



THE MINE VENTILATION SOCIETY  
OF  
AUSTRALIA

CWP Inquiry  
Sub No. 038

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**5 January 2017**

Mrs Jo-Ann Miller [MP]  
Coal Workers' Pneumoconiosis Select Committee  
Parliament House  
George Street  
Brisbane, QLD 4000

Dear Jo-Ann,

Herewith a report from the Mine Ventilation Society of Australia with regard to the re-emergence of Coal Workers' Pneumoconiosis [CWP] amongst coal mine workers in Queensland.

**Executive Summary**

The Mine Ventilation Society of Australia ('MVSA') submission to the Queensland Parliament Coal Workers' Pneumoconiosis Select Committee urges that the committee to accept that the re-emergence of black lung in Queensland coal mine workers is one symptom of the wider issue of poor ventilation practices, policy and regulation in Queensland mines. The MVSA submits that recent regulatory changes are insufficient and that the appointment of Ventilation Officers, with the competencies now demanded only for underground coal mines, be extended to all resources and all mining methods as is required in Western Australia, and that the NSW requirement for regular 12 monthly ventilation audits by a licensed ventilation auditor, be also extended to all mining methods and resources in Queensland.

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## 1. The Mine Ventilation Society of Australia.

The Mine Ventilation Society of Australia ('MVSA') was founded in 2012 by Australian mine ventilation practitioners, mining engineers, lawyers and other mining professionals, who share a common passion, dedication, and commitment to exemplary mine ventilation policy and practice to ensure a safe and healthy work environment for mine workers. The formation of the MVSA was inspired by the need to improve ventilation practices across Australasia, to share valuable knowledge and implementing innovative techniques, utilising the wealth of world-wide knowledge and experience the MVSA offers. The MVSA is affiliated with *The Australasian Institute of Mining and Metallurgy* ('The AusIMM'). Members of the MVSA work in industry roles, in academia, and in government.

## 2. Mine Ventilation.

Mine ventilation is one of the most demanding tasks in mining and is not just about the volume and velocity of air in underground mines. The duties of Ventilation Officers ('VO') overlap those of Occupational Hygienists ('OH') in dealing with the following occupational hazards.

**Table 1: Occupational hazards**

Category	Hazard
Atmospheric contaminants	Dust, respirable crystalline silica, inhalable dust, respirable dust, respirable synthetic mineral fibre, blast residue, nitrogen dioxide (NO <sub>2</sub> ), CO, CO <sub>2</sub> , diesel particulate matter (DPM), abrasive blasting.
Safety and Health	Self-rescuer, resuscitation equipment, atmospheric monitoring, health surveillance, PPE.
Radiation	Dose, collective effective dose, committed effective dose, contamination level, does constraint, dose limit, and controlled area. Radiation PPE.
Noise	Noise level, noise exposure, peak noise level, action noise level, noise reduction and abatement.
Heat	Hot work procedures, ambient temperature, air temperature, humidity.
Water	Stagnant, potable, dust control water, wetting down.
Weather	Shelter, protection, PPE.
Hygiene and Sanitation	Eating places, wash rooms, change rooms, hand basins, toilets, and sewage.
Hazardous substances	Registers, containers, labelling, enclosed systems, MSDS, engineering and ventilation controls, atmospheric monitoring, health surveillance, PPE.
Explosives	Explosive coal dust, explosive coal seam gas, and the manufacture, storage, transport, supply, use and disposal of blasting compounds.

Managing resource project atmosphere and environs needs specialist high level skills and training. Managing the related hazards carries enormous responsibility. The risk to workers and to the community from poisonous atmosphere or from explosions caused by the ignition of gas or dust is extreme. Improvements in science and technology highlight the hazards in new ways. Dust and fumes are now seen as more dangerous than before. Whereas methane was seen as the biggest

hazard in coal mining, and coal dust seen only for its explosive risk, black lung, changed that view in open cut as well as underground coal mines. For hard rock mines and quarries dust was seen as a nuisance more than a real hazard, and Diesel Particulate Matter ('DPM') has only been taken seriously relatively recently, even in the face of early warnings by Schenker (1980)<sup>1</sup> and the CSIRO.<sup>2</sup> More recent studies by Susan Peters et al (2016)<sup>3</sup> confirm the risks. Little is done. As coal seam gas comes under oil and gas legislation, even at coal mines,<sup>4</sup> the hazards are not as well-regulated as they are in coal mines.

If the person charged with managing resource project atmosphere and environs gets it wrong, severe adverse consequences may follow. Multiple deaths may occur. Yet resource project atmosphere and environs management is not always well resourced. The VO and OH job on a resource project site is one that not many people want. The duties and responsibilities for mine ventilation are not always assigned to a VO, but may be shared with an OH. Where neither is employed, mine ventilation can be the responsibility of operational managers and supervisors, not all of whom have specialist mine ventilation skills and in any event, have other more pressing duties.

For example, the most junior member of the technical services team is typically seconded to assume the role of VO in metalliferous mines. They are usually inexperienced mining engineers who have completed a tertiary qualification and mine ventilation was not a major component of their studies. They are cycled through the technical services department as part of their practical experience. They assume the role of VO without adequate knowledge or experience and they are not under the direct supervision of an experienced ventilation practitioner. They cannot wait to move on to drill and blast and ultimately become senior managers without the required specialist ventilation knowledge. This too often creates a cycle and situation where mine ventilation is in a state of neglect to the detriment of the mine workers.

Although there are different regulatory standards for each Australasian jurisdiction, mining ventilation professionals, occupational hygienists or the operational personnel assigned their duties deal with many of the hazards embraced by legislation including those set out above in Table One.

### **3. Mine Ventilation Law.**

Each Australasian jurisdiction has different legislative obligations on the VO and OH (and their duties and responsibilities overlap). Not all Australian States and Territories adopted the Commonwealth *Model Work Health and Safety Act 2011* (Cth) ('WHS') for harmonisation of workplace health and safety. In some states, mining is totally exempted. In others, some of the provisions of WHSA have been weaved into State mining legislation.

#### **3.1. Queensland.**

Queensland did adopt the WHSA. However, pursuant to Schedule 1(2) of the *Work Health and Safety Act 2011* (Qld), the WHSA does not apply to a coal mine, a hardrock mine or petroleum and gas operating plant.

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<sup>1</sup> Marc B Schenker, 'Diesel Exhaust – An Occupational Carcinogen?', (1980) 22 (1) *Journal of Occupational Medicine* 41.

<sup>2</sup> DJ Williams et al, 'Particulate emissions from 'in-use' motor vehicles—II. Diesel vehicles', (1989) 23 (12) *Atmospheric Environment* 2647.

<sup>3</sup> Susan Peters et al, 'Estimation of quantitative levels of diesel exhaust exposure and the health impact in the contemporary Australian mining industry', (2016) *Occupational and Environmental Medicine* (in print) doi:10.1136/oemed-2016-103808; Jessica Mendes, 'Underground miners face high risk of lung cancer death from diesel exhaust exposure: study', *ABC News* (online), 18 November 2016 <<http://www.abc.net.au/news/2016-11-18/study-shows-miners-face-high-lung-cancer-risk-from-diesel/8035798>>.

<sup>4</sup> See for example: *Petroleum and Gas (Production and Safety) Act 2004* (Qld); *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW); *Petroleum and Geothermal Energy Resources Act 1967* (WA), *Petroleum Pipelines Act 1969* (WA), *Petroleum (Submerged Lands) Act 1982* (WA).

Queensland has for coal mining the *Coal Mining Safety and Health Act 1999* (Qld) and the *Coal Mining Safety and Health Regulation 2001* (Qld). For quarries and hard rock mines, the *Mining and Quarrying Safety and Health Act 1999* (Qld) and the *Mining and Quarrying Safety and Health Regulation 2001* (Qld). For petroleum and gas, (including coal seam gas); the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) and Regulations.

In Queensland, a VO is a statutory position in underground coal mines, but not for open cut coal mines. The ventilation provisions for underground coal mines are comprehensive and reasonably effective. There are no provisions for ventilation in open cut coal mines.

The *Mining and Quarrying Safety and Health Regulation 2001* applies to quarries and both underground and open cut hard rock mines. Regulation 48 provides that ventilation at a mine be of a sufficient volume, velocity and quality to achieve a healthy atmosphere.

Though not included in the *Recognised competencies for coal mining statutory positions in Queensland*, set by the Coal Mining Safety and Health Advisory Committee (2016),<sup>5</sup> the provision by mine ventilation engineers and by any other mine ventilation professional of a 'Professional Engineering Service' as defined in the *Professional Engineers Act 2002* (Qld)<sup>6</sup> demands that the provider be a Practising Professional Engineer Queensland ('PPEQ') or be directly supervised by a PPEQ.

### 3.2. New South Wales.

NSW has now consolidated all its mining legislation for coal, hard rock mines and petroleum sites in the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW) and the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* (NSW). The new legislation is construed as if it formed part of the *Work Health and Safety Act 2011* (NSW).<sup>7</sup>

The statutory function of a VO in NSW underground coal mines is to control and manage the ventilation activities and standards forming a part of the mining operations at the mine and the VO must hold a current practising certificate that authorises the exercise of the statutory function.<sup>8</sup>

The ventilation system and ventilation control plan for the mine at each underground coal mine must be audited at intervals not exceeding 12 months by a Ventilation Auditor,<sup>9</sup> who must hold a current practising certificate that authorises the exercise of this statutory function.<sup>10</sup> These provisions do not apply to open cut coal mines, or underground or open cut hard rock mines.

General requirements for managing risks from airborne contaminants and hazardous atmospheres (including diesel particulates) for all mines, including underground mines are included in the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* (NSW),<sup>11</sup> which sets out additional requirements relating to underground coal mines,<sup>12</sup> and in the *Work Health and Safety Regulation 2011* (NSW) (all workplaces, including mines).<sup>13</sup>

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<sup>5</sup> Coal Mining Safety and Health Advisory Committee, *Recognised competencies for coal mining statutory positions in Queensland*, (2016) <<https://www.dnrm.qld.gov.au/?a=240633>>.

<sup>6</sup> The definition broadened by the *Professional Engineers and Other Legislation Amendment Act 2014* (Qld) from 'construction or production activity' to 'construction, production, operation or maintenance activity'.

<sup>7</sup> *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW) s 4.

<sup>8</sup> *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* (NSW), Sch 10, Pt 2, reg 8; NSW Department of Trade and Investment – Mine Safety, *Statutory Functions* (December 2014) <[http://www.resourcesandenergy.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0011/537293/Statutory-functions-guide.pdf](http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0011/537293/Statutory-functions-guide.pdf)>.

<sup>9</sup> *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* (NSW), reg 71(4).

<sup>10</sup> *Ibid*, Sch 10, Pt 2, reg 7; *Statutory Functions*, above n 8.

<sup>11</sup> *Ibid* Pt 2, div 4, sub-div 2.

<sup>12</sup> *Ibid* Pt 2, div 4, sub-div 3.

<sup>13</sup> *Work Health and Safety Regulation 2011* (NSW) Pt 3.2, divs 7 and 8.

### 3.3. Western Australia.

Western Australia ('WA') has *not* adopted the *WHS*A. 'There is no fixed timeframe for adoption of the *WHS* laws in Western Australia and the timing will depend, in part, on the substance of the submissions received during the public comment period for the model *WHS* regulations, [which] ends on 31 August 2016'.<sup>14</sup> A *WHS* (Resources) Bill is proposed and the *WA* Department of Mines and Petroleum ('*DMP*') Resources Safety Division, responsible for regulating safety and health in the *WA* resources industries, including the mining, petroleum and dangerous goods sectors, has engaged Marsden Jacob Associates ('*MJ*') to prepare a Consultation Regulatory Impact Statement ('*C-RIS*') on the proposed *WHS* (Resources) Bill and to undertake an independent consultation with all relevant stakeholders. It is hoped that the new legislation will combine the best features of the *WHS*A, as well as the National Mine Safety Framework.<sup>15</sup>

In the meantime, the *Occupational Safety and Health Act 1984* (WA) remains in force. The *Mines Safety and Inspection Act 1994* (WA) and *Mines Safety and Inspection Regulations 1995* (WA) apply to all mining methods and all resources. For petroleum oil and gas, a regulatory scheme of Acts, regulations and Codes of Practice are underpinned by the *Petroleum and Geothermal Energy Resources Act 1967* (WA), *Petroleum Pipelines Act 1969* (WA), *Petroleum (Submerged Lands) Act 1982* (WA). The *Mines Safety and Inspection Regulations 1995* (WA) applies to quarries, hard rock mines and coal mines<sup>16</sup>, both open cut and underground and contains the most comprehensive provisions for ventilation in Australia.<sup>17</sup> A *VO* is a statutory position<sup>18</sup> in underground and open cut, coal mines and hard rock mines. The qualifications for the *VO* are prescribed.<sup>19</sup> Their duties in underground<sup>20</sup> and surface<sup>21</sup> mines are detailed and exacting and include keeping a ventilation log book.<sup>22</sup>

### 3.4. Other Australian Jurisdictions.

The Northern Territory has adopted *WHS*A. The *Work Health and Safety (National Uniform Legislation) Regulations 2011* (NT) includes the Model *WHS*A Regulation Chapter 10 dealing with mining and imposing some duties upon the mine operator including the requirement to give the regulator a risk management plan certified by a competent person.

South Australia has adopted the *WHS*A. The *Work Health and Safety Act 2012* (SA) and *Work Health and Safety Regulations 2012* (SA) apply to open cut and underground mines and quarries regardless of resource. The *Mines and Works Inspection Act 1920* (SA) and *Mines and Works Inspection Regulations 2013* (SA) also provide for the regulation and inspection of mines and works. The new mines regulations can be found at Chapter 10 of the *Work Health and Safety Regulations 2012* (SA). There are minimal requirements for underground mines, including a Ventilation Plan,<sup>23</sup> minimum standards for ventilated air<sup>24</sup> and monitoring air quality.<sup>25</sup> The ventilation obligations are placed upon the mine operator. There are no requirements for a *VO*, or a special ventilation competency for the mine manager.

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<sup>14</sup> Western Australia Department of Commerce, *FAQ - Model Work Health and Safety (WHS) Regulations*, <<http://www.commerce.wa.gov.au/worksafe/faq-model-work-health-and-safety-whs-regulations>>.

<sup>15</sup> Western Australia Department of Mines and Petroleum, *RIS on Work Health and Safety (Resources) Bill* (15 February 2016), ES.i <<http://www.dmp.wa.gov.au/Documents/Safety/MSH-RIS-WorkHealthSafetyBill.pdf>>.

<sup>16</sup> See definition of 'mine' and 'mining operations' in *Mines Safety and Inspection Act 1994* (WA), s 4.

<sup>17</sup> *Mines Safety and Inspection Regulations 1995* (WA), pt 9, sc 9.1-9.37.

<sup>18</sup> *Ibid* pt 9, s 9.3.

<sup>19</sup> *Ibid* pt 9, s 9.4.

<sup>20</sup> *Ibid* pt 9, s 9.5.

<sup>21</sup> *Ibid* pt 9, s 9.6.

<sup>22</sup> *Ibid* pt 9, s 9.7.

<sup>23</sup> *Work Health and Safety Regulations 2012* (SA), ch 10, pt 2, div 4 sub-div 2, s 656.

<sup>24</sup> *Ibid* ch 10, pt 2, div 4 sub-div 2, s 648.

<sup>25</sup> *Ibid* ch 10, pt 2, div 4 sub-div 2, s 649.

On 01 January 2013, Tasmania adopted the *Work Health and Safety Act 2012* (Tas) and the *Work Health and Safety (Transitional and Consequential Provisions) Act 2012* (Tas), *Work Health and Safety Regulations 2012* (Tas), *Work Health and Safety (Transitional) Regulations 2012* (Tas) which apply to all workplaces including mines, but not Chapter 10 of the Model WHS Laws dealing specifically with mining.

The *Mines Work Health and Safety (Supplementary Requirements) Act 2012* (Tas) and *Mines Work Health and Safety (Supplementary Requirements) Regulations 2012* (Tas) apply to hard rock and coal mines, both open cut and underground. The Site Senior Officer provisions<sup>26</sup> use some of the language in the Qld legislation for Site Senior Executive, but is not a complete emulation. The mine operator responsible for ventilation.<sup>27</sup> There are some standards for mine ventilation,<sup>28</sup> but no ventilation competency is demanded.

Victoria has *not* adopted the *WHS Act*. Except for the large brown coal fields and associated electric power generation capacities, Victoria has mainly small mining operations and takes an almost completely laissez-faire approach to mining. The regulation of all mines for all mining methods and all resources is left to the *Occupational Health and Safety Regulations 2007* (Vic). The provisions relating to mine ventilation contained in Pt 5.3 are encapsulated in seven sentences.

The principal obligation is to ensure 'the air does not pass through so many work areas that it becomes unfit to breathe'.<sup>29</sup> The slightly more comprehensive provisions dealing with confined space do not apply to mines.<sup>30</sup>

The ACT adopted the *Work Health and Safety Act 2011* (ACT), but the *Work Health and Safety Regulations 2011* (ACT) do *not* include Chapter 10 applying to mining. The confined spaces provisions of the *Work Health and Safety Regulations 2011* (ACT) do not apply to a mine shaft or the workings of a mine. However, there is no mining as such in the ACT; just some quarrying.

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<sup>26</sup> *Mines Work Health and Safety (Supplementary Requirements) Regulations 2012* (Tas), reg 39.

<sup>27</sup> *Ibid* pt 6, reg 20(1).

<sup>28</sup> *Ibid* pt 6, regs 20-26.

<sup>29</sup> *Occupational Health and Safety Regulations 2007* (Vic), reg 5.3.31(c).

<sup>30</sup> *Ibid* reg 1.1.5 – definition of 'confined space'.

#### 4. Best Ventilation Practice.

Queensland and NSW have comprehensive underground coal mine ventilation legislation that works reasonably well, but could be improved. The open cut coal and hard rock mine ventilation legislation leaves much to be desired. WA has simple, clear, comprehensive and effective mine ventilation legislation that applies to all mining methods and resources. The other states and the ACT and NT have little to offer to the equation.

The best features from each of the best legislative schemes recommends the WA requirement for a VO for open cut and underground mines and quarries regardless of the resource and extending the NSW requirement for regular 12 monthly ventilation audits by a licensed ventilation auditor to all mining methods and resources.

These measures should be an Australasian wide legislative requirement. They may have prevented the incidents in Queensland open cut coal mines in March that saw coal mine workers overcome by fumes and hospitalised and toxic clouds of dust and blast fumes impacting upon the wider community.<sup>31</sup>

Unfortunately, in the demand for greater production, mines often only comply with the minimum legislative requirements. The compliance cost of the measures recommended below is small compared to the impacts upon workers and the wider community, and the cost of lost production if a high potential incident or serious accident closes the mine.

Process Engineering governs the operation of coal preparation plants, mills in hard rock mines and quarries and the processes associated with the output from resource projects. However, there is no 'Process Engineer' area of engineering recognised by the Board of Professional Engineers Queensland ('BPEQ') or Process Engineer Chartered Professional post-nominal recognised by *The AusIMM*. Apparently 'Environmental Engineering' is considered basically 'Process Engineering'.

Those employed as Process Engineers find different ways to achieve registration as Engineers. Some use *The AusIMM* route, first achieving Chartered Professional accreditation (under what *The AusIMM* calls 'disciplines') as Mining Engineers, Environmental Engineers or Metallurgical Engineers and then seeking registration under those 'areas of engineering' (the term used by the BPEQ).

Other Process Engineers sought accreditation with Engineers Australia as Chemical Engineers, Mechanical Engineers, Structural Engineers and Environmental Engineers, then seeking registration under those areas of engineering.

There is no 'Mine Ventilation Engineering' discipline recognised by *The AusIMM* or 'Mine Ventilation Engineering' area of engineering recognised by BPEQ. It was generally thought that Mine Ventilation Engineering came exclusively under Mining. However, that does not appear to be the case.

In WA, a VO must have a diploma or degree in Mining Engineering, where Mine Ventilation is a substantial part of the curriculum; or the equivalent as recognised by the State WA Chief Mining Engineer.<sup>32</sup> The other jurisdictions have other, mostly lower standards of competency for a VO.

Throughout Australia (other than in WA), a VO is not necessarily a Mine Ventilation Engineer or even a Mining Engineer. While it might be thought that Mine Ventilation Engineering must be performed by Mining Engineers, with a Mine Ventilation Competency, that sadly is not always the case.

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<sup>31</sup> Below n 28-35.

<sup>32</sup> *Mines Safety and Inspection Regulations 1995* (WA) s 9.4.



In Queensland, because of the demands of the RPEQ process mandated by the *Professional Engineers Act 2002* (Qld) and the *Professional Engineers Regulations 2003* (Qld), all professional engineering services (as defined in Schedule 1 of the Act) must be performed by a *PPEQ* or under the direct supervision of an *PPEQ* accredited in the same area of engineering. But in relation to Mine Ventilation Engineering, which area of engineering is it under which the *PPEQ* be accredited.

At first view, Mine Ventilation Engineering is not the province of mechanical, civil or structural engineers, although they could work on mine ventilation assignments, under the direct supervision of a 'Mine Ventilation Engineer', but there is no *PPEQ* defined as such.

Several mechanical, civil and structural engineers are known to be working in Mine Ventilation Engineering and issuing Certificates testifying to the 'structural adequacy' of parts of Ventilation Control Devices ('*VCDs*') and the 'mechanical' functioning of parts of ventilation systems.

The *Coal Mining Safety and Health Regulations 2001* (Qld) demand more than the assessment of the structural adequacy of the thickness of component parts of *VCDs* or the mechanical functioning of parts of ventilation systems. Ventilation systems should as far as possible be tested and evaluated in situ, as a complete ventilation system, not component-by-component. Two Qld Safety Bulletins (No 107/2011 and 127/2005) make this clear; as do the Pressure Ratings for *VCDs* and the other relevant parts of the *Coal Mining Safety and Health Regulations 2001* (Qld).

The founding members of the *MVSA* include South African émigrés. South Africa has many deep and hot underground mines. South African Ventilation Officers need to complete six years of study and experience to meet the South African Ventilation Standards, which are very high in a comparison with those in Australia. The South African Mine Ventilation and Environmental control qualifications are world class.

By contrast in Australia, there are people posited in the industry as 'Mine Ventilation Engineers', who are at best Mining Engineers, Geologists (many of whom get accredited by *The AusIMM* and then registered by the *BPEQ* as 'Geotechnical Engineers'), Mechanical Engineers, Structural Engineers and Environmental Engineers; and at worst, people with just a lot of 'on the job training'.

The *MVSA* is uniquely positioned to set the minimum qualifications and length of experience necessary to become accredited as a Mine Ventilation Engineer (perhaps better named the 'Atmosphere and Environment Engineer'). This might start with the WA standard of a diploma or degree in Mining Engineering, where Mine Ventilation (or the expanded qualification Atmosphere and Environment Engineering) is a substantial part of the curriculum; or the equivalent.<sup>33</sup> Objectively, most South African trained Mine Ventilation Officers fit squarely within the 'equivalent'. The State WA Chief Mining Engineer appears to agree.

The graded hierarchy for the Atmosphere and Environment 'area of engineering' should include:

1. Atmosphere and Environment Engineering Auditor;
2. Atmosphere and Environment Engineer;
3. Atmosphere and Environment Graduate Engineer;
4. Atmosphere and Environment Assistant; and
5. Atmosphere and Environment Trainee.

Each of these ranks would have defined qualifications and experience. The mining legislation should ensure that mining companies only employ for defined roles, persons holding the relevant competencies.

More importantly, the National Scheme for the Registration of Engineers manqué should include these competencies and prevent anyone who does not hold them from working in the mining ventilation discipline. That would mean that Mining Engineers, Geologists (accredited as

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<sup>33</sup> Ibid.

'Geotechnical Engineers'), Mechanical Engineers, Structural Engineers and Environmental Engineers and those who just have a lot of 'on the job training' must upscale their qualifications to the prescribed level of competency or find a line of work other than in Atmosphere and Environment engineering.

## 5. The MVSA Submission.

This submission to the Queensland Parliament Coal Workers' Pneumoconiosis Select Committee by the Mine Ventilation Society of Australia ('MVSA') urges that the committee to accept that the re-emergence of black lung in Queensland coal mine workers is one symptom of the wider issue of poor ventilation practices, policy and regulation in Queensland mines.

As the Committee Chair now appears to accept, Black Lung is not confined to underground coal mines,<sup>34</sup> although based on US experiences, this should have come as no surprise.<sup>35</sup> The hospitalisation of coal mine workers suffering the effects of blast fumes,<sup>36</sup> and the effects of toxic clouds of dust and fumes on the wider community<sup>37</sup> are other symptoms of this same malady.

The Mining Safety and Health Commissioner Stewart Bell (as he then was) was reported as saying that 62 people were taken to hospital in 2011 when fumes from open cut mines went beyond exclusion zones.<sup>38</sup> A Safety Alert<sup>39</sup> and a Guidance Note<sup>40</sup> sought to rectify the problem. In addition, from 1 January 2017, two new recognised standards will drive best practice monitoring and control of respirable dust in coal mines.<sup>41</sup>

- The recognised standard for Monitoring respirable dust in coal mines will require mine operators to routinely report their respirable dust data to the department. This will drive improvement in respirable dust management through increased consistency and transparency of the monitoring requirements as well as independent review by a tripartite committee.
- The recognised standard for Underground respirable dust control will provide a comprehensive approach for managing respirable dust using known risk management concepts and best practice dust management controls.

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<sup>34</sup> Jonathan Hair, 'Black lung disease no longer contained to underground mining sector, Queensland Government confirms', *ABC News* (online), 11 October 2016 <<http://www.abc.net.au/news/2016-10-11/black-lung-disease-has-now-spread-to-open-cut-mine-worker/7921702>>; Lara Webster, 'Queensland's black lung inquiry broadens to include open cut coal mines', *ABC Country Hour* (online), 12 October 2016 <<http://www.abc.net.au/news/2016-10-12/queensland-black-lung-inquiry-broadens/7925924>>.

<sup>35</sup> Cara Halldin et al, 'Debilitating Lung Disease Among Surface Coal Miners With No Underground Mining Tenure', (2015) 57 (1) *Journal of Occupational and Environmental Medicine* 62.

<sup>36</sup> Cole Latimer, 'Blast fumes injure miners', *Australian Mining* (online), 05 April 2011 <<https://www.australianmining.com.au/news/blast-fumes-injure-miners/>>.

<sup>37</sup> Rory Callihan, 'Queensland locals fuming as mine blasts send toxic clouds into neighbourhood', *The Australian* (online), 05 October 2011 <<http://www.theaustralian.com.au/national-affairs/state-politics/queensland-locals-fuming-as-mine-blasts-send-toxic-clouds-into-neighbourhood/story-e6frgczx-1226158548213>>.

<sup>38</sup> Fidelis Rego, 'Miners deny gas impact from open cut blasts', *ABC News* (online), 05 October 2011 <<http://www.abc.net.au/news/2011-10-05/miners-deny-gas-impact-from-open-cut-blasts/3299686>>.

<sup>39</sup> Queensland Government, Department of Natural Resources and Mines, 'Prevention and management of blast fumes' (Explosives safety alert no. 44, Version 2, 15 March 2011) <<https://www.dnrm.qld.gov.au/mining/safety-and-health/alerts-bulletins-search-tool/alerts-bulletins-search/alerts-bulletins/explosives/prevention-management-blast-fumes#>>.

<sup>40</sup> Queensland Government, Department of Natural Resources and Mines, *Guidance Note – QGN 20: Management of oxides of nitrogen in open cut blasting*, (2011) <[http://dnrm.qld.gov.au/\\_\\_data/assets/pdf\\_file/0010/212500/qld-guidance-note-20-mgmt-oxides-nitrogen.pdf](http://dnrm.qld.gov.au/__data/assets/pdf_file/0010/212500/qld-guidance-note-20-mgmt-oxides-nitrogen.pdf)>.

<sup>41</sup> Queensland Government, Business and industry portal, *Regulatory changes* (2016) <<https://www.business.qld.gov.au/industry/mining/safety-health/mining-safety-health/medicals/pneumoconiosis/regulatory-changes>>.

The *MVSA* submits that these regulatory changes are insufficient and that the appointment of an Atmosphere and Environment Officer, with the competencies now demanded only for a VO in underground coal mines,<sup>42</sup> be extended to all resources and all mining methods as is required in Western Australia,<sup>43</sup> and that the NSW requirement for regular 12 monthly ventilation audits by a licensed ventilation auditor,<sup>44</sup> be also extended to all mining methods and resources in Queensland.

The *MVSA* advocates a national approach for a competent Atmosphere and Environment Officer ('*AEO*') with duties to address all the occupational hazards included in Table One (above), to manage resource project atmosphere and environs at all mining, oil and gas facilities, including underground mines, surface mines and quarries. The concerns of any smaller entities complaining that they cannot afford to hire a dedicated competent *AEO* for their operation can be met by the capacity of any entity to hire a competent *AEO* on contract. The *AEO* can be a one day a fortnight at a small quarry.

An initial audit of occupational hazard requirements at all resource facilities by personnel approved by the *MVSA*, will provide a list of requirements to manage resource project atmosphere and environs. The qualifications required for a *AEO* for each site will be fixed by the *MVSA*. The duties of the *AEO*, including how often they need to be on site and what readings they need to take and record will also be prescribed by the *MVSA*. The initial audit should also list for the operator what hazards have been identified and what the operator needs to do to mitigate and control them. This can be followed up with an interim audit to ensure the requirements are being met and 12 monthly audits thereafter.

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Johannes Holtzhausen  
**MVSA – President**

For and on Behalf of the Mine Ventilation  
Society of Australia

## **Bibliography.**

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<sup>42</sup> Above n 5.

<sup>43</sup> Above [3.3].

<sup>44</sup> Above [3.2].

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# THE MINE VENTILATION SOCIETY OF AUSTRALIA

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**6 February 2017**

Mrs Jo-Ann Miller [MP]  
Coal Workers' Pneumoconiosis Select Committee  
Parliament House  
George Street  
Brisbane, QLD 4000

Dear Jo-Ann,

## MVSA Coal Workers' Pneumoconiosis submission

The Mine Ventilation Society of Australia ('MVSA') submitted a report to the Queensland Parliament Coal Workers' Pneumoconiosis Select Committee dated 5 January 2017 [CWP Inquiry Sub No.038]. This letter refers to that submission.

It has come to the MVSA executive committee's attention that, due to an administrative error, the submission made to the Coal Workers' Pneumoconiosis Select Committee had not been issued to all MVSA members for their comment, review and input. After this document became public a number of MVSA members alerted us to the fact that they did not receive a draft document for comment. A number of members also expressed their concern with statements contained in said report [5 January 2017] which they do not agree with nor support. The report consequently does not reflect the collective opinion or view of the MVSA membership.

The MVSA committee therefore believe that it is our responsibility to retract the submission made to the Coal Workers' Pneumoconiosis Select Committee. This letter serves as a formal retraction of the MVSA submission dated 5 January 2017. We also request that, should procedure allow, the MVSA submission be struck from the enquiry records.

Please accept our sincere apologies for any inconvenienced caused. We trust that this letter will meet with your kind consideration.

Regards

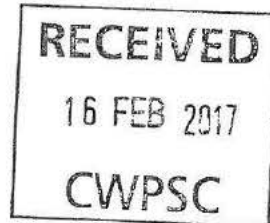
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6 February 2016

Mrs Joanne Miller MP  
Coal Workers' Pneumoconiosis (CWP) committee  
Parliament House  
George Street  
Brisbane QLD 4000

Dear Mrs Miller

**Re: Coal Workers' Pneumoconiosis (CWP) committee inquiry submission 038**

I am writing to clear a matter of public record with regards to the Australasian Institute of Mining and Metallurgy's (AusIMM's) affiliation with the Mine Ventilation Society of Australia and in particular any possible perception that the AusIMM was involved in or associated with the submission from that group, available online at:

<https://www.parliament.qld.gov.au/documents/committees/CWPSC/2016/CWPSC/submissions/038.pdf>

On the third page of the document noted above, the author has included a statement that the Mine Ventilation Society of Australia is affiliated with the AusIMM. I wish to ensure that this is not construed as AusIMM support of their submission.

The Mine Ventilation Society and the AusIMM have previously worked together hosting joint events, however, there has not been any joint advocacy activity nor is the society in any way a part of the AusIMM.

It would be our preference that the publically-available document be modified to remove the sentence regarding AusIMM affiliation; however, I understand if this is not possible.

Sincerely,

Colin Moorhead FAusIMM(CP)  
AusIMM President

