be able to show that the method they use meets the minimum standards.

DNRME has a standard for monitoring respirable dust in coal mines. It stipulates that mine operators' dust samples must be collected using monitoring equipment and techniques according to Australian standards. DNRME also requires samples to be analysed in an accredited laboratory.

DNRME's standard currently prevents mine operators from using real-time personal dust monitors for compliance sampling. This is because real-time monitors do not meet the national standard. The standard was published in 2009 and does not reflect the current technology of real-time personal dust monitors, or emerging technologies for silica dust.

An industry working group explored the use of real-time personal dust monitors and presented its work on three separate occasions to the Coal Mining Safety and Health Advisory Committee (made up of industry, trade unions, and government).



On 29 November 2017, the advisory committee voted unanimously to amend the standard to allow the use of real-time monitors for compliance monitoring purposes in open-cut mines. It separately acknowledged the safety issues involved with using real-time monitors in underground mines.

The outcomes of the advisory committee's decision were provided to the minister to be endorsed. DNRME issued a revised version of the standard in November 2018, but it was not amended to reflect the advisory committee's decision. At the time of reporting, DNRME did not have confirmed advice from the minister to implement the advisory committee's decision.

Enforcing and overseeing coal dust management

The Select Committee recommended that DNRME's Mines Inspectorate significantly increase its dust monitoring activities.

Since 2017, the government has allocated nearly \$5 million to improving dust monitoring, reporting, and assessment. This includes \$1.68 million in the 2019–20 budget for additional occupational hygiene capability.

Inspecting dust controls and exposure levels

Mine operators must adhere to DNRME's standard for controlling respirable dust in underground coal mines—separate from monitoring dust. The Coal Mining Safety and Health Advisory Committee has been developing an equivalent standard for open-cut mines since September 2018.

DNRME's Mines Inspectorate performs inspections of mine sites to identify potential risks, harms, and other compliance issues. Inspections are part of DNRME's regular ongoing compliance activities that look at all aspects of a coal mine's operations.

When inspectors are undertaking an inspection, they follow DNRME's inspection guidelines. Currently, the inspector has discretion as to whether they include dust as part of their inspection of underground mines. This is because the database is not set up to make dust (occupational hygiene dust monitoring) a mandatory component of the inspection guidelines. If an inspector does consider dust, there are no minimum requirements they must address in their inspection.

Results of mine inspections are entered into a database. QAO's examination of the database found that:

- Examples of some recent inspection reports from underground mines (mine record entries) did not include respirable dust as part of the inspection.
- DNRME has no way to efficiently extract information from their inspections database to determine the number of coal mine inspections that considered control of respirable dust, or the extent to which it was considered.
- Mine reports are in free-form text format, so there is no accurate or consistent way to report on the number of coal inspections and audits related to dust.
- It is difficult to conduct analysis of emerging compliance themes at a system level.

We note that the equivalent system used for mineral mines and quarries includes structured guidance notes about relevant laws and regulations and requires hazard factors, such as dust and silica, to be addressed.

Figure 1B demonstrates the reduction of inspections since 2015, noting that this is not specifically for silica or coal dust—rather all inspections that have been conducted for coal mines. The minister has separately reported through parliament in July 2019 that the number of inspections has reduced due to DNRME's increased focus on coal workers' pneumoconiosis and investigating recent fatalities.

It also demonstrates the increase in audits at the same time as the reduction of inspections. From 2018, there have been 15 dust monitoring audits undertaken.



Figure 1B
Number of coal mine inspections and audits 2015–2019

Financial year	2015–16	2016–17	2017–18	2018–19
All inspections	397	396	375	364
<i>Announced inspections</i>	382	379	341	293
<i>Unannounced inspections</i>	15	17	34	71
All audits	4	8	44	61
<i>Audits (dust monitoring)</i>	0	0	8	7
<i>Audits (not dust monitoring)</i>	4	8	36	54

Note: The total number of inspections includes all coal mine inspections, but not all inspections necessarily include a dust element. The total number of audits (all hazards) do not include a dust element. Only 15 audits were specific to dust monitoring.

Source: Queensland Audit Office.

Auditing dust controls and exposure levels

DNRME's Mine Inspectorate carries out audits of coal mines to assess whether mine operators are complying with industry minimum standards related to health and safety systems. Audits are more in-depth than inspections.

In 2017, DNRME developed an audit guideline to help its inspectors assess whether mines are complying with its standard for monitoring respirable dust. The guideline ensures dust monitoring audits are conducted consistently.

Four inspectors are qualified as occupational hygienists who can conduct dust monitoring audits. However, only one inspector conducts targeted audits for coal mines. The other inspectors work across mineral mines and quarries.

There are currently 52 open-cut and 11 underground coal mines operating in Queensland. Since 2017, DNRME has conducted 15 audits of open-cut mines to determine how well mine operators have established a program to monitor dust. During these 15 audits, DNRME did not examine whether coal dust or silica exposure levels were being effectively monitored. No audits have been completed for underground mines.

In September 2019, the minister, through parliament, reported that the actual number of audits of coal mines have not matched planned audits for the last two years.

Recommendations not accepted

Dust monitoring and management practices

Dust abatement and ventilation plan

The Select Committee recommended Queensland adopt a similar model to New South Wales for dust abatement and ventilation plans. In New South Wales, coal mine operators are required to obtain approval of these plans prior to starting mine operations to demonstrate how they will proactively manage dust. There is no equivalent process in Queensland.

DNRME presented an options analysis to the Coal Mining Safety and Health Advisory Committee in September 2018. The advisory committee did not support dust abatement plans. Instead, it proposed that DNRME develop a new standard for dust management in open-cut mines to supplement existing legislation and standards. At the time of the audit, DNRME advised the standard was anticipated to be gazetted for notice on 29 November 2019.

The *Coal Mining Safety and Health Act 1999* was separately amended to impose civil penalties for non-compliance with existing legislative provisions for dust management.

Commercial dust monitoring providers

The Select Committee recommended separating mining operators from private occupational hygiene providers (who conduct dust sampling) to reduce the risk of conflicts of interest. This has not happened.

DNRME has not implemented a recommendation for private occupational hygiene providers to submit results directly to the Chief Inspector of Coal Mines. Coal mine operators are required to report exceedances and quarterly monitoring results to the Chief Inspector of Coal Mines, but this does not address the committee's concern about maintaining the integrity of results.

The Coal Mine Safety and Health Advisory Committee endorsed mandatory competencies for those who conduct respirable dust sampling. This enables mining operators to conduct their own sampling once accredited, which is contrary to the committee's intent.

Standing dust committee

The Select Committee recommended that an independent committee be established to review dust monitoring results and trends. In September 2017, the Coal Mining Safety and Health Advisory Committee advised that a standing dust committee was not required, as it already fulfilled the role. The minister endorsed the recommendation in November 2017.

The advisory committee is of the view that respirable coal dust is now well managed and monitored. In its 2017–18 annual report, the committee reported that its quarterly review of dust results has identified a general decrease in the exposure of miners to dust and dust exceedances, with average exposure rates and exceedance rates for the year below the requisite levels.

Despite the Select Committee's recommendation, the advisory committee does not currently include representatives from coal ports or people independent of the mining industry that might be impacted by coal dust or silica.

Enforcing and overseeing coal dust management

Mines Inspectorate

One of the Select Committee's key findings was that DNRME's dust monitoring inspections and audits of dust sampling results from mine operators were not adequate to provide the public and workers with confidence in the integrity of that system. It raised concerns of flawed sampling practices, including non-representative samples. It reported that most sampling activities were conducted during production shifts rather than during scheduled or non-scheduled maintenance. It also reported on the high rates of samples being voided, suggesting that high-level samples (samples that return a high read of dust exposure) were being interfered with.

DNRME decided not to implement the recommendation for mines inspectors to observe coal workers during periods of atmospheric monitoring (air monitoring of a specific space) or to validate dust monitoring results.

In addition, the Select Committee’s concerns about regulatory capture (where regulatory entities favour industries’ perspective) have not been addressed. DNRME decided not to implement the recommendation to amend regulations to prohibit mines inspectors from inspecting mines where they have previously worked. It also does not have a documented policy. However, the Commissioner for Mines Safety and Health has reported that the department does have a strict internal policy on this in place.

The reasons for DNRME not implementing the recommendation are set out in Appendix D.

Unannounced visits by industrial safety and health representatives

The Select Committee recommended that DNRME permit more unannounced inspections from industrial representatives to strengthen its existing compliance program.

DNRME decided not to implement the recommendation to remove 'reasonable notice' for industrial safety and health representatives due to a lack of demonstrated tripartite support during a separate inquiry.

DNRME has noted that mine sites are hazardous by nature, with strict health and safety induction processes that must be completed prior to entering a site.

Health assessments (early detection)

In total, there were 38 recommendations about improving respiratory health monitoring to detect mine dust lung diseases for coal workers.

All 18 recommendations from the Monash review focused on changes to the Coal Mine Workers' Health Scheme.

The Select Committee made a further 20 recommendations, including recommendations on improving health arrangements for coal workers.

Figure 1C summarises our assessment of the current implementation status for recommendations directed towards improving health assessments for coal workers.

Figure 1C
Implementation status: Health assessments

QAO assessment	Monash review	Select Committee Report No. 2
Fully implemented	12	12
Partially implemented	6	6
Not implemented (recommendation not accepted)	-	2
Total	18	20

Source: Queensland Audit Office.



Progress made

Improved respiratory health arrangements for coal mine workers

Both the CWP Select Committee and the Monash review recommended that DNRME amend its Coal Mine Workers' Health Scheme to ensure it focused on assessing health, rather than just assessing fitness for work. The recommendations included improving workers' awareness of risks and support services.

Focusing on health

Over the last three years, DNRME has considerably improved health arrangements for coal mine workers. The progress made to date includes:

- extensively consulting stakeholders through discussion papers on roles and responsibilities for the scheme
- expanding the scheme to provide early diagnosis and intervention for respiratory diseases
- providing coal mine workers with access to exit respiratory health assessments (conducted when they leave the job)
- offering health information through websites and roadshows and continued health assessments for retired and former coal mine workers on a voluntary basis.

However, DNRME does not currently have a dedicated occupational physician to oversee the scheme as recommended by the Select Committee.

Access to information for coal workers and employers

DNRME has successfully built an effective communication network to connect with coal mine workers. It has consulted with coal mine operators, site senior executives, union leaders, and site safety and health representatives to help disseminate general awareness information at mine sites.

It has created a dedicated website and communication materials to improve the information available to miners and employers on coal mine dust lung disease. The website is clear and well presented. Examples of what it provides include:

- videos for coal mine workers about preventing and detecting lung disease, and about support services
- factsheets for workers with contact email and telephone
- information booklets designed to fit in a miner's pocket, addressing dust exposure in coal mines and mine dust lung disease
- a Miners' Health Matters website, which was launched in June 2018.

There is also online information available for retired or former coal mine workers. Despite all these improvements, stakeholders, including industry and advocacy groups, noted during the audit that there are more opportunities for DNRME to use local community networks such as retired worker associations, general practices, and sporting and other membership groups. This would ensure that support services and advice are effectively communicated in other forums for workers and their families who may not otherwise access information online.

Integrated information management

DNRME's Health Surveillance Unit is responsible for managing coal workers' health records. At the time of the Monash review, DNRME had over 170,000 hard copy files in storage.

DNRME has identified that their current systems do not provide doctors with timely and simplified access to a coal mine worker's previous work history or health assessment records to gain a long-term view of worker health to detect any significant decline over time.



DNRME has advised its minister that:

- Given the recommendations of the Monash review to undertake health surveillance, DNRME will need to enhance existing systems in the Health Surveillance Unit (HSU) to ensure the long-term solution delivers adequate data (expected in 2021–22).
- Due to the limited utility of the existing HSU database, health surveillance capability is severely restricted without enhancing existing systems.

The Monash review and CWP Select Committee Report No. 2 made five recommendations that rely on DNRME moving to a new electronic information management system. It would:

- assist doctors to enter results of health assessments and access historical health records to improve the time and accuracy of potential diagnoses
- allow DNRME to audit the quality of medical health assessments
- facilitate regular and meaningful surveillance to identify trends in disease, inform policy decisions and identify regional areas or individuals
- assist in disseminating analysis and trends to employers, unions, and coal mine workers
- permit DNRME to register and authorise clinicians.

Prior to release of the Monash review, as an interim measure, DNRME began scanning hard copy health record files into an electronic format. By June 2017, it had completed a substantial amount of work over 18 months to scan 174,288 chest x-rays, spirometry reports, and health assessments.

The backlog has now been resolved, but there is an ongoing requirement for DNRME to continue to scan health records. In 2018–19, 40 per cent of health assessment records were still provided by doctors in hard copy. Since July 2019, DNRME has received 88 per cent of health assessment records in electronic format. These scanned health assessments still require DNRME's staff to manually enter them into the HSU database.

If doctors request access to a worker's previous health records, it can take five days for DNRME to release them. While we acknowledge DNRME's time and resourcing in addressing the backlog, the scanning of health records does not fulfil the intent of three of the Monash review recommendations or two of the CWP Select Committee's recommendations.

In 2018, DNRME identified that there were broader business requirements necessary to implement the Monash review recommendations and CWP Select Committee recommendations. It reported that a new technology solution was urgently required to support coal workers and alert them of any new diagnosis of potential or identified disease. It was also noted that the system must provide DNRME with the required access to health record statistical data to enable surveillance reporting, identify trends in disease, and inform policy decisions.

In DNRME project documents approved in March 2019, the department noted multiple problems with the current records management system including:

- medical practitioners cannot quickly access previous health assessments to gain a historical long-term view of worker health
- coal workers cannot quickly access their health records, including when they leave the industry or move interstate
- health data is not readily available for surveillance purposes, including to detect early trends of mine dust lung disease
- there are risks of inaccurate data due to manual entry of health assessments
- inefficient data storage requirements.



Separate project documents approved in April 2019 state that the proposed new digital occupational health surveillance solution will support DNRME in its role in administering the Coal Mine Workers' Health Scheme. This will be achieved by integrating several stand-alone technology systems and its largely paper-based records management system.

DNRME received over \$3.9 million funding in 2017–18 to establish the system, and an additional \$1.1 million in 2018–19. DNRME has advised that the system is expected to be operational by October 2020 (but it will not deliver group health surveillance capability until 2021–22). Once fully implemented, the system is expected to:

- digitally capture fitness for work health information from employers, workers, and clinicians
- provide electronic worker assessment information storage
- provide appropriate access to previous assessment records by medical practitioners, employers, coal workers, and others
- enable data analysis and reporting over collected health assessment data to support regular and meaningful surveillance
- provide for clinical data exchange with other health management systems.

When commenting on DNRME's proposed electronic records management project, the Royal Australian and New Zealand College of Radiologists noted that ongoing health surveillance and screening will ensure holistic management of coal mine workers' dust lung disease.

DNRME has started to develop its research strategy, including co-funding a dust disease research study with the Wesley Hospital to analyse and report on trends such as age, gender, work history, disease severity, and smoking status. It is also exploring other research partnerships to address cancer and mortality trends in coal mine workers.

DNRME's position is that its current state of transitioning to the new system meets the intent of the Monash review and has reported that the recommendations are fully implemented. However, until there is an integrated information system fully functioning, we consider that these recommendations are partially met.

Training and selecting doctors

Doctors play an important role in assisting workers to reduce their further exposure to dust.

The Monash review recommended that doctors performing health assessments for coal mine workers be appropriately trained and qualified, in order to improve prevention and detection of diseases.

DNRME has strengthened how doctors are selected and trained to be able to participate in the Coal Mine Workers' Health Scheme. From 1 March 2019, only doctors approved by DNRME can undertake health assessments under the scheme. Once approved, doctors are referred to as 'supervising doctors'. They are then contracted by coal mine operators as 'appointed medical advisers' (AMAs). The AMA's role is to carry out and report on health assessments for the employer's coal mine workers. They also supervise other doctors who are not AMAs but who are authorised to perform medical examinations of workers.

DNRME has introduced new training programs for doctors about how to consider dust exposure controls when performing health assessments of coal mine workers. The doctors are provided with training on:

- assessment of past exposure
- descriptions of types of mines and jobs
- sources of coal mine dust and the control measures.



With the assistance of our subject matter experts, Monash University, we reviewed 236 health assessment forms against the Thoracic Society Australia and New Zealand Standards—*Delivery of Spirometry for Coal Mine Workers July 2017*. The review identified that there are still opportunities for DNRME to improve doctors' training. These areas include ensuring doctors accurately complete health assessment forms and providing better guidance to support workers returning to work.

The areas of improvement from the health assessment forms were provided to DNRME to investigate. DNRME reviewed the same sample and identified five individuals where the clinical pathway was not followed.

Chest x-rays

The Monash review identified concerns about the quality of Queensland chest x-ray reports to accurately diagnose mine dust lung disease for coal mine workers. At the time of their report in 2016, there were limited specialist radiologists in Australia.

Dual read process

Doctors use chest x-rays to identify early signs of occupational dust lung disease. Best practice is for chest x-rays to be reviewed twice (referred to as a 'dual read process') by a minimum of two radiologists. These radiologists undertake additional training to be qualified and are called B-readers (second reads). Qualified B-readers review chest x-rays according to an international classification standard (International Labour Office, ILO).

The United States of America's National Institute for Occupational Safety and Health (NIOSH) offers a one-week training course for specialist medical practitioners (radiologists, occupational physicians, and respiratory physicians) to report chest x-rays using the internationally recognised standards. Physicians who have passed this course are referred to as 'B-readers'.

The University of Illinois, Chicago, is engaged by DNRME to deliver training for Australian doctors who are registered to perform coal mine worker health assessments.

Timeliness of x-ray results

It was positive to note that most chest x-rays we examined (168 of the 234 where dates were noted) were taken within a day after the initial health assessment, and these chest x-rays were provided to the doctor within a time period of a few days to a few weeks.

To address the concerns raised in the Monash review, from late 2016 DNRME started sending coal mine workers' chest x-rays for screening to a recognised expert at the University of Illinois, Chicago, for a second read. The government has spent \$7 million to date to do this.

During 2017 and 2018, there was a considerable time gap between when chest x-rays were taken and when the final reports were received from Chicago. We calculated that, on average, it took 195 calendar days (220 median) from the time DNRME sent a chest x-ray to the United States until the date it received a report. For the same period, we note that DNRME reported that it took on average 141 days to receive the final report, as they measured business days as opposed to calendar days.

Where a worker presented with abnormal results from preliminary tests, such as from a chest x-ray, doctors were able to refer the worker for follow-up investigations and referrals to medical specialists while they waited for the final chest x-ray report (referred to as the 'clinical pathway'). DNRME issued clinical pathway guidelines in 2017 to assist doctors in reaching a diagnosis on potential cases of coal mine dust lung disease in a reasonable time frame. This aimed to reduce worker anxiety and provide more consistent outcomes.

Doctors also had the option of requesting a priority read—this process aimed to have results returned from the United States within three months for urgent requests.



We noted in a small number of workers that the first read did not identify any abnormalities, and the second read did. For these workers, the delay in receiving the final report may have meant a lost opportunity to take early action to reduce further dust exposure. However, in most cases there has been strong agreement between read results from the first read by Australian radiologists and the dual read results from the United States.

From 1 March 2019, DNRME engaged Lungscreen Australia to conduct all second readings instead of sending them to the United States. This has shortened the time period considerably. When we examined x-rays performed since March 2019, we found almost all second reads were completed from between a few days to a few weeks. As at October 2019, Lungscreen Australia has further improved turn-around times to less than one week.

Final health assessments are only completed once all tests have been undertaken, including second read chest x-rays and spirometry. Doctors are required to provide timely feedback to coal mine workers on the outcome of their health assessments under clinical guidelines issued by DNRME. When coal mine workers receive the report, they are required to sign the health assessment to acknowledge that they have discussed the report with the doctor.

DNRME advises that AMAs are often not the examining doctor and they only perform a review of a worker's health assessment without actually seeing the worker in person. This is consistent with our examination of the 236 completed health assessments, where we found worker signatures (confirming advice from the doctor) on 20 of them.

The Construction, Forestry, Maritime, Mining and Energy Union (the union) advised that if workers do not agree with a diagnosis or return to work conditions, the worker will not sign the medical forms. The clinical guidelines state that miners can submit a further medical health assessment from a doctor of their choice. AMAs are required to advise employers of the outcomes of health assessments of employees. But DNRME has no process to ensure that the AMA has notified the employee. DNRME advises that it relies on the professional integrity of the medical provider to answer these questions accurately.

Quality standards

In September 2017, DNRME released its standard for digital chest x-ray images for Queensland coal mine workers. It sets out:

- quality standards for medical officers who take chest x-rays (including image quality)
- qualification requirements for medical officers who report the chest x-rays (including that they must complete the international B-reader program).

In December 2017, 13 Australian B-readers were qualified. From then, a transition process was in place until Lungscreen Australia replaced the Chicago-based B-readers on 1 March 2019. Registration lasts for four years and B-readers need to re-sit examinations periodically to keep their qualifications current.

To monitor the quality of chest x-rays, DNRME:

- engages a third party, Quality Innovation Performance, to accredit chest x-ray providers prior to applying for registration with the department as an approved provider
- receives reports from Lungscreen Australia about the quality of chest x-rays taken by registered chest x-ray providers (this includes rejecting poor quality images).

DNRME has also engaged the University of Illinois at Chicago (UIC) to review the quality of x-ray imaging and reporting. This will occur once UIC completes the 100 per cent audit phase later in 2019/early 2020.



Spirometry

In addition to chest x-rays, doctors use spirometry tests to measure a person's lung function. Specialist laboratories and medical clinics conduct the tests. The Monash review recommended that spirometry testing should be consistent with current Australian standards. It also recommended that the quality of tests be audited regularly as part of the overall auditing within the Coal Mine Workers' Health Scheme.

Spirometry test results

With the assistance of our subject matter experts, Monash University, we reviewed 228 completed health assessments conducted up until April 2018. We assessed whether the quality of the spirometry tests had improved and whether previous results were recorded to allow tests to be compared.

We found the quality of spirometry tests has improved:

- Nearly 90 per cent were considered acceptable quality compared to 60 per cent at the time of the Monash review in 2016.
- The accuracy of results had increased from 79 per cent to 86 per cent.
- Only one assessment had no spirometry data.

Our subject matter experts also identified a proportion of tests that only had automatically generated quality comments from spirometry software. High-quality spirometry testing is vital for accurate interpretation. While many spirometry testing software programs generate these assessments, a preferable approach is for operators to make their own specific comment indicating their interpretation of test quality and relevant patient information.

Training and accrediting spirometry providers

DNRME has introduced more quality and rigour to providers of spirometry tests for coal mine workers. This includes training programs and clinical guidelines focused on how to perform and interpret tests.

Since April 2019, to be an accredited spirometry laboratory/medical clinic they are required to meet the Thoracic Society of Australia and New Zealand standards to conduct tests specifically for coal mine workers. They must also complete mandatory requirements to train medical practitioners to interpret results.

DNRME has engaged a third party, Queensland Innovation Performance, to accredit approved spirometry training providers and ensure they meet the Thoracic Society standards.

Quality standards

The Thoracic Society conducts clinical audits on the spirometry results, on behalf of DNRME, to assess compliance with spirometry reporting and interpretation. We note DNRME commenced sending audit samples to the Thoracic Society on 30 August 2019.

In September 2019, DNRME received its first audit report of a spirometry provider, and it found that this provider was non-compliant.

This demonstrates the value of compliance audits and the need to continue auditing all spirometry providers. The spirometry clinical audit program manual states that all 166 current spirometry providers should have their initial audit completed by September 2020, one year after the audit program commencing.



What still needs to be done

Better guidance for doctors

The Select Committee recommended ways in which doctors can better guide decisions about when workers can safely return to work. It noted that all workers are exposed to risks at coal mine sites, not just those who work at the coal face. The Monash review separately considered the circumstances where doctors decide not to perform a chest x-ray due to a perceived lack of dust exposure risk.

Assessing a worker's health

DNRME has provided training materials for doctors that include how to complete the respiratory component of the health assessment. However, the sections on assessing return to work do not have enough information on how to evaluate the type of work a worker with respiratory disease can continue to perform while using personal equipment that monitors exposure to dust. In addition, the training materials do not cover the doctor's assessment of a worker's fitness for work or any adjustment necessary to support their return to work.

With the assistance of our subject matter experts, Monash University, our review of health assessments found that, overall, respiratory questions were completed well on all the health assessment forms.

There were some quality issues with older versions of the forms and other issues identified in current forms that indicate further training is needed to improve quality. For example:

- Questions on fitness for work were not always well completed and were sometimes contradictory between sections. On some forms, the included instructions about who can use respiratory protective equipment and under what circumstances were not clear.
- There were errors in transposing spirometry data and the wrong boxes were ticked in places.
- The sections for referrals and follow-ups on respiratory health concerns were not accurately completed.

Quality control

The Monash review recommended that all aspects of coal mine workers' medical assessments be performed within a quality audit program. The CWP Select Committee separately noted the need for specialist clinical oversight of the health scheme.

While DNRME previously had an occupational physician to review the clinical material and decisions in 2017, there has been no subsequent appointment to the role within the agency. Auditing of the collected clinical information, including medical investigations, and review of decisions for some thousands of workers each year needs to be undertaken by an occupational physician. The need for this was highlighted in the audit of the sample of spirometry results, where several errors had been made. DNRME has been conducting administrative reviews and routine audits as required, but these have been ill-defined and not sufficient.

We note DNRME is proposing to establish a medical advisory committee to obtain overall clinical and health policy advice. This committee is not anticipated to be in place until 2020. And will not replace the need for an occupational physician.



Auditing chest x-rays

Once DNRME has the quality audit program with the University of Illinois active, it will need to work out:

- the number or proportion of chest x-rays that will be provided and how they will be selected
- how feedback will be reported and what action will be taken if a chest x-ray or reading is of poor quality
- how the audit program provides feedback to the training provided to doctors.

With the assistance of our subject matter experts, Monash University, we sampled 278 chest x-ray reports from the period 1 January 2018 to March 2019. We found the quality of chest x-rays had improved in both imaging and interpreting results, but this will require monitoring as part of the chest x-ray audit process. This includes monitoring discrepancies between Australian and Chicago B-readers.

DNRME still needs to demonstrate how it intends to evaluate the service provider it has engaged to accredit and audit chest x-ray providers. This should include who reviews the online application forms to become a B-reader and how the register will be continuously monitored.

Health assessment forms

Our review of health assessments found that doctors should have more training about the importance of accessing previous spirometry test data to better inform their decisions. This includes knowing how to identify an acceptable test result and how to interpret the spirometry tests. Our review found:

- some health assessment forms did not include spirometry test results at all or included results that were unreadable
- nearly all the health assessment forms did not require doctors to identify the spirometry test provider.

There were also medical history questions missing from DNRME's current form that related specifically to testing a person's lung function and their history of past respiratory conditions.

Workers' compensation and rehabilitation

The Select Committee addressed emerging issues for workers, including rehabilitation and return to work.

These recommendations relate to two separate regulatory regimes:

- the regulation of coal mines under the *Coal Mine Safety and Health Act 1999* administered by DNRME (for coal mine workers)
- the *Work Health and Safety Act 2011* that applies outside of coal mines administered by the Office of Industrial Relations (for other coal workers).

The *Workers' Compensation and Rehabilitation Act 2003* (Qld) and associated regulation establishes Queensland's system of workers' compensation. The Select Committee found workers who have made a claim or received some form of compensation have not been able to reopen their claim if their coal workers' pneumoconiosis (CWP) disease had progressed or their condition deteriorated.



The Select Committee adopted recommendations from a workers' compensation stakeholder reference group that addressed:

- access to health assessments for former or retired coal workers
- the ability of a worker whose mine dust lung disease has progressed to apply to reopen their workers' compensation claim to access further benefits
- enhanced rehabilitation and return to work programs.

Of the 68 recommendations made in the Select Committee Report 2, one recommendation with multiple parts focused on supporting workers' return to work, including improving access to workers' compensation and rehabilitation. Our assessment of the current implementation status of the recommendation is that it is partially implemented.

Progress made

Access to free medical examination for former or retired coal workers

The Office of Industrial Relations has made significant progress towards improving access to free medical examinations for former coal workers who stopped working in the industry before 1 January 2017. This impacts on coal workers in the rail industry, coal-fired power stations, and the shipping industry.

It introduced amendments to the *Workers' Compensation and Rehabilitation Act 2003* establishing a medical examination process for retired or former coal workers with suspected coal workers' pneumoconiosis or a coal mine dust lung disease.

Until 1 January 2022, former coal workers can receive a free lung disease examination if they:

- were employed in an industry involved in mining, loading, transporting, or otherwise dealing with coal, and
- had permanently stopped working in the industry *before* 1 January 2017, and
- had six months cumulative exposure to coal dust as a worker in their place/s of employment in Queensland.

The medical examination process includes a respiratory examination of the person and a chest x-ray. The chest x-ray must be for the purposes of screening for mine dust lung disease and is conducted within clinical guidelines.

Former or retired coal workers who were not properly screened throughout their working life (due to identified deficiencies in the Coal Mine Workers' Health Scheme) are now able to have their respiratory health assessed for the purpose of lodging a workers' compensation claim.

But these arrangements are only considered a stop-gap measure, as they are not available to other coal workers who retired *after* 1 January 2017. We address this further below as part of addressing broader industry implications.

We note that since 1 March 2019, former coal mine workers have been eligible for a free health assessment under the Coal Mine Workers' Health Scheme (through DNRME).

Ability to reopen compensation claims as disease progresses

The Office of Industrial Relations amended the *Workers' Compensation and Rehabilitation Act 2003* and *Workers' Compensation and Rehabilitation Regulation 2014* to:

- clarify that a worker with pneumoconiosis can access further workers' compensation entitlements if they experience disease progression
- introduce an additional lump sum compensation up to \$120,000 for workers with pneumoconiosis.



This recognised the long latency period (during which symptoms do not show) that can occur with CWP and the lengthy time for diagnosis. The lump sum is not available for workers who have been diagnosed with any other mine dust lung disease. This includes, but is not limited to, chronic obstructive pulmonary disease, diffuse dust fibrosis, lung cancer, and other undefined lung disease.

Rehabilitation and return to work programs

The Office of Industrial Relations notes that each individual worker's return to work is determined on a case-by-case basis, and is overseen by their treating specialist, employer, insurer, and rehabilitation and return to work coordinator.

The Office of Industrial Relations has improved rehabilitation and return to work programs for coal mine workers, including:

- requiring insurers to provide periodic reports on return to work outcomes for workers with mine dust lung disease
- establishing (in August 2018) the Coal Mine Dust Lung Disease rehabilitation and return to work stakeholder working group
- engaging medical experts (in February 2019) to develop a return to work decision-making framework.

What still needs to be done

Rehabilitation and return to work programs

For coal mine workers, DNRME's Miners' Health Matters website identifies a list of roles available in the mining industry for those diagnosed with a mine dust lung disease. This includes surface mine operations, underground mining operations with controlled dust exposure (such as electricians), tasks away from the coal face, and maintenance and infrastructure.

There are still gaps in terms of rehabilitation and return to work programs for other coal workers diagnosed with mine dust lung disease, including uncertainty about what type of jobs are within a safe dust level.

Employers and insurers are not given guidance to assist them in delivering a consistent and informed approach. To address this challenge, the Office of Industrial Relations needs to implement the recommendations of the working group, including:

- considering the use and effectiveness of personal dust monitors
- developing a risk matrix to systematically identify appropriate jobs
- developing an agreed approach for employers and insurers to adopt when facilitating return to work arrangements
- developing guidelines about when a worker should be restricted to environments with no dust or low dust risks.

The Office of Industrial Relations has commissioned expert medical advice to provide recommendations about returning workers to work on a mine site with a diagnosis of CWP or coal mine dust lung disease. This advice will form the basis of guidance to assist treating specialists, mining employers, and workers. As the medical group includes an international expert, the Office of Industrial Relations expects to finalise the advice by early 2020.



Addressing broader industry implications

The CWP Select Committee looked at arrangements for regulating and monitoring exposure to silica dust. Silica dust is a hazardous component of coal mine dust (respirable crystalline silica) that can lead to workers developing another form of lung disease called silicosis. The committee's findings applied to all workers in mining and quarry industries, tunnelling operations, and construction and manufacturing sectors.

The committee made recommendations in its second and fourth reports that related to:

- establishing compulsory reporting of mine dust lung disease (two recommendations)
- addressing community air quality concerns including establishing codes of practice (five recommendations)
- expanding the Coal Mine Workers' Health Scheme to other coal-related industries (three recommendations).

Appendix H includes dust monitoring data provided by DNRME for context to the recommendations.

Figure 1D summarises our assessment of the current implementation status for recommendations about addressing broader industry implications.

Figure 1D
Implementation status: Broader industry implications

QAO assessment	Select Committee Report No. 2	Select Committee Report No. 4
Fully implemented	2	4
Partially implemented	-	1
Not implemented (recommendation not accepted)	3	-
Total recommendations	5	5

Source: Queensland Audit Office.

Progress made

Compulsory reporting of dust lung disease

The CWP Select Committee recommended that cases of diagnosed mine dust lung disease caused by occupational exposure to dust (such as coal or silica) be reported to Queensland Health as notifiable conditions.

In July 2019, Queensland Health established the notifiable dust lung disease register. Diagnosed cases will be reported for the coal industry and other industries such as silica exposure in the stone benchtop manufacturing industry.



Air quality monitoring

Local governments use a planning framework to protect their communities from dust.

The Department of State Development, Manufacturing, Infrastructure and Planning conducted a review of the local government planning framework and:

- endorsed that the planning framework includes appropriate processes and mechanisms related to dust
- identified actions that will assist local governments to continue or improve their use of these processes and mechanisms.

The Department of Environment and Science operates environmental air quality monitoring stations across Queensland.

Following the CWP Select Committee Report No. 4, the department conducted a review of the positioning of these stations. In February 2019, a monitoring station was established in Blackwater and another monitoring station is planned for Emerald by June 2020.

Code of practice

The CWP Select Committee recommended that codes of practice be put in place for both stevedoring and coal-fired power stations (stevedoring involves the loading or unloading of cargo (such as coal) from a ship).

The Office of Industrial Relations approves codes of practice that provide guidance to employers on ways to identify and manage work health and safety risks. Employers are required to comply with the approved codes of practice.

In March 2018, the Minister for Education and Minister for Industrial Relations approved Queensland's adoption of Safe Work Australia's national code for managing risks in stevedoring.

In December 2018, the Office of Industrial Relations approved a code of practice for managing respirable dust hazards for coal-fired power stations. It had formed a stakeholder working group that included representatives from coal-fired power stations, maintenance and cleaning contractors, unions, and DNRME. In developing the code of practice, the working group aligned requirements with the current practices for dust monitoring in coal mines.

Recommendations not accepted

Expanding the Coal Mine Workers' Health Scheme to other coal workers

The CWP Select Committee made several comments in its Report No.2 about the need for continued health surveillance for any worker involved in handling or transporting coal (referred to as 'other coal workers'). This includes rail workers, port workers, power station workers, and maritime workers.

In the Select Committee's extended terms of reference as part of its Report No.4, it affirmed the comments and recommendations made in its second report regarding coal rail workers. While it acknowledged that health risks were low due to the systems in place to reduce workers' exposure to dust, the Select Committee also noted that it is essential that the health of workers—past and present—be carefully monitored on an ongoing basis that reflects the long latency of mine dust lung diseases.

Current workers

The Select Committee recommended that the government expand the Coal Mine Workers' Health Scheme (administered by DNRME) to provide other coal workers with the same access to free and mandated health assessments that are available for coal mine workers.



The government has not implemented these recommendations. The Office of Industrial Relations, in consultation with DNRME, determined that existing work health and safety protections for other coal workers were adequate, and that the health risks were different.

Subsequently, Office of Industrial Relations advised DNRME that it considered there is no benefit to be gained in changing the health and safety laws because the laws were largely consistent with protections provided to coal mine workers under the Coal Mine Workers' Health Scheme.

Our assessment, however, is that for current workers in other coal industries, there are differences in the protections offered.

The Coal Mine Workers' Health Scheme requires:

- mandatory free health assessments for all coal mine workers every five years
- DNRME oversight of all completed health assessments.

In addition, mine safety legislation requires coal mines to conduct periodic dust monitoring and report all results to the Mines Inspectorate.

By comparison, for other coal workers, work health and safety laws require employers to determine whether there is a risk to the employee's health by:

- identifying the risk of dust exposure
- determining if dust monitoring is required
- determining if health assessments should be provided.

Work health and safety laws rely on employers understanding the risk of occupational dust exposure so they can protect the health of their workers. To ensure a consistent approach by employers across the industries, it is important they are made aware of, and receive training to understand, the risks of occupational dust exposure.

Appendix D contains more details about the assessment of recommendation 38, including a comparison of the main differences between the legislation that protects coal mine workers and that for other coal workers.

Retired or former workers

The government still needs to address the gap for former or retired workers from other coal-related industries who stop working *after* 1 January 2017.

This is because they are not otherwise eligible for a free health assessment under the Coal Mine Workers' Health Scheme, and the workers' compensation scheme is not set up to provide ongoing health assessments for them.



2. Oversight and reporting

Introduction

As Queensland's regulator of the resources industry, the Department of Natural Resources, Mines and Energy (DNRME) has been implementing the majority of the recommendations from the Monash review and the CWP Select Committee reports. This has included advising the government about establishing an independent regulatory body and funding model.

DNRME has created a public website that provides updates on changes that are introduced, such as training for medical professionals. It also reports on progress about the status of recommendations.

We assessed the progress of government and DNRME in implementing recommendations to create more independent regulation for the resources industry.

Overseeing resources and safety regulation

In May 2017, the Coal Workers' Pneumoconiosis (CWP) Select Committee (the Select Committee) issued its second report, *Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*.

The Select Committee found the lack of accountability and independence in regulating the Queensland resources industry was impacting on the health and safety of coal mine workers. It suggested DNRME had conflicting responsibilities, and that its work on compliance action against coal mine operators should be separate from its work on supporting the economic policy interests of the industry.

The Select Committee recommended significant changes to the way the resources industry operates. It made 19 recommendations focused on new governance and funding arrangements to independently regulate the industry. The recommendations related to:

- establishing a new independent regulator and oversight arrangements (16 recommendations)
- establishing a new funding model to sustain the regulator's operations (three recommendations).

To effectively implement the Select Committee's model, some of DNRME's operational functions would need to move to a newly established independent body. The Select Committee also recommended replacing existing advisory committees with dedicated parliamentary oversight and establishing a new advisory council.

In September 2017, the government supported all the governance recommendations. It noted, however, that it would need to consult widely with stakeholders to come up with options that would be effective and sustainable. Stakeholders included employers (mine operators), unions, legal representatives, insurers, medical experts, and other government departments.

Two of the 66 recommendations from the Select Committee's report were directed to the Public Service Commissioner. One related to reviewing public servant conduct during the Select Committee inquiries—this was referred to the Parliamentary Ethics Committee. The other recommendation required the commissioner to review how DNRME had appointed its former occupational physician. Both have been assessed as fully implemented.

Figure 2A summarises our assessment of the current implementation status of recommendations about establishing a new oversight and funding model.



Figure 2A
Implementation status: Overseeing resources and safety regulation

QAO assessment	Select Committee Report No. 2
Fully implemented	2
Partially implemented	8
Not implemented (recommendation not accepted)	11
Total recommendations	21

Source: Queensland Audit Office.

Progress made

DNRME has made significant progress in addressing the committee's concerns about needing more transparent and independent regulation of the resources industry. It has:

- established an independent time-limited project management office (PMO) to consult with stakeholders and develop options for a new regulatory model
- developed a recommended model to establish a new independent regulator that has been approved by government, along with additional funding
- developed new laws to establish the independent regulator. The Minister for Natural Resources, Mines and Energy introduced the proposed legislation into parliament on 4 September 2019 and referred it to the State Development, Natural Resources and Agricultural Industry Development Committee to consider. The committee has approved the bill, but it is yet to be passed by parliament.

Stakeholder consultation

In late 2017, the government established the PMO to consult with stakeholders about the potential impacts of changing how the resources industry operates. The PMO was separate from DNRME and reported directly to the minister.

The government, through the PMO, consulted extensively with affected entities and stakeholders, using existing advisory committee structures to consider operational and industry implications. The PMO used media statements, discussion papers, focus papers, meetings, public forums, and online updates/communication media to communicate with workers and industry.

It delivered its final report to the minister in June 2018, following its release of a public options paper. The final report included the PMO's advice about how the government could implement the committee's recommendations to establish a new regulatory and funding model.

After the PMO was disbanded in June 2018, DNRME continued to consult with stakeholders on important aspects of the regulatory model to prepare final advice for government. The Queensland Productivity Commission recognised the level of public consultation that DNRME undertook in 2018 when it assessed the potential regulatory impact of the new model. It determined that the previous work undertaken is equivalent to that required when preparing a regulatory impact statement. It determined that further consultation on the proposed legal changes was not required.



Developing a new independent regulator and funding model

The PMO's work program addressed 19 of the CWP Select Committee's Report No. 2 recommendations. DNRME was assigned responsibility for implementing the outcomes of the PMO's advice to the minister, along with most of the other recommendations.

We note the PMO's final report states that meaningful improvement in regulating health and safety requires good legislation, effective operational systems and practices, and a structural framework supported by good governance.

Of the Select Committee's 16 recommendations related to a new independent regulator and oversight arrangements, eight were not accepted in the final model (refer to Appendix D).

DNRME presented their final regulatory model to the government in November 2018, and it was approved. In developing the model, DNRME considered:

- the Select Committee's recommendations
- the PMO's final report
- outcomes of consulting with stakeholders.

DNRME undertook additional stakeholder consultation on some components of the PMO report. Some aspects of the Select Committee and PMO recommendations were not supported by stakeholders, for example setting up an advisory committee, so DNRME did not include them in its final recommended model.

In addition, three recommendations related to a new funding model were also not accepted. DNRME was able to demonstrate all these decisions not to accept recommendations had been made at the appropriate level (such as by the minister or by Cabinet). DNRME presented its recommended funding model (based on the PMO's report) to government in early 2019, but this has not yet been approved.

We found that DNRME has effectively addressed the Select Committee's intent to increase the independence of regulation functions through the alternative model it developed for government. It has done this by separating responsibility for regulating health and safety from promoting and supporting the industry.

DNRME's final model also reflects the PMO's commitment to government and stakeholders to develop options that ensure:

- independence and flexibility
- consistency with the Queensland Government's policy about establishing new governance arrangements
- simple and clear reporting lines
- risk areas are identified and prioritised
- compliance actions are made independently
- independent oversight of performance.

The time taken to implement the recommendations to date is appropriate. It reflects the complexities involved in developing a new independent regulatory model, funding model, and legislative framework, and in consulting with experts and stakeholders.

The government has committed funding to designing and establishing the new regulator, with:

- \$1.5 million allocated across 2017–18 and 2018–19 to establish the PMO and develop options for government, and to oversee the transition to the new regulator (noting the PMO was disbanded in June 2018). DNRME has reported internally that approximately \$1.03 million was spent as at June 2019
- \$2 million allocated in the 2019–20 state budget to establish the new regulator.



Overall, the evidence demonstrated:

- timely action by government and DNRME in responding to the reviews and recommendations. This included committing funding, setting up the PMO, and getting complex legislation and regulation amendments passed
- regular ongoing updates to Cabinet about progress and issues
- ongoing engagement with specialist and expert advice—in line with the seriousness and sensitivity of the issues raised
- employment of a tripartite approach to improving mine safety and health in Queensland (with industry, unions, and government) to ensure all parties participated in developing continuous safety and health improvements.

What still needs to be done

As at the time of writing this report, the government is still considering the funding model that will sustain the ongoing independent operation of the regulator. Parliament also needs to pass the draft legislation to establish the regulator.

Once this is approved, DNRME will need to:

- implement the funding model
- move staff from its functional areas to the new body, including staff from investigations, inspections, policy, and research
- recommend appointments to positions in the new regulatory framework.

If the new funding model and legislation are approved, the government will have effectively addressed the CWP Select Committee's intent to create an independent and sustainable regulatory model.

Coordinating and reporting progress

With so many entities sharing responsibility across all the recommendations, we also assessed how effectively government is coordinating and reporting its progress across all the reviews.

Coordinating work across government

Multiple entities are responsible for collectively reducing the risk of coal mine workers' lung disease. There is evidence of collaborative approaches to implementing some recommendations that have required expertise or broader assessment of system impacts. For example, DNRME consulted with Queensland Health about initial advice to implement recommendations requiring changes to medical processes or accrediting doctors.

As responsibility for implementing the reforms is shared, there is no centralised reporting role assigned to any entity. This means there is no single point for government that considers the impact across all reforms or monitors and reports on progress across the multiple reviews and recommendations.

In February 2018, after the government had publicly acknowledged support for the findings and recommendations from the Select Committee and Monash reviews, the Premier wrote to the Minister for Mines and Energy setting out the commitments and priorities that the minister would be responsible for delivering (through DNRME). This included continuing reforms to resource safety and health, particularly in response to the re-identification of coal workers' pneumoconiosis.



Consistent with the letter from the Premier, DNRME is responsible for implementing most of the reforms in the CWP Select Committee's Report No. 2, and all the Monash review recommendations. DNRME assigned responsibility to other entities for matters that were outside its mandate or expertise to agencies, such as the Public Service Commission and Office of Industrial Relations.

The Office of Industrial Relations assumed responsibility for the Select Committee's Report No. 4 (*Inquiry into occupational respirable dust issues*), including preparing the government's response.

In most cases, the Office of Industrial Relations formally assigned responsibility to other entities where appropriate, but in some cases it did not. In those cases, action has not been taken.

Updates have been provided to the Department of the Premier and Cabinet when requested for preparatory information, or through Cabinet consultation processes related to funding or legislation approvals.

Reporting on implementation progress and changes in decisions

Definitions of status

The separation of responsibilities for implementing recommendations across multiple entities has created disjointed reporting processes. There are no agreed definitions across the entities on terms such as 'actioned', 'implemented', or 'completed', leading to inconsistent practices in how entities report on the status of their work.

DNRME engaged consultants throughout its work program to assess the status of recommendations and to identify where work still needed to be done. DNRME has used the outcomes of these reviews to inform how it reports its progress. These reports have changed over time. DNRME has advised that:

- initially, status reports developed for internal purposes used the term 'actioned', which meant that a recommendation was being adopted and implemented in full or an alternative approach was being undertaken to achieve the intent
- terms have evolved to address the specific approach/audience
- currently, the meaning of 'actioned' and 'implemented' is that action has been taken and the recommendation has been implemented, or an alternative action has been taken to achieve the intent of the recommendation.

DNRME has not consistently reported on the status of recommendations. For example, it has used the following terms to describe the status of Monash review recommendations:

- 'delivered all 18 of the Monash review recommendations'
- 'completed with further enhancement'
- 'implemented all Monash review recommendations'.

The Office of Industrial Relations does not have any agreed definitions for reporting its status. It has stated that all recommendations have been implemented. This is consistent with the information obtained as part of this audit.

Public reporting

As the agency responsible for implementing all recommendations from the Monash review and most of the recommendations from the Select Committee's Report No. 2, DNRME provides updates on the status of progress. These updates are shared with stakeholders, the public (through its website), other government departments, its minister, Cabinet, and parliament.



DNRME uses a dedicated government website to provide the public with information about the status of the government's progress in implementing recommendations.

Monash review

Since July 2018, DNRME has consistently reported that all Monash review recommendations have been delivered or implemented. DNRME has communicated these messages through public forums and parliamentary processes, as well as through the government's public website. This includes a recommendation that a three-year review be conducted to assess actions to implement the report (intended for 2019; satisfied through this audit).

Based on these statements, we expected there to be no further action needed to address the intent of the recommendations. This is consistent with our definition of 'fully implemented'.

However, we found six of the 18 Monash review recommendations where further action is required to fully implement the recommendation (refer to Appendix D and E for detail). This includes advice from DNRME that its new integrated information management system (relating to three recommendations from the Monash review and one from the CWP Select Committee Report No. 2) is not expected to be completed until 2020 to 2022.

Select Committee Report No. 2

DNRME's government website currently states that it is on track to deliver on the actions and timeframes committed to in its 2017 response to the Select Committee's report.

Recent public statements in July 2019 include that the government has actioned all 68 recommendations of the Select Committee.

This is not consistent with the information obtained during this audit or DNRME's definition of 'actioned'.

Select Committee Report No. 4

There have been no public updates by any of the four responsible entities about the CWP Select Committee's Report No. 4.

Changes to decisions

The Select Committee reported that:

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.

The Queensland Government's performance management framework states that departments implementing whole-of-government plans or strategies should establish specific public reporting arrangements.

Since the government's public response in 2017, responsible agencies and the government have made subsequent decisions not to accept 27 recommendations (out of 66 in-scope recommendations from the CWP Select Committee). These decisions, and information about the rationale for the decisions, have not been reported publicly.

Some decisions to not proceed were only made at the department (senior executive) level, such as the Office of Industrial Relations deciding not to implement the Select Committee's recommendations to expand the health scheme to other coal workers. We note that Cabinet has responsibility for developing and coordinating the policies of the government. Given the government's initial support for the recommendations, including those that were subject to further consultation, we had expected that ministers or Cabinet representatives of the government would have been required to endorse a decision of this nature.

Reporting on expenditure

In total, DNRME has received nearly \$25 million in the last three years to implement recommendations from the Monash review and CWP Select Committee's Report No. 2, including:

- in 2016, \$3.73 million to investigate the re-emergence of CWP (fully spent)
- in 2017, \$21 million to
 - establish the PMO to develop options for a new regulatory system (\$1.5 million)
 - implement the Monash review recommendations (\$14.8 million)
 - improve dust monitoring activities such as additional audits and inspections (\$4.7 million).

DNRME advised that not all the funds have been spent (approximately \$8.264 million was unspent at the end of June 2019).

However, in 2019, DNRME received an additional \$11.6 million to:

- establish the new independent regulator (\$2 million)
- undertake additional dust monitoring activities (\$1.7 million)
- establish a mobile health unit (\$1.2 million)
- continue reforms to the Coal Mine Workers' Health Scheme (\$6.7 million).

There has been no reporting of how the funds have been spent collectively across the government entities responsible for implementing relevant recommendations.

What still needs to be done

We do acknowledge that there have been public announcements about changes to legislation and other significant developments. However, consistent with the government's principles of transparency and accountability, we consider it appropriate that responsible entities, as a group:

- agree on definitions of implementation status to ensure consistent language is used to manage expectations of the public, Cabinet, and parliament
- regularly monitor progress across reports and agencies, particularly actions that impact on other recommendations and decisions not to implement recommendations
- report centrally to an appropriate agency on progress and budget expenditure to acquit funds allocated to implement the recommendations.

DNRME's position is that these arrangements would add additional burden to themselves and to other entities by shifting the focus and effort from implementing recommendations.



Appendices

A.	Full responses from entities	45
	Comments received from Director-General, Department of Natural Resources, Mines and Energy	46
	Comments received from Commission Chief Executive, Public Service Commission	54
	Comments received from Director-General, Department of Environment and Science	55
	Comments received from Director-General, Queensland Health	55
	Comments received from Director-General, Department of Education	56
B.	Audit objectives and methods	61
	Audit objective and scope	61
	Entities subject to this audit	62
	Audit approach	62
C.	Roles and responsibilities	64
D.	QAO assessment of recommendations	66
	Monash review recommendations	66
	Coal Workers' Pneumoconiosis Select Committee Report No. 2 recommendations	77
	Coal Workers' Pneumoconiosis Select Committee Report No. 4 recommendations	110
E.	Government response to original reviews and reported status	114
	Monash review recommendations	114
	Coal Workers' Pneumoconiosis Select Committee Report No. 2 recommendations	118
	Coal Workers' Pneumoconiosis Select Committee Report No. 4 recommendations	134
F.	Recommendations by theme	136
G.	Findings from previous reports	137
	Monash review	137
	Coal Workers' Pneumoconiosis Select Committee	138
H.	Dust monitoring data	141



A. Full responses from entities

As mandated in Section 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to the Department of Natural Resources, Mines and Energy; Queensland Health; the Office of Industrial Relations; the Department of State Development, Manufacturing, Infrastructure and Planning; the Department of Environment and Science; and the Public Service Commission.

The heads of these agencies are responsible for the accuracy, fairness and balance of their comments.

This appendix contains their detailed responses to our audit.



Comments received from Director-General, Department of Natural Resources, Mines and Energy

Your Ref 9183P
Our Ref CTS 29380/19

25 NOV 2019

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

qao@qao.qld.gov.au

Dear Mr Worrall,

Thank you for your letter of 5 November 2019 concerning the performance audit on addressing mine dust lung disease.

I would like to acknowledge and thank the Queensland Audit Office (QAO) for its work in undertaking the performance audit. The Department of Natural Resources, Mines and Energy (DNRME) has invested considerable effort in assisting the QAO through its audit process over the past 12 months.

The Queensland Government has progressed significant reforms over the past three years to implement recommendations from the Monash University review of the respiratory component of the Coal Mine Workers' Health Scheme (CMWHS) (the Monash Review) and actions identified in the government response to the Coal Workers' Pneumoconiosis select committee (CWP select committee) reports no. 2 and 4.

Through these reforms DNRME has seen an increase in early stage disease detected and successful return to work with ongoing dust exposure managed. The changes made to the CMWHS have made this possible including mandatory chest X-ray and spirometry performed to appropriate standards by medical practitioners now with additional training and accreditation.

DNRME maintains that it has fully implemented all recommendations from the Monash Review:

- Recommendation 5: DNRME has updated the health assessment form to provide a comprehensive respiratory medical history and respiratory system questionnaire. The US National Institute for Occupational Safety and Health (NIOSH) respiratory questionnaire was adopted based on advice from the Coal Mine Dust Lung Disease Collaborative Group (CMDLD Collaborative Group) of medical specialists, consisting of Professor Malcolm Sim and Dr Robert Cohen, amongst other respiratory experts. Additional changes to the health assessment form have been requested by the QAO regarding questions relating to past respiratory conditions. DNRME is progressing these additional minor changes to the health assessment form.
- Recommendation 8: DNRME has implemented a formalised training program that includes visits to mine sites and registers doctors to ensure they maintain a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the CMWHS.

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Department of
Natural Resources,
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- Recommendation 11: Chest X-rays are performed by appropriately trained staff to a suitable standard or quality. DNRME has established an accreditation system, which includes mandatory training and certification. Chest X-rays are taken and read according to the current International Labour Office (ILO) classification. Doctors must complete the NIOSH B-reader competency examination to be registered and retain B-reader proficiency to remain registered. DNRME delivered the first digital NIOSH B-reader course in Australia, which now has 32 qualified B-readers.
- Recommendation 13: Since 2018, DNRME has been transitioning to an electronic system of data entry and storage, whereby doctors undertaking respiratory assessments enter medical and occupational data and can access previously collected information for comparative assessment, and to facilitate auditing. DNRME has an online portal for doctors to submit health assessment forms electronically. Currently, 88 per cent of health assessments are submitted electronically.
- Recommendation 14: Health assessments for all coal mine workers, including contractors, subcontractors and labour hire employees, who meet revised criteria for being at risk from dust exposure are included in the DNRME database for the purposes of ongoing medical surveillance.
- Recommendation 15: DNRME conducts ongoing individual and group surveillance of health data collected under the scheme, to detect early CMDLD and analyse trends to disseminate to workers, employers and unions.

As at 31 October 2019, 57 971 mine worker X-rays have been dual read, with 22 cases of disease detected. Certain mine dust lung diseases do not exhibit a radiographic change in the lung and a further six cases of disease have been detected via the spirometry component of the health assessment. Fortunately, the majority of coal workers' pneumoconiosis cases detected were in the early stage of disease. Free respiratory checks are also now available to retired and former workers to ensure their continued health surveillance.

DNRME is transitioning to an electronic system for health surveillance which will provide a significantly improved health surveillance capability allowing identification of trends and support research and provide an interface between employers, workers, medical practitioners and DNRME. With the inherent complexity of this system, it is important that care is given to ensure the system delivers these intended outcomes. At no point during this transition have workers' respirable health been at risk.

In its response to the CWP select committee report no. 2, the government supported or supported in principle all 68 recommendations contained in the report. In doing so, the government stated it accepted the intent of the recommendations and acknowledged that additional analysis and consultation was required to better understand the most appropriate implementation pathway. The additional work required was outlined in eight action areas, which the government has completed. The government is progressing toward full implementation of its decisions arising from those actions.

In responding to the recommendations, the government's focus has been on addressing risk and potential harm to workers. Through its analysis of the recommendations and extensive engagement with stakeholders, including unions, medical professionals and technical experts, it was clear that the action best addressing the risk at the core of some recommendations often required more than rigid compliance with the recommendation.

For example, the independently led Project Management Office (PMO) found that many elements of the regulatory model recommended by the CWP select committee were rejected by stakeholders due to their administrative complexity with little or no improvement to worker health protection. In these cases, the government decided to take an alternative, more protective approach. DNRME has taken great care to explain this to the QAO during its audit.



Significant improvements have been made in coal dust management. Since 2017 all coal mines are required to report any exceedance of measured personal respirable coal dust or silica dust. These exceedances must be investigated and the worker's task must be resampled. These are handled as complaint investigations and do not appear as inspections.

Inspectors conduct structured inspections of coal mines. These address many safety and health hazards and are conducted in accordance with a structured inspection guideline. These are typically allocated for a certain part of the mine. If an Inspector identifies issues or matters of concern regarding dust they will be documented within the mine record. Since 2017 there has been a significant reduction in the average dust exposures and singles exceedances reported across all mines, reflecting improved practices in industry and greater regulatory oversight.

DNRME has prepared regular, comprehensive reporting to the Minister for Natural Resources, Mines and Energy on the reforms to the CMWHS and the status of actions against the Monash Review and CWP select committee recommendations.

With all of this work there is still, and will always be, further effort required to ensure the reforms made are embedded and sustained to deliver their intended outcomes. DNRME is progressing the establishment of mobile health units, establishing an expert medical advisory panel and is awaiting parliamentary consideration of the Resources Safety and Health Queensland Bill 2019 to establish the resources safety and health regulator as an independent statutory body. DNRME is also continuing to improve the CMWHS and progress to full implementation the CWP select committee recommendations.

DNRME has reviewed the proposed report and considers it is important to clarify a number of matters which are detailed in the document attached.

Should you have any further enquiries, please contact Mr Mark Stone, Executive Director, Resources Safety and Health, Department of Natural Resources, Mines and Energy on telephone

Yours sincerely,



James Purtil
Director-General

Att

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Attachment 1

Clarification of matters contained in proposed report

The Department of Natural Resources, Mines and Energy (DNRME) considers it is important to clarify the following matters contained in the report:

Report reference	DNRME clarification
"DNRME publicly report cases of mine dust lung disease. From 2015 to 2019, it reported 116 workers as at 31 October 2019 have been diagnosed with the disease..." - page 9.	DNRME's public report of confirmed cases of mine dust lung disease as at 31 October 2019 was 124 workers since 1984. 114 cases have been reported to DNRME since 2015.
"The Select Committee recommended reducing the occupational exposure limit for coal dust and DNRME has published this as an interim measure" - page 12.	DNRME advised QAO that the government has changed the law to reduce exposure limit as an interim measure, while awaiting SWA's recommendations. These reduced limits apply and are being enforced and generally industry is managing exposure to far higher standard than the reduced limit.
"While there is evidence of DNRME consulting with a range of stakeholders, including medical professionals, over the last three years, there has been no designated medical expert or any expert group that has had formal responsibility for overseeing the scheme..." - page 13.	A group of medical experts, including Professor Malcolm Sim, with support from Queensland Health and Dr Cohen, voluntarily formed the Coal Mine Dust Lung Disease (CMDLD) Collaborative Group. The CMDLD Collaborative Group has provided expert advice and developed a diagnostic clinical pathway to ensure consistency in the referral and diagnosis of CMDLD. DNRME is transitioning to a long-term solution by establishing an expert medical advisory panel. The panel will provide medical advice on priority focus areas and identify emergent health issues associated with all mining and quarrying in Queensland.
"DNRME engaged Lungscreen Australia in March 2019 to conduct the second read of the chest X-ray instead of sending them to the United States. This considerably reduced the length of time for second reads to weeks not months. Since October 2019, Lungscreen Australia has further improved turn-around times to less than one week" - page 13 & 31.	Lungscreen Australia's average turnaround times have been less than one week since June 2019. For the month of October 2019 the average turnaround time for urgent reads was 1.99 business days (from receiving the chest X-ray image to providing the final report).
"The government has separately reported that it has actioned all the Select Committee recommendations" - page 16.	The government's response to the select committee's report no. 2, committed to a number of actions, noting that further work including consultation would be required to determine the best pathway to implementation. The government has stated that it has delivered the actions it committed to in the response. The government has also communicated progress on work to complete implementation, such as the introduction of a bill to establish the resources safety and health regulator as an independent statutory body.
"... There is no clear, accurate reporting on the status of work" - page 18.	DNRME has prepared regular, comprehensive reporting to the Minister for Natural Resources, Mines and Energy on the reforms to the Coal Mine Workers' Health Scheme and the status of actions against the Monash Review and CWP select committee recommendations.

Report reference	DNRME clarification
<p>“Coal dust occupational exposure limit” – page 20.</p>	<p>The Minister for Natural Resources, Mines and Energy has long stated his support for adopting the scientific evidence-based recommendation of the Safe Work Australia review into exposure limits. The Minister also wrote to the then Commonwealth Minister for Small and Family Business, the Workplace and Deregulation and requesting Safe Work Australia expedite the review for respirable coal dust and respirable crystalline silica. On 1 November 2018, the Queensland Government amended the Coal Mining Safety and Health Regulation 2017 to lower the limit from 3mg/m³ for respirable dust to 2.5mg/m³.</p>
<p>Enforcing and overseeing coal dust management – page 23 and 24.</p>	<p>Inspectors conduct structured inspections of coal mines. These address many safety and health hazards and are conducted in accordance with a Structured Inspection Guideline (SIG). These are typically allocated for a certain part of the mine. For example development, longwall or outbye. Within these SIGs there are specific sections on dust. If an Inspector identifies issues or matters of concern regarding dust they will be documented within the body of the mine record.</p> <p>Since 2017 there has been a significant reduction in the average dust exposures and singles exceedances reported across all mines. Prior to 2017 there many occasions in dust or dust control was identified and addressed in inspections and mine records. Often this resulted in compliance actions (directives and SCPS).</p> <p>Since 2017 all coal mines are required to report any exceedance of measured personal respirable coal dust or silica dust. These exceedances must be investigated and the task must be resampled. If this results in a second exceedance the mine is issued with a directive and this matter handled outside the inspection regime and involves the inspectors reviewing the investigation, installed dust controls and increased monitoring requirements.</p> <p>Since 2017 there have been a number of complaints received by the inspectorate regarding dust control and dust monitoring. These are handled as complaint investigations and do not appear as inspections.</p> <p>The dust monitoring audits conducted to determine compliance with recognised standard 14 were specifically targeted for open cut coal mines. Open cut coal mines had historically undertaken the same level of monitoring as underground coal mines and this audit program was developed to ensure that open cut coal mines understood the risk and were implementing robust risk based monitoring programs.</p> <p>In preparation for the audits all monitoring undertaken by the mine was reviewed including the samples collected per similar exposure group. In addition all single exceedances reported by the mine were reviewed and investigated.</p>



Report reference	DNRME clarification
	<p>During most of these audits time was taken to visit parts of the mine to speak with coal mine workers and conduct visual inspection of the working environment. Typically this would be targeted to high exposure risk areas such as drill rigs, blast patterns and coal processing laboratories.</p>
<p>"On 29 November 2017, the advisory committee voted unanimously to amend the standard to allow the use of real-time monitors...the outcomes of the advisory committee's decision were provided to the minister to be endorsed. DNRME issued a revised version of the standard in November 2018 but it was not amended to reflect the advisory committee's decision. At the time of report, DNRME did not have confirmed advice from the minister to implement the advisory committee's decision" – page 23.</p>	<p>DNRME publishes standards, known as "recognised standards", which are developed by tripartite committees and made by the Minister. Recognised standards outline ways for mine operators to effectively manage risks at coal mines.</p> <p>The Minister for Natural Resources, Mines and Energy has noted the advice of the advisory committee.</p> <p>The implementation of recommendation 27 is pending IECEx certification required to use real-time personal dust monitors, such as the Thermo Scientific PDM3700, in underground coal mines).</p>
<p>"The advisory committee did not support dust abatement plans. Instead, it proposed that DNRME develop a new standard for dust management in open-cut mines to supplement existing legislation and standards. At the time of the audit, the standard had not been published" – page 25.</p>	<p>The Minister for Natural Resources, Mines and Energy has approved the publication of 'Recognised Standard 20 – Dust control in surface mines'. It is anticipated that the recognised standard will be notified by gazette notice on 29 November 2019.</p>
<p>"The areas of improvement from the health assessment forms were provided to DNRME to investigate. DNRME reviewed the sample and identified five individuals where the clinical pathway was not followed" - page 30.</p>	<p>DNRME had previously identified these same five individuals as part of its existing review of clinical pathway compliance and had already commenced follow-up with the relevant doctor.</p>
<p>"Since April 2019, spirometry laboratories/medical clinics are required to meet the Thoracic Society of Australia and New Zealand standards to be accredited to conduct tests specifically for coal mine workers. They must also complete mandatory requirements to train medical practitioners to interpret results.</p> <p>DNRME has engaged a third party, Queensland Innovation Performance, to accredit approved spirometry training providers and ensure they meet the Thoracic Society standards" - page 32.</p>	<p>The Thoracic Society of Australia and New Zealand (TSANZ) standards for the delivery of spirometry for coal mine workers were released in late 2017.</p> <p>The requirement for spirometry providers to follow the TSANZ standards was included as an obligation in the approved health assessment form from 27 April 2018 (Version 3).</p> <p>The accreditation program for spirometry commenced in January 2019. From 1 March 2019, any new providers seeking approval to undertake spirometry under the Coal Mine Workers' Health Scheme must have first completed accreditation with Quality Innovation Performance. The TSANZ standards include obligations for staff performing spirometry to have completed accredited courses.</p> <p>DNRME engaged a third party, Quality Innovation Performance, to accredit both practices that conduct spirometry under the Coal Mine Workers' Health Scheme and providers of spirometry training against the respective TSANZ standards.</p>



Report reference	DNRME clarification
<p>"The Thoracic Society conducts clinical audits, on behalf of DNRME, on the spirometry results to assess compliance with spirometry reporting and interpretation." - page 32.</p>	<p>The TSANZ reviews spirometry tests conducted by spirometry providers against the TSANZ standards for the delivery of spirometry. This is achieved through reviewing spirometry reports and relevant sections of the health assessment form to assess the quality of the tests, that the results have been correctly interpreted, and that the documentation meets the reporting requirements for spirometry.</p>
<p>"DNRME still needs to... - include guidance about determining which workers do not need a chest X-ray (those engaged in a low risk task – refer to Monash recommendation 6) (8.2.6)..." - Appendix D, Figure 2, page 6.</p>	<p>As reflected in QAO's assessment of DNRME's implementation of Monash review recommendation 6, which states no further action is required—revision of the doctor training program to include guidance is not necessary because all coal mine workers that are referred to a doctor by their employer for a health assessment under the Coal Mine Workers' Health Scheme must have a chest X-ray prior to starting in the coal industry and then at least once every 5 years.</p>
<p>"Recommendation 5: The form should include a comprehensive respiratory medical history and respiratory symptom questionnaire – QAO assessment: Partially implemented" – Appendix D, page 3 and Appendix E, page 2.</p>	<p>DNRME has updated the health assessment form to provide a comprehensive respiratory medical history and respiratory system questionnaire. The US National Institute for Occupational Safety and Health (NIOSH) respiratory questionnaire was adopted based on advice from the Coal Mine Dust Lung Disease Collaborative Group (CMDLD Collaborative Group) of medical specialists, consisting of Professor Malcolm Sim and Dr Robert Cohen, amongst other respiratory experts. Additional changes to the health assessment form have been requested by the QAO regarding questions relating to past respiratory conditions. DNRME are progressing these additional minor changes to the health assessment form.</p>
<p>"Recommendation 8: Doctors should undergo a formal training program, including visits to mine sites, prior to being approved by DNRME, to ensure they reach a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the scheme – QAO assessment: Partially implemented" - Appendix D, page 5 and Appendix E, page 2.</p>	<p>DNRME has implemented a formalised training program that includes visits to mine sites, and registers doctors to ensure they maintain a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the CMWHS.</p>
<p>"Recommendation 11: Chest X-rays should be performed by appropriately trained staff to a suitable standard or quality and performed and interpreted according to the current ILO classification by radiologists and other medical specialists classifying CXRs for the scheme – QAO assessment: Partially implemented" – Appendix D, page 7 and Appendix E, page 2.</p>	<p>Chest X-rays are performed by appropriately trained staff to a suitable standard or quality. DNRME has established an accreditation system, which includes mandatory training and certification. Chest X-rays are taken and read according to the current International Labour Office (ILO) classification. Doctors must complete the NIOSH B-reader competency examination to be registered and retain B-reader proficiency to remain registered. DNRME delivered the first digital NIOSH B-reader course in Australia, which now has 32 qualified B-readers.</p>

Report reference	DNRME clarification
<p>"Recommendation 13: DNRME should transition to an electronic system of data entry and storage, whereby doctors undertaking these respiratory assessments enter the data for their assessment and can access previously collected data for the mine worker ad to facilitate auditing – QAO assessment: Partially implemented" – Appendix D, page 10 and Appendix E, page 3.</p>	<p>Since 2018, DNRME has been transitioning to an electronic system of data entry and storage, whereby doctors undertaking respiratory assessments enter medical and occupational data and can access previously collected information for comparative assessment, and to facilitate auditing. DNRME has an online portal for doctors to submit health assessment forms electronically. Currently, 88 per cent of health assessments are submitted electronically.</p>
<p>"Recommendation 14: All coal mine workers, including contractors, subcontractors and labour hire employees, who meet revised criteria for being "at risk from dust exposure" should be registered in the DNRME database on entry into the industry for the purposes of ongoing medical surveillance – QAO assessment: Partially implemented" - Appendix D, page 10 and Appendix E, page 3.</p>	<p>Health assessments for all coal mine workers, including contractors, subcontractors and labour hire employees, who meet revised criteria for being at risk from dust exposure are included in the DNRME database for the purposes of ongoing medical surveillance.</p>
<p>"Recommendation 15: DNRME 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 – QAO assessment: Partially implemented" - Appendix D, page 10 and Appendix E, page 3.</p>	<p>DNRME conducts ongoing individual and group surveillance of health data collected under the scheme, to detect early CMDLD and analyse trends to disseminate to workers, employers and unions.</p>



Comments received from Commission Chief Executive, Public Service Commission



Public Service Commission

Please quote: TF/19/11997

21 November 2019

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Worrall

Performance audit on addressing mine dust lung disease

Thank you for your letter dated 5 November 2019 regarding the Queensland Audit Office's performance audit on addressing mine dust lung disease and providing an opportunity to comment on the proposed report to parliament.

The audit proposes a finding that the Public Service Commission has effectively implemented relevant recommendations from the Coal Workers' Pneumoconiosis Select Committee. I also note that the Public Service Commission's comments on the preliminary draft of the report have been adopted and incorporated into the report. Therefore, I have no further comments on the proposed report to parliament.

Should you have any further queries or require further information, please contact Mr Joe Meagher, Principle Policy Officer, Policy, Conduct and Performance, via email or on [redacted] or Mr David Reed, A/g Executive Director and Corporate Counsel via email [redacted]

Yours sincerely

A handwritten signature in black ink, appearing to read "Robert Setter".

Robert Setter
Commission Chief Executive

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Comments received from Director-General, Department of Environment and Science



Department of
Environment and Science

Our Ref: CTS 30332/19
Your Ref: 9183P

Mr Brendan Worrell
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Worrell

Thank you for your letter of 5 November 2019 regarding the performance audit on addressing mine dust lung disease.

I would also like to thank you for sending me a copy of the proposed report to Parliament for information and comment. I am pleased to inform you that I have no further comment on the proposed report.

I am also pleased to note that the Department of Environment and Science (the department) has fully implemented Recommendation 5 b) and c) of the Coal Workers' Pneumoconiosis Select Committee Report No. 4.

Should your officers require any further information, they may contact Dr Faiz Khan – Chief Scientist, Air and Chemical Policy, Environmental Policy and Programs of the department on telephone or by email at

Yours sincerely

A handwritten signature in black ink, appearing to read "J. Merrick", written over a horizontal line.

Jamie Merrick
Director-General

26/11/19

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Comments received from Director-General, Queensland Health



Queensland Health

Enquiries to: Ms Sophie Dwyer
Health Protection Branch
Prevention Division

File Ref: C-ECTF-19/12918

Mr Brendan Worrall
Auditor-General
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Email: gao@gao.qld.gov.au

Dear Mr Worrall

Thank you for your letter dated 5 November 2019 regarding a performance audit on addressing mine dust lung disease, and the opportunity to provide further comment on the proposed report to parliament.

As the Queensland Audit Office has incorporated previous feedback by Queensland Health on earlier drafts of the report, and also noting that Queensland Health has fully implemented relevant recommendations to address mine dust lung disease, Queensland Health have no further comments.

Queensland Health appreciate the level of consultation undertaken by the Queensland Audit Office to date and look forward to the final report being presented in the Queensland Parliament in December 2019.

If you require any further information in relation to this matter, please contact Ms Sophie Dwyer, Executive Director, Health Protection Branch, Prevention Division, Department of Health, on telephone [redacted] or via email at [redacted]

Further information and updates about the Queensland Health Notifiable Dust Lung Disease Register can also be found at <https://www.health.qld.gov.au/public-health/industry-environment/dust-lung-disease-register/about-the-register>.

Yours sincerely

A handwritten signature in black ink, appearing to read "John Wakefield".

Dr John Wakefield PSM
Director-General
26 / 11 / 2019

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Comments received from Director-General, Department of Education



Office of the
Director-General

Department of
Education

26 NOV 2019

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
Email: gao@gao.qld.gov.au

Dear Mr Worrall *Brendan*

Thank you for your letter dated 5 November 2019 providing an opportunity to comment on the Queensland Audit Office's (QAO) proposed report to parliament on addressing mine dust lung disease.

I note the report assessed how effectively public sector entities have implemented recommendations from the following independent reviews aimed at reducing the risk and occurrence of mine dust lung disease:

- Monash Centre for Occupational and Environment Health, Review of Respiratory Component of the Coal Mine Workers' Health Scheme;
- Coal Workers' Pneumoconiosis (CW) Select Committee reports:
 - Report No 2, *Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*, May 2017; and
 - Report No 4, *Inquiry into occupational respirable dust issues*, September 2017.

The Department of Education, through the Office of Industrial Relations (OIR), has responsibility for six of the 89 recommendations considered by the QAO, with four recommendations contained in Report No 2 (recommendations 38, 62, 65 and 66) and two recommendations arising out of Report No 4 (recommendations 1 and 2).

The department notes the QAO's assessment of the implementation of these recommendations.

Recommendations 38, 65 and 66 of Report No 2:

The Queensland Government's response to Report No 2 provided in-principle support for the intention of expanding the Coal Mine Workers' Health Scheme, health assessments and occupational exposure limits to non-coal mine workers. However, the Government also acknowledged this approach creates administrative complexities that required further assessment of regulatory and portfolio responsibilities across industry and relevant agencies. The response further noted these recommendations would be better informed following the release of the Select Committee's response to their extended terms of reference.

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Based on evidence provided as part of the extended terms of reference, it was evident the risk profile of these other coal workers is different to underground and aboveground coal mine workers. In particular, I note that Report No 4 states:

- Coal rail workers (page 43) – ‘The committee did not receive a lot of evidence of poor practices in coal rail handling. Collectively, many of the concerns that were raised in evidence related to past practices. The introduction in recent years of various practices aimed at reducing workers’ exposure to respirable dust and monitoring their health appears to have gone a long way towards alleviating concerns regarding the exposure of coal rail workers. The committee’s further investigations have confirmed its initial view expressed in its *Black lung, white lies* report (and noted at the start of this chapter) that the systems put in place in recent years, including monitoring, engineering controls and coal dust suppression, do provide an effective means for reducing workers’ exposure’.
- Coal port workers (page 54) – ‘As with coal rail issues, many, though certainly not all, of the concerns raised with the committee related to incidents, or alleged incidents, that went back some years’. Subsequently the Select Committee recommended the adoption of the national code of practice for managing risks in stevedoring and this code was approved in March 2018.
- Coal fired power station workers – The Select Committee remained concerned about the inconsistent practices within the coal-fired power station industry and recommended a code of practice be developed. The code of practice, *Managing respirable dust hazards in coal-fired power stations Code of Practice 2018* was approved in December 2018 and delivered consistent approaches for health assessments (same health monitoring tests as for coal mine workers) and occupational exposure limits (via specifying air monitoring requirements and reporting of results). OIR has also verified the majority of personal air sampling results from coal-fired power stations are well below the existing occupational exposure limit for respirable coal dust.

This is supported by no reported workers’ compensation claims for CWP for coal port, rail or power station workers.

Recommendation 62 of Report No 2

In 2017, amendments were made to the *Workers’ Compensation and Rehabilitation Act 2003* to introduce a medical examination process for retired and former coal workers who stopped working in the industry prior to 1 January 2017. This was a measure designed to enable former and retired coal mine workers, who had not at that stage been properly screened throughout their working life or on retirement, with a means of having their respiratory health assessed for the purpose of lodging a workers’ compensation claim. These amendments aligned with the recommendations made by a Stakeholder Reference Group in March 2017 that were adopted by the Select Committee in its report.

The department notes the QAO’s assessment that there is no further action required by OIR in relation to recommendations 62(a) and 62(b). The department also notes the QAO’s finding that the Government still needs to address the requirement for a medical examination process for former or retired coal workers (other than coal mine workers) who stopped working in the industry after 1 January 2017.

In response to recommendation 62(c), OIR established a stakeholder working group in 2018 to overcome barriers to returning workers with mine dust lung diseases back to work in a supported and safe manner. The stakeholder group agreed to engage an expert medical panel, led by international expert, Professor Robert Cohen from the University of Illinois and including Dr David Cleveland, Dr Matthew Brandt and Dr Robert Edwards, to develop a risk matrix for returning workers to work. This medical panel has consulted with the stakeholder working group on its findings and is expected to finalise its advice by the end of 2019. This will provide important guidance to employers in facilitating safe and meaningful return to work outcomes for workers.

The department also notes the QAO's finding in relation to recommendation 62(d). OIR will work with the Department of National Resources, Mines and Energy (DNRME), to address any implications that arise following the establishment of the new independent resources safety and health regulator, including reviewing the existing memorandum of understanding between OIR and DNRME.

Recommendations 1 and 2 of Report No 4

OIR has introduced specific codes of practice under the *Work Health and Safety Act 2011* for coal-fired power station and stevedoring workers. These codes are helping to ensure that risks from coal dust to workers – no matter where they work – are managed appropriately and provide consistent safety protections for any worker in Queensland working with coal.

In response to recommendation 5(a) of Report No 4, OIR is developing a strategy to address key occupational health risks, including examining international approaches to ensure longitudinal data on current and emerging risks are utilised as part of a health surveillance framework. Work to date includes establishing an internal working group tasked with examining other jurisdictions' approaches involving health surveillance frameworks to collect and analyse data and inform future action. Proposed short term outcomes include updating and improving processes to monitor and review emerging risks, drawing on a range of available information sources, and proposing appropriate regulatory activities for prioritisation in OIR's overall regulatory strategy.

It is also proposed that OIR will formally engage with the Department of Environment and Science to ensure clear understanding in relation to responsibility for delivery of recommendation 5(a).

Other initiatives

Since the Select Committee released its reports, the department has also committed extensive resources to provide support to workers diagnosed with mine dust lung diseases. This includes:

- working closely with DNRME to develop targeted information resources for workers;
- engaging with the Mine Dust Victims Group to provide information and assistance to current and former coal mine workers concerned about mine dust lung diseases or diagnosed with a mine dust lung disease;
- holding forums in Moranbah, Rockhampton and Mackay in May 2019 to disseminate information about supports and resources to affected workers and their families that are available through the workers' compensation scheme; and
- distributing information about navigating the workers' compensation scheme through medical colleges such as the Australian College of Rural and Remote Medicine.

The department is continuing to engage with stakeholders to disseminate information to ensure affected workers and their families are supported.

It is noted that the approach implemented to ensure the safety of workers exposed to occupational dust and to support workers through the workers' compensation scheme has provided a strong basis for the recent response to the outbreak of disease related to exposure to respirable crystalline silica in Queensland's stone benchtop fabrication industry. The recently approved *Managing respirable crystalline silica dust exposure in the stone benchtop industry Code of Practice 2019*, also sets enforceable minimum standards for stone benchtop fabrication businesses. This code aims to directly address the high rates of non-compliance within the stone benchtop industry and the significant increase in workers' compensation claims for silicosis in the industry. This is achieved by specifying minimum dust control measures, consistent health monitoring tests as for coal mine workers and occupational exposure limits in addition to specifying air monitoring requirements and reporting of results.

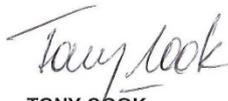
4

In addition, an industry-specific code better supports an industry largely made up of small employers who have limited knowledge and resources available to manage the risks associated with fabricating artificial stone, and the complex nature of the injury caused by this exposure.

If you require further information or assistance, please contact Ms Janene Hillhouse, Executive Director, Workers' Compensation Policy and Services, OIR, on

Again, thank you for the opportunity to comment on the proposed report.

Yours sincerely



TONY COOK
Director-General

Ref: 19/635281



B. Audit objectives and methods

This audit has been performed in accordance with the Standard on Assurance Engagements ASAE 3500 *Performance Engagements*, issued by the Auditing and Assurance Standards Board. This standard establishes mandatory requirements and provides explanatory guidance for undertaking and reporting on performance engagements.

The conclusions in our report provide reasonable assurance that the objectives of our audit have been achieved. Our objectives and criteria are set out below.

Audit objective and scope

The objective of the audit was to assess how effectively public sector entities have implemented recommendations from the following independent reviews aimed at reducing the risk and occurrence of mine dust lung disease:

- Monash Centre for Occupational and Environmental Health, *Review of Respiratory Component of the Coal Mine Workers' Health Scheme*, July 2016
- Coal Workers' Pneumoconiosis Select Committee reports:
 - Report No. 2, *Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*, May 2017
 - Report No. 4, *Inquiry into occupational respirable dust issues*, September 2017.

The committee tabled five reports in total in 2016 and 2017. Reports 2 and 4 are relevant to this audit.

We also assessed how effectively the responsible public sector entities are monitoring and reporting on progress.

This audit separately addresses a recommendation from one of the reports to conduct an independent three-year review of the Queensland Government Coal Mine Workers' Health Scheme.

Scope exclusions

The audit acknowledges that workers are exposed to occupational dust hazards in a range of industries. However, we have examined the implications only for coal workers exposed to coal dust and silica, which was the focus of the three review reports. This audit did not specifically look at other industries who have been recently impacted by the emerging silicosis diagnoses.



Entities subject to this audit

The Department of Natural Resources, Mines and Energy (DNRME) is the government agency responsible for the health and safety of coal mine workers. Most of the recommendations from the three reviews were directed to DNRME, but other entities are also responsible for implementing recommendations.

In conducting this audit, we assessed the actions of:

- Department of Natural Resources, Mines and Energy
- Department of Education (Office of Industrial Relations)
- Queensland Health
- Department of State Development, Manufacturing, Infrastructure and Planning
- Department of Environment and Science
- Public Service Commission.

Audit approach

We conducted this audit in accordance with the Auditor-General of Queensland Auditing Standards—September 2012, which incorporated the requirements of standards issued by the Australian Auditing and Assurance Standards Board.

The audit included:

- interviews with staff from the departments (including regional staff)
- reviews of documents and analysis of data
- interviews with key stakeholders, such as WorkCover Queensland and Dr Bob Cohen
- interviews with staff from Queensland Resource Council, Cement Concrete and Aggregates Australia, CFMEU, and NSW Coal Services
- site visits to an underground coal mine, open-cut coal mine, quarry, and underground metalliferous mine.

Subject matter experts

The Monash Centre for Occupational and Environmental Health at Monash University contributed to this audit as subject matter experts as they undertook the original Monash review.

Monash University complied with relevant independence policies and procedures, including those required by the Queensland Audit Office (QAO), the Queensland Public Service, and the Accounting Professional and Ethical Standards Board. QAO actively managed any conflicts of interest (actual or perceived) during the audit.

DNRME sought further advice from Monash University after the original Monash review. To mitigate any self-review threat by Monash University, QAO has precluded Monash's involvement in assessing those four recommendations.

Assessing implementation

We assessed whether each recommendation has been fully implemented, partially implemented, not implemented (with the recommendation either accepted or not accepted), or is no longer applicable. The definition of each is provided in Figure B1 below.



Our assessment was based on the actions and time taken by entities to implement improvements. If recommendations have not been implemented, we examined whether decision-making processes were appropriate and whether the issues in the reviews have been addressed through alternative actions.

Figure B1
Definitions of implementation status

Status	Definition
Fully implemented	Recommendation has been implemented, or alternative action has been taken that addresses the underlying issues and no further action is required. Any further actions are business as usual.
Partially implemented	Significant progress has been made in implementing the recommendation or taking alternative action, but further work is required before it can be considered business as usual. This also includes where the action taken was less extensive than recommended as it only addressed some of the underlying issues that led to the recommendation.
Not implemented	<i>Recommendation accepted</i> No or minimal actions have been taken to implement the recommendation, or the action taken does not address the underlying issues that led to the recommendation.
	<i>Recommendation not accepted</i> The government or the agency did not accept the recommendation.
No longer applicable	Circumstances have fundamentally changed, making the recommendation no longer applicable. For example, a change in government policy or program has meant the recommendation is no longer relevant.

Source: Queensland Audit Office.



C. Roles and responsibilities

Regulating the Coal Mine Workers' Health Scheme

As the entity responsible for regulating the Coal Mine Workers' Health Scheme, the Department of Natural Resources, Mines and Energy (DNRME) has implemented many initiatives in partnership with industry, unions, and other government entities. This approach appropriately reflects the shared responsibility for implementing improvements to the Coal Mine Workers' Health Scheme. It may also be used in addressing broader health implications for workers in other industries, and emerging occupational dust lung diseases such as silicosis.

Coal mine operators

Coal mine workers are protected under the Queensland Coal Mine Workers' Health Scheme (the scheme).

Under the scheme, employers (including coal mine operators and labour hire companies) are responsible for paying for and ensuring their employees are referred for health assessments at least every five years (and for new employees, before they start work). Retiring and former coal mine workers can access the scheme on a voluntary basis.

DNRME oversees the scheme and works with employers, medical practitioners, unions, and coal mine workers to facilitate early diagnosis and treatment for respiratory diseases like coal workers' pneumoconiosis (CWP).

Other coal workers

Other coal workers (those not employed on a mine site) are not subject to the same mandatory health assessments. They fall under general work health and safety laws, and health assessments are not mandatory. It is up to the employer to determine if the worker is at risk and then determine if a health assessment is required.

Regulating the coal mine industry

Regulating the mining industry requires specialist skills and experience due to the types of risks and hazards, so it falls outside of general work health and safety laws.

Queensland coal mines operate under the *Coal Mining Safety and Health Act 1999* and mineral mines and quarries operate under the *Mining and Quarrying Safety and Health Act 1999*.

DNRME's Resources Safety and Health division regulates the coal mines, mineral mines and quarries, explosives, and petroleum and gas industries. It also publicly reports on all confirmed cases of mine dust lung disease that are notified to the department.

A Commissioner for Mine Safety and Health provides advice to the minister about the safety and health of mine and quarry workers and about DNRME's performance.

The commissioner chairs two advisory committees:

- the Coal Mining Safety and Health Advisory Committee
- the Mining Safety and Health Advisory Committee.

The primary function of the committees is to give advice and make recommendations to the minister about promoting and protecting the safety and health of mine workers.

DNRME's Resources Safety and Health division is responsible for regulating the industry to protect the safety and health of workers and those affected by operations.



In the context of coal mining:

- The Resources Safety and Health division has a Mines Inspectorate unit that monitors and investigates coal mine dust. Inspectors have specialist qualifications in occupational hygiene to assess whether coal workers are being exposed to unsafe levels of coal mine dust.
- The commissioner considers complaints from industry and coal workers when they suspect breaches of the legal framework, such as unsafe work practices. The commissioner has the power to prosecute coal operators or workers for breaches or issue directions that require specific action. The commissioner is also responsible for reporting to the minister and parliament about the performance of the Resources Health and Safety division, under the *Coal Mining Safety and Health Act 1999*.

Several funding sources contribute to the regulation of the coal mining industry, for example:

- safety and health fees paid by industry
- funds from commercial fee-for-service work by Simtars (a specialist research, training, and testing unit within DNRME)
- consolidated revenue from government.

Industrial and environmental safety

Work health and safety and workers' compensation

The Office of Industrial Relations delivers work health and safety, electrical safety, and workers' compensation services, and manages Queensland's industrial relations framework and labour hire licensing scheme. This includes enforcement of work health and safety laws, investigations of workplace fatalities and serious injuries, prosecution of breaches of legislation, and oversight of self-insurers and dispute resolution services within the workers' compensation scheme.

The Office of Industrial Relations also educates employees and employers on their legal obligations, under both work health and safety and workers' compensation laws.

Environmental safety

The Department of Environment and Science is responsible for protecting the environment in order to avoid, minimise, or mitigate impacts that may harm it. It does this by using scientific expertise to protect and manage it, for example, by implementing air quality control programs.

The Department of State Development, Manufacturing, Infrastructure and Planning is responsible for the planning framework that local governments use to protect communities from dust emissions.



D. QAO assessment of recommendations

Monash review recommendations

The tables below detail our assessment of implementation for each recommendation from the Monash review.

Figure D1
Implementation details and status for Monash review

Monash review recommendations	
<p>Recommendation 1: The main purpose of the respiratory component of the scheme should explicitly focus on the early detection of CMDLD among current and former coal mine workers.</p> <p>1.1. The purpose of the respiratory component of the scheme should be clearly stated as being to:</p> <p>1.1.1. Provide mandatory respiratory health screening to detect early CMDLD in coal mine workers.</p> <p>1.1.2. Offer participation in the scheme to former coal mine workers.</p> <p>1.1.3. Ensure appropriate referral for follow-up, diagnosis and management, including appropriate reductions in further exposure to dust, for coal mine workers with respiratory abnormalities indicating CMDLD.</p> <p>1.1.4. Collect, analyse and report group surveillance data to monitor trends in CMDLD, and to inform Government, industry and trade union reviews of dust exposure levels and occupational exposure limits for coal mines.</p> <p>1.2. The purpose of the scheme should be clarified to employers, coal mine workers, doctors and other stakeholders. The roles and responsibilities of the stakeholders (the DNRME, employers unions and mine workers) under the scheme should be defined.</p> <p>1.3. An information pack about CMDLD and how these conditions are identified and diagnosed should be developed for workers.</p> <p style="text-align: right;"><i>QAO assessment: Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • (through the Governor-in-Council), amended the Coal Mining Safety Regulation 2017 to <ul style="list-style-type: none"> – clearly state the purpose of the Coal Mine Workers' Health Scheme to determine fitness for work and provide early diagnosis and intervention for respiratory diseases – introduce periodic health screening for retired and former coal mine workers, commenced on 1 March 2019 • clarified the scheme's purpose in the department's online information about the scheme 	<ul style="list-style-type: none"> • <i>no further action required.</i>



Monash review recommendations	
<ul style="list-style-type: none"> consulted with stakeholders through a discussion paper on roles and responsibilities under the scheme provided information online for current and former coal mine workers, and other stakeholders developed an information pack about identifying and diagnosing mine dust lung disease for workers. 	
<p>Recommendation 2: 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 miner workers should be developed and incorporated into the scheme.</p> <p style="text-align: center;"><i>QAO assessment: Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> (through Coal Mine Dust Lung Disease Collaborative Group), developed clinical guidelines for follow-up investigation and referral to relevant specialists of suspected CMDLD cases identified among current and former coal miner workers. The guideline is to be applied by medical practitioners registered to offer health services to coal mine workers. 	<ul style="list-style-type: none"> <i>no further action required.</i>
<p>Recommendation 3: DNRME should require the reporting of detected cases of CWP and other CMDLDs in current and former coal miners identified by the scheme.</p> <p style="text-align: center;"><i>QAO assessment: Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 and the Mining and Quarrying Safety and Health Regulation 2017 to require the Site Senior Executive of the mine to notify DNRME of mine dust lung diseases established a memorandum of understanding with the Office of Industrial Relations to ensure accepted compensation claims for mine dust lung diseases are reported to DNRME. 	<ul style="list-style-type: none"> <i>no further action required.</i>
<p>QAO note subsequent to the Monash review, the CWP Select Committee recommended reporting of CWP and CMDLD to Queensland Health as a notifiable condition (refer to CWPSC Report No. 2 recommendation 59 and 60). To allow for information sharing and validation of reported CWP and CMDLD cases in current and former coal mine workers, DNRME need to establish a memorandum of understanding with Queensland Health to ensure reported cases of occupational dust exposure are reported to DNRME. Refer to CWP Select Committee Report No. 2 recommendation 10.</p>	



Monash review recommendations

Recommendation 4: 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.

QAO assessment: *Fully implemented*

DNRME has:

- amended the health assessment form to include a separate respiratory section. ILO format reporting is now mandatory and spiograms to be attached.

DNRME still needs to:

- *no further action required.*

Recommendation 5: The form should include a comprehensive respiratory medical history and respiratory symptom questionnaire.

The new health assessment form should include:

- 5.1 A detailed respiratory symptom questionnaire and past medical history.
- 5.2 Revised and expanded questions about smoking history to better identify current/former/never smokers and cumulative smoking exposure (pack-years).
- 5.3 Occupational history which allows identification of job categories or industries where high coal dust and/or mixed dust exposure is likely to occur.
- 5.4 A specific reference to the absence or presence of symptoms/signs and CXR or spirometry changes consistent with CMDLD, the follow-up required and frequency of subsequent health assessments.
- 5.5 Determination of any restrictions on work capacity for individuals with CMDLD, including ability to use respiratory protective equipment (RPE).

QAO assessment: *Partially implemented*

DNRME has:

- updated the health assessment form to include
 - improved smoking history questionnaire
 - occupational history specific to mining and dusty jobs in other sectors
 - a section for the diagnosis of CMDLD, and the frequency of follow up required
 - reduced work capacity in respect of RPE use.

DNRME still needs to:

- update the current health assessment form to ensure that questions regarding past respiratory conditions are collected.



Monash review recommendations

Recommendation 6: The criteria to determine workers “at risk from dust exposure” should be based on past and current employment in underground coal mines and designated work categories in open-cut coal mines and CHPPs.

- 6.1 The criteria to determine job categories “at risk from dust exposure” should be standardized across the Queensland coal mining industry.
- 6.2 All job categories involving underground work in underground mines, and designated jobs in open-cut mines (e.g. blasting, drilling, rock screening) and CHPPs (e.g. some production and laboratory workers) should require a CXR.
- 6.3 For workers currently not involved in such jobs, but who have had significant dust exposure in past jobs, the approved medical practitioner undertaking the health assessment should decide whether a CXR is required, and whether the frequency should be more often than five years, based on discussion with the mine worker, including a full occupational history of exposure to coal dust. This is particularly important for former mine workers.
- 6.4 The criteria to determine dust exposure job categories should be reviewed and/or revised regularly to reflect changes in level of risk, for example due to changes in coal mining technology.

QAO assessment: Fully implemented

DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to <ul style="list-style-type: none"> – require all coal mine workers to receive a CXR upon entry to the industry – require all underground and above-ground coal mine workers receive a CXR at least every five years – require regular monitoring and quarterly reporting of respirable coal dust to DNRME to inform future exposure and screening requirements – provide voluntary health assessments for retiring coal mine workers. 	<ul style="list-style-type: none"> • <i>no further action required.</i>

Recommendation 7: 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.

QAO assessment: Fully implemented

DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to make the approved provider framework mandatory from 1 March 2019. From this date, only the doctors approved by DNRME can undertake health assessments under the scheme. This has reduced the size of the doctor pool from over 237 at the time of the Monash review to 111 (as at 29 July 2019). 	<ul style="list-style-type: none"> • <i>no further action required.</i>



Monash review recommendations

Recommendation 8: Doctors should undergo a formal training program, including visits to mine sites, prior to being approved by the DNRM, to ensure they reach a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the scheme.

- 8.1 The minimum qualifications and experience for doctors who are to undertake respiratory health assessments under the scheme should be established.
- 8.2 While doctors seeking to be appointed to perform respiratory health assessments should have already reached a certain level of competence in the necessary knowledge and skills set out below, a formal induction and ongoing training and audit program for these doctors should be developed to ensure initial and ongoing competence for the specific requirements of the early detection of CMDLD:
 - 8.2.1 Information about the prima purpose of the respiratory component of the scheme, in particular health protection, prevention and early detection of CMDLD and the importance of undertaking such assessments in an independent way.
 - 8.2.2 Information about the spectrum of diseases included in CMDLD.
 - 8.2.3 Information about coal and silica dust exposure, and other respiratory hazards associated with the Queensland coal mining industry.
 - 8.2.4 A visit to a coal mine(s), with a focus on inspecting jobs deemed “at risk from dust exposure”.
 - 8.2.5 Conduct and interpretation of quality spirometry.
 - 8.2.6 Instruction in how to consider coal dust exposure for the purposes of deciding which miners require a CXR.
 - 8.2.7 Instruction in the ILO CXR classification of pneumoconiosis to enable them to interpret such reports from the radiologists.
 - 8.2.8 Instructions about how to complete each section of the respiratory component of the modified health assessment form.
 - 8.2.9 Clinical guidelines for follow-up and appropriate referral of CMDLD cases or other respiratory abnormalities.
 - 8.2.10 Instructions to explain the outcome of health assessments, including follow-up with treating doctors and specialists and workplace restrictions on dust exposure for those with indications of CMDLD.
- 8.3 An experienced Medical Officer should be responsible for the ongoing training and audit of doctors approved to undertake respiratory health assessments under the scheme.

QAO assessment: *Partially implemented*

DNRME has:

- previously appointed an occupational physician that reviewed clinical decisions made by doctors (until 2017)
- established an accreditation system, including minimum qualifications and experience, for doctors who undertake respiratory health assessments (8.1)
- amended the Coal Mining Safety and Health Regulation 2017 to require use of approved doctors for the scheme from 1 March 2019 (8.1)

DNRME still needs to:

- revise the training program to
 - specifically address relevant sections of existing codes of practice that emphasise the importance of maintaining independence (8.2.1)
 - include guidance about determining whether a worker with respiratory disease can continue to use RPE (refer to Monash recommendation 5) (8.2.8)
 - include guidance on follow-up with treating doctors and specialists and workplace restrictions on dust exposure for those with indications of CMDLD (8.2.10)

Monash review recommendations	
<ul style="list-style-type: none"> engaged the University of Illinois at Chicago to deliver doctor training program which includes bi-annual webinars, an annual face-to-face workshop, online training modules, facilitated coal mine visits and evaluation. Doctors registered with DNRME are required to complete this training program at the time of registration and every three years to maintain registration (8.2) provided training to doctors on chest imaging (8.2) released draft terms of reference for public consultation to establish a medical advisory committee in 2020. 	<ul style="list-style-type: none"> implement an ongoing audit program to assess the competency of doctors approved to undertake respiratory health assessments under the scheme (8.2) engage an appropriate physician to audit health assessments to review clinical decisions made by doctors, to ensure appropriate follow up investigations for abnormal screening results (8.3)
<p>Recommendation 9: 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 DNRM.</p> <p><i>QAO assessment: Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to make the approved provider framework mandatory from 1 March 2019. From this date, only the doctors approved by DNRME can undertake health assessments under the scheme. 	<ul style="list-style-type: none"> <i>no further action required.</i>
<p>Recommendation 10: Doctors approved to undertake respiratory health assessments should have a different designation from ‘NMA’, which should reflect their specific responsibility for respiratory health assessments under the new scheme.</p> <p><i>QAO assessment: Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to effect the change in the designation from NMA to Appointed Medical Adviser. The Appointed Medical Advisers are doctors who have been approved by the department and have the necessary qualifications and experience to undertake respiratory health assessments. Changes took effect from 1 March 2019. 	<ul style="list-style-type: none"> <i>no further action required.</i>



Monash review recommendations

Recommendation 11: 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 CXRs for the scheme.

- 11.1 Require additional training in the use of the ILO classification for radiologists or respiratory physicians classifying CXRs for the Coal Mine Workers' Health Scheme.
- 11.2 Develop a program to evaluate those radiologists or respiratory physicians who seek to classify CXRs for pneumoconiosis to demonstrate adequate performance. Examples of programs that provide such an evaluation are the US NIOSH B-Reader and the Asian Air Pneumo programs.
- 11.3 In order to maintain the highest quality, ILO classifications of CXRs for the DNRME should be performed by a selected group of medical practitioners, separate from the clinical interpretation provided by the local radiologist.
- 11.4 Due to variability in reading CXRs, utilise a protocol involving at least two independent classifications to confirm agreement about the presence or absence of radiological features of pneumoconiosis, similar to the protocol used in this study.
- 11.5 Provide guidelines to radiology clinics performing CXRs for the Coal Mine Workers' Health Scheme detailing the appropriate qualification of personnel, imaging equipment and software, image acquisition, documentation, image display, and quality control systems. An example of such a guideline to be found at <http://www.cdc.gov/niosh/docs/2011-198/>
- 11.6 Develop ongoing clinical audit of CXRs and classifications to ensure quality.
- 11.7 Provide appropriate feedback to coal mine workers so that they have access to the information in the radiologist and NMA reports.
- 11.8 Improve the acquisition and archiving of digital CXRs by Queensland DNRME to facilitate disease surveillance efforts.

QAO assessment: Partially implemented

DNRME has:

- established an accreditation system, including mandatory training and certification, for independent doctors who interpret chest x-rays using ILO classification for the scheme. This requires doctors to complete the NIOSH B-reader competency examination at the time of registration and maintain B-reader proficiency to remain registered. (11.1–11.3)
- (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to require use of approved doctors for the scheme from 1 March 2019. (11.1–11.3)
- introduced dual-reading of chest x-rays. University of Illinois at Chicago were initially engaged to provide dual reading services. From May 2018 and if requested, Lungscreen Australia were able to provide the first read of the dual read process, with the second read being undertaken by UIC. Other qualified Australian B-readers, if requested, were also able to undertake the first read of the dual read process, with the second read being undertaken by the UIC. From 1 March 2019, Lungscreen Australia commenced dual reading services (11.4)

DNRME still needs to:

- through UIC, commence clinical audits of CXRs and classifications to ensure quality, including identify a program for audit processes. (11.6) DNRME has advised the clinical audit program is expected to commence in late 2019/early 2020.



Monash review recommendations

- developed guidelines for x-ray imaging standards including requirements for personnel and their qualifications, imaging equipment and software, image acquisition, documentation and quality assurance and control. DNRME has published the standards online in September 2017 (11.5)
- established an accreditation system for approved imaging practices. These practices are required to adopt the x-ray imaging standards (11.5)
- engaged UIC to conduct to conduct clinical audits of CXRs and classifications to ensure quality (11.6)
- revised the health assessment form to require AMA's to provide feedback to the coal mine worker (11.7)
- documented standards for acquiring and storing digital CXRs (11.8)

Recommendation 12: Spirometry should be conducted by appropriately trained staff and performed and interpreted according to current ATS/ERS standards.

- 12.1 Spirometry should be conducted at respiratory laboratories accredited by Thoracic Society of Australia and New Zealand (TSANZ) or similar bodies and for other medical facilities seeking to undertake spirometry under the scheme, accreditation specific to spirometry should be required.
- 12.2 Spirometry scientists or technicians who conduct tests for the new scheme should undergo initial training and participate in periodic refresher courses provided by an approved organisation.
- 12.3 Spirometry testing must take part in a quality control program consistent with current ATS/ERS standards and the quality of spirometry tests should be audited regularly as part of the overall auditing within the scheme.

QAO assessment: *Fully implemented*

DNRME has:

- established an accreditation system for spirometry providers, which requires practices to provide evidence that they meet the Thoracic Society of Australia and New Zealand standards (12.1)
- (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to require use of approved spirometry providers for the scheme from 1 March 2019 (12.1)
- spirometry providers are required to undertake training to become accredited and complete refresher courses to remain accredited (12.2)
- from 30 August 2019, implemented a quality control program with clinical audits of spirometry testing to ensure quality and compliance and with the standards (12.3).

DNRME still needs to:

- *no further action required*



Monash review recommendations

Recommendation 13: DNRME should transition to an electronic system of data entry and storage, whereby doctors undertaking these respiratory assessments enter the data for their assessment and can access previously collected data for the mine worker and to facilitate auditing.

- 13.1 DNRME should institute electronic data entry and data storage, with suitable consent and security arrangements and the facility to link all records for individual mine workers, and enable access to previous records by doctors undertaking the respiratory health assessments.
- 13.2 A regular audit function of the collected medical information should be introduced to monitor quality with regular feedback to the doctors performing respiratory health assessments under the scheme.

QAO assessment: *Partially implemented*

DNRME has:

- implemented a SharePoint platform to allow uploads and retrieval of medical records
- made available the SharePoint platform to all doctors; however, only 60 per cent are using this platform. Other doctors are still posting hard copies which are then required to be scanned.
- commenced a project to transition to a long-term electronic records management system and allocated funding to complete roll out by June 2020.

DNRME still needs to:

- deliver its long-term technology solution (an integrated information management system).
- engage an appropriately qualified physician to audit health assessments, monitor quality and provide regular feedback to doctors
- commence an audit program to monitor quality and provide regular feedback to the doctors performing respiratory health assessments under the scheme.

Recommendation 14: All coal mine workers, including contractors, subcontractors and labour hire employees, who meet the revised criteria for being “at risk from dust exposure” should be registered in the DNRME database on entry into the industry for the purposes of ongoing medical surveillance.

QAO assessment: *Partially implemented*

DNRME has:

- processes in place to record all coal workers in the Health Surveillance Unit database when it receives a completed health assessment form. These include all coal mine workers, including contractors, subcontractors and labour hire employees. However, the database does not facilitate ongoing medical surveillance.

DNRME still needs to:

- develop and implement a long-term electronic records management system to allow ongoing medical surveillance. Expected completion—June 2020 (refer to recommendation 13).



Monash review recommendations

Recommendation 15: DNRME 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.

QAO assessment: *Partially implemented*

DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • commenced its research strategy, using individual health surveillance data by <ul style="list-style-type: none"> – funding the Wesley Dust Disease Research Centre to complete a research project to review recently diagnosed cases of CMDLD to understand the spectrum of diagnoses, the severity of disease and the occupational histories leading to diagnosis. The research project report was published in May 2019. – engaging Monash University to undertake an additional review of the health assessment form to ensure it captures appropriate information for health surveillance. DNRME also engaged Monash University to undertake scoping study of health assessment database to identify surveillance research priorities. And to research cancer and mortality trends in coal mine workers. • developed a dust database to record dust monitoring results to enable comparison with health data information • published the reported number of cases of mine dust lung disease on its website. The Queensland Mines and Quarries Safety Performance and Health Report also includes disease reporting and trends. 	<ul style="list-style-type: none"> • deliver its long-term technology solution to enable group health surveillance to be conducted (expected in 2021–22). Refer also to recommendation 13. • implement an ongoing group surveillance program and publish and disseminate the results of the research to employers, unions and coal mine workers • make deidentified results of research into trends (comparing the dust database of dust monitoring results with health data information) available to employers, unions and coal mine workers.



Monash review recommendations

Recommendation 16: Coal mine workers should have exit respiratory health assessments regardless of whether they leave the industry due to ill-health, retirement or other reasons.

16.1 Due to the latent period for developing CMDLD, health surveillance under the scheme should include current and former coal mine workers, including retirees, as this would provide a more accurate depiction of industry-wide disease trends.

QAO assessment: Fully implemented

DNRME has:

- (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to provide voluntary exit health assessments for retiring coal mine workers from 1 January 2017, with costs borne by employers.
- (through the Governor-in-Council), amended the Coal Mining Safety and Health Regulation 2017 to include a right to periodic health screening for retired and former coal mine workers from 1 March 2019, with costs borne by DNRME.

DNRME still needs to:

- *no further action required.*

QAO note individual surveillance has been conducted (including current and former coal mine workers), however an electronic records management system is required to enable group health surveillance to be conducted (refer to Monash recommendation 15).

Recommendation 17: 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.

QAO assessment: Fully implemented

DNRME has:

- established an internal project team to provide updates to unions, industry, medical professionals. It also referred some matters to the Coal Mine Dust Lung Disease Collaborative Group and the Coal Mining Safety and Health Advisory Committee for advice/consultation.

DNRME still needs to:

- *no further action required.*

Recommendation 18: 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.

QAO assessment: Fully implemented

DNRME has:

- has completed this recommendation by participating in this performance audit by QAO.

DNRME still needs to:

- *no further action required.*

Source: Queensland Audit Office.

Coal Workers’ Pneumoconiosis Select Committee Report No. 2 recommendations

The tables below detail our assessment of implementation for each recommendation from the Coal Workers’ Pneumoconiosis (CWP) Select Committee Report No. 2.

Figure D2
QAO assessment of implementation status

CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p>QAO assessment: <i>Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> established an independent specialist Project Management Office (PMO) that developed options for alternative regulatory models, consulted with stakeholders and provided advice to the Minister on a preferred model. This report was delivered in June 2018. further consulted with stakeholders to finalise a proposed regulatory model. recommended a final regulatory model to Cabinet for approval. In November 2018, Government endorsed the recommended model and approved the preparation of a new Bill to establish the regulator prepared a draft Bill to establish the new regulator and through its minister, introduced the Bill to Parliament on 4 September 2019. 	<ul style="list-style-type: none"> receive Cabinet Budget Review Committee (CBRC) approval for the new funding model to support the ongoing independent operation of the regulator receive parliamentary approval of the draft Bill through government, establish the new resources safety and health regulator including transitioning relevant DNRME staff and resources and recruiting key positions.
<p>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 <i>Crime and Corruption Act 2001</i> and a ‘public authority’ for the purposes of the <i>Right to Information Act 2009</i>.</p> <p>QAO assessment: <i>Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. 	<ul style="list-style-type: none"> as per Recommendation 1.



CWP Select Committee Report No. 2 recommendations

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).

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- considered this recommendation together with Recommendation 1.
- through government, determined not to implement the recommendation. The Government response dated September 2017 stated that the regulator should not be subject to a board of directors as it would place the independence of the regulator at risk.

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- considered this recommendation together with Recommendation 1.
- through the project management office, determined not to implement the recommendation.



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. through the project management office, recommended at alternative option that the new regulator would be headed by a Chief Executive Officer, who would have overall responsibility for the regulator and would report directly to the minister, but would not be subject to ministerial direction on operational matters. 	<ul style="list-style-type: none"> as per Recommendation 1.
<p>Recommendation 7: The Mines Inspectorate, currently within DNRME should be administratively relocated within the Mine Safety and Health Authority, ensuring statutory and administrative independence from DNRME.</p> <p style="text-align: center;"><i>QAO assessment: Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. through the project management office, recommended that the Mines Inspectorate be relocated from DNRME to the new regulator. 	<ul style="list-style-type: none"> as per Recommendation 1.
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. through the project management office, recommended that the commissioner would not have a role in the operational matters of the new regulator, including managing the inspectors and investigations. 	



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- considered this recommendation together with Recommendation 1.
- through the project management office, recommended not to discontinue the SIMTARS fee for service work.

DNRME still needs to:

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.

QAO assessment: Partially implemented

DNRME has:

- recommended that a resources safety and health regulator be established as a statutory authority
- extended previously established MoU with OIR to enable sharing of information relating to mine dust lung disease cases.

DNRME still needs to:

- revise as required the MoU between DNRME and OIR following potential legislative reforms, including the establishment of the new regulator
- assess the requirements for an MoU between the new regulator and Qld Health and amend the existing MoU with Qld Health accordingly.

Recommendation 11: The Mine Safety and Health Authority, including the Coal Workers' Health Scheme, should be supported by an expert Medical Advisory Panel 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.

QAO assessment: Partially implemented

DNRME has:

- consulted with the Coal Mine Dust Lung Disease (CMDLD) Collaborative Group, a self-nominated volunteer group of medical experts and includes Dr Robert Cohen, from the University of Illinois
- in July 2019, released a draft terms of reference for a proposed Resources Medical Advisory Committee (RMAC) for public consultation.

DNRME still needs to:

- progress consultation on the new expert medical advisory panel
- establish a formalised expert medical advisory panel, with clearly defined terms of reference and which is focused to deliver more targeted outcomes.



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. not appointed a suitably qualified and experienced specialist physician to lead the Coal Mine Workers’ Health Scheme. 	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. engaged a consulting firm to perform a benchmarking exercise to determine a remuneration rate that is equivalent to a specialist of similar standing. DNRME obtained approval from Public Service Commission for the requested remuneration level. 	<ul style="list-style-type: none"> as per Recommendation 1.
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Partially implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> considered this recommendation together with Recommendation 1. drafted terms of reference for a research advisory steering committee to provide oversight and governance for Simtars’ five-year research strategy. 	<ul style="list-style-type: none"> as per Recommendation 1. establish the research advisory steering committee establish a properly resourced and dedicated health research function within the new regulator.



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- considered this recommendation together with Recommendation 1.
- through the project management office, recommended to instead use the Work Health and Safety (WHS) prosecutor to prosecute serious offences under mine safety legislation.

DNRME still needs to:

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- considered this recommendation together with Recommendation 1.
- through the project management office, recommended an alternative funding model to support the establishment of the independent regulatory body.

DNRME still needs to:

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- considered this recommendation together with Recommendation 1.
- through the project management office, recommended an alternative funding model to support the establishment of the independent regulatory body.

DNRME still needs to:



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • considered this recommendation together with Recommendation 1. • through the project management office, recommended an alternative funding model to support the establishment of the independent regulatory body. 	
<p>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:</p> <ul style="list-style-type: none"> • for coal dust – 1.5mg/ m3 air, and • for silica – 0.05mg/m3 air. <p>Section 89 of the Coal Mining Safety and Health Regulation 2001 should immediately be amended to give effect to this recommendation.</p> <p>Consideration should then be given to relocating the OEL provisions within the <i>Coal Mining Safety and Health Act 1999</i>.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • determined not to implement the recommendation to lower the OEL for respirable coal dust to 1.5mg/m3 and silica to 0.05mg/m3 while awaiting the results of the Safe Work Australia review of occupational exposure limits. 	
<p>QAO note that pending completion of Safe Work Australia's review, as an interim measure, DNRME has reduced the exposure limit for coal dust from 3.0 mg/m3 to 2.5 mg/m3, effective from 1 November 2018.</p> <p>In February 2019, Safe Work Australia released draft exposure limits for coal dust (0.4–0.9 mg/m3) and silica (0.02 mg/m3). DNRME has made a submission to Safe Work Australia on the practical limitations of the draft exposure limits.</p>	



CWP Select Committee Report No. 2 recommendations

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.**

In relation to this recommendation, the CWP Select Committee noted: ‘The committee considers that a pro-active system of regulatory approval for dust mitigation and abatement plans 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.’

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- determined no further action was required, as CMSHAC determined that the current regulatory framework meets the intent of the recommendations.
- presented an options analysis to the Coal Mining Safety and Health Advisory Committee (CMSHAC). CMSHAC determined that a pro-active system of regulatory approval for dust mitigation and abatement plans not be implemented. Instead CMSHAC supported developing a new recognised standard for dust management in open cut mines to support existing legislation.



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p><i>In relation to this recommendation, the CWP Select Committee noted: ‘The committee considers that a pro-active system of regulatory approval for dust mitigation and abatement plans 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.’</i></p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • determined no further action was required, as CMSHAC determined that the current regulatory framework meets the intent of the recommendations. • presented an options analysis to the Coal Mining Safety and Health Advisory Committee (CMSHAC). CMSHAC determined that a pro-active system of regulatory approval for dust mitigation and abatement plans not be implemented. Instead CMSHAC supported developing a new recognised standard for dust management in open cut mines to support existing legislation. 	
<p>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.</p> <p>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.</p> <p style="text-align: center;"><i>QAO assessment: Fully implemented</i></p>	
The Commissioner for Mine Safety and Health has:	The Commissioner for Mine Safety and Health still needs to:
<ul style="list-style-type: none"> • actively promoted awareness in the mining industry that it is an offence to cause detriment to another person for raising a safety or health concern through public speaking engagements, presentations and the mine safety health matters newsletter • reviewed complaints and considered prosecution for offences of this nature. <ul style="list-style-type: none"> • <i>no further action required.</i> 	



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Partially implemented*

DNRME has:

- commenced an online government resource called the Library as a database to maintain and public dust techniques and technologies used in Queensland mines. The Library currently consists of publications relating to good practice of dust monitoring and fact sheets
- published Recognised Standard 15 “Underground respirable dust control” which also sets out best-practice dust control techniques, developed by regulator, union and industry (effective date May 2017).

DNRME still needs to:

- ensure that the database is used to inform research into the efficacy of engineering dust controls, and that this information is made available to the industry stakeholders.

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.

QAO assessment: *Partially implemented*

DNRME has:

- commenced an online government resource called the Library as a database to maintain and public dust techniques and technologies used in Queensland mines (refer to recommendation 23)
- through SIMTARS contributed to the Australian Coal Industry Research Program (ACARP) project "Improving respirable dust exposure monitoring and control" in collaboration with the University of Queensland and NSW Coal Services.

DNRME still needs to:

- finalise the ACARP project report for publication
- address the requirement to research, review and publish new dust mitigation techniques being used in jurisdictions such as NSW and the United States.



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: Fully implemented

DNRME has:

- assessed the use of real time monitor - PDM3700 and determined that it is not safe for use in underground coal mines
- utilised Advance Queensland's Small Business Innovation Research program to explore other real time monitors for use in Queensland. DNRME has contracted three successful applicants through Advance Queensland to develop real time respirable dust monitors for use in underground coal mines.

DNRME still needs to:

- *No further action.*

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- through SIMTARS, contributed to a Failure Modes, Effects and Criticality Analysis (FMECA) conducted by an industry working group
- in collaboration with Advance Queensland, funded small business innovation research grants for development of a real-time personal dust monitoring device that complies with Australian Standards.

DNRME still needs to:

- address the requirement to consider amendments to Recognised Standard 14 and the Coal Mining Safety and Health Regulation 2017 to enable the use of real time personal dust monitors for compliance monitoring and reporting.



CWP Select Committee Report No. 2 recommendations

QAO note that the use of real-time personal dust monitors for compliance monitoring is a separate issue to the certification of real-time personal dust monitors as intrinsically safe for use in underground mines (refer to recommendation 25).

Recognised Standard 14 prevents the use of real-time personal dust monitors for compliance sampling as it requires samples to be collected in accordance with AS 2985 (Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust). This means that open-cut mines are unable to use real-time personal dust monitors for compliance sampling.

AS 2985 is a national standard published by Standards Australia in 2009. AS 2985 did not consider the relevant technology (emerging tapered element oscillating microbalance – TEOM) in the development of the standard. The PDM3700, which is used by the United States for compliance monitoring, utilises TEOM technology.

Following work completed by a joint industry project team, on 29 November 2017 CSMHAC endorsed changes to Recognised Standard 14 to facilitate the use of real-time monitors as compliance sampling instruments.

The Coal Mining Safety and Health Regulation 2017 requires dust monitoring to be conducted in accordance with AS2985.

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.

QAO assessment: Not implemented – recommendation accepted

DNRME has:

- determined that the recommendation is unable to progressed as there is currently no real-time personal dust monitor that may be used for compliance monitoring. DNRME will consider amendments to the Coal Mining Safety and Health Regulation 2017 when an appropriate dust monitor becomes available and is certified intrinsically safe for use in underground mines.

DNRME still needs to:

- consider amendments to the Coal Mining Safety and Health Regulation 2017 to allow the use of real-time personal dust monitors for resampling after a trigger event.

QAO note that the use of real-time personal dust monitors for resampling after a trigger event is a separate issue to the certification of real-time personal dust monitors as intrinsically safe for use in underground mines (refer to recommendation 25).

The Coal Mining Safety and Health Regulation 2017 prevents the use of real-time personal dust monitors for resampling after a trigger event as it requires further samples to be taken in accordance with AS 2985 (Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust). This means that open-cut mines are unable to use real-time personal dust monitors for resampling after a trigger event.

AS 2985, which was published in 2009, did not consider the relevant technology (emerging tapered element oscillating microbalance - TEOM). The PDM3700, which is used by the United States for compliance monitoring, utilises TEOM technology.



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p><i>In relation to this recommendation, the CWP Select Committee noted: ‘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 interest in the providers they engage or in an associated third party entity’.</i></p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • through its Minister, published a mandatory competency (recognised by CSMHAC) for persons carrying out respirable dust sampling at a coal mine in accordance with AS2985. This mandatory competency enables mining operators to conduct their own sampling once accredited. • decided not to implement the recommendation, for which the intent was to ensure separation between mining operators and private occupational hygiene providers. 	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • through its Minister, published Recognised Standard 14 which requires site senior executives to report <ul style="list-style-type: none"> – single sample exceedances to the Mines Inspectorate, Industry Safety and Health Representative (ISHR), Site Safety and Health Representative (SSHR) and coal mine workers in relevant Similar Exposure Group (SEG) – all dust sampling results to the Mines Inspectorate • determined not to implement the recommendation, including requirements for <ul style="list-style-type: none"> – results to be reported directly by the entity undertaking atmospheric dust monitoring – results to be reported to the relevant ISHR. 	



CWP Select Committee Report No. 2 recommendations

Recommendation 30: The Mines Inspectorate should increase the proportion of unannounced inspections to a rate of at least 50 per cent of total inspections.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- engaged an external consultant to conduct a review of its annual compliance program for coal mines. The consultant's report found that DNRME's current rate of unannounced inspections aligns with the health and safety regulations of high hazard industries. The report noted a rate of 10–20 per cent is a reasonable proportion of unannounced inspections. In FY2018–19, 19.5 per cent of coal mine inspections were unannounced.
- determined not to implement the recommendation to increase the rate of unannounced inspections to 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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- determined not to amend legislation due to lack of demonstrated tripartite support during an inquiry by the Infrastructure, Planning and Natural Resources Committee.



CWP Select Committee Report No. 2 recommendations

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.

In relation to this recommendation, the CWP Select Committee noted: “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.”

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

DNRME still needs to:

- updated the Resources Safety and Health Induction checklist for the Mines Inspectorate to consider potential conflicts for new employees (inspection of previous workplaces for 6 months). There is no existing documented policy to prohibit mines inspectors from inspecting mines at which they had previously worked.
- determined not to amend regulation as
 - prohibiting mines inspectors from inspecting mines at which they previously worked has the potential to reduce the effectiveness of the Inspectorate to undertake its functions (including responding to incidents).
 - prohibiting a person from being appointed to a statutory role may restrict future employment prospects for inspectors and impact the ability of the Inspectorate to maintain a workforce with the required competencies.

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.

QAO assessment: Fully implemented

DNRME has:

DNRME still needs to:

- | | |
|---|--|
| <ul style="list-style-type: none"> • held discussions with the Mine Health and Safety Academy (MHSA) to understand how mining legislation and regulation in the United States compares to Queensland. • determined that MSHA training has limited application to the Queensland Mines Inspectorate (QMI) regulatory activities and will not be pursued. | <ul style="list-style-type: none"> • <i>no further action required.</i> |
|---|--|



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: Not implemented – recommendation not accepted

DNRME has:

- developed a structured audit guideline for monitoring respirable dust for use by the department's sole qualified occupational hygienist for coal mines
- conducted 15 audits of mines' dust monitoring programs against the requirements of Recognised Standard 14 since 2017. These audits are not dust inspections.
- incorporated consideration of dust into the structured inspection guidelines for mining development and outbye mining for use by Mines Inspectors
- established a dust monitoring database (refer to recommendation 35) and utilised dust monitoring data to inform risk-based inspections and audits.
- determined not to implement the recommendation for inspectors to observe coal workers during periods of atmospheric monitoring as they do not consider it to be an effective measure or compliance of adequacy of monitoring.

DNRME still needs to:

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

QAO assessment: Fully implemented

DNRME has:

- amended the Coal Mining Safety and Health Regulation 2001 and Recognised Standard 14 to require all Queensland coal mines to provide quarterly respirable dust data to the Chief Inspector of Coal Mines
- established a database of dust monitoring results, including both respirable coal dust and respirable crystalline silica
- published the de-identified dust monitoring results online.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations	
<p>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.</p> <p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> determined no further action was required, as CMSHAC determined that it fulfils the functions of a Standing Dust Committee. 	
<p>QAO note CMSHAC review the results of quarterly dust monitoring (including results of sampling and exceedances) at each meeting and includes representatives from industry, unions and DNRME. CMSHAC does not include representatives of coal ports and persons independent of the current mining industry.</p>	
<p>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.</p> <p style="text-align: center;"><i>QAO assessment: Not implemented – recommendation not accepted</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> determined no further action was required, as CMSHAC determined that it fulfils the functions of a Standing Dust Committee (refer to recommendation 36). 	
<p>QAO note CMSHAC review the results of quarterly dust monitoring (including results of sampling and exceedances) at each meeting and includes representatives from industry, unions and DNRME. CMSHAC does not include representatives of coal ports and persons independent of the current mining industry.</p>	



CWP Select Committee Report No. 2 recommendations

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 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.

QAO assessment: *Not implemented – recommendation not accepted*

OIR has:	OIR still needs to:
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- determined not to implement the recommendation. It determined the existing protections within the Workplace Health and Safety legislation are largely consistent with protections provided to coal mine workers under the Coal Mine Safety and Health legislation, and therefore there was no benefit to be gained in amending the laws.

QAO note existing Workplace Health and Safety legislation are not commensurate with the protections provided under Coal Mine Safety and Health legislation (including the Coal Mine Workers’ Health Scheme) for coal workers. Workplace Health and Safety legislation is applicable for coal workers other than coal mine workers. This includes coal rail workers, coal port workers and coal-fired power station workers. Key differences include:

Key difference	Coal Mine Safety and Health legislation	Workplace Health and Safety legislation
Responsibility for identifying workers at risk of coal dust or silica exposure	All coal mine workers (excluding low risk workers) subject to the Coal Mine Workers' Health Scheme.	Responsibility of the employer to identify the risk of exposure to airborne contaminants.
Requirements for conducting and reporting regular coal dust and silica monitoring	All coal mines must conduct baseline and periodic dust monitoring and must report results of sampling and exceedances to the Mines Inspectorate.	Responsibility of the employer to: <ul style="list-style-type: none"> identify the risk of exposure to airborne contaminants determine if there is a risk of exceeding the exposure standard or a risk to health ensure air monitoring is conducted to determine the airborne concentration at the workplace.



CWP Select Committee Report No. 2 recommendations		
Requirements for conducting ongoing health assessments	All coal mine workers (excluding low risk workers) are required to have health assessments at least every five years.	Responsibility of the employer to: <ul style="list-style-type: none"> • identify the risk of exposure to hazardous chemicals (noting that coal dust is not a hazardous chemical listed in legislation) • determine whether there is a significant risk to the worker's health because of exposure to the hazardous chemical • arrange and pay for health monitoring for workers.
Oversight of health assessments	Appointed medical advisers are required to provide completed health assessment forms and medical records to DNRME.	Responsibility of the employer to provide a copy of the health monitoring report to the regulator if the report contains any advice that the worker may have contracted a disease, injury or illness as a result of carrying out work with a hazardous chemical.
<p>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.</p> <p>QAO assessment: <i>Partially implemented</i></p>		
DNRME has:	DNRME still needs to:	
<ul style="list-style-type: none"> • completed significant work to implement the recommendations of the Monash review. DNRME has fully implemented Monash review recommendations 1, 2, 3, 4, 7, 9, 10, 16, and 18. 	<ul style="list-style-type: none"> • fully implement the remaining Monash review recommendations. These include Monash review recommendations 5, 8, 11, 12, 13, 14, 15, and 17. 	
<p>QAO note the Monash review had 18 recommendations. The CWP Select Committee adopted all but one of the Monash review recommendations (Monash review recommendation 6). Refer to above in this appendix for QAO's assessment of the Monash review recommendation.</p>		



CWP Select Committee Report No. 2 recommendations

Recommendation 40: The Public Service Commissioner should review the process adopted by DNRME 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.

QAO assessment: *Fully implemented*

PSC has:

- engaged McGrath Nicol to conduct an independent investigation into the process adopted by DNRME for the appointment of the current 'Occupational Physician'. The investigation identified a number of procedural deficiencies in the recruitment process, however found that there was no breach of the *Public Service Act 2008*.
- communicated the results of the independent investigation to DNRME and the Clerk of Parliament.

PSC still needs to:

- *no further action required.*

Recommendation 41: The current position described as 'Occupational Physician' within DNRME 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.

QAO assessment: *Not implemented – recommendation not accepted*

DNRME has:

- considered this recommendation together with Recommendation 1.
- not appointed a suitably qualified and experienced specialist physician to lead the Coal Mine Workers' Health Scheme.

DNRME still needs to:

- as per Recommendation 1.
- establish the role of the Chief Executive Officer and/or appoint a suitably qualified and experienced specialist physician.



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Partially implemented*

DNRME has:

- a database to capture health assessment data, however, there is limited scope for using it to perform meaningful surveillance of health data (refer also Monash review recommendation 13)
- implemented a SharePoint platform to allow uploads and retrieval of medical records. DNRME has made available the SharePoint platform to all doctors; however, only 50 per cent are using this platform. Other doctors are still posting hard copies which are then required to be scanned
- engaged Wesley Dust Disease Research Centre to investigate confirmed cases to analyse common medical and occupational histories of workers to determine any commonalities that can be used to inform exposure control efforts and health surveillance aims.

DNRME still needs to:

- develop and implement an integrated information management system that can perform regular and meaningful surveillance.

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'.

QAO assessment: *Not implemented – recommendation not accepted*

DNRME has:

- obtained advice from the CMDLD collaborative group who recommended that an 'opt out' category for health assessments be considered (as determined by the AMA) for certain low-risk jobs within the mine, as determined by an appropriate risk assessment process and with reasons fully documented and substantiated by serial low dust measurements.
- determined not to implement the recommendation to remove the exception for workers employed in a 'low risk task'.

DNRME still needs to:

QAO note this recommendation relates to Monash recommendation 6, which notes that DNRME still need to develop criteria and define 'low risk task' as per the Coal Mining Safety and Health Regulation 2017.



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Partially implemented*

DNRME has:

- in September 2016, *amended the Coal Mining Safety and Health Regulation 2001* to require all coal mine workers (to be employed for a task other than a low-risk task) to undergo a health assessment prior to commencing work in the coal mining industry. The regulation requires the health assessment to include an examination of respiratory function and a chest x-ray examination.

QAO note that recommendations to expand the Coal Mine Workers' Health Scheme to include all coal workers (including those involved in the transportation and handling of coal outside coal mines) were not implemented as they were not accepted by Office of Industrial Relations. Refer to CWP Select Committee Report No. 2 recommendations 38, 65 and 66.

As the scheme was not expanded to include all coal workers, the amendment regulation noted above applies only to coal mine workers.

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

QAO assessment: *Not implemented – recommendation not accepted*

DNRME has:

DNRME still needs to:

- consulted with the CMDLD collaborative group who advised that underground coal mine workers should receive a health assessment every 3–5 years.
- determined not to implement the recommendation to require health assessments (including an examination of respiratory function and a chest x-ray examination) for underground coal mine workers every three years. The Coal Mining Safety and Health Regulation 2017 requires underground coal mine workers to undergo a health assessment at least once every five years.



CWP Select Committee Report No. 2 recommendations

Recommendation 46: All other coal workers should be required to undertake a health assessment at least every six years.

QAO assessment: *Partially implemented*

DNRME has:

- on 20 July 2018, amended the Coal Mining Safety and Health Regulation 2017, to require all coal mine workers to undergo a health assessment at least once every five years. The regulation requires the health assessment to include an examination of respiratory function and a chest x-ray examination.

QAO note that recommendations to expand the Coal Mine Workers' Health Scheme to include all coal workers (including those involved in the transportation and handling of coal outside coal mines) were not implemented as they were not accepted by Office of Industrial Relations. Refer to CWP Select Committee Report No. 2 recommendations 38, 65 and 66.

As the scheme was not expanded to include all coal workers, the amendment regulation noted above applies only to coal mine workers.

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.

QAO assessment: *Partially implemented*

DNRME has:

DNRME still needs to:

- | | |
|---|---|
| <ul style="list-style-type: none"> • assessed the CWP Select Committee's recommendation to operate at least one mobile unit for delivering health assessments, including chest x-rays and spirometry • appointed an approved provider to implement a mobile x-ray service to target rural Queensland coal mines. This service is working with Lungscreen Australia which is accredited by DNRME to read all coal mine chest x-rays in Queensland. This mobile service only provides chest x-rays and does not include provisions of health assessments and spirometry services. • sought feedback from stakeholders through a consultation paper released 30 July 2019. • obtained funding for the establishment of one mobile health unit for a period of two years. | <ul style="list-style-type: none"> • establish the mobile health unit. |
|---|---|



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Partially implemented*

DNRME has:

- refer to recommendation 47.

DNRME still needs to:

- ensure the mobile health unit is properly staffed and maintained under the Coal Mine Workers Health Scheme.

Recommendation 49: The cost of health assessments undertaken at the Coal Workers' Health Mobile Units should be met by the Coal Workers' Health Scheme.

QAO assessment: *Fully implemented*

DNRME has:

- refer to recommendation 47. The mobile unit is funded through the 2019–20 state budget.

DNRME still needs to:

- *no further action required*

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.

QAO assessment: *Fully implemented*

DNRME has:

- published information about prevention, detection and support for mine dust lung diseases on the Miners' Health Matters website
- published contact details for the Health Surveillance Unit, who provide free advice by phone and email to current and former mine workers about accessing respiratory health assessments.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations	
<p>Recommendation 51: ‘Nominated Medical Advisors’ should be renamed and redefined as ‘Approved Medical Advisors’.</p> <p>QAO assessment: <i>Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • amended the Coal Mining Safety and Health Regulation 2017 to establish a mandatory ‘approved provider’ framework, and replaced the term ‘Nominated Medical Adviser’ (NMA) with ‘Appointed Medical Adviser’ (AMA) • From 1 March 2019, employers must appoint a doctor (Appointed Medical Adviser), who must be approved by DNRME, to undertake the role of supervising and reporting on health assessments. 	<ul style="list-style-type: none"> • <i>no further action required.</i>
<p>Recommendation 52: Approved Medical Advisors should be approved as such by the Commissioner for Mine Safety and Health.</p> <p>QAO assessment: <i>Fully implemented</i></p>	
DNRME has:	DNRME still needs to:
<ul style="list-style-type: none"> • made regulatory amendments to introduce an approved provider framework and made the use of Appointed Medical Advisors (AMAs) mandatory from 1 March 2019 • From this date, only doctors approved by DNRME can undertake the role of supervising and reporting on health assessments. Under the current regulator model, the Chief Executive DNRME approves the AMAs. 	<ul style="list-style-type: none"> • <i>no further action required.</i>



CWP Select Committee Report No. 2 recommendations

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)’.

QAO assessment: *Fully implemented*

DNRME has:

- made regulatory amendments to introduce an approved provider framework and made the use of Appointed Medical Advisors (AMAs) mandatory from 1 March 2019 (refer to CWP Select Committee Report No. 2 recommendation 52).

AMA's, also referred to as supervising doctors, must meet minimum eligibility requirements for accreditation including

- post-graduate qualification in occupational medicine or occupational health
- experience with health surveillance, fitness to work or providing occupational health advice
- experience conducting medical assessments for the coal mining industry
- visit to an operating coal mine within the last three years.

DNRME still needs to:

- *no further action required.*

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.

QAO assessment: *Fully implemented*

DNRME has:

- amended the Coal Mining Safety and Health Regulation 2017 to require
 - spirometry testing must be performed for all health assessments
 - use of approved spirometry providers for the scheme from 1 March 2019. Under the current regulator model, the Chief Executive DNRME approves spirometry providers.
- established an accreditation system for spirometry providers, which requires practices to provide evidence that they meet the Thoracic Society of Australia and New Zealand standards.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Fully implemented*

DNRME has:

- amended the Coal Mining Safety and Health Regulation 2017 to require
 - chest x-rays must be performed for all health assessments
 - use of approved x-ray imaging providers for the scheme from 1 March 2019. Under the current regulator model, the Chief Executive DNRME approves x-ray imaging providers.
- developed and published x-ray imaging standards including requirements for personnel and their qualifications, imaging equipment and software, image acquisition, documentation and quality assurance and control.
- established an accreditation system for x-ray imaging providers, which requires practices to provide evidence that they meet the x-ray imaging standards.

DNRME still needs to:

- *no further action required.*

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.

QAO assessment: *Fully implemented*

DNRME has:

- amended the Coal Mining Safety and Health Regulation 2017 to require use of approved radiologists (B-readers) for the examination of chest x-rays for the scheme from 1 March 2019. Under the current regulator model, the Chief Executive DNRME approves radiologists (B-readers).
- established an accreditation system, including mandatory training and certification, for radiologists who read and interpret chest x-rays using ILO classification for the scheme. This requires radiologists to complete and maintain NIOSH B-reader competency.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: Fully implemented

DNRME has:

- amended the Coal Mining Safety and Health Regulation 2017 to require
 - chest x-rays are assessed and classified in compliance with the ILO guidelines
 - use of approved radiologists (B-readers) for the examination of a chest x-rays for the scheme from 1 March 2019. Under the current regulator model, the Chief Executive DNRME approves radiologists (B-readers).
- established an accreditation system, including mandatory training and certification, for radiologists who read and interpret chest x-rays using ILO classification for the scheme. This requires radiologists to complete and maintain NIOSH B-reader competency.

DNRME still needs to:

- *no further action required.*

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.

QAO assessment: Fully implemented

DNRME has:

- engaged Dr Robert Cohen, from the University of Illinois at Chicago to provide expert advice in improving the Coal Workers' Health Scheme.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

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

QAO assessment: *Fully implemented*

Queensland Health has:

- amended the *Public Health Act 2005* and Public Health Regulation 2018 to enable the establishment of the Notifiable Dust Lung Disease (NDLD) register. The Public Health Regulation 2018 defines notifiable dust lung disease as: cancer, chronic obstructive pulmonary disease or pneumoconiosis (including silicosis) caused by occupational exposure to inorganic dust.
- in July 2019, established the NDLD register.
- notified relevant medical practitioners of the legislative changes and their obligations to report diagnosis of NDLD to the chief executive.
- developed the *Public Health Act 2005* Compliance Plan 2019-21 which details planned activities to promote and enforce compliance for the NDLD register.

Queensland Health still needs to:

- *no further action required.*

Recommendation 60: 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.

QAO assessment: *Fully implemented*

Queensland Health has:

- amended the *Public Health Act 2005* to require:
 - the chief executive of Queensland Health to report annually to the Minister on the Notifiable Dust Lung Disease register (including the number of notifications received, types of notifiable dust lung disease and actions the department has taken)
 - the Minister to table the report in the Legislative Assembly.

Queensland Health still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Partially implemented*

DNRME has:

- developed options for alternative regulatory models, including different governance frameworks, and sought feedback from stakeholders on the alternative models
- recommended that a tripartite Resources Safety and Health Advisory Council be established to deliver the functions of strategic direction, advice and monitoring. PMO suggested that the current advisory committees such as CSMHAC and MSHAC could be accommodated in this model to provide a source of expert advice to the Resources Safety and Health Advisory Council on matters relevant to those sectors.

DNRME still needs to:

- seek Cabinet Budget Review Committee (CBRC) funding approval for the new regulator
- draft Bill to Parliament and seek Parliamentary approval for the establishment of the new regulator
- establish the Resources Safety and Health Advisory Council.

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.

QAO assessment: *Partially implemented*

OIR has:

- a)
 - amended the *Workers' Compensation and Rehabilitation Act 2003* and *Workers' Compensation and Rehabilitation Regulation 2014* to introduce a medical examination process for former coal workers who stopped working in the industry prior to 1 January 2017 (available through to 1 January 2022).

OIR still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

- | | |
|---|---|
| <p>b)</p> <ul style="list-style-type: none"> • amended the <i>Workers' Compensation and Rehabilitation Act 2003</i> and <i>Workers' Compensation and Rehabilitation Regulation 2014</i> to <ul style="list-style-type: none"> – clarify that a worker with pneumoconiosis can access further workers' compensation entitlements if they experience disease progression • introduce an additional lump sum compensation up to \$120,000 for workers with pneumoconiosis. | <ul style="list-style-type: none"> • <i>no further action required.</i> |
| <p>c)</p> <ul style="list-style-type: none"> • monitored return to work outcomes for mine dust lung disease claims by requiring insurers to provide periodic reports on return to work outcomes for these workers • established the Coal Mine Dust Lung Disease rehabilitation and return to work stakeholder working group (the working group) in August 2018 • engaged medical experts in February 2019 to provide advice to inform the development of a decision-making framework for assessment of suitable duties and return to work. | <ul style="list-style-type: none"> • accept and implement the outcomes of the working group including to <ul style="list-style-type: none"> – obtain advice from the medical experts, including advice on "acceptable level" of dust exposure for a worker diagnosed with a CMDLD and the role and effectiveness of personal dust monitors – develop a risk matrix for use in the coal mining industry to assist in providing a systematic approach to identifying jobs for workers diagnosed with CWP or CMDLD • develop an agreed approach for employers and insurers to adopt when facilitating return to work for workers diagnosed with CWP or other CMDLD. |
| <p>d)</p> <ul style="list-style-type: none"> • extended an existing memorandum of understanding with DNRME to enable sharing of information for all mine dust lung diseases. | <ul style="list-style-type: none"> • once the new regulator has been established (refer to CWP Select Committee Report No. 2, recommendation 1), address any implications of new arrangements for the Coal Mine Workers' Health Scheme. |

Government still needs to address the requirement for a medical examination process for former or retired coal workers (other than coal mine workers) who stopped working in the industry after 1 January 2017. These workers are not otherwise eligible for a free health assessment under the Coal Mine Workers' Health Scheme or the Workers' Compensation Scheme.



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Fully implemented*

DNRME has:

- made regulatory changes that came into effect on 1 January 2017, to provide voluntary health assessments for retiring coal mine workers. Employers are required to organise and pay for a retirement examination for any eligible retiring coal mine worker who requests one.
- amended the Coal Mining Safety and Health Regulation 2017 to provide the former coal mine workers the right to voluntary respiratory health assessments, from 1 March 2019.

DNRME still needs to:

- *no further action required.*

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.

QAO assessment: *Fully implemented*

DNRME has:

- published information about the health assessments available for former or retired workers on the Business Queensland website and the Miners health matters website. Free health assessments for retired and former workers were introduced under the Coal Mine Workers' Health Scheme on 1 March 2019. As at 24 July 2019, 76 retired or former workers have accessed a free respiratory health check.
- in April 2019, developed a social media plan to promote the former mine worker health assessments.

DNRME still needs to:

- *no further action required.*



CWP Select Committee Report No. 2 recommendations

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.

QAO assessment: *Fully implemented*

PSC has:	PSC still needs to:
<ul style="list-style-type: none"> sought advice from Crown Law and the Clerk of Parliament about the ability of the Public Service Commission to conduct this review. On the basis of this advice, PSC were unable to conduct this review as it was outside PSC's statutory functions and powers, and would be a breach of parliamentary privilege. on 21 August 2017, issued a formal response to the Committee, advising that the Committee is best placed to identify and assess whether there are sufficient grounds to recommend that matters be referred to the Assembly's Ethics Committee as a possible contempt of the Parliament. 	<ul style="list-style-type: none"> <i>no further action required.</i>

Source: Queensland Audit Office.



Coal Workers' Pneumoconiosis Select Committee Report No. 4 recommendations

The tables below detail our assessment of implementation for each recommendation from the CWP Select Committee Report No. 4.

Figure D3
QAO assessment of implementation status

CWP Select Committee Report No. 4 recommendations	
<p>Recommendation 1: The committee recommends the development of a code of practice on the management of respirable dust hazards in coal-fired power stations, to be informed by international best practice and consultation with industry stakeholders.</p> <p>QAO assessment: <i>Fully implemented</i></p>	
OIR has:	OIR still needs to:
<ul style="list-style-type: none"> established a stakeholder working group, including representatives from industry, unions and DNRME developed the code of practice through consultation with the stakeholder working group, informed by international best practice and relevant information from DNRME's Recognised Standard 14: Monitoring respirable dust in coal mines published a Code of Practice approved by the Minister for managing respirable dust hazards in coal-fired power stations. 	<ul style="list-style-type: none"> <i>no further action required.</i>
<p>Recommendation 2: The committee recommends that the Minister approve the national model code of practice for managing risks in stevedoring as a code of practice under section 274 of the <i>Work Health and Safety Act 2011 (Qld)</i>.</p> <p>QAO assessment: <i>Fully implemented</i></p>	
OIR has:	OIR still needs to:
<ul style="list-style-type: none"> published a Code of Practice approved by the Minister for managing risks in stevedoring, based on the national model code of practice. 	<ul style="list-style-type: none"> <i>no further action required.</i>



CWP Select Committee Report No. 4 recommendations

Recommendation 3: The committee recommends that the *Guideline for Management of Respirable Crystalline Silica in Queensland Mineral Mines and Quarries* be amended to require that all exposure monitoring data is reported to the Mines Inspectorate, consistent with the requirements for coal mines set out in Recognised standard 14: Monitoring respirable dust in coal mines.

QAO assessment: *Fully implemented*

DNRME has:

- conducted a review of the *Guideline for Management of Respirable Crystalline Silica in Queensland Mineral Mines and Quarries* (QGL02)
- consulted with the Mining Safety and Health Advisory Committee (MSHAC)
- amended QGL02 to require that all exposure monitoring data is reported to the Mines Inspectorate.

DNRME still needs to:

- *no further action required.*

Recommendation 4: The committee recommends that the Minister for Local Government* conduct a review of the use of buffer zones in local government planning schemes to protect Queensland communities from large point-source dust emissions.

QAO assessment: *Fully implemented*

DSDMIP has:

- conducted a review of the policies and mechanisms in the planning framework relevant to managing large point-source dust emissions in planning schemes, including review of a sample of local government planning schemes.
- prepared a review report, which found that there are no barriers to local governments using these mechanisms and the sampled local governments are using the planning mechanisms available to manage land uses nearby large point-source emitting activities. The review report also identified three actions for DSDMIP to assist local governments to continue or improve the use of planning mechanisms to protect their communities from large point-source dust-emitting activities.

DSDMIP still needs to:

- *no further action required.*



CWP Select Committee Report No. 4 recommendations

Recommendation 5: The committee recommends that the Queensland Government consider:

a) commissioning research into the impacts of environmental dust exposure on occupational dust exposure tolerance thresholds.

The Queensland Government response to this recommendation noted: ‘Rather than commissioning research on environmental dust exposure on occupational dust exposure tolerance thresholds, the Queensland Government proposes that resources should primarily be focused on:

- *ensuring duty holders comply with requirements to ensure workers are not exposed above relevant workplace exposure standards and that exposure is kept as low as reasonably practicable;*
- *ensuring business keep concentrations of airborne pollutants below environmental air quality standards; and*
- *encouraging improvements in technology, plant and product development focused on reducing the emission of airborne pollutants.’*

QAO assessment: *Partially implemented*

OIR has:

- conducted compliance activities to ensure duty holders (that is, employers) comply with workplace dust exposure standards for the following industries
 - Coal-fired power stations
 - Coal terminals
 - Stone benchtop manufacturing
 - Construction
- developed a workplan which outlines completed, ongoing and planned compliance activities for respirable crystalline silica for the stone benchtop manufacturing industry
- drafted a construction dust program which outlines the planned compliance approach for respirable crystalline silica.

OIR still needs to:

- further progress development of an overall evidence-based compliance approach for occupational health hazards, including minimising occupational dust exposure.
- work with DES to confirm steps to implement the alternative action stated in the government response to recommendation 5(a).

QAO note that the alternative action stated in the Queensland Government response does not address the intent of the Select Committee’s recommendation.



CWP Select Committee Report No. 4 recommendations		
<p>Recommendation 5: The committee recommends that the Queensland Government consider:</p> <p>b) conducting a review of the positioning of environmental air quality monitoring stations across Queensland; and</p> <p>c) increasing the level of engagement with communities affected by industrial dust in relation to the levels of community dust exposure and any health effects or otherwise.</p> <p style="text-align: center;"><i>QAO assessment: Fully implemented</i></p>		
	DES has:	DES still needs to:
b)	<ul style="list-style-type: none"> • conducted an annual review of the State-wide Air Quality Monitoring Program plan, which considers positioning of environmental air quality monitoring stations across Queensland • established a new particle monitoring station in Blackwater in February 2019 • committed to establishing a new particle monitoring station in Emerald, by June 2020. 	<ul style="list-style-type: none"> • <i>no further action required.</i>
c)	<ul style="list-style-type: none"> • enhanced the accessibility and presentation of air quality monitoring data on the Queensland Government website • partnered with Clean Air Wynnum to develop the Wynnum citizen science air monitoring project, which aims to improve community knowledge and understanding of air monitoring processes and regulation. The interim report for the project found that <ul style="list-style-type: none"> – between December 2018 and February 2019 all 24-hour averages were well below the NEPM standards – the composition of dust from surface wipe samples found only trace amounts (less than one per cent) of coal, with the primary components being mineral dust and black rubber dust • partnered with the Gladstone Air Quality Community Group (GAQCG) to empower the community to access and understand information available in their local community. 	<ul style="list-style-type: none"> • <i>no further action required.</i>

*Note: The Queensland Government response to CWP Select Committee Report No. 4 noted that this recommendation would be addressed through a review of the planning framework, within the responsibility of the Minister for State Development, Manufacturing, Infrastructure and Planning. Therefore, QAO assessed action taken by the Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP).

Source: Queensland Audit Office.



E. Government response to original reviews and reported status

Monash review recommendations

The table below details the government's response to the recommendations, the reported status of recommendation implementation, and our assessment of implementation for each recommendation from the Monash review.

Figure E1
Government response and status of Monash review

Monash review recommendations			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 1: The main purpose of the respiratory component of the scheme should explicitly focus on the early detection of CMDLD among current and former coal mine workers.	The Queensland Government supports all 18 recommendations of the Monash review. <i>Queensland Government response tabled 8 September 2017</i>	The Queensland Government has fully implemented all recommendations.	Fully implemented
Recommendation 2: 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 miner workers should be developed and incorporated into the scheme.			Fully implemented
Recommendation 3: DNRM should require the reporting of detected cases of CWP and other CMDLDs in current and former coal miners identified by the scheme.			Fully implemented

Monash review recommendations			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 4: 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.			Fully implemented
Recommendation 5: The form should include a comprehensive respiratory medical history and respiratory symptom questionnaire.			Partially implemented
Recommendation 6: The criteria to determine workers “at risk from dust exposure” should be based on past and current employment in underground coal mines and designated work categories in open-cut coal mines and CHPPs.			Fully implemented
Recommendation 7: 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.			Fully implemented
Recommendation 8: Doctors should undergo a formal training program, including visits to mine sites, prior to being approved by the DNRM, to ensure they reach a suitable standard of competence and have the necessary experience to undertake respiratory health assessments under the scheme.			Partially implemented
Recommendation 9: 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 DNRM.			Fully implemented
Recommendation 10: Doctors approved to undertake respiratory health assessments should have a different designation from ‘NMA’, which should reflect their specific responsibility for respiratory health assessments under the new scheme.			Fully implemented



Monash review recommendations			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 11: 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 CXRs for the scheme.			Partially implemented
Recommendation 12: Spirometry should be conducted by appropriately trained staff and performed and interpreted according to current ATS/ERS standards.			Fully implemented
Recommendation 13: DNRM should transition to an electronic system of data entry and storage, whereby doctors undertaking these respiratory assessments enter the data for their assessment and can access previously collected data for the mine worker and to facilitate auditing.			Partially implemented
Recommendation 14: All coal mine workers, including contractors, subcontractors and labour hire employees, who meet the revised criteria for being “at risk from dust exposure” should be registered in the DNRM database on entry into the industry for the purposes of ongoing medical surveillance.			Partially implemented
Recommendation 15: DNRM 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.			Partially implemented
Recommendation 16: Coal mine workers should have exit respiratory health assessments regardless of whether they leave the industry due to ill-health, retirement or other reasons.			Fully implemented

Monash review recommendations			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 17: 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.			Fully implemented
Recommendation 18: 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.			Fully implemented

Source: Queensland Audit Office.



Coal Workers' Pneumoconiosis Select Committee Report No. 2 recommendations

The table below details the government's response to the recommendations, the reported status of recommendation implementation, and our assessment of implementation for each recommendation from the Coal Workers' Pneumoconiosis (CWP) Select Committee Report No. 2.

Figure 6
Government response and status of CWP Select Committee Report No. 2 recommendations

CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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 <i>Crime and Corruption Act 2001</i> and a 'public authority' for the purposes of the <i>Right to Information Act 2009</i> .	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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: <ul style="list-style-type: none"> • coal mine operators • metalliferous mine operators • unions • resources transportation and ports, and • persons independent of the mining industry (including resources transportation and ports). 	Supported in principle - subject to further independent advice <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted

CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>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.</p>	<p>Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Partially implemented</p>
<p>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.</p>	<p>Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Partially implemented</p>
<p>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.</p>	<p>Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
Recommendation 16: The safety and health fee currently provided for by part 2A of chapter 2 of the <i>Coal Mining Safety and Health Regulation 2001</i> should be abolished.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>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.</p> <p>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.</p>	<p>Supported in principle - subject to further independent advice</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported in principle - further consultation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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—</p> <ul style="list-style-type: none"> • for coal dust – 1.5mg/ m³ air, and • for silica – 0.05mg/m³ air. <p>Section 89 of the <i>Coal Mining Safety and Health Regulation 2001</i> should immediately be amended to give effect to this recommendation.</p> <p>Consideration should then be given to relocating the OEL provisions within the <i>Coal Mining Safety and Health Act 1999</i>.</p>	<p>Supported in principle - consultation with CMSHAC and/or MSHAC required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Not Actioned / Implemented - awaiting Safe Work Australia review of airborne contaminants</p> <p><i>DNRME progress tracker provided to QAO in March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>Recommendation 20:</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>Supported in principle - consultation with CMSHAC required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported in principle - consultation with CMSHAC required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p> <p>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.</p>	<p>Supported</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Fully implemented</p>



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
Recommendation 27: The definition of ‘further sample’ in section 89A(5) of the <i>Coal Mining Safety and Health Regulation 2001</i> 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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation accepted



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
Recommendation 30: The Mines Inspectorate should increase the proportion of unannounced inspections to a rate of at least 50 per cent of total inspections.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
Recommendation 31: Section 119(1)(b) of the <i>Coal Mining Safety and Health Act 1999</i> and section 116 of the <i>Mining and Quarrying Safety and Health Act 1999</i> 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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>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.</p> <p>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.</p>	<p>Supported in principle - further consultation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported in principle - further investigation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Fully implemented</p>
<p>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.</p>	<p>Supported in principle - further consultation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>Recommendation 35: A comprehensive database of dust monitoring results should be established and maintained by the Mine Safety and Health Authority.</p>	<p>Supported</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Fully implemented</p>

CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>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.</p>	<p>Supported <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Not implemented – recommendation not accepted</p>
<p>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.</p>	<p>Supported <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Partially implemented</p>
<p>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 <i>Public Service Act 2008</i> or other statutory instrument.</p>	<p>Actioned <i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Fully implemented</p>



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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'.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
Recommendation 45: All underground coal mine workers should be required to undertake a health assessment every three years.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted

CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 46: All other coal workers should be required to undertake a health assessment at least every six years.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Partially implemented
Recommendation 49: The cost of health assessments undertaken at the Coal Workers' Health Mobile Units should be met by the Coal Workers' Health Scheme.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 51: 'Nominated Medical Advisors' should be renamed and redefined as 'Approved Medical Advisors'.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
Recommendation 52: Approved Medical Advisors should be approved as such by the Commissioner for Mine Safety and Health.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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)'.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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 <i>Public Health Act 2005</i> .	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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.	Supported <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
<p>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.</p>	<p>Supported in principle - further consultation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Partially implemented</p>
<p>Recommendation 62: The <i>Workers' Compensation and Rehabilitation Act 2003</i> and <i>Workers' Compensation and Rehabilitation Regulation 2014</i> should be amended as necessary to provide for:</p> <p>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</p> <p>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</p> <p>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</p> <p>d) the alignment of the workers' compensation scheme with proposed new arrangements for the Coal Workers' Health Scheme.</p>	<p>Supported</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Partially implemented</p>
<p>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.</p>	<p>Supported in principle - further consultation required</p> <p><i>Queensland Government response tabled 8 September 2017</i></p>	<p>Actioned / Implemented</p> <p><i>DNRME progress tracker provided to QAO March 2019</i></p>	<p>Fully implemented</p>



CWP Select Committee Report No. 2			
Recommendation	Government response	Government reported status	QAO assessment
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented
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).	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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.	Supported in principle - further consultation required <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Not implemented – recommendation not accepted
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 <i>Code of Practice for Public Service Employees Assisting or Appearing Before Parliamentary Committees</i> .	Actioned <i>Queensland Government response tabled 8 September 2017</i>	Actioned / Implemented <i>DNRME progress tracker provided to QAO March 2019</i>	Fully implemented

Source: Queensland Audit Office.



Coal Workers' Pneumoconiosis Select Committee Report No. 4 recommendations

The table below details the government's response to the recommendations, the reported status of recommendation implementation, and our assessment of implementation for each recommendation from the CWP Select Committee Report No. 4.

Figure 7
Government response and status of CWP Select Committee Report No. 4 recommendations

CWP Select Committee Report No. 4			
Recommendation	Government response	Government reported status	QAO assessment
Recommendation 1: The committee recommends the development of a code of practice on the management of respirable dust hazards in coal-fired power stations, to be informed by international best practice and consultation with industry stakeholders.	Supported <i>Queensland Government response tabled 9 March 2018</i>	Status not reported	Fully implemented
Recommendation 2: The committee recommends that the Minister approve the national model code of practice for managing risks in stevedoring as a code of practice under section 274 of the <i>Work Health and Safety Act 2011 (Qld)</i> .	Supported <i>Queensland Government response tabled 9 March 2018</i>	Status not reported	Fully implemented
Recommendation 3: The committee recommends that the Guideline for Management of Respirable Crystalline Silica in Queensland Mineral Mines and Quarries be amended to require that all exposure monitoring data is reported to the Mines Inspectorate, consistent with the requirements for coal mines set out in Recognised standard 14: Monitoring respirable dust in coal mines.	Supported <i>Queensland Government response tabled 9 March 2018</i>	Status not reported	Fully implemented
Recommendation 4: The committee recommends that the Minister for Local Government conduct a review of the use of buffer zones in local government planning schemes to protect Queensland communities from large point-source dust emissions.	Supported <i>Queensland Government response tabled 9 March 2018</i>	Status not reported	Fully implemented

CWP Select Committee Report No. 4			
Recommendation	Government response	Government reported status	QAO assessment
<p>Recommendation 5: The committee recommends that the Queensland Government consider:</p> <p>a) commissioning research into the impacts of environmental dust exposure on occupational dust exposure tolerance thresholds.</p>	<p>Supported in-principle <i>Queensland Government response tabled 9 March 2018</i></p>	<p>Status not reported</p>	<p>Partially implemented</p>
<p>Recommendation 5: The committee recommends that the Queensland Government consider:</p> <p>b) conducting a review of the positioning of environmental air quality monitoring stations across Queensland</p> <p>c) increasing the level of engagement with communities affected by industrial dust in relation to the levels of community dust exposure and any health effects or otherwise.</p>	<p>Supported in-principle <i>Queensland Government response tabled 9 March 2018</i></p>	<p>Status not reported</p>	<p>Fully implemented</p>

Source: Queensland Audit Office.



F. Recommendations by theme

Figure F1
Monash review and CWP Select Committee review recommendations by theme

QAO report chapter	QAO heading	Monash review	CWP Select Committee Report No. 2	CWP Select Committee Report No. 4
Chapter 1	Health assessments (early detection)	18 recommendations (1–18)	20 recommendations (39, 42–58, 63–64)	Nil
	Dust monitoring and controls (prevention)	Nil	19 recommendations (19–37)	Nil
	Supporting return to work (rehabilitation)	Nil	One recommendation (62)	Nil
Chapter 2	Oversight of resources and safety regulation	Nil	23 recommendations: <ul style="list-style-type: none"> • 16 recommendations (1–3, 5–15, 41): an independent regulator • three recommendations (16, 17, 18): alternative funding model • two recommendations (59–60): health reporting arrangements • two recommendations (40, 67): public sector governance 	Nil
	Addressing broader industry implications	Nil	Three recommendations (38, 65, 66)	Five recommendations (1–5)

Source: Queensland Audit Office.



G. Findings from previous reports

Monash review

In 2015, the Queensland Government commissioned an independent review by Monash University's Centre for Occupational and Environmental Health, in collaboration with the University of Illinois at Chicago (the Monash review). It assessed whether the medical screening program for coal mine workers was effective to detect lung disease.

Monash review findings

The Monash review found the respiratory component of the Coal Mine Workers' Health Scheme focused on fitness to work rather than detecting and managing early mine dust lung disease. They also found that health information was not effectively being used to monitor trends in mine dust lung disease (referred to as 'group health surveillance'). The Monash review identified deficiencies in several areas:

- training and registration of doctors
- the role of examining medical officers
- how it is decided who is at risk from dust exposure, and therefore requires a chest x-ray
- reading and reporting of chest x-rays
- the conduct of spirometry tests
- processing of health assessment forms by DNRME.

It also found other limitations of the scheme including:

- a lack of clear clinical pathway to investigate, diagnose, and manage coal mine workers and former coal miners who may present with symptoms of respiratory abnormalities consistent with mine dust lung disease
- a lack of clear process to advise mines to review dust exposure levels if respiratory abnormalities are identified
- no established process to report a diagnosis of mine dust lung disease to DNRME
- doctors were not able to identify potential changes in someone's respiratory health because previous health records were not readily available.

Monash review recommendations

Monash University made 18 recommendations in its 2016 report. The report recommended government introduce a range of reforms to improve chest x-rays, lung function testing, training and accreditation of medical practitioners, and surveillance and digital records management.

Government response

The government supported all the recommendations. DNRME is the agency responsible for implementing all 18 recommendations.

Since 2018, DNRME has reported that all recommendations have been fully implemented.



Coal Workers' Pneumoconiosis Select Committee

After the Monash review was published in 2016, the Queensland Parliament established the Coal Workers' Pneumoconiosis (CWP) Select Committee (CWP Select Committee). The committee initially focused on coal workers' pneumoconiosis in the Queensland coal mine industry.

In March 2017, the committee extended its terms of reference to examine adverse health impacts for workers beyond direct coal mining activities. This included end-to-end production of coal, such as rail transport.

The CWP Select Committee also looked at arrangements for regulating and monitoring exposure to silica dust. Silica dust is a hazardous component of coal mine dust (respirable crystalline silica) that can lead to workers developing another form of lung disease, called silicosis. The committee's findings applied to all workers in mining and quarry industries, tunnelling operations, and construction and manufacturing sectors.

Report No. 2—Findings

The committee concluded that the coal mining industry required a more effective system of oversight and compliance, including greater levels of transparency and accountability.

Dust management and controls

The committee found that:

- coal mine operators did not have clear or consistent guidance from inspectors about actions required to demonstrate dust monitoring compliance, and that the industry developed a culture of complacency and disregard for the serious risk posed by respirable dust exposure
- before legislative changes were introduced in January 2017, there was an absence of any regulated oversight of respirable dust monitoring or mandatory reporting of dust exceedances
- the primary focus of the regulator, DNRME, was on mine safety, rather than miners' health and reducing the risk of exposure to respirable dust. The report stated that while there are a range of compliance options available, no person or entity had been prosecuted in Queensland for failing to meet a safety and health obligation related to respirable dust.

Health arrangements for coal workers

Like the Monash review, the committee identified several limitations about how DNRME was administering the Coal Mine Workers' Health Scheme, including:

- 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 role of the Health Surveillance Unit at DNRME had been purely administrative, with no meaningful data analysis or clinical review of the health assessment records it received. This was contrary to the policy objectives of the health scheme to monitor and ensure the health of the coal mine workers.

The Monash review and the committee both commented on the large backlog of health assessments that DNRME were processing at the time of their respective reports. The committee supported the Monash review and adopted all but one of the recommendations.



Workers' compensation

The *Workers' Compensation and Rehabilitation Act 2003* (Qld) and associated regulation establishes Queensland's system of workers' compensation. The committee found workers who have made a claim or received some form of compensation were not able to reopen their claim if their CWP disease progressed or their symptoms deteriorated.

The committee adopted recommendations from a workers' compensation stakeholder reference group that addressed:

- access to health assessments for former or retired coal workers
- if a workers' mine dust lung disease progresses, the ability to apply to reopen their workers' compensation claim to access further benefits
- enhanced rehabilitation and return to work programs
- alignment of the Workers' Compensation Scheme with proposed new arrangements for the Coal Workers' Health Scheme.

Report No. 2—Recommendations

The committee tabled its second report in May 2017. It made 68 recommendations, including to:

- establish an independent regulator (17 recommendations)
- implement an alternative funding model for the regulator (three recommendations)
- improve respirable dust monitoring and management (13 recommendations)
- improve the enforcement and oversight of coal dust management (six recommendations)
- establish the compulsory reporting of mine dust lung disease (two recommendations)
- improve health arrangements for coal mine workers (23 recommendations)
- improve workers' compensation and rehabilitation (one recommendation)
- address the committee's observations (three recommendations).

Report No. 2—Government response

In September 2017, the government announced that it supported or supported in principle all 68 recommendations. But it noted that additional consultation would be needed for more complex recommendations, such as establishing an independent regulator.

The government nominated five agencies to lead the implementation of 66 of the 68 recommendations. Of these, DNRME has responsibility for implementing 57. Two recommendations addressed to the Queensland Parliament are out of scope for this audit.

DNRME's current status tracker reports that, as at July 2019, 67 of the 68 recommendations are 'actioned/implemented'. Its website states that it is working with key stakeholders to address the 68 recommendations.

Report No. 4—Findings

The committee expanded its terms of reference in 2017 to examine risks to workers in other industries impacted by occupational dust hazards. These included coal ports, coal-fired power stations, metalliferous mining and quarrying, tunnelling, and construction and manufacturing industries.



The committee suggested that industries needed to consistently and effectively manage respirable dust hazards to safeguard the health of their workers, including to:

- develop more precise and detailed statutory guidance about reducing dust hazards
- increase engagement between compliance officers and industry support improved practices.

Health scheme for other industries

When considering workers that fall outside of the Coal Mine Workers' Health Scheme, the committee found there is no equivalent health scheme or oversight mechanism for broader occupational groups.

The committee noted that DNRME, the Office of Industrial Relations, Queensland Health, and peak medical bodies should continue to work together to build clinical expertise in occupational medicine. This recognised that symptoms of occupational dust lung disease can manifest after workers have retired or otherwise left the industry, and they may be seeking treatment within the public health system. The committee considered that a mechanism for systematic reporting of occupational respiratory disease should be explored.

Addressing community air quality concerns

The committee received evidence during its inquiry about the impact of inhalable dust on surrounding communities. It noted that these issues were outside its terms of reference, but commented that government should consider:

- commissioning research into the impacts of environmental exposure on occupational dust exposure. This included revising exposure thresholds to support more informed risk assessment and management, and tailoring exposure limits and controls
- reviewing the position of environmental air quality monitoring stations
- increasing its engagement with communities affected by industrial dust, including detected levels of community exposure and associated risks to health.

Report No. 4—Recommendations

The committee made five recommendations and tabled its report in the Queensland Parliament in September 2017. The report recommended that government:

- establish codes of practice for stevedoring and coal-fired power stations
- improve reporting of dust monitoring by all mines and quarries
- review buffer zones of large point-source dust emissions
- review the impact of environmental dust exposure on occupational dust exposure thresholds
- review the impact of community dust exposure.

Report No. 4—Government response

The government responded that it supported recommendations 1 to 4 and supported in principle recommendation 5. The Office of Industrial Relations is the agency responsible for implementing the five recommendations. The other entities responsible for implementing recommendations include the:

- Department of State Development, Manufacturing, Infrastructure and Planning
- Department of Environment and Science
- Department of Natural Resources, Mines and Energy.



H. Dust monitoring data

Under s. 89 of the Coal Mining Safety and Health Regulation 2017, mines must ensure each coal mine worker's exposure to respirable dust at the mine is kept to an acceptable level and the average concentration of coal and silica dust in the atmosphere in which the worker breathes does not exceed 2.5mg/m³ air and 0.1mg/m³ air respectively.

As dust monitoring is not conducted on every worker on every day across every task, workers are grouped because they perform similar tasks or use the same types of materials or processes. These groups are called 'similar exposure groups' (SEGs).

The sampling provides an average concentration that the worker was exposed to over their shift. This can then be compared to the occupational exposure limit, as stated above, 3mg/m³ for respirable dust and 0.1mg/m³ for respirable silica (prior to 1 November 2018), and 2.5mg/m³ for respirable dust and 0.1mg/m³ for respirable silica (after 1 November 2018).

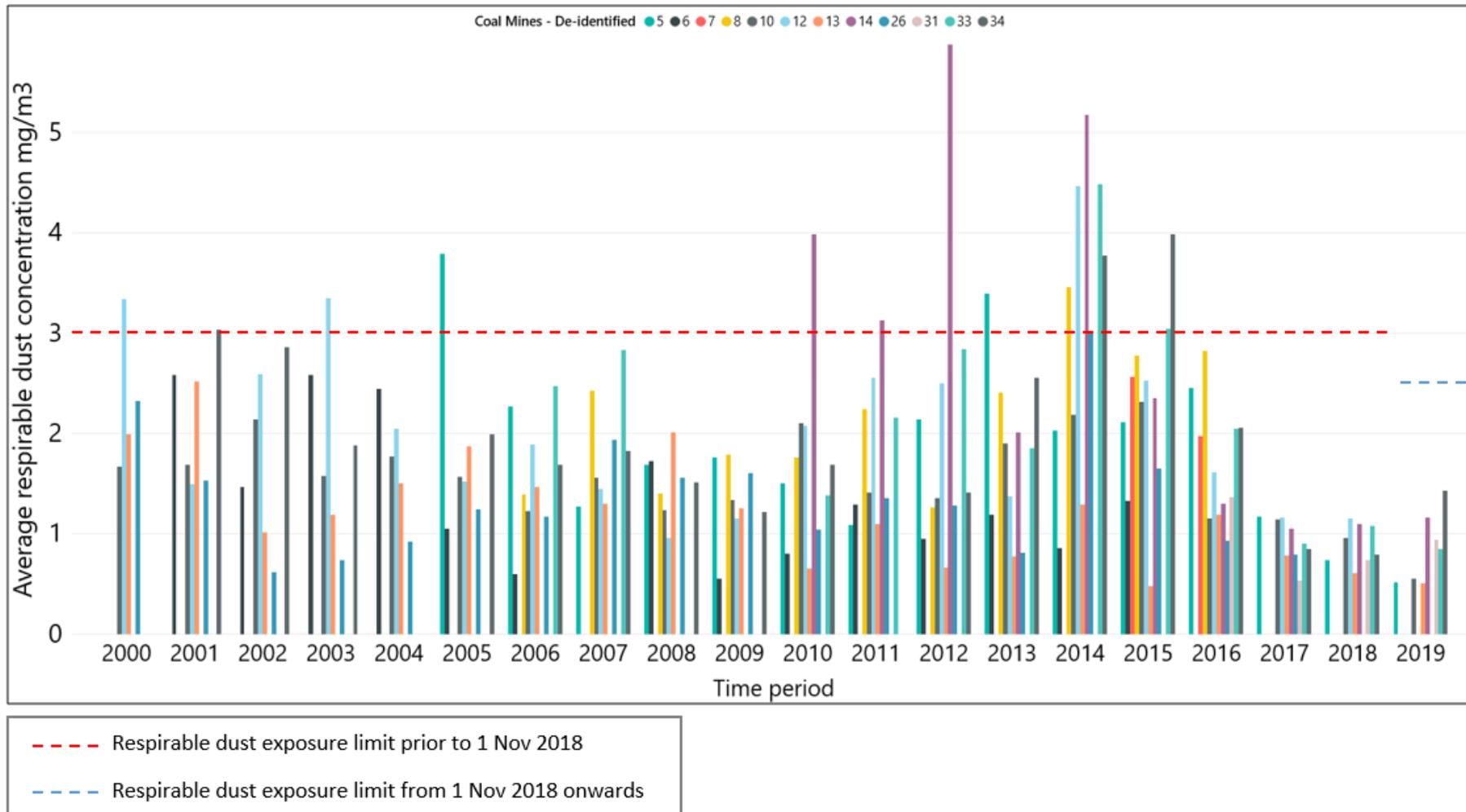
The Department of Natural Resources, Mines and Energy publish graphs online each quarter. This allows mine sites to bench mark themselves against other sites and operators. <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/hazards/dust/monitoring-data>.

The Coal Mine Inspectorate use this reported data for oversight on respirable dust and silica levels at sites which, in turn, will trigger compliance action.

The following graphs are a sample of average respirable dust concentration and respirable silica concentration for Queensland's underground coal mines.



Figure H1
Underground SEG (Longwall workers) average respirable dust levels 2000—Q2 2019



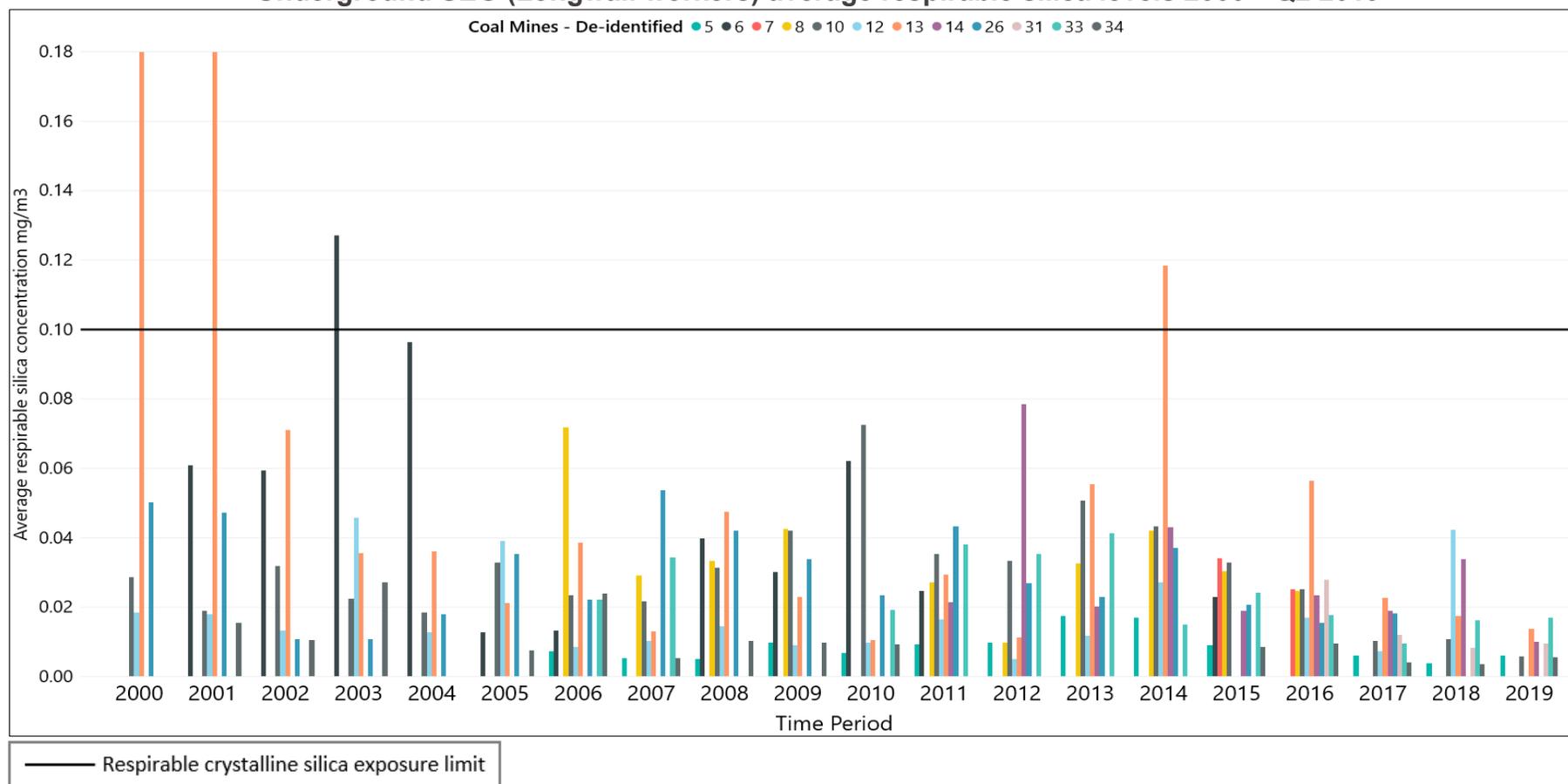
Source: The Department of Natural Resources, Mines and Energy.



Longwall workers conduct similar tasks such as operating the shearer, which cuts the coal in an underground mine. Figure H1 shows the average respirable dust concentration in this work group across different coal mines in Queensland. Each vertical bar represents a different mine site and indicates the trend in dust levels. The solid black line indicates the occupational exposure limit from 2000 – 31 October 2019. From 1 November 2019, the exposure limit was reduced to 2.5mg/m³.

Figure H2 shows the average respirable silica concentration in the longwall work group.

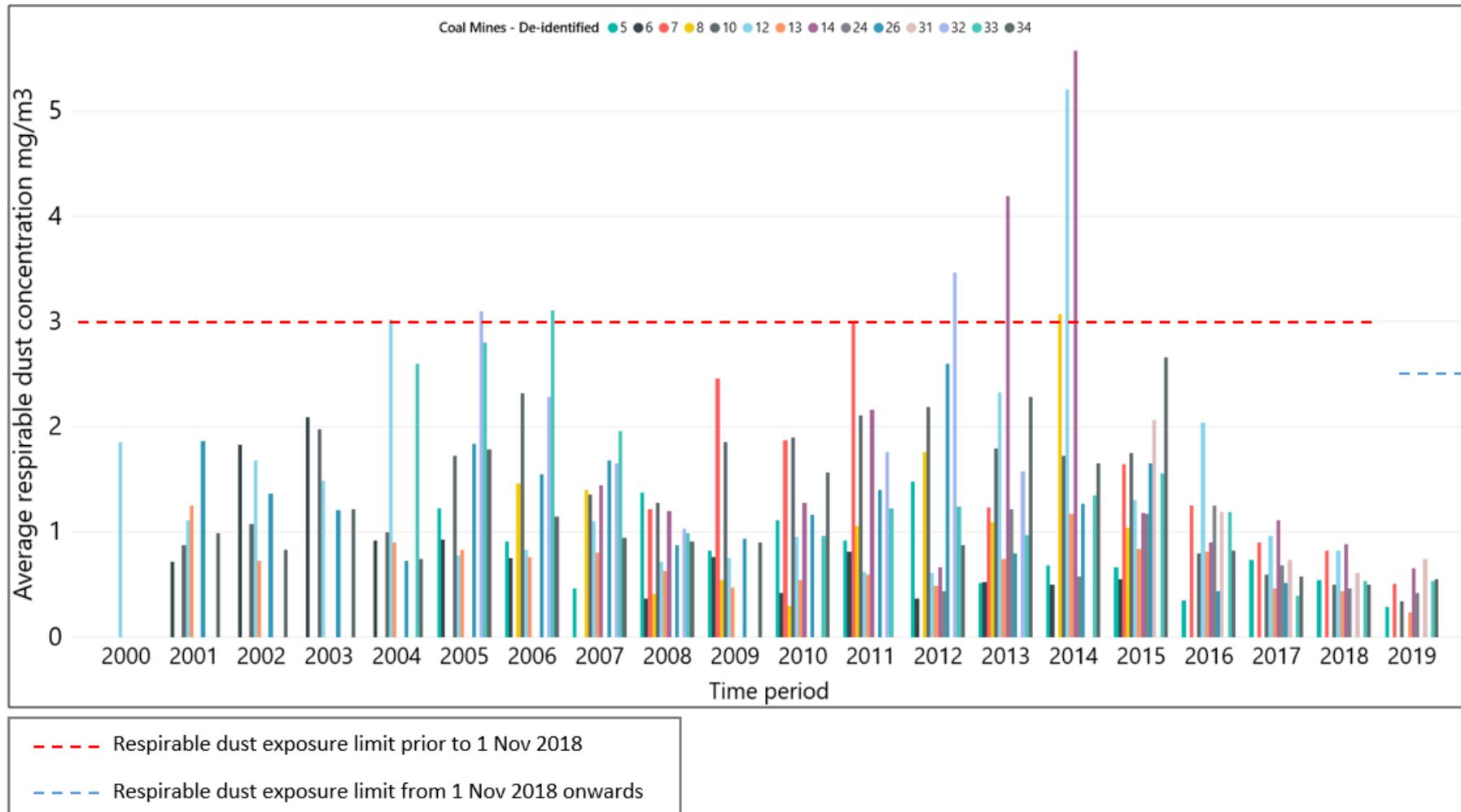
Figure H2
Underground SEG (Longwall workers) average respirable silica levels 2000—Q2 2019



Source: The Department of Natural Resources, Mines and Energy.



Figure H3
Underground SEG (Development workers) average respirable dust levels 2000—Q2 2019

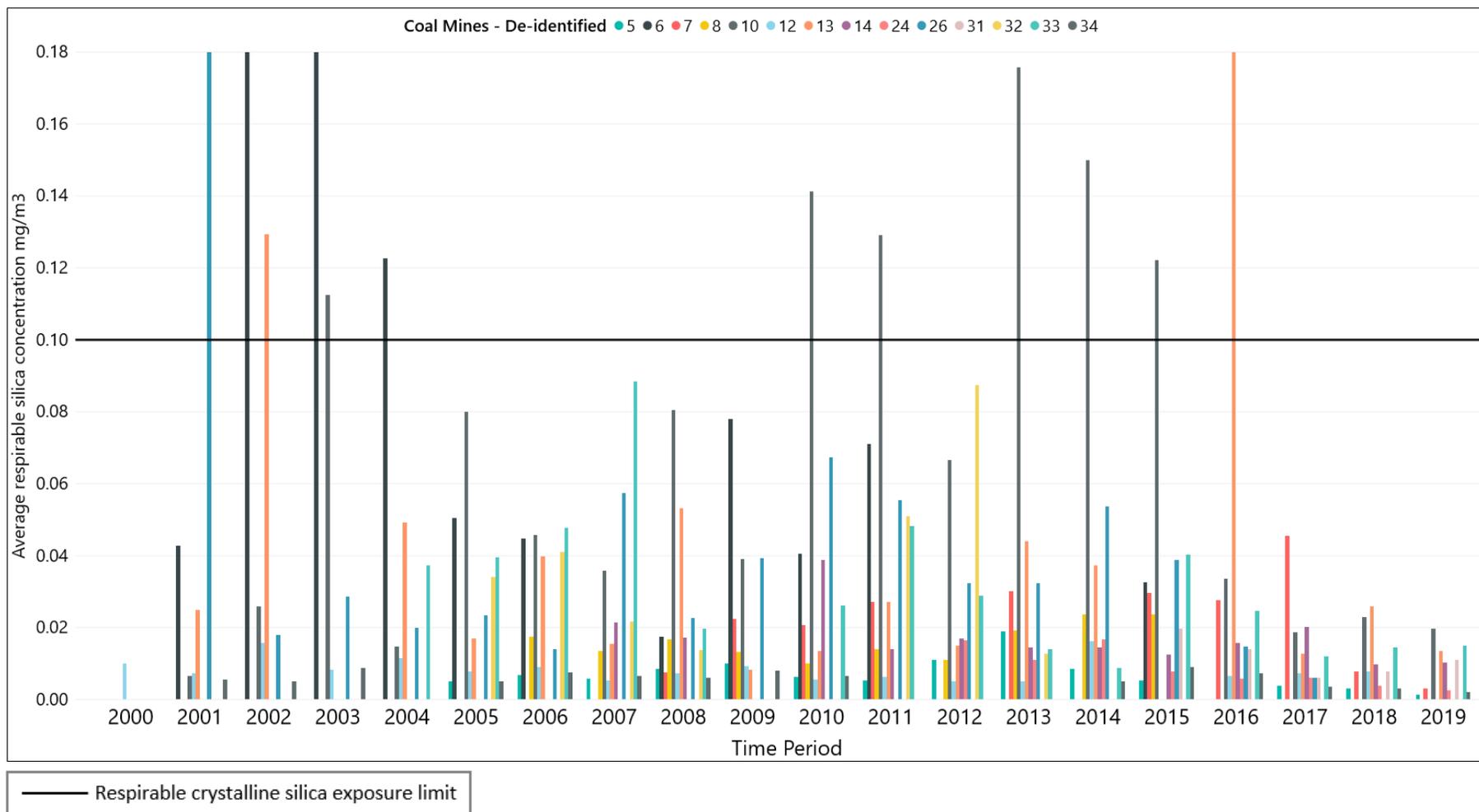


Source: The Department of Natural Resources, Mines and Energy.

Development workers conduct tasks such as operating the continuous miner. Figure H3 shows the average respirable dust concentration in this work group across different coal mines in Queensland. Each vertical bar represents a different mine site and indicates the trend in dust levels.



Figure H4
Underground SEG (Development workers) average respirable silica levels 2000—Q2 2019



Source: The Department of Natural Resources, Mines and Energy.



Audit and report cost

This audit and report cost \$598,000 to produce.

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