



12 Flinders Parade
Sandgate QLD 4017
Australia
ACN 087 666 340
ABN/GST 55 087 666 340

Phone:
E-mail:
Web: www.mvaust.com.au

Mine Ventilation Australia subsurface ventilation specialists

13 April 2018

Committee Secretary
Education, Employment and Small Business Committee
Parliament House
George Street
Brisbane Qld 4000

Dear Sir or Madam,

Submission regarding Mines Legislation (Resources Safety) Amendment Bill 2018

I wish to make the following submission to the Committee.

Firstly, I have been involved as a mine ventilation engineer in underground mine ventilation for most of my career, mostly (but not exclusively) in non-coal (“hardrock” or “metalliferous” or “mines and quarries” in the terminology of the Queensland legislation). In this submission, I refer to these latter as “non-coal” mines.

I will only be commenting on Part 3 of the Bill (non-coal mines), although I note that it has many “parallel” regulations with Part 2 (coal mines).

My view is that there are four key pillars to achieving safe and healthy ventilation in an underground mine:

- **Ventilation control plan (VCP).** The role and scope of these plans is well described in the Safe Work Australia Model WH&S regulations, *and* the current NSW mine regulations (Work health and safety (mines) regulations 2014 clause 62 and elsewhere), *and* the current SA mine regulations (Division 4, subdivision 2, clause 654 and elsewhere). We need similar requirements in Queensland and this proposed new Act does not provide this, so far as I can see. A well-developed, regularly audited and properly “change managed” VCP is the single most important success factor in achieving safe and healthy mine ventilation. It forms the blueprint for the design and operation of an effective, relevant and up-to-date ventilation system.

I further note that the concept of “Principal hazards” and “Principal hazard management plans” has been part of the Qld Coal Mining Safety and Health Act since 1999, and is already an integral concept in the legislation for coal and non-coal mines in NSW and SA, but has still not been introduced into non-coal legislation in Qld, which is a continuing defect in the Qld non-coal legislation.

- **Statutory position of ventilation officer (VO).** The ventilation officer in non-coal mines was a statutory position in Queensland until it was removed in 1999. In hindsight, this was a mistake but the reason (in my opinion) is that at the time there was no certification for the position, no requirement to maintain competency and so the position was seen as superficial and unnecessary and therefore removed. I fully support the reintroduction of the statutory position of VO in non-coal mines although the success of this will depend in large measure on the requirements set by the Advisory Committee and the Board of Examiners.

I see no reason why the new legislation should state that the VO for coal mines should be “subject to the direction and control of the underground mine manager” (Figure 1) whilst the same position in the bill for non-coal mines does not have this proviso on it (Figure 2). I believe the proposed wording for coal is the better and more realistic of the two.

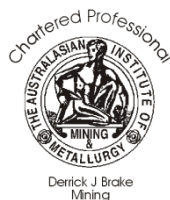
I also note that a new VO appointment is required after 7 days in coal mines and 14 days in non-coal mines and that inside the 7 days, the statutory duties of the VO in coal can be taken up by the underground manager only if he also has a VO competency, whereas in non-coal mines, the statutory duties of the VO can be taken up by the underground manager whether or not he has a VO competency. This is probably sensible given the different nature and risks of the two industries. However, I would

point out that while the “acute” problems of poor ventilation are likely to be more serious in coal mines (esp methane explosions), the “chronic” problems of poor ventilation are likely to have a relatively similar risk profile in both industries (coal workers or silica pneumoconiosis, lead and toxic metals).

- **Sufficiently resourced and qualified Inspectorate using an in-depth targeted audit system.** The Inspectorate in Queensland should have its own in-house mine ventilation specialist. The Inspectorate should have a well-targeted and in-depth audit program.
- **Suitable up-to-date Guidelines or Codes of Practice** to facilitate compliance with the Act and Regulations. There are already many excellent government guidelines (Qld and other Australian states) and government-issued self-audit tools covering many underground mine ventilation and ventilation-related topics in Australia (including fires, diesel emissions including particulate matter, egress and entrapment, etc); unfortunately, there is also duplication and contradiction between States in some of these guidelines which is nonsensical given that operating a safe and healthy mine ventilation system is independent of the location. I would urge the regulators to develop a national standard set of compliance guidelines, even if these do need some internal qualifications within them to deal with specific differences in regulations between the various states. The need for these Guidelines is especially important in non-coal mines either where the mines are very small or where the ventilation-related risks may be low. In both cases, following an approved guideline should be a faster, cheaper, more effective and more reliable way to achieve the objectives of the Act and Regulations.

| <i>Figure 1 Coal (page 21)</i> | <i>Figure 2 Mines and Quarry (page 62)</i> |
|--|---|
| (4) Subject to the direction and control of the underground mine manager, the ventilation officer for the mine is responsible for— | (5) The ventilation officer for the mine is responsible for— |
| 26 27 28 | 27 28 |
| Page 21 | |
| Authorised by the Parliamentary Counsel | |
| Resources Safety) Amendment Bill 2018 of Coal Mining Safety and Health Act 1999 | |
| (a) the implementation of the mine’s ventilation system; and | (a) the implementation of the mine’s ventilation system; and |
| 1 2 | 29 30 |
| (b) the establishment of effective standards of ventilation for the mine. | (b) the establishment of effective standards of ventilation for the mine. |
| 3 4 | 31 32 |

Sincerely,

Dr D J (Rick) Brake

Director and Principal Consultant, Mine Ventilation Australia

Adjunct A/Professor, Resources Engineering, Monash University, Melbourne, Australia

Howard Hartman Award 2017 for “Outstanding service in the field of mine ventilation engineering”

PhD (Curtin), MBA (Deakin), B.E. Min (Hons 1) (UQld), Adv Dipl Mine Vent (CQIT)

MNCU1109 (Coal Vent Off), MNMMSM631 (Metalliferous Vent Off)

South Australian Radiation Licences: Sealed Sources in Fixed Industrial Gauges & Unsealed Sources – Radioactive Ores & Concentrates

Cert IV (Vocational Training), MNC.G1002A (Risk Management), Cert IV (Leadership), Cert IV (Frontline Supervision)

F AusIMM, AusIMM Chartered Professional (Mining), M MVSA, Registered Professional Engineer (Qld)