

Ventilation officer of underground coal mines

Introduction

Type	Details
Name of the statutory function	Ventilation officer
Class of mine	Underground coal mines
Key statutory function?	Yes
Mining supervisor?	No

Statutory functions are certain safety-critical roles in the mining and extractives industry that are regulated by the department. This document has been developed for people who exercise specific statutory functions to help them understand their duties, key relationships, tasks and work practices. Schedule 10 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 (WHS (M&PS) Regs 2014) regulates statutory functions.

This document will:

- inform you of what exercising the function involves
- help mine operators and individuals to develop training and/or mentoring programs to support individuals to practise in the function
- assist mine operators to develop their safety management system, including management arrangements
- guide mine operators and individuals when identifying maintenance of competence learning to be undertaken.

Please note, a [list of key terms](#) and [legislative provisions](#) can be found at the end of this document.

Guidance on statutory function

Extract from the WHS (M&PS) Regs 2014, Schedule 10, Part 2, clause 8:

- (1) The statutory function of Ventilation Officer is to control and manage ventilation activities and standards forming a part of the mining operations at the mine.
- (2) The requirement for nomination to exercise the statutory function is that the individual nominated must hold a current practising certificate that authorises the exercise of the statutory function.

Exercising the function

An individual exercising the function should:

Control: Control the ventilation system for the mine to be in compliance with the standards set out in:

- the ventilation control plan for levels of air quality and the processes and controls to achieve them.
- the safety management system (SMS), including principal hazard and other control plans which relate to ventilation, e.g. mechanical engineering control plan for diesel exhaust and emission levels and monitoring.
- WHS laws and their referenced standards including *Guidance on the Interpretation of Workplace Exposure Standards for Airborne Contaminants* published by Safe Work Australia.
- any relevant codes of practice and guidance material, e.g. confined spaces, hazardous chemicals.

Manage – manage the ventilation activities and standards throughout the lifecycle of the mine by carrying out the following steps.

- Develop the standards for ventilation against which the ventilation system will be controlled against (refer above) and the system of activities to meet the standards.
- Implement the ventilation system:
 - Assist in documenting it in the safety management system, including the ventilation control plan and procedures.
 - Integrate the ventilation control plan with other plans in the SMS so they are effective, e.g. emergency plan.
 - Communicate the ventilation control plan and safety management system requirements, as appropriate, to persons implementing, applying and/or monitoring ventilation.
 - Train and advise workers and mining supervisors on effective ventilation in the mining operations.
 - Direct supervision and general supervision (refer key terms) of mining operations and workers, including contractors, for ventilation.
 - Participate in and/or monitor the management of risk according to the safety management system, in particular those involving ventilation risks and controls.
 - Monitor the results from ventilation monitoring devices at the mine and respond as required.
 - Review the performance of the ventilation system, referring to reports from workers and PCBUs.

- Maintain an understanding of WHS hazards and risks in the mining operations that are required to be controlled or eliminated, and apply this knowledge to ventilation.

Scope and relationships

This statutory function applies to underground coal mines.

An individual will follow the management structure set out in the mine safety management system.

They should be aware of possibly interacting with other individuals exercising statutory functions at the mine:

- **Mining engineering manager** – for the development of mining engineering standards and procedures that are to be applied as they relate to ventilation, and for them to be monitored and reviewed to remain current.
- **Undermanager** – assist with implementing ventilation standards and activities, particularly major changes (refer key terms).
- **Deputy** – assist with supervising, monitoring and reviewing ventilation standards and activities
- **Electrical and mechanical engineering managers** – apply the electrical and mechanical engineering standards and procedures forming part of mining operations as they relate to ventilation standards and activities.
- **Ventilation auditor** – liaise so an audit of the ventilation system and the ventilation control plan for the mine is conducted by them at least once every 12 months at the mine.
- **Dust explosion control measures auditor** – liaise so an audit is conducted of the dust explosion control measures and standards used at the mine.

Statement of minimum tasks

The individual should carry out the following tasks for required elements of the mine's safety management system to supervise workers and inspect work areas as applicable at the mine:

Generally

For the applicable elements of the safety management system:

- Manage risks.
- Mine inspection plan for ventilation related matters.
- Supervise contractors and their management plans.

Principal hazards

Manage the implementation of the principal hazard management plans for all applicable prescribed principal hazards in WHS (M&PS) Regs 2014, clause 5 and any others through the ventilation control plan.

Principal control plans

- Manage the implementation of principal control plans as required for ventilation of the mining operations, in particular the ventilation control plan.
- Refer to scope and relationships for application and monitoring with other statutory function holders.

Specific control measures (application as prescribed in the WHS laws¹)

- Manage the implementation of specific control measures for all mines and underground mines, coal mines and underground coal mines, as they apply to ventilation.
- Manage the implementation of emergency plans through ventilation activities and standards, including use of inertisation equipment, sealing and post monitoring.
- Assist to ensure the accuracy and content of mine survey plans (refer to Scope and relationship).

Information, training, instruction and consultation

- Provide information, training and instruction on the ventilation control plan.
- Participate in mine consultation processes internally and externally, as required.

Monitoring, auditing and review

- Monitor the performance of the safety management system against the specified standards as part of managing, including those in the ventilation control plan.
- Monitor the compliance of the safety management system with reporting mine incidents, matters and reportable incidents to the regulator, including:
 - Notify the regulator of a *high risk* activity prescribed by the WHS (M&PS) Regs 2014 for sealing.
 - Notify the regulator where an incident occurs prescribed as a *notifiable incident* by the WHS (M&PS) Regs 2014.
- Participate in the audits and reviews of the safety management system, as required.

Key statutory function

The ventilation officer is a key statutory function under clause 135 of the WHS (M&PS) Regs 2014. Only one person is nominated by the mine operator in the safety management system to exercise the key statutory function.

¹ Means the *Work Health and Safety Act 2011*, *Work Health and Safety Regulation 2017*, *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.

Note

The safety management system forms part of the overall management system that is in place at the mine². The mine management system may follow a management approach such as:

- plan, do, check, act
- identify, assess, control and review.

Regardless of what management approach is used at the mine, the individual should exercise the statutory function to meet the safety management system and WHS laws requirements.

Work practices

How the ventilation officer exercises the statutory function will be determined by the mine operator in the safety management system and the applicable legislation, in particular WHS laws. A typical cycle of work practices that a ventilation officer may undertake is set out below:

Daily

- Monitor results from ventilation monitoring devices at the mine and respond as required.
- Review reports from workers and PCBUs on the performance of the ventilation system.
- Identify incidents involving ventilation that are required to be reported to the regulator and/or assist in reporting them.
- Communicate with workers and mining supervisors on the performance of the ventilation system including any issues identified from the mine inspection plan.

Weekly

- Carry out testing or ensure tests are completed for ventilation at the mines, as set out in the ventilation control plan.
- Review the results of the testing and respond as necessary with any corrective action.

Monthly

- Review the performance of the ventilation system and identify any opportunities for improvement
- Provide a report to the mine operator, as set out in the safety management system, on the performance of the ventilation system including any further resourcing required to ensure the effectiveness of the system.

Annually

- Organise for a ventilation auditor to conduct an audit of the ventilation system and the ventilation control plan for the mine at least once every 12 months;

² Clause 13(4) Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

- Assist in the testing of the emergency plan as scheduled that relates to ventilation (or more frequently).

Authority

The WHS (M&PS) Regs 2014 enables the function and an individual to practise in it by:

- Clause 136: only an individual who meets the requirements can exercise the function and only if they are nominated by the mine operator.
- Clause 137: the mine operator must ensure the nominated individual continues to meet the requirements and is able to exercise the function.
- Clause 138: an individual must inform the mine operator if they cannot exercise the function.

Key terms³

Term	Definition
Apply	To put into practical operation or to put to use, eg. an inspection program.
Develop	To bring into being or activity, generate or evolve. The term includes further adding to and amending standards and procedures that form part of the safety management system.
Fit for purpose	Something that is sufficient to do the job it was designed to do. This definition is taken from the NSW code of practice: mechanical engineering control plan .
Implement	To put into effect, either directly or through causing others to carry out actions.
Lifecycle	For mining operations, this means the activities for exploration, construction, commissioning, extraction and those in connection with it, and the decommissioning of a mine.
Major changes to the ventilation system	Includes changes which are outside the scope of normal ventilation changes made during the production cycle (eg. main fan shut downs, reversal of ventilation etc.) that may be identified through the safety management system.
Mining operations	For a definition of this term, refer to section 7 of the <i>Work Health and Safety (Mines and Petroleum Sites) Act 2013</i> . Mining operations includes lifecycle activities.

³ Some meanings are derived from the Macquarie Dictionary and added to for context.

Monitor	To check, observe, supervise and/or record the operation of a mine, part of a mine, workers or related activities so as to assess the suitability of mining engineering standards and procedures to manage potential or actual risks.
Review	A retrospective assessment of something with the intention of instituting change if necessary.
Safety management system	All activities planned and documented by the mine operator to be carried out to manage health and safety risks at the mine in an organised manner.
Standards and procedures	Written internal or external documents that set out or provide guidance on how mining operations should be carried out to achieve a performance level for WHS. This may include mining, electrical, mechanical or other areas. The standards may include: <ul style="list-style-type: none"> → WHS legislation and codes of practice → international and Australian Standards → guidance information from various sources that are credible, current and substantive → industry publications such as WHS reports.
Supervise	Oversee or direct some part of mining operations. The mining engineering manager should normally provide general supervision, but at times may exercise direct supervision, such as to verify critical controls are working or high risk activities are being managed. This could include, for example, commissioning a large new piece of plant.
Direct supervision	Verifying through direct observation that mining operations and any contractors involved are applying the requirement of the safety management system.
General supervision	Where the individual may not always be present or directly responsible for supervising the activities, but will monitor to ensure that the safety management system is implemented, applied and monitored, and provide advice to supervisors and workers.
Underground coal mine ⁴	An underground mine that is a coal mine.
Underground mine ⁵	Means that part of a mine that is beneath the surface of the earth and includes plant and structures that extend continuously from the surface

⁴ Clause 3 Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

⁵ Clause 3 Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

into that part of the mine but does not include a part of the mine in which high wall mining is being carried out.

Verify

Confirm or substantiate by examination or comparison. In this description, it means directly or indirectly checking that requirements of the safety management system are being satisfied, e.g. direct supervision, reading reports.

© State of New South Wales through the NSW Department of Planning and Environment 2018.

This publication is copyright. You may download, display, print and reproduce this material in an unaltered form only (retaining this notice) for your personal use or for non-commercial use within your organisation. To copy, adapt, publish, distribute or commercialise any of this publication you will need to seek permission from the NSW Department of Planning and Environment.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (February 2018). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the NSW Department of Planning and Environment or the user's independent advisor.

CM9 reference: PUB17/662