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Model Work Health and Safety Regulations

Chapter 9—Mines

Contents

CHAPTER 9 MINES

Part 9.1 Preliminary

9.1.1 Meaning of *mine*

(1) In these Regulations, a ***mine***:

(a) is a place that is:

(i) a workplace at which mining operations are carried out; or

(ii) a tourist mine; and

(b) includes any plant or structures at the place that are used or were formerly used for mining operations.

(2) In these Regulations, a ***tourist mine*** means a workplace:

(a) used only for tourism purposes but at which mining operations were formerly carried out; and

(b) at which a principal mining hazard is present.

Note

See the jurisdictional note in the Appendix.

9.1.2 Meaning of *mining operations*

(1) In these Regulations, ***mining operations*** are activities carried out for or in connection with:

(a) extracting minerals from the ground; or

(b) exploring for minerals by mechanical means that disturb the ground.

(2) Without limiting subregulation (1), the activities include the following:

(a) handling or storing extracted materials in connection with the activities referred to in subregulation (1)(a) and (b);

(b) preparing or processing extracted materials in connection with the activities referred to in subregulation (1)(a) and (b);

(c) constructing or decommissioning an extraction site or exploration site or other place where an activity specified in paragraph (a) or (b) is carried out.

(3) In these Regulations, ***mining operations*** do not include:

(a) activities carried out in relation to the extraction of minerals on private land for the private and non-commercial use of the owner of the land; or

(b) fossicking.

(4) In these Regulations (other than regulation 9.1.1) a reference to mining operations includes a reference to educational and tourist activities carried out in relation to mining operations or former mining operations.

Note

See the jurisdictional notes in the Appendix.

9.1.3 Meaning of *mineral*

In these Regulations ***mineral***:

(a) means:

(i) a naturally occurring element or inorganic compound; or

(ii) coal, lignite, peat or oil shale; or

(iii) rock, stone, gravel or sand; and

(b) does not include water.

Note

See the jurisdictional note in the Appendix.

9.1.4 Meaning of *principal mining hazard*

(1) In these Regulations a ***principal mining hazard*** is:

(a) any activity, process, procedure, plant, structure, substance, situation or other circumstance relating to the conduct of mining operations that could create a risk of multiple fatalities in a single incident or fatalities in a series of recurring incidents, in relation to any of the following:

(i) ground or strata instability;

(ii) inundation and inrush of any substance;

(iii) mine shafts and winding operations;

(iv) roads and other vehicle operating areas;

(v) air quality and dust and other airborne contaminants;

(vi) fire or explosion;

(vii) gas outbursts;

(viii) ionising radiation; or

(b) any other activity, process, procedure, plant, structure, substance, situation or other circumstance relating to the conduct of mining operations, identified by the mine operator under regulation 9.2.1, that could create a risk of multiple fatalities in a single incident or fatalities in a series of recurring incidents.

(2) In the case of a tourist mine, the reference to the conduct of mining operations in subregulation (1) includes a reference to the conduct of mining operations before the mine became a tourist mine.

(3) In these Regulations, a ***principal mining hazard*** at a mine that is a facility for the purposes of Chapter 8 does not include a major incident hazard.

Note

Chapter 8 applies in relation to a mine that is also a facility, including a major hazard facility, for the purposes of that Chapter.

9.1.5 Meaning of *mine operator*

(1) The ***mine operator*** of a mine is the mine holder for the mine, unless the mine holder appoints another person to be the mine operator.

(2) The mine holder for a mine may appoint a person to be the mine operator only if:

(a) the person is conducting a business or undertaking and is appointed in accordance with regulation 9.1.7 to carry out mining operations at the mine on behalf of the mine holder; and

(b) the mine holder authorises the person to have management or control of the mine and to discharge the duties of a mine operator under this Chapter.

9.1.6 Meaning of *mine holder*

(1) In these Regulations, the ***mine holder*** for a mine is the person who is conducting a business or undertaking with control over a right or entitlement to carry out mining operations at the mine.

(2) Without limiting subregulation (1), a person is conducting a business or undertaking ***with control over a right or entitlement to carry out mining operations*** if:

(a) a mining authorisation is required for carrying out those operations; and

(b) the person holds a mining authorisation so required.

(3) In subregulation (2), a ***mining authorisation*** is a mining title, mining licence, mineral development licence, prospecting permit, exploration permit, mining lease or mining claim or other authorisation (however described) granted or issued under [.....].

Note

See the jurisdictional notes in the Appendix.

9.1.7 Appointment of mine operator

(1) An appointment of a person to be the mine operator of a mine must:

(a) be in writing; and

(b) be made in the manner and form required by the regulator; and

(c) include a signed statement that the person agrees to the appointment; and

(d) specify:

(i) the name and contact details of the mine operator, including postal and business addresses; and

(ii) when the appointment takes effect; and

(e) describe the location of the mine, including:

(i) the boundaries of all extraction and exploration sites; and

(ii) land title identification.

(2) The mine holder for the mine must give the regulator written notice of the appointment.

(3) The mine holder must give written notice to the regulator of any change to the appointment of a mine operator or any termination of the appointment.

(4) The mine holder must take all reasonable steps to ensure that a notice under subregulation (2) or (3) is given before the appointment or the change or termination takes effect.

(5) The mine holder must give the mine operator all relevant information held by the mine holder that may reasonably be required by the mine operator to discharge the duties imposed on the mine operator under the Act and these Regulations.

(6) The mine operator of a mine who intends to cease being the mine operator must ensure, so far as is reasonably practicable, that all records the mine operator has kept under the Act and these Regulations are given to the mine holder for the mine.

9.1.8 Notification by mine holder who is the mine operator

(1) If the mine holder of a mine is the mine operator, the mine holder must give the regulator written notice of this fact.

(2) The notice must include the information referred to in regulation 9.1.7(1)(c) and (d).

9.1.9 Meaning of *adversely affected by alcohol or drugs*

In this Chapter, a person is ***adversely affected by alcohol or drugs*** if alcohol or drugs have caused the person's judgment or capacity to be impaired to the extent that the person may expose the person's or another person's health or safety to a risk.

Part 9.2 Managing Risks

Division 1 General control of risk

9.2.1 Identification of hazards

The mine operator of a mine must, so far as is reasonably practicable, identify all reasonably foreseeable hazards associated with mining operations at the mine.

9.2.2 Assessment of risks

The mine operator of a mine must assess risks to health and safety associated with all hazards identified under regulation 9.2.1.

9.2.3 Control of risk

(1) This regulation applies if it is not reasonably practicable for the mine operator of a mine to eliminate risks to health and safety associated with mining operations at the mine.

(2) The mine operator of a mine must, so far as is reasonably practicable, minimise risks to health and safety associated with mining operations at the mine by implementing any or all of the following control measures:

(a) substituting, for the hazard giving rise to a risk to health and safety, a new activity, procedure, plant, process or substance that reduces the risk to health and safety;

(b) isolating persons from the hazard;

(c) implementing engineering controls.

(3) If complying with subregulation (2) does not minimise a risk so far as is reasonably practicable, the mine operator must, so far as is reasonably

practicable, minimise the remaining risk by implementing administrative controls.

(4) If complying with subregulations (2) and (3) does not minimise a risk so far as is reasonably practicable, the mine operator must, so far as is reasonably practicable, minimise the remaining risk by providing suitable personal protective equipment to persons who are at risk.

9.2.4 Review of risk control measures

(1) The mine operator of a mine must review and as necessary revise measures implemented to control risks to health and safety associated with mining operations, in the following circumstances:

(a) before making a significant change to the mining operations;

(b) a notifiable incident occurs at the mine;

(c) an audit of performance standards indicates a deficiency in a risk control measure;

(d) a worker's work is changed due to health monitoring results;

(e) there is evidence that a risk control measure does not adequately control the risk;

(f) a health and safety representative at the mine requests the review.

(2) Without limiting subregulation (1), a mine operator reviewing control measures in the circumstances referred to in subregulation (1)(b) must keep a record of the following:

(a) the work health and safety issues arising from the notifiable incident;

(b) recommendations arising from consideration of the notifiable incident;

(c) a summary of any changes to the WHS management system and any affected principal mining hazard management plan for the mine.

(3) A health and safety representative at a mine may request a review of risk control measures if the health and safety representative reasonably believes that:

(a) a circumstance specified in subregulation (1)(a), (b), (c), (d) or (e) exists; and

(b) the mine operator has not adequately reviewed the risk control measures in response to that circumstance.

(4) In subregulation (1)(a) a ***significant change*** to mining operations is a change to any workings, processes, structures or plant (including the introduction of new workings, processes, structures or plant) that could:

(a) create a principal mining hazard that has not previously been identified; or

(b) increase the risk associated with mining operations at the mine.

9.2.5 WHS management system—duty to establish and implement

(1) The mine operator of a mine must establish and implement a WHS management system for the mine.

(2) The WHS management system must be designed to be used by the mine operator as the primary means of:

(a) ensuring the health and safety of workers at the mine; and

(b) ensuring that the health and safety of other persons is not put at risk from work carried out as part of mining operations.

(3) A WHS management system must:

(a) provide a comprehensive and integrated system for the management of all aspects of risk control in relation to the operation of the mine; and

(b) be documented.

9.2.6 WHS management system—content

(1) The WHS management system for a mine must:

(a) state the mine operator's safety policy, including broad aims in relation to the safe operation of the mine; and

(b) describe the systems and procedures and other risk control measures that will be used to control risks to health and safety associated with mining operations at the mine; and

(c) describe the management structure for the management of work health and safety at the mine, including:

(i) arrangements for filling temporary and permanent vacancies; and

(ii) requirements relating to acting positions in the structure; and

(d) include the matters set out in regulation 9.2.7; and

(e) describe arrangements in place for health monitoring under Part 9.3; and

(f) set out the safety role for workers developed under Part 9.4; and

(g) include the ventilation control plan prepared under regulation 9.2.18; and

(h) include the principal mining hazard management plans prepared under Division 2; and

(i) describe arrangements in place for all other monitoring, assessment and inspection activities conducted for the purposes of the Act and these Regulations; and

(j) be set out and expressed in a way that is readily accessible and comprehensible to persons who use it.

(2) In deciding the level of detail to be provided in the WHS management system, the mine operator must have regard to all relevant matters including:

(a) the nature and complexity of the mining operations; and

(b) the risks associated with those operations.

9.2.7 WHS management system—monitoring and audit

A WHS management system for a mine must:

(a) set out performance standards for measuring the effectiveness of the WHS management system that:

(i) relate to all aspects of the WHS management system; and

(ii) are sufficiently detailed to ensure that the ability of the mine operator to ensure the effectiveness of all aspects of the WHS management system is apparent from the documentation; and

(iii) include steps to be taken to continually improve all aspects of the WHS management system; and

(b) include a description of the way in which the performance standards are to be met; and

(c) set out a system for auditing the effectiveness of the WHS management system for the mine against the performance standards, including the methods, frequency and results of the audit process.

9.2.8 WHS management system—review

(1) The mine operator of a mine must ensure that the WHS management system for the mine is reviewed and as necessary revised to ensure it remains up to date at least once every 3 years.

Note

Regular testing of the emergency plan is also required (see regulation 9.2.35).

(2) In addition, if a risk control measure is revised under regulation 9.2.4, the mine operator must ensure that the WHS management system for the mine is reviewed and as necessary revised in relation to all aspects of risk control addressed by the revised control measure.

9.2.9 Giving information to the regulator

(1) A mine operator must give the regulator the work health and safety information specified in Schedule 9.1.

(2) The information must be given on a quarterly basis in the manner and form required by the regulator.

Division 2 Principal Mining Hazard Management Plans

9.2.10 Duty to prepare plan

(1) The mine operator of a mine must prepare a principal mining hazard management plan in relation to each principal mining hazard identified under regulation 9.2.1.

(2) A principal mining hazard management plan must:

(a) provide for the management of all aspects of risk control in relation to the relevant principal mining hazard; and

(b) be set out and expressed in a way that is readily accessible and comprehensible to persons who use it.

(3) A principal mining hazard management plan must:

(a) state the nature of the principal mining hazard to which it relates; and

(b) describe how a risk assessment will be conducted in relation to the principal mining hazard; and

(c) specify the results of the risk assessment; and

(d) specify all control measures to be implemented to control risks to health and safety associated with the principal mining hazard; and

(e) be prepared after considering the matters specified in Schedule 9.2 that apply to the plan.

9.2.11 Risk assessment under a plan

(1) In conducting a risk assessment under regulation 9.2.2 for the purposes of preparing a principal mining hazard management plan, the mine operator must:

(a) use investigation and analysis methods that are appropriate to the principal mining hazard being considered; and

(b) consider the principal mining hazard to which the plan relates individually and also cumulatively with other hazards at the mine.

(2) The risk assessment must:

(a) state the likelihood of the principal mining hazard causing or contributing to any harm to the health or safety of any person, and the severity of that harm; and

(b) describe the investigation and analysis methods used in the assessment; and

(c) describe all control measures considered to control risks associated with the principal mining hazard; and

(d) state the reasons for deciding which risk control measures to implement.

9.2.12 Review of plan

The mine operator of a mine must ensure that a principal mining hazard management plan is reviewed and as necessary revised if a risk control measure specified in the plan is revised under regulation 9.2.4.

Note

Regular reviews of the WHS management system are also required (see regulation 9.2.8).

Division 3 Specific risk control measures

9.2.13 Communication between outgoing and incoming shifts

The mine operator of a mine must ensure that a system is provided that requires:

(a) the supervisor of each outgoing shift to provide a written report to the supervisor of the incoming shift, in relation to the state of the mine workings and plant and any other matters that relate to work health or safety; and

(b) the supervisor of the incoming shift to communicate the content of the report to the workers on the incoming shift.

Note

For requirements relating to communication with workers carrying out remote or isolated work at the mine, see regulation 1A.2.9.

9.2.14 Progress of workings

(1) The mine operator of a mine must, if any underground mine workings are or may be near or approaching an area that contains an inrush hazard that may be a risk to the health or safety of any person at the mine:

(a) ensure that the person is at all times aware of the location of the faces being approached; and

(b) ensure that exploratory bore-holes are drilled from the workings, that will indicate the presence and location of the inrush hazard; and

(c) identify and maintain a safe zone between the mine workings and the location of each inrush hazard.

(2) The mine operator of a mine, before connecting any underground workings at the mine to any other workings (including disused workings), must:

(a) if it is not possible to safely gain access to the workings to be connected—ensure that exploratory bore-holes or other exploratory methods are used to determine the location of the other workings; and

(b) in any other case—ensure that the other workings are inspected for water, gas, misfires, butts and any other circumstance that may be a risk to the health or safety of any person at the mine.

(3) The mine operator of a mine must, if two working faces are approaching each other, ensure that one of the workings is stopped, made safe and barricaded as soon as practicable before the distance separating the faces creates a risk to health or safety.

(4) In this regulation, an ***inrush hazard*** is a hazard involving the potential inrush of any substance.

9.2.15 Shafts and winding

(1) The mine operator of a mine must ensure that every winding system for a shaft at the mine includes the following:

(a) ropes that will enable the shaft conveyance to bear the weight that can reasonably be expected to be borne by the shaft conveyance;

(b) controls and limiting devices to prevent any shaft conveyance from being overwound or overrun or from travelling at an unsafe speed;

(c) brakes that can bring the system to rest;

(d) devices that detect slack rope or drum slip conditions, or tail rope malfunctions;

(e) devices that cause the winder to stop when a condition or malfunction referred to in paragraph (d) is detected;

(f) an effective means of communication between the winding room and the entry to every shaft that is in use.

(2) The mine operator must ensure that the winding system for each shaft that is in use, and all components of the winding system, are tested regularly to ensure the safe performance of the system.

(3) The mine operator must:

(a) ensure that material or plant being carried in a shaft conveyance:

(i) does not protrude from the shaft conveyance while it is moving; and

(ii) is so secured to the shaft conveyance that it cannot leave the shaft conveyance except by being removed deliberately; and

(b) ensure that persons being carried in a shaft conveyance are adequately protected from another shaft conveyance in the same shaft and from any material or plant being carried by that shaft conveyance; and

(c) if a shaft conveyance that combines a cage and skip is used, ensure that material is not carried in the skip while persons are being carried in the cage.

(4) The mine operator must ensure that control measures are implemented to prevent a detached shaft conveyance from falling down the shaft.

(5) The mine operator must ensure that energy lockout devices are fitted to all mechanical and electrical plant associated with any shaft at the mine, including any mechanical and electrical plant associated with the operation, maintenance or use of the shaft.

(6) The mine operator must ensure that, in relation to the automatic winding system for any shaft at the mine:

(a) the functions of the winder can be monitored from outside the winder house; and

(b) warning systems are installed to alert persons at the mine of any emergency in the shaft; and

(c) means of communication between the surface and any shaft conveyance carrying persons are provided and maintained.

(7) The mine operator must ensure that facilities for loading material or plant onto or into a shaft conveyance are designed and operated so as to prevent spillage into the shaft.

9.2.16 Movement of mobile plant

(1) This regulation applies if it is not reasonably practicable for the mine operator of a mine to eliminate risks to health and safety associated with the movement of mobile plant at the mine.

(2) In minimising risks to health and safety associated with the movement of mobile plant at the mine, the mine operator must have regard to all relevant matters including the following:

(a) the design, layout, construction and maintenance of all roads and other areas at the mine used by mobile plant;

(b) interactions between mobile plant, especially large and small mobile plant;

(c) interactions between mobile plant and pedestrians;

(d) the operation of remotely controlled mobile plant;

(e) the maintenance and testing of brakes, steering, lights and other safety features of the mobile plant.

9.2.17 Dust explosion in an underground mine

(1) The mine operator of an underground mine must, so far as is reasonably practicable, minimise the risk of a dust explosion occurring at the mine.

(2) Without limiting subregulation (1), the mine operator must implement control measures that:

(a) minimise the generation of potentially explosive dusts; and

(b) suppress, collect and remove potentially explosive airborne dusts; and

(c) if the underground mine is a coal mine:

(i) minimise the accumulation of coal dust on roadways at the mine and on any surfaces on or near roadways; and

(ii) apply stone dust or other explosion inhibitor at a rate that minimises the risk associated with a coal dust explosion.

(3) The mine operator of an underground mine must, so far as is reasonably practicable, minimise risk associated with a dust explosion occurring at the mine.

(4) Without limiting subregulation (3), the mine operator must implement control measures that:

(a) effectively suppress any coal dust explosion, so far as is reasonably practicable; and

(b) restrict the propagation of any dust explosion so that, so far as is reasonably practicable, other areas are not affected.

9.2.18 Ventilation control plan for an underground mine

(1) The mine operator of an underground mine must ensure that a ventilation control plan is prepared to provide for the management of all aspects of ventilation at the mine.

(2) The ventilation control plan must describe all control measures implemented in relation to ventilation at the mine, including by cross-referencing relevant sections of the WHS management system for the mine.

Examples

Design, operation, maintenance, monitoring and security of the ventilation system.

Arrangements for the ventilation of specific work areas, including minimum standards for the placement, operation, maintenance and monitoring of ventilation devices.

Arrangements for preventing intake air from travelling across the face of a permanent seal at the mine.

Arrangements for eliminating or minimising the risk of inrush and leakage into intake airways of atmospheric contaminants from goaf areas and abandoned sealed workings.

Procedures to ensure the safety of persons at the mine in the event of a total or partial ventilation failure for more than 30 consecutive minutes.

9.2.19 Temperature and moisture content of air

The mine operator of an underground mine must ensure that:

(a) the atmosphere in the mine is subject to controls that prevent heat stress; and

(b) the moisture content of the atmosphere in the mine is maintained at a safe level.

9.2.20 Measures to be implemented

(1) The mine operator of a mine must implement measures that effectively reduce, dilute or extract the concentration of any airborne contaminants or asphyxiant or explosive gases to meet air quality and safety standards under these Regulations.

(2) The mine operator must comply with subregulation (1):

(a) so far as is reasonably practicable, by means of suppression or the installation of a ventilation or exhaust extraction system; or

(b) if this is not reasonably practicable, by some other suitable means.

9.2.21 Air quality—exposure to airborne contaminants

(1) The mine operator of a mine must:

(a) eliminate the exposure of any person at the mine to any airborne contaminant, including respirable dust and inhalable dust, so far as is reasonably practicable; and

(b) if it is not reasonably practicable to eliminate the exposure, to minimise the exposure so far as is reasonably practicable.

(2) Without limiting subregulation (1), the mine operator must ensure that:

(a) no person at the mine is exposed to a harmful level of any airborne contaminant; and

Note

Regulation 1A.2.11 deals with the exposure standards for certain substances.

(b) no person at the mine is exposed to time-weighted average atmospheric concentrations of airborne dust that exceed:

(i) respirable dust—3·0 mg per cubic metre of air;

(ii) inhalable dust—10·0 mg per cubic metre of air.

(3) The mine operator must, so far as is reasonably practicable, comply with this regulation by means other than the use of personal protective equipment.

(4) If it is not reasonably practicable to comply with this regulation by other means, the operator must ensure that any person who may be exposed:

(a) is given suitable personal protective equipment; and

(b) is instructed in the use of the personal protective equipment; and

(c) uses the personal protective equipment when there is any possibility of exposure.

9.2.22 Air quality and safety—underground mine

(1) The mine operator of an underground mine must ensure that the ventilation system for the mine provides air that is of sufficient volume, velocity and quality to ensure, so far as is reasonably practicable, the health and safety of workers and other persons in the mine having regard to all relevant factors including:

(a) concentrations of oxygen, carbon dioxide, airborne contaminants and flammable or explosive gases; and

(b) likely changes to these concentrations at different stages of mining operations in the mine.

(2) Without limiting subregulation (1), the mine operator must ensure that the ventilation system for the mine is designed, implemented and monitored to ensure the atmosphere in each part of the mine that is a workplace has a general body concentration:

(a) for oxygen, that is at least 19·5 per cent under normal atmospheric pressure; and

(b) [*to be determined for other gases and airborne contaminants*].

(3) In this regulation ***general body concentration*** in relation to a gas in an underground mine or part of an underground mine, means the concentration of that gas measured at a representative location in that mine or that part of the mine.

Note

This regulation does not limit regulation 1A.2.2(e).

9.2.23 Air safety—additional requirements relating to methane in underground mines

(1) This regulation applies to an underground mine in which there is a risk to health or safety arising from the presence of methane.

(2) The mine operator must ensure that the concentration of methane in intake air does not exceed 0·25%.

(3) The mine operator must ensure that arrangements are in place that trip the supply of electricity to a production area in which the concentration of methane exceeds 1·25%.

(4) The mine operator must ensure that arrangements are in place to ensure that the internal combustion engine of a non-flameproof vehicle is stopped and not restarted if the concentration of methane in the air [of the production area] in which the vehicle is used exceeds 1·25%.

(5) The mine operator must ensure that arrangements are in place to ensure that persons in a work area are evacuated if the concentration of methane in the return air for the work area exceeds 2·0%.

(6) The mine operator of the mine must monitor the level of methane at the mine by installing air monitoring devices that produce a visible or audible warning if:

(a) the concentration of methane in intake air is 0·25% or more; or

(b) the concentration of methane in a production area is 1·25% or more; or

(c) the concentration of methane in return air is 2·0% or more.

9.2.24 Notice to workers and others

If the results of air monitoring conducted at a mine indicate that any of the circumstances referred to in regulation 9.2.23(2) to (6) exist, the mine operator must notify any affected workers or other persons at the mine of that circumstance.

9.2.25 Signs

The mine operator of a mine must ensure that signs are erected at the mine, that explain:

(a) the meaning of any warning produced by an air monitoring device; and

(b) what persons must do in response to the warning.

9.2.26 Air monitoring—all mines

(1) The mine operator of a mine must ensure that air monitoring is conducted at the mine in accordance with any risk assessment prepared under regulation 9.2.11.

Note

Air monitoring could be required to monitor oxygen levels and detect the formation or emission of toxic, asphyxiant or explosive gas.

(2) If a mine operator uses air monitoring devices to comply with subregulation (1), the mine operator must ensure that:

(a) the devices used are suitable having regard to:

(i) the nature of the monitoring being conducted; and

(ii) the *gas or airborne contaminant* being monitored; and

(b) the devices are positioned to ensure that they will work to best effect.

Note

Regulation 1A.2.12 sets out monitoring requirements for certain chemicals.

9.2.27 Records of air monitoring

(1) The mine operator of a mine must keep a record of any air monitoring conducted at the mine, that includes:

(a) the results of the monitoring; and

(b) details of the location and frequency of the monitoring; and

(c) the sampling method used.

(2) The mine operator must keep the record of air monitoring:

(a) available for inspection under the Act; and

(b) readily accessible to workers and other persons at the mine; and

(c) for at least 7 years.

Note

Section 19(3)(g) of the Act requires a person conducting a business or undertaking to ensure that the conditions at the workplace are monitored.

9.2.28 Ventilation in an underground mine

(1) The mine operator of an underground mine must ensure the following:

(a) ventilation circuits at the mine do not allow uncontrolled airflows to recirculate;

(b) plant and structures that regulate airflow are maintained in good working order;

(c) dead-end openings are not worked unless adequate auxiliary ventilation is provided;

(d) no work area at the mine is ventilated with contaminated air.

(2) The mine operator must ensure that the air supplied to the ventilation system at the mine is obtained from the purest source available.

(3) The mine operator must ensure that the direction, course, volume and velocity of air current at the mine are regularly measured.

(4) The mine operator must keep a record of measurements made under subregulation (3) and all other monitoring and testing of ventilation at the mine.

(5) The mine operator must keep the record of measurements:

(a) available for inspection under the Act; and

(b) readily accessible to workers and other persons at the mine; and

(c) for at least 7 years.

Note

This regulation does not limit regulation 1A.2.2(e).

9.2.29 Ventilation plans for underground mines

(1) The mine operator of an underground mine must ensure that a plan of the ventilation system for the mine is prepared.

(2) The ventilation plan must show:

(a) the direction, course and volume of air currents; and

(b) the position of all air doors, stoppings, fans, regulators and other ventilating plant and structures at the mine.

(3) The mine operator must ensure that a copy of the ventilation plan is available for inspection under the Act.

9.2.30 Prohibited uses

The mine operator of a mine must ensure an item of plant or a substance specified in Schedule 9.3 is not used in a place or for a purpose that is prohibited under that Schedule.

9.2.31 Closure, suspension or abandonment of mine

(1) If the mine operator of a mine closes a mine, the mine operator must, at the time of the closure, ensure, so far as is reasonably practicable, that the mine is safe, including by being secure against unauthorised entry by any person.

(2) If mining operations at a mine are suspended , the mine operator must ensure, so far as is reasonably practicable, that the mine is safe, including by being secure against unauthorised entry by any person, during the period of suspension.

(3) The mine operator of a mine must not abandon the mine.

(4) If the mine holder for a mine is not the mine operator, the mine holder must also comply with this regulation.

Note

Section 16 of the Act provides for circumstances in which more than one person have the same duty.

Division 4 Emergency planning

Note

The requirements of this Division are in addition to the requirements in relation to emergency plans under Division 4 of Part 1A.2.

9.2.32 Emergency plan—duty to prepare and implement

(1) The mine operator of a mine must prepare and implement an emergency plan for the mine.

(2) The mine operator must use the emergency plan as the primary means of emergency response at a mine.

(3) In addition to the matters required by regulation 1A.2.5(1), the emergency plan must:

(a) address all aspects of emergency response, including by ensuring:

(i) the establishment of a system that enables all persons at the mine to be promptly located; and

(ii) the provision of adequate rescue equipment; and

(iii) that an adequate number of persons trained in the use of rescue equipment are available to respond effectively to the emergency if a person is working at the mine; and

(iv) the provision of adequate patient transport if a person is working at a mine; and

(b) include all matters specified in Schedule 9.4; and

(c) be documented and set out and expressed in a way that is readily accessible and comprehensible to persons who use it.

(4) In preparing an emergency plan, the mine operator must:

(a) consult with:

(i) the emergency services that have responsibility for the area in which the mine is located; and

(ii) in relation to the principal mining hazards that may cause or contribute to an incident that may adversely affect the health and safety of persons in the area surrounding the mine, the local authority for the local authority area in which the mine is located; and

(b) have regard to the advice and recommendations provided by the persons consulted.

(5) The mine operator must implement the emergency plan for the mine in the event of an emergency.

9.2.33 Emergency plan—to be provided to emergency services

The mine operator of a mine must provide a copy of the emergency plan for the mine to the emergency services consulted in preparing the plan.

9.2.34 Emergency plan—provision of resources

The mine operator of a mine must ensure that:

(a) all resources, including rescue equipment, specified in the emergency plan for the mine are provided in accordance with the plan; and

(b) all equipment, including rescue equipment, specified in the emergency plan is maintained in good working order.

9.2.35 Emergency plan—testing

The mine operator must test the emergency plan, in conjunction with the emergency services and any other emergency response service providers consulted in preparing the plan, at least once each year.

Note

More frequent testing may be required—see regulation 1A.2.5.

9.2.36 Review of emergency plan

If a risk control measure is revised under regulation 9.2.4, the mine operator must ensure that the emergency plan is reviewed and as necessary revised in relation to all aspects of risk control addressed by the revised control measure.

9.2.37 Emergency exits

(1) This regulation applies to an underground mine into which:

(a) a shaft has been sunk; or

(b) a decline or an adit has been driven.

(2) Subject to subregulation (3), the mine operator of the mine must provide a means of exiting the mine workings in addition to the hoisting shaft and any other normal exit.

(3) If the underground mine is a coal mine or metalliferous mine, the mine operator of the mine must provide 2 means of exiting the mine workings in addition to the hoisting shaft and any other normal exit.

(4) The mine operator of the mine must ensure that each additional exit required under subregulation (2) or (3) is:

(a) marked or signposted so that it can be readily located in an emergency; and

(b) maintained so that it remains effective.

9.2.38 Safe escape from underground mines

The mine operator of an underground mine must provide adequate means of escape (including suitable mobile plant and self-rescuers) that enable persons underground to safely reach any exit, including through conditions of reduced visibility or irrespirable or unsafe atmospheres.

9.2.39 Emergency signage

The mine operator of a mine must ensure that signs are prominently displayed at the mine, showing:

(a) emergency exits; and

(b) refuges (in an underground mine).

9.2.40 Self-rescuers

(1) The mine operator of an underground mine other than a tourist mine must ensure that a person who is to go underground is provided with a self-contained self-rescuer.

(2) The mine operator must ensure that the person is trained in the use of, and is able to use, the self-rescuer provided.

9.2.41 Personal protective equipment in emergencies

(1) This regulation applies in relation to a worker who is to enter an underground mine in order to carry out first aid or rescue procedures in an emergency.

(2) The mine operator of the underground mine must ensure that air supplied respiratory equipment is available for use by, and is provided to, the worker in an emergency in which:

(a) the concentration of oxygen falls below a safe oxygen level; or

(b) the atmosphere in the underground mine has a harmful concentration of an airborne contaminant; or

(c) there is a serious risk of the atmosphere in the underground mine becoming affected in the way referred to in paragraph (a) or (b) while the worker is in the underground mine.

(3) The mine operator must ensure that suitable personal protective equipment is available for use by, and is provided to, the worker in an emergency in which:

(a) there has been an inundation or inrush of any substance in the underground mine; or

(b) there is a serious risk of an inundation or inrush of any substance occurring while the worker is in the underground mine.

(4) The mine operator must ensure that a worker uses the personal protective equipment provided under subregulation (2) or (3).

Division 5 Information, training and instruction

9.2.42 WHS management plan—duty to inform workers

(1) A mine operator of a mine must ensure that, before a worker commences work at the mine:

(a) the worker is given a written summary of the WHS management system for the mine; and

(b) the worker is informed of the right to see a copy of the documented WHS management system.

(2) The mine operator must ensure that a copy of the documented WHS management system is readily accessible on request to a worker at the mine.

(3) The mine operator must ensure that:

(a) a principal mining hazard management plan prepared under regulation 9.2.10 is available to a worker who is to carry out work to which the plan relates;

(b) a ventilation control plan, prepared under regulation 9.2.18, is readily accessible to all workers at the mine;

(c) the emergency plan for the mine, prepared under regulation 9.2.32, is readily accessible to all workers at the mine.

(4) If the WHS management system is revised under regulation 9.2.8, the mine operator must ensure, so far as is reasonably practicable, that each worker at the mine is made aware of any revision that is relevant to work being carried out by the worker.

Note

In relation to the provision of information to workers, also see regulation 9.2.24 and section 19(3)(f) of the Act.

9.2.43 Duty to provide information, training and instruction

The mine operator of a mine must, so far as is reasonably practicable, ensure that workers at the mine are provided with suitable and adequate information, training and instruction in relation to the following:

(a) all hazards associated with mining operations;

(b) the implementation of risk control measures in relation to mining operations;

(c) strategies developed and implemented under regulation 9.3.1 to protect persons from risks to health and safety arising from fatigue;

(d) strategies developed and implemented under regulation 9.3.2 to protect persons from risks to health and safety arising from the consumption of alcohol or the use of drugs by any person;

(e) the content and implementation of the WHS management system for the mine;

(f) the emergency plan for the mine;

(g) the safety role for workers implemented under regulation 9.4.1.

9.2.44 Information for visitors

The mine operator of a mine must ensure that a visitor who enters the mine is, as soon as practicable:

(a) informed about risks associated with mining operations, to which the visitor may be exposed at the mine; and

(b) instructed in safety precautions the visitor should take at the mine; and

(c) instructed in the actions the visitor should take if the emergency plan for the mine is implemented while the visitor is at the mine.

9.2.45 Review of information, training and instruction

The mine operator of a mine must ensure that information, training and instruction provided to workers under regulations 9.2.42 and 9.2.43 is reviewed and as necessary revised to ensure that they remain relevant and effective.

9.2.46 Record of training

The mine operator of a mine must:

(a) make a record of any training provided to a worker under regulation 9.2.43; and

(b) keep the record while the worker remains engaged at the mine.

Part 9.3 Fitness for Work and Health Monitoring

9.3.1 Worker fatigue

The mine operator of a mine must develop and implement strategies for the control of any risks to health or safety associated with worker fatigue.

9.3.2 Alcohol and drugs

(1) The mine operator of a mine must develop and implement strategies to protect persons at the mine from any risk to their health or safety arising from the consumption of alcohol or the use of drugs by any person.

(2) Without limiting subregulation (1), the mine operator must ensure that a person whom the mine operator reasonably believes is adversely affected by alcohol or drugs does not enter or remain at the mine.

9.3.3 Worker's duty in relation to alcohol and drugs

A worker who is adversely affected by alcohol or drugs must not enter or remain at a mine.

9.3.4 Duty to carry out health monitoring

(1) The mine operator of a mine must ensure that health monitoring is carried out in relation to a worker at the mine who is exposed to a risk associated with mining operations, that may reasonably be expected to have an adverse effect on the worker's health.

(2) Health monitoring must:

(a) commence before the worker starts work at the mine; and

(b) be carried out immediately before the worker ceases carrying out work that exposes the worker to risks associated with mining operations.

(3) Health monitoring must be carried out:

(a) under the supervision of a registered medical practitioner with the relevant competencies; and

(b) only in relation to the worker's work at the mine; and

(c) at a frequency determined by the mine operator in consultation with a registered medical practitioner (but at least every 5 years).

(4) The mine operator must consult the worker in relation to the selection of the registered medical practitioner and the timing of the monitoring.

(5) The mine operator must ensure that a person who applies to carry out work at the mine is told about the purpose, type and nature of the health monitoring scheme before the person starts work at the mine.

(6) The mine operator must pay all expenses in relation to health monitoring.

9.3.5 Health monitoring summary

(1) The mine operator of a mine must ensure that a summary of the results of health monitoring carried out in relation to a worker is obtained from the registered medical practitioner who supervised the monitoring as soon as practicable after the monitoring is carried out.

(2) The summary of health monitoring results must include the following:

(a) an explanation of the results;

(b) any advice indicating any adverse health effect resulting from exposure to a risk associated with mining operations;

(c) any recommendation as to steps the mine operator should take in relation to the worker's work;

(d) whether medical counselling is required in relation to work-related health risks.

(3) The mine operator must give a copy of the summary of health monitoring results to the following persons as soon as practicable after obtaining the summary:

(a) the worker; and

(b) all other persons conducting businesses or undertakings who have a duty to provide health monitoring for the worker.

(4) The mine operator must ensure that a copy of the summary is given to the regulator as soon as practicable after receiving a recommendation under subregulation (2)(c) that the mine operator should:

(a) remove a worker from a hazard; or

(b) assign a worker to different work.

9.3.6 Health monitoring records

(1) The mine operator of a mine must ensure that a worker's health monitoring results are kept:

(a) as a confidential record in relation to the worker; and

(b) for at least:

(i) for hazards known to have a cumulative or delayed health effect—30 years after the record is made; or

(ii) for other hazards—7 years after the record is made.

(2) The mine operator must not disclose a worker's health monitoring results to another person without the worker's written consent.

(3) Subregulation (2) does not apply if the record is disclosed to:

(a) the regulator under regulation 9.3.5(3)(b); or

(b) a new mine operator to whom all records are given under regulation 9.1.7(6); or

(c) a person who must keep the record confidential under a duty of professional confidentiality.

(4) The mine operator must ensure that a worker's health monitoring results are given to the worker if mining operations cease at the mine.

Part 9.4 Consultation and Workers' Safety Role

9.4.1 Safety role for workers

The mine operator of a mine must implement a safety role for workers at the mine that enables them to contribute to:

(a) the identification of principal mining hazards under regulation 9.2.1; and

(b) the consideration of risk control measures for risks associated with principal mining hazards at the mine.

9.4.2 Mine operator must consult with workers

For the purposes of section 49(f) of the Act, the mine operator of a mine must consult with workers at the mine in relation to the following:

(a) implementing the WHS management system for the mine;

(b) conducting risk assessments for principal mining hazard management plans;

(c) preparing and reviewing the emergency plan for the mine;

(d) the safety role under regulation 9.4.1;

(e) developing and implementing strategies to protect persons at the mine from any risk to health and safety arising from the following:

(i) the consumption of alcohol or drugs by any person;

(ii) worker fatigue.

Note

See section 49 of the Act for other consultation duties of a person conducting a business or undertaking.

Part 9.5 Mine Survey Plans

9.5.1 Survey plan of mine must be prepared

(1) The mine operator of a mine must ensure that an accurate and detailed survey plan of the mine is prepared by:

(a) in the case of an underground coal mine or an underground metalliferous mine, [a registered mine surveyor]; or

(b) in any other case, a competent person.

Note

See the jurisdictional note in the Appendix.

(2) The plan must reference the mine to the *Geocentric Datum of Australia* and the *Australian Height Datum.*

(3) The plan must clearly show the following:

(a) the workings of the mine, including disused workings and bore holes;

(b) the location of electrical installations;

(c) the location of telephones and other fixed plant associated with the radio and telecommunications systems;

(d) water dams and tailings dams;

(e) natural features surrounding the mine;

(f) places where hydrocarbons or explosives are stored;

(g) points of entry and exit, including emergency exits;

(h) refuges (in an underground mine).

Note

Regulation 9.2.29 requires the mine operator of an underground mine to prepare a plan of the ventilation system for the mine.

9.5.2 Review of survey plan

The mine operator of a mine must review and, if necessary, revise the mine survey plan:

(a) when there has been a significant mine modification; and

(b) at least every 3 months in relation to the parts of the plan that identify points of access, exits and refuges; and

(c) otherwise at least annually.

9.5.3 Survey plan to be available for inspection

(1) The mine operator of a mine must keep the current mine survey plan and all previous versions of the plan available for inspection under the Act.

(2) The mine operator of a mine must make the plan readily accessible on request to workers at the mine.

Part 9.6 Notification of high potential incidents

9.6.1 Duty to notify of high potential incidents

(1) A mine operator of a mine must ensure that the regulator is notified in the manner and form required by the regulator of any high potential incident that occurs at the mine.

(2) In this regulation ***high potential incident*** means an incident or event referred to in section 37(a) to (k) or prescribed under section 37(l) of the Act that would have been a dangerous incident under that section if a person were in the vicinity at the time when the incident or event occurred and in usual circumstances a person could have been in that vicinity at that time.

Part 9.7 Mine Records

9.7.1 Mine record

(1) The mine operator of a mine must keep a mine record for the mine.

(2) The mine record must contain:

(a) a record of any notice issued in relation to the mine under Part 10 of the Act; and

(b) a record of every notifiable incident at the mine required under regulation 9.2.4(2), including details of the mine operator's investigation of the incident; and

(c) a record of every high potential incident (as defined in regulation 9.6.1) at the mine; and

(d) each report under regulation 9.2.13 by a shift supervisor at the mine.

(3) A record that forms part of the mine record must be kept:

(a) available for inspection under the Act; and

(b) for 7 years from the date the record was made.

Schedule 9.1—Work Health and Safety—Information to be Included in Mine Quarterly Report

1 Commodity processed

A description of the primary commodity processed at the mine site during the reporting period.

2 Number of workers

The average number of workers who worked at the mine site during the reporting period.

3 Number of hours worked

The total number of hours (including additional shifts and overtime) worked at the mine site during the reporting period.

4 Number of incidents

The total number of high potential incidents required to be notified under regulation 9.6.1 occurring during the reporting period.

5 Number of lost time injuries

The total number of incidents referred to in clause 4 that involved injury or disease of a worker that resulted in the inability of the worker to work for 1 day or more (not including the incident day) during the reporting period (whether the worker is rostered on that day or not).

6 Days lost from work

The total number of days (not including the incident day) lost from work by workers as a result of incidents referred to in clause 4 during the reporting period.

7 Number of restricted duties injuries

The total number of incidents referred to in clause 4 that involved injury or disease of a worker that resulted in the worker being on restricted duties during the reporting period.

8 Number of restricted duty days

The total number of days (not including the incident day) on which workers worked on restricted duties during the reporting period as a result of incidents referred to in clause 7.

9 Number of medical treatment injuries

9.1 The total number of work-related injuries of workers that required medical treatment during the reporting period but did not require a day lost from work or restricted duties (other than the incident day).

9.2 In clause 9.1, ***medical treatment*** means the management or care of a patient including:

(a) the suturing of a wound;

(b) the treatment of fractures;

(c) the treatment of bruises by drainage of blood;

(d) the treatment of second and third degree burns,

but does not include diagnostic procedures, observation, counselling, first aid or therapeutic measures taken solely for preventative purposes.

10 Number of fatalities

The total number of fatalities that occurred during the reporting period as a result of an incident referred to in clause 4.

Schedule 9.2—Principal Mining Hazard Management Plans—Additional Matters to be Considered

1 Ground or strata instability

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks of ground or strata instability:

(a) the local geological structure;

(b) the local hydrogeological environment, including surface and ground water;

(c) the geotechnical characteristics of the rocks and soil, including the effects of time, oxidation and water on rock support and stability;

(d) any natural or induced seismic activity;

(e) the location and loadings from existing or proposed mine infrastructure such as waste dumps, tailing storage haul roads and mine facilities;

(f) any previously excavated or abandoned workings;

(g) the proposed and existing mining operations, including the nature and number of excavations, the number and size of permanent or temporary voids or openings, backfilling of mined areas and stopes, abutments, periodic weighting and windblast;

(h) the proposed blasting activities, including airblast.

2 Inundation and inrush

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks of inundation and inrush:

(a) the potential sources of inundation including extreme weather, overflow or failure of levies and dam structures, failure or blocking of flow channels (either regular or overflow or emergency);

(b) the potential sources of inrush including current, disused or abandoned mine workings, along the same seam or across strata, surface water bodies, backfill operations, highly permeable aquifers, bore-holes, faults or other geological weaknesses;

(c) the potential for the accumulation of water, gas or other materials that could liquefy or flow into other workings or locations;

(d) the magnitude of all potential sources and maximum flow rates;

(e) the worst case scenarios for each potential source especially, including the accuracy of plans of other workings, variation in rock properties, geological weaknesses or similar unknowns.

3 Mine shafts and winding operations

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks associated with mine shafts and winding operations:

(a) the stability and integrity of the shaft;

(b) the potential for fires in underground operations, the shaft or winder areas;

(c) the potential for any unintended or uncontrolled movement of the conveyances within the shaft;

(d) the potential for a detached conveyance to fall down the shaft;

(e) the potential for fall of persons, equipment, materials or support structure into or within, the shaft;

(f) the potential for failure of, or damage to, safety related equipment and controls, including:

(i) ropes bearing the weight of the shaft conveyance;

(ii) controls and limiting devices to prevent overwind, overrun, overspeed and other selected limits;

(iii) measures to detect, prevent or cause the winder to stop in the event of slack rope, drum slip or tail rope malfunctions;

(iv) braking systems including emergency brakes and preventing free-fall of a conveyance;

(v) warning systems for any emergency in the shaft;

(vi) communication systems;

(g) the potential for injury to people in a conveyance from material being carried in the conveyance or falling from a conveyance;

(h) the need to enable people to escape from a stalled conveyance;

(i) the competency of the operator of the winder.

4 Roads and other vehicle operating areas

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks associated with roads and other vehicle operating areas:

(a) mobile plant characteristics, including stopping distances, manoeuvrability, operating speeds, driver position, driver line of sight, remote control mobile plant;

(b) the effects of expected environmental conditions during operating periods, including time of day, visibility, temperature and the effects of weather on road conditions;

(c) the impact of road design and characteristics, including grade, camber, surface, radius of curves, intersections;

(d) the impact of mine design, including banks and steep drops adjacent to plant operating areas;

(e) the potential for interactions between mobile plant with different operating characteristics, including heavy and light vehicles, and the volume and speed of traffic;

(f) the potential for interactions between mobile plant and pedestrians, including consideration of *park up areas* and driver access;

(g) the potential for interaction between mining mobile plant and public traffic;

(h) the potential for interaction between mobile plant and fixed structures, including overhead and underground power lines, tunnel walls and roofs.

5 Air quality, dust and other airborne contaminants

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks associated with air quality, airborne dust and other airborne contaminants:

(a) the types of dust and other contaminants (chemical and biological) likely to be in the air from both natural and introduced sources that may result in a risk to health and safety on exposure, including naturally occurring asbestos;

(b) the levels of oxygen, dust and other contaminants in the natural or supplied air of a mine;

(c) the temperature and humidity of the air;

(d) the length of exposure, including taking account of extended shifts and reduced recovery periods.

6 Fire or explosion

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks of fire and explosion:

(a) the potential sources of flammable, combustible and explosive substances and materials, both natural and introduced, including gas, dust, fuels, solvents, timber;

(b) the potential sources of ignition, fire or explosion, including equipment, electricity, static electricity, spontaneous combustion, lightning, hot work and other work practices;

(c) the potential for propagation of fire or explosion to other parts of the mine.

7 Gas outbursts

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks of gas outbursts:

(a) the potential for gas release into the working area of a mine from both natural and introduced sources in a concentration that could lead to fire, explosion or asphyxiation;

(b) the potential for accumulation of gases in existing and abandoned areas of the mine;

(c) the nature of the gas that could be released;

(d) the gas levels in the material being mined;

(e) gas seam pressures.

8 Ionising radiation

The following matters must be considered in assessing the impact on the safety of workers and others in current and proposed mining operations in developing the control measures to manage the risks from ionising radiation:

(a) the potential sources of ionising radiation from both natural and manufactured sources, including from dust, air, water, ore and waste

from mining and drilling operations, stack emissions, ventilation system emissions, surface contamination, core and sample storage, monitoring equipment;

(b) the type of radiation (alpha, beta or gamma);

(c) the levels of radiation, including background radiation;

(d) the potential for and length of exposure.

Schedule 9.3—Prohibited Uses in Mines

Column 1 Item	Column 2 Prohibited use

Schedule 9.4—Matters to be Included in Emergency Plan for a Mine

1 Site and hazard detail

1.1 The location of the mine, including its street address and the nearest intersection (if any).

Note

Sufficient detail must be provided to enable a person not familiar with the site to find it.

1.2 An up-to-date survey plan of the mine as required under regulation 9.5.1.

1.3 A brief description of the nature of the mine and mining operation.

1.4 The maximum number of persons, including workers, likely to be present at the mine on a normal working day.

1.5 The emergency planning assumptions, including emergency measures planned for identified incidents and likely areas affected.

1.6 The protective resources available to control an incident.

1.7 The emergency response procedures, including procedures for isolating areas of the mine in an emergency.

1.8 The infrastructure likely to be affected by a major incident.

2 Command structure and site personnel

2.1 The command philosophy and structure to be activated in an emergency, so that it is clear what actions will be taken, who will take these actions and how, when and where they will be taken.

2.2 Details of the person who can clarify the content of the emergency plan if necessary.

2.3 The contact details of, and the means of contacting, the persons at the mine responsible for liaising with emergency services.

2.4 A list of 24 hour emergency contacts.

2.5 Arrangements for assisting emergency services with control actions taken in the surrounding area.

3 Notifications

3.1 In the event of the occurrence of a notifiable incident or an event that could reasonably be expected to lead to a notifiable incident, procedures for notifying:

(a) any person whose health or safety may be affected, even if:

(i) the person is located underground; or

(ii) there is no electrical power that can be used for the notification; and

(b) the emergency services in circumstances where emergency services are required.

3.2 On-site and off-site warning systems.

3.3 Contact details for emergency services and other support services that can assist in providing resources and implementing evacuation plans in an emergency.

3.4 On-site communication systems.

4 Resources and equipment

4.1 On-site emergency resources, including:

(a) first aid equipment, facilities, services and personnel; and

(b) emergency equipment and personnel; and

(c) gas detectors, wind velocity detectors, sand, lime, neutralising agents, absorbents, spill bins, and decontamination equipment.

4.2 Off-site emergency resources, including arrangements for obtaining additional external resources (specific to the likely incidents), including mines rescue services, as necessary.

4.3 Arrangements for mine rescue that state the following:

(a) the minimum mines rescue training to be provided;

(b) any arrangements for the mine operator and mine operators of mines in the vicinity to assist each other in an emergency;

(c) how inertisation equipment is to be used;

(d) the procedures to be followed in carrying out mines rescue.

4.4 In an underground mine, a means of communication between the surface of the mine and any underground area of the mine where persons are located, that is effective even if there is no electrical connection between the surface and the relevant underground area.

5 Procedures

5.1 Procedures for the safe evacuation of, and accounting for, all persons at the mine.

5.2 Procedures and control points for utilities, including gas, water and electricity.

5.3 Procedures in the event of the ventilation system at the mine failing totally or for more than 30 minutes.

APPENDIX

JURISDICTIONAL NOTES (MINES)

Regulation	Jurisdictional note
9.1.1	Jurisdictions may define "mine" by referring to local legislation.
9.1.2	1 Jurisdictions may amend subregulation (2) to align with the functions of the regulator.
	2 Jurisdictions may add further paragraphs to subregulation (3) if further ancillary activities (e.g. transport of extracted minerals on public roads) are regulated by a different person or body.
	3 Alterations made to this regulation must ensure that the areas of responsibility of the regulator and other relevant regulatory bodies are clear.
9.1.3	1 Jurisdictions may add further paragraphs to this regulation if the extraction of and exploration for further materials are to be regulated by the regulator.
	2 Jurisdictions may remove paragraphs from this regulation if the extraction of and exploration for certain materials is to be regulated by a different person or body.
	3 Alternatively, jurisdictions may define "mineral" by referring to local legislation.
	4 Alterations made to this regulation must ensure that the areas of responsibility of relevant jurisdictions are clear.
9.1.6	1 Jurisdictions may define "mine holder" by referring to local legislation.
	2 In relation to subregulation (3), jurisdictions are to insert references to legislation under which authorisations are granted to persons enabling the persons to carry out mining operations.

Regulation	Jurisdictional note
9.5.1(1)	1 A jurisdiction may omit this provision if other laws of the jurisdiction already require this. 2 A jurisdiction may define the term *registered mine surveyor* as appropriate for that jurisdiction.