



Nationally consistent mine safety legislation

Queensland's proposal for a
nationally consistent legislative framework

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Glossary

CMSHA	<i>Coal Mining Safety and Health Act 1999</i>
COAG	Council of Australian Governments
IGA	Intergovernmental Agreement
ILO	International Labour Organisation
Model Act	Model Work Health and Safety Act
MQSHA	<i>Mining and Quarrying Safety and Health Act 1999</i>
NMSF	National Mine Safety Framework
PCBU	Person Conducting a Business or Undertaking
Queensland Acts	<i>Coal Mining Safety and Health Act 1999 and Mining and Quarrying Safety and Health Act 1999</i>
SHMS	safety and health management system
SSE	site senior executive

Executive summary

In 2008, the National Mine Safety Framework (NMSF) was included as a Council of Australian Governments (COAG) regulatory reform priority. Most states regulate mine safety under the national Model Work Health and Safety legislation (Model Act) with the major mining states of Queensland, New South Wales and Western Australia developing additional NMSF 'Non-Core' provisions suitable for the more extensive mining operations.

The three options considered to implement new mine safety legislation in Queensland are:

Option 1. Retain the current *Coal Mining Safety and Health Act 1999* and *Mining and Quarrying Safety and Health Act 1999* (collectively the Queensland Acts) for the coal and metalliferous sectors plus NMSF provisions that improve safety and consistency.

Option 2. Have one single Act for coal and metalliferous sectors plus any NMSF provisions that improve safety and consistency.

Option 3. Develop mine safety legislation primarily based on the Model Act plus any NMSF provisions that improve safety and consistency.

Queensland is committed to the NMSF process and to achieving greater consistency in mine safety and health legislation with other states, however Queensland has made it clear that it will not accept any lowering of its safety standards. Queensland's commitment to the NMSF is guided by two principles:

1. The new legislation must result in a clear improvement in safety outcomes or, at the very least, no diminution in safety standards within Queensland.
2. The new legislation must not impose any additional cost on either government or industry as a result of its introduction.

Queensland's mining industry's consistently improving safety and health statistics since 2002 is an indicator that the industry generally has made significant efforts to make improvements. The *Coal Mining Safety and Health Act 1999* (CMSHA) and *Mining and Quarrying Safety and Health Act 1999* (MQSHA) and Regulations have provided a sound regulatory framework for the improvement in safety performance.

We in the Department of Natural Resources and Mines have a preference for Option 1 and this consultation paper outlines our rationale. This consultation paper outlines what we think and we are interested to hear what you think.

Purpose

The purpose of the consultation paper is to:

1. Outline the department's preferred policy option for amending Queensland mine safety legislation to achieve more nationally consistent provisions as part of the NMSF.
2. Seek stakeholder feedback on the preferred and alternative policy options.

In developing the policy proposals in this paper, we, the Department of Natural Resources and Mines, considered their regulatory impact and the extent to which they achieve an appropriate balance between improving safety standards and increasing legislative consistency with the other major mining states.

This consultation paper is an intermediate step in determining Queensland's mine safety policy position. Before settling on a final legislative proposal for government to consider, a Regulatory Assessment Statement (RAS) may also be published later this year if necessitated by the extent of regulatory change. If required, this RAS will be released with a minimum of 28 days for further feedback; it will consider the feasible alternatives for meeting our policy objectives and the likely impacts of each in more detail.

To inform this ongoing process, we invite stakeholders to comment on the proposals outlined in this paper. The proposed options indicate the approach we may take and are not the government's final policy. We ask that as well as responding to the specific proposals and questions within this paper (as outlined in the attached public comment response form) you also outline any other issues or options you consider important. Information about possible compliance costs, impacts on competition or broader costs and benefits of each option are of particular interest.

The driver for change—nationally consistent mine safety legislation

In March 2008, COAG agreed to an agenda of national reforms consisting of 27 areas of work aimed at reducing the costs of regulation and enhancing productivity and workforce mobility to create a seamless national economy. The NMSF and the reform of work health and safety legislation are two of the reform priorities that overlap.

In mid-2010, COAG acknowledged the different requirements for mine safety between jurisdictions and agreed to the development of a set of core regulations to be included under the Model Act framework and to be adopted by all jurisdictions. COAG permitted the major mining states Queensland, New South Wales and Western Australia to develop additional non-core regulations to adequately regulate mine safety in those states.

The work on non-core regulations is guided by an intergovernmental agreement (IGA) between the three states who require the development of consistent and, where possible, uniform, non-core provisions that support the Model Act framework. Importantly, the IGA provides that 'no party will be required to reduce existing health and safety standards.'

Queensland's commitment to the NMSF and to achieving greater consistency of legislation with other states is guided by the following two principles:

1. The new legislation must result in a clear improvement in safety outcomes or at the very least no diminution in safety standards within Queensland.
2. The new legislation must not impose any additional cost on either government or industry as a result of its introduction.

Mining safety and health in Queensland

Tragic history behind Queensland’s current mining safety legislation

Queensland suffered a series of mining disasters which had a profound and lasting impact on the affected communities, industry and government. The lessons learnt from each disaster have led to changes in the legislation and subsequent improvements in safety (see Figure 1). The current Queensland Acts (comprising the *Coal Mining Safety and Health Act 1999* (CMSHA) and the *Mining and Quarrying Safety and Health Act 1999* (MQSHA)) were developed through close collaboration by government, industry and unions after the 1994 Moura mining disaster that killed 11 men. This event was the fourth major mining disaster in Queensland between 1972 and 1994 in which a total of 53 men lost their lives, including some mine rescue personnel.

The recommendations from the inquiry into the 1994 disaster (the Moura Inquiry) substantially influenced the new legislation and regulations under the current Queensland mining safety and health framework. The recommendations included safety and health management systems based on detailed risk/hazard analyses.

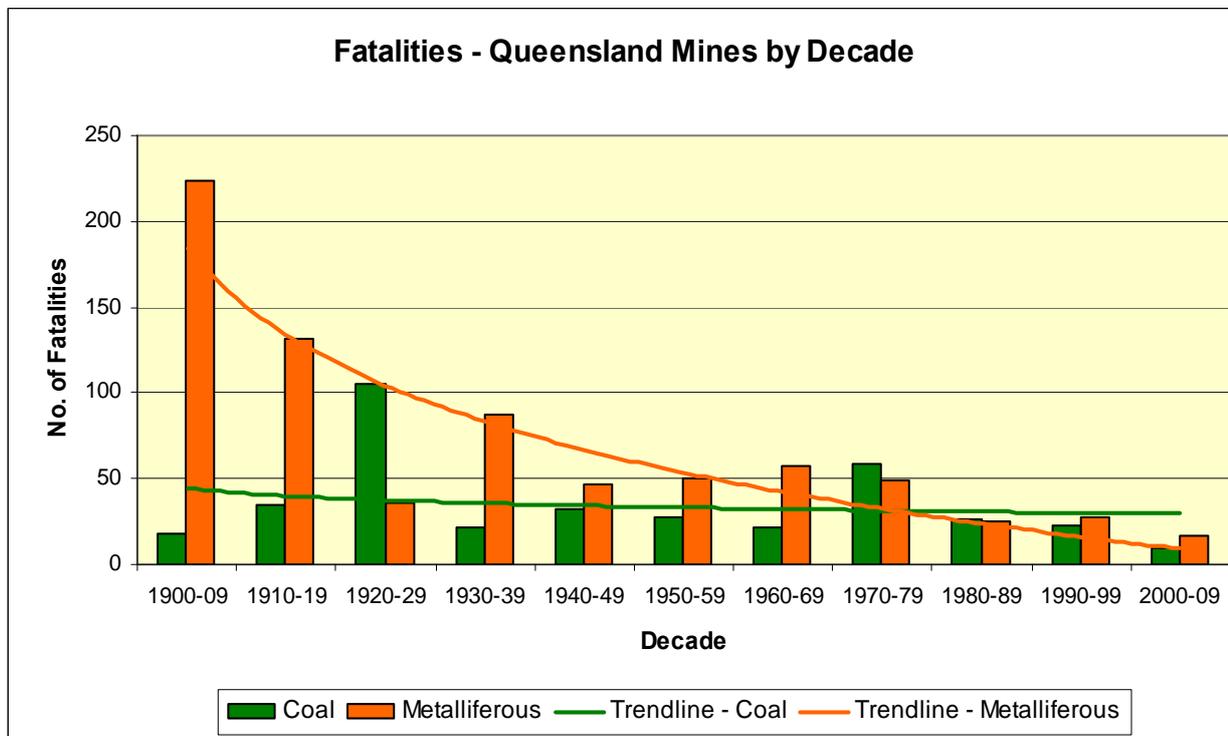


Figure 1. Fatalities in Queensland mines 1900–2009

The current Queensland mine safety framework that was developed after the disasters is based on a risk management model that requires problems to be anticipated and controlled before they arise. The model is based on effective work health and safety management systems and associated risk management processes. Consistent with this greater foresight or ‘a stitch in time saves nine’ approach, Queensland inspectors are also able to regulate proactively, basing their decisions on objective risk management. Although some mines may struggle to perform competently, the framework encourages greater safety and health achievement through anticipation and a proactive approach by all people at a mine. All persons who might affect the safety and health of others at a mine are required to achieve and maintain an acceptable level of risk. This is the unifying concept throughout the Queensland framework.

Options

This section discusses three options for achieving consistency with other states. Given this commitment, maintaining the status quo is not considered to be an option. The three options considered to implement new mine safety legislation in Queensland are:

Option 1. Retain the current Queensland Acts for the coal and metalliferous sectors plus NMSF provisions that improve safety and consistency.

Option 2. Have one single Act for coal and metalliferous sectors plus any NMSF provisions that improve safety and consistency.

Option 3. Develop mine safety legislation primarily based on the Model Act plus any NMSF provisions that improve safety and consistency.

Option 1

Option 1 builds on Queensland's current framework and incorporates components from the Model Act and regulations which the department considers will improve safety outcomes. This option also includes the adoption of the non-core provisions that have been agreed to by New South Wales, Western Australia and Queensland.

The Queensland Acts are based on a risk management model that requires the anticipation and control of problems before they arise. This is evidenced by:

- the safety and health management system
- proactive inspector's powers
- safety-oriented management structure
- a duty by all persons to ensure an acceptable level of risk.

Features of the Queensland framework that are superior to the Model Act framework are:

- focus on a systems approach
- vertical control of all activities on site
- acceptable level of risk—a proactive approach
- cooperation requirements
- workers' duties
- site senior executive duties.

Focus on a systems approach

A key outcome of the Moura Inquiry was the introduction of risk-based safety and health management systems, including specifically identified principal hazard management systems, for each mining operation. The importance of these systems is central to the Queensland Acts and regulations. These systems incorporate risk management elements and practices that ensure the safety and health of persons who may be affected by mining operations.

Mine operators are required to proactively review their safety and health management system to ensure the system is effective and can constantly adapt to the changing environment and interdependencies of complex mining operations. The Queensland framework enables the site senior executive, site safety and health representatives, industry safety and health representatives, mines inspectors, authorised officers and mine workers to play a proactive role in reviewing, inspecting or auditing the safety and health management system. The Queensland Acts enable proactive review by a wide range of persons with differing expertise and perspectives and this increases the possibility of detection of flaws in the safety management system.

In a mining context, the importance and centrality of the safety management system to managing mining hazards indicates that such provisions should be in the principal Act. The current Queensland Acts combine the risk management and system requirements within an overall

acceptable level of risk framework that is clearer and more proactive than the Model Act's 'as far as reasonably practicable' framework.

Vertical control of all activities on site

The Queensland Acts also focus on the importance of a single integrated safety and health management system (SHMS) for each mine. This means contractors who periodically work at a mine must follow the essential strict safety risk management controls required of all workers at a mine. The requirement that there be only one SHMS is a recommendation from a coronial inquiry and ensures all workers, regardless of rank or employment type, operate under the one system that is developed and implemented by the site senior executive.

This vertical control system at mines is an important distinction from the Model Act's Person Conducting a Business or Undertaking (PCBU) concept, which introduces a horizontal control structure in which there can be multiple PCBUs on one mine site. In a mining context it is not appropriate that the operator is potentially reduced to one among equals on the same level as the contractor under the Model Act. The operator and the operator's site senior executive must be able to have the ultimate checking and determination in relation to how a contractor's work will be integrated with and will follow the mine's safety and health management system.

The core mining regulations attempt to require a single integration of safety systems. How the provisions are interpreted together with the Model Act is likely to be debated and disputed across regulators and stakeholders. Interpreting the integration requirements of the core regulations subject to the Model Act is not as clear as the current requirements under the Queensland Acts.

The relevant International Labour Organisation (ILO) convention states in part, 'Whenever two or more employers undertake activities at the same mine, the employer in charge of the mine shall coordinate the implementation of all measures concerning the safety and health of workers and shall be held primarily responsible for the safety of the operations.'¹

Safety and health at a mine arguably require greater attention to integration of systems, due to the involvement of contractors, than most other places of work. However, the Model Act only requires horizontal consultation, cooperation and coordination because it is designed to cover general places of work. If a duty holder refuses to consult, cooperate and coordinate, the relevant code of practice suggests that a duty holder be reminded of the general duties, 'that written arrangements may help clarify everyone's expectations,' and that duty holders should consider including requirements in contracts to provide a contractual right to enforce against each other if necessary.

Also, unless inquiries are made in relation to business structures, in some cases it might be unclear whether a contractor doing a particular task is a PCBU or worker (different standards and consultation requirements apply depending on these two situations). Compliance and regulation is more complex because business structure is relevant to duties and consultation. However, the important issue is, 'What are the tasks for the contractor and what are the skills required of the contractor and any related competency and training issues?'

A clearer vertical management system, as provided under the Queensland Acts, enables operators to more easily:

- assess contractors including whether they have sufficient training, skills, expertise and resources and, where contractors may have specialised expertise, how this integrates with essential mining safety requirements

¹ ILO C176 Safety and Health in Mines Convention 1995 - Article 12

- ensure a contractor follows essential information provided to them from the SHMS in relation to hazards and how the contractor's work must respect those systems and how the contractor will integrate with the essential systems
- maintain a level of oversight of contractor activities.

Acceptable level of risk—a proactive approach

The Queensland Acts are based on a risk management model integrated around the concept of an acceptable level of risk that applies to all duty holders at a mine. Risk management is not as clear or systematic under the Model Act because it is subject to the 'weighing up' of factors at a particular time under the legal concept of 'as far as reasonably practicable'. The Model Act concept of 'as far as reasonably practicable' dates back to a 1949 United Kingdom case.

The Queensland acceptable level of risk approach was influenced by the safety culture theories of Professor James Reasonⁱⁱ and the contemporary risk management movement. Acceptable level of risk dates back to the wave of occupational health and safety reform of the mid-1990s regarding risk management and new technical analysis about acceptable and intolerable risk. Professor Andrew Hopkins has noted that the new thinking around acceptable risk arose through regulators in high risk industries seeking more objective ways to require operators to carry out further risk reduction activities. Acceptable level of risk as expressed through the Queensland Acts is a practical, adapted version of the acceptability of risk theories and focuses on the quality of management and risk management systems and processes over time.

Through the acceptable level of risk framework, Queensland's existing mining safety legislation and regulations are also based on anticipating safety and health problems as proactively as possible, based on risk before they arise.

Analysis of workplace disasters by Professor Reason and others (including analysis of the Moura and Gretley mining disasters by Professor Hopkins—see below) have highlighted the importance of proactively addressing latent system problems because disasters often cannot be avoided at imminent or immediate stage of realisation. In contrast, the Model framework is less robust because it has an overall imminent or immediate focus.

Professor Hopkins examined what led management to dismiss warning signs prior to the 1994 Moura (Queensland) and 1996 Gretley (New South Wales) mining disasters.ⁱⁱⁱ The inquiries following both disasters each blamed the events on management failure and found that the disasters could have been prevented. Hopkins referred to fellow academics, including Professor Reason, who wrote of active failures behind immediate causes, as well as latent failures from underlying system inadequacies, and misinformation. Hopkins found parallels in the details of management neglect that lead to each disaster.

Hopkins suggested that, to overcome these problems, a policy would be to structure decision-making with imperatives to action in certain circumstances which rule out denial. Hopkins recommended that hazard management plans should do the following:

- involve careful analysis of how the danger might arise
- cover how crucial safety information may be incorrect
- identify warning signs which will be treated as triggers to action
- specify to some extent what kinds of actions are mandatory when warning signs are observed and who is responsible for taking the action.

ⁱⁱ Reason, J. (1997) *Managing the risks of organizational accidents*, Ashgate Publishing Ltd, Farnham UK.

ⁱⁱⁱ Hopkins, A. 'A culture of denial: sociological similarities between the Moura and Gretley mine disasters,' 2000, *J Occup Health Safety – Aust NZ*, 16(1): 29-36

Hopkins also recommended a built-in bias towards taking action.

The Queensland Acts contain this built-in bias towards taking action by specifying what kind of actions are required when risk is unacceptable. The Queensland Acts also clearly contain a proactive approach including activities enabling inspectors to identify possible latent systematic failings e.g. directives to review the safety health management system, have an independent engineering study, carry out a test, ensure a worker is competent, reduce risk, and so on. The Queensland proactive approach aims to gain attention early before injuries or deaths occur, to correct and to educate. In many cases, an inspector may not be present, or it will often be too late for an inspector or others to be trying to intervene when an incident is about to occur through immediate or imminent causes.

The acceptable level of risk framework enables the Queensland Mines Inspectorate to regulate proactively and focus on the quality of the systematic risk management systems and address latent safety system issues before they contribute to incidents, as well as any imminent and immediate issues. The proactive Queensland framework enables potentially better preventative outcomes compared to the reasonably practicable Model Act framework.

Cooperation requirements

The current Queensland mine safety legislation was formulated following the 1994 Moura mine disaster. This most recent in a list of disasters resulting in multiple loss of life from underground mine explosions had a profound effect on everyone in the industry. There was overwhelming agreement by all mining industry stakeholders that every effort should be made to prevent any recurrence.

Much was achieved as a result of this joint effort. The ideal of working jointly at a high level is included in the Queensland Acts in the provisions that cover 'Cooperation to achieve objects of Act' and 'Industry consultative arrangements.'

Workers' duties

Embedded in the ideal of cooperation is the process of involving mine workers in the management of risk. The Queensland Acts have a duties section that places obligations on persons generally. This includes requiring all persons to ensure, to the extent of the responsibilities and duties allocated, that the work and activities under the person's control, supervision and leadership are conducted in a way that does not expose the person or someone else to an unacceptable level of risk.

In contrast, the Model Act has intentionally excluded 'control' from its duty of care framework. Under the Model Act there is a notional or an extended idea of the PCBU through the 'officer' concept requiring the officer to exercise due diligence to ensure the PCBU complies. Under the Model Act there are very likely to be arguments in some cases about who is, or is not, an officer and the expectations on workers (the next Model Act category down from officers), which would include statutory position holders, are noticeably weaker in not requiring proactive and proper diligence of workers as well as officers.

In the current Queensland Acts all persons, workers included, on site are involved in risk identification and reduction. Additionally, if a mine worker is competent and able to eliminate the danger from a hazard, the worker must take the action necessary to eliminate the danger or if they are not competent or able to eliminate the danger, the worker must take reasonable measures to prevent immediate danger to other mine workers and immediately report the situation to their supervisor.

The defences applying to all duty holders under the Queensland Acts look for reasonable precautions and proper diligence for all duty holders. The Model Act framework defines the

obligations of workers in a much more limited way and does not clearly indicate how a supervisor or statutory officer, compared to a supervised worker, would interpret individual duties because there are no references to considerations such as information, control, supervision or leadership, particular responsibilities, or involvement in risk management. This contrasts markedly with the clearer provisions in the current Queensland Acts.

Although workers are consulted under the Model Act and Regulations, they are primarily confined to roles that seem reactive, rather than roles in which they may also be competent in some cases, to manage risk. The Model Act framework would need to be changed or at least added to, to cover workers with higher level safety obligations than, for example, a worker in a commercial office or a retail centre.

The differences are mainly due to the comparatively well developed overall safety culture at mines, in part related to statutory position holders and their safety and risk management related competencies and safety-skilled workers generally at mines, compared to some general workplaces, and the proactive standard of acceptable level of risk applying to all duty holders under the Queensland Acts.

Site senior executive duties

Queensland requires operators regardless of size and business structure to appoint a site senior executive (SSE) to each site to take individual responsibility and be accountable through specific obligations and powers to manage the organisation's safety and health obligations. Lower levels of management also have specific obligations.

The appointment of an SSE is related to the boundaries of the mining operations or parts of the mine for which the SSE has responsibility. Queensland's current provisions applying to SSEs mostly reflect the NMSF non-core policy. We propose to retain these provisions in their current form.

Non-core provisions to be considered

The department proposes to adopt the non-core provisions agreed to with New South Wales and Western Australia regulators. A list of general content headings is outlined in Appendix A.

Examples of possible changes

Notification of high risk activities

Currently under the Coal Mining Safety and Health Act and Regulation in Queensland, there are three activities of which mines notify the Mines Inspectorate before commencing the activity: second workings, sealing an underground mine and sinking a drift or shaft.

Under the Mining and Quarrying Safety and Health Regulation, mines are only required to notify the inspectorate prior to the introduction or disconnection of electricity and certain upgrades at mines.

Appendix B contains the list of proposed high risk notification activities included in the non-core drafting instructions. The content of the table is still to be finalised.

Statutory positions and competencies in mine safety

Queensland currently has fewer statutory positions requiring certificates of competency issued by the board of examiners (BOE) than New South Wales or Western Australia. There are variations in the prerequisites for application in each of the states. The list in Appendix C is an aggregation of all of the statutory positions for the three states. It is not an indication of the final policy proposal, which is still under consideration.

Tri-state competency advisory council

In order to facilitate movements of holders of statutory competencies between the three major mining states, a proposal is being developed for a tri-state competency advisory council to simultaneously recognise competencies by the three major mining states.

Model Act concepts to be considered for inclusion in the Queensland mine safety laws

Options related to higher financial penalties, different imprisonment penalties and alternative possible court systems for prosecutions from the Model Act will be further considered.

Option 2

Option 2 is similar to Option 1 except there will be one Act covering both the coal and metalliferous and quarrying sectors with one regulation for each of the sectors subordinate to the Act. Although this option will reduce the number of pages on Queensland's statute books, the remaining single Act would be longer because respective sectors would still have to be differentiated through various parts of the Act. Having one Act does not result in any practical benefits. Some Queensland stakeholders have also indicated a preference for keeping two separate Acts.

The coal and metalliferous sectors are essentially very different and there is little labour mobility across the sectors. Different industrial situations prevail in the coal and metalliferous sectors with different unions representing the majority of workers in each sector. Coal has a long tradition of proactive involvement in safety matters through its industry safety and health representatives, formerly known as industry check inspectors (a term still in use in New South Wales). The difference between the two sectors is the reason for having separate advisory committees, with each committee focused on the issues and hazards pertaining its specific sector.

There is a possibility of an increase in underground coal mining when easily accessible coal resources are depleted. There may be a requirement for a greater focus on high hazard issues in the future. Separate legislation for specific sectors will facilitate timely legislative responses to emerging issues.

Keeping separate Acts will allow the users of the Acts to refer to them without the need to filter out provisions that are not relevant to their industry.

There are examples of other Queensland statutes addressing specific industry sectors in the transport sector. The transport operations series of Acts, Regulations and Standards covering marine safety, passenger transport, road use management and the Translink Transit Authority are comprised of 4 Acts and 22 separate pieces of subordinate legislation. This segmented approach is tailored to the specific needs of stakeholders and results in simplicity and a smaller regulatory burden for stakeholders.

Replacing the two Acts with one single mine safety Act is not a significant change but it could begin a drift towards more generalised safety legislation and away from industry-specific legislation that has served each sector well.

Option 3

The Model Act's duties framework may be well suited to general workplaces and many industries. However, the framework has been considered by the Department of Natural Resources and Mines and, for a range of reasons including some key reasons outlined in this discussion paper, the department recommends retaining the current Queensland mine safety legislation. Any

amendments or additions related to the Model Act, and non-core NMSF provisions or policy will be based on improving current standards of safety and outcomes for Queenslanders.

Next steps

Codes of practice

In addition to the core and non-core regulations there will be codes of practice for specific matters such as winding systems, ventilation, ground control, vehicles and roads, and inrush hazards. These documents will provide detailed guidance about technical matters. The department supports the development of codes of practice for mine safety that are as consistent as possible across all states. Codes of practice will ultimately replace mine Recognised Standards (coal) and Guidelines (metalliferous) which will be removed after a transition period or redeveloped as Queensland Codes of Practice.

Implementation target date

The department is working towards implementing the new legislation by 31 December 2012, as outlined in the IGA. In order to meet this timeframe, we propose to introduce legislation into Parliament in the last quarter of 2012. Prior to finalising the legislation, the department will release a RAS for public comment if the regulatory impact is regarded as significant. The RAS will outline the proposed legislation and consider its costs and benefits.

Implementation of new legislation will involve a period of transition to allow industry time to comply with the new framework. The transition period will be decided in consultation with stakeholders.

Your feedback

Please provide your feedback on the proposals within this paper by Monday 23 July 2012. A comment response form has been provided as a template for your comments.

Appendixes

Appendix A: National Mine Safety Framework non-core provisions

The following is a general list of topics of the non-core matters agreed in principle through meetings of tri-partite stakeholders with representatives from the Australian Government, New South Wales, Western Australia and Queensland.

Preliminary

- meaning of mine
- meaning of mining operations
- meaning of mineral
- meaning of principal mining hazard
- meaning of mine operator
- meaning of mine holder
- appointment of mine operator
- notification of mine operator to regulator (will include site senior executive)

Managing Risks—Control of risk

- management of risks to health and safety
- review of control measures
- record of certain reviews of control measures

Safety management system

- duty to establish and implement safety management system
- content of safety management system
- performance standards and audit
- maintenance
- review

Information to adjoining mine operators

- duty to provide information to mine operator of adjoining mine

Principal mining hazard management plans

- identification of principal mining hazards and conduct of risk assessments
- preparation of principal mining hazard management plan
- review
- additional matters to be considered
 - ground or strata instability
 - inundation and inrush
 - mine shafts and winding operations
 - roads and other vehicle operating areas
 - air quality, dust and other airborne contaminants
 - fire or explosion
 - gas outbursts
 - spontaneous combustion

Specific control measures—operational controls

- communication between outgoing and incoming shifts
- movement of mobile plant

- prohibited uses (e.g. of certain such as polymeric chemicals, various gases and fuels, ignition sources)
- closure, suspension or abandonment of mine
- minimum age to work in mine

Air quality and monitoring

- temperature and moisture content of air
- air quality—exposure to dust
- air monitoring
- signage relating to air monitoring and warnings
- records of air monitoring

Fitness for work

- fatigue
- alcohol and drugs

Specific control measures—underground mines’ operational controls

- inrush hazards
- connecting workings
- winding systems
- operation of shaft conveyances
- dust explosion

All underground mines—air quality and ventilation

- air quality
- air quality—minimum standards for ventilated air
- requirements if air quality and air safety standards not met
- ventilation
- monitoring and testing of ventilation
- duty to prepare ventilation control plan
- review of ventilation control plan
- ventilation plan

Underground coal mines

- coal dust explosion
- spontaneous combustion
- atmospheric contaminant from sealed areas
- air quality—minimum standards for ventilated air
- exposure to atmospheric contaminants other than carbon dioxide
- exposure to carbon dioxide
- additional requirements relating to methane

Emergency management—emergency plans for all mines

- duty to prepare
- matters to be included in emergency plan for a mine
- consultation in preparation of emergency plan
- implementation of emergency plan
- copies to be kept and provided
- resources for emergency plan
- testing of emergency plan
- review

Underground mines

- emergency exits
- safe escape and refuge
- signage for refuges
- self-rescuers
- personal protective equipment in emergencies

Information, training and instruction

- duty to inform workers about safety management system
- duty to provide information, training and instruction
- information for visitors
- review of information, training and instruction
- record of training

Health monitoring

- health monitoring of each worker
- duty to inform of health monitoring
- duty to ensure health monitoring is carried out or supervised by registered medical practitioner with experience
- duty to pay costs of health monitoring
- duty to provide registered medical practitioner with information
- health monitoring report
- obtaining a health monitoring report
- giving the health monitoring report to mine operator of mine
- duty to give health monitoring report to worker
- duty to give health monitoring report to regulator
- health monitoring records

Consultation and workers' safety role

- safety role for workers in relation to principal mining hazards
- mine operator must consult with workers

Mine survey plans

- survey plan of mine must be prepared
- review of survey plan
- survey plan to be available

Provision of information

- duty to notify regulator of certain incidents
 - information to be included in mine incident report
- quarterly reports—statistical information

Mine record

- mine record
- mine record must be kept and available

Appendix B: Notification of high risk activities

The following information should be provided to the regulator:

- a statement containing particulars of the proposed activity
- the hazards identified as having the potential to arise from undertaking the activity
- an assessment of the risks arising from undertaking the activity
- the controls to be put in place to manage the risks that may arise from the undertaking of the activity, including reasons for their selection and rejection of others that may be used
- extracts of the relevant parts of the principal mining hazard management plans or principal control plans applicable to the undertaking of the activity
- further information pertaining to the activity as set out in the schedule.

Proposed high risk activity notification schedule

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
All mines	Highwall mining that involves entry into a previously formed high wall when no people will be underground	1 month	<p>An engineering drawing, endorsed by the underground mine manager detailing the activity</p> <ul style="list-style-type: none"> • A plan certified by a mine surveyor, of the activity
All mines	Highwall mining that involves entering a highwall mining excavation when people will be inside the highwall mining excavation	48 hours	<ul style="list-style-type: none"> • Details of the competencies of the person appointed to control the highwall mining activity whilst any person is inside the highwall mining excavation • Details of the competencies of the person(s) entering the highwall mining excavation • Details of self rescue equipment to be carried by persons entering the highwall mining excavation
All mines	Shot firing underground when shot firing has not been undertaken within a year prior to the intended time of shot firing	1 day	<ul style="list-style-type: none"> • Details of the location of shot firing
All mines	Commissioning or use of mine shaft and winding operations plant	3 months	<ul style="list-style-type: none"> • Evidence of how hazard identification and risk assessment methods have been used in the design of the shaft or winder to minimise the risks to health and safety of persons

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
All underground mines	Single entry development of a roadway or a drift for more than 200m without the formation of an intersection along it	1 month	<ul style="list-style-type: none"> • Details of any design or performance standards that have been relied on in the construction of the shaft or winder • An engineering drawing, endorsed by the underground mine manager, of the activity
All underground mines	Working within an inrush control zone where the potential source of inrush cannot be inspected	1 month	<ul style="list-style-type: none"> • An engineering drawing, endorsed by the underground mine manager, of the activity
All underground mines	Working within an inrush control zone where the potential source of inrush can be inspected	1 week	<ul style="list-style-type: none"> • An engineering drawing, endorsed by the underground mine manager, of the activity
All underground mines	Sinking a shaft or drift, raise boring or development of a new underground mine entry	3 months	<ul style="list-style-type: none"> • Method of working and details of plant and equipment to be used
Underground metalliferous mines only	Newly devised method of mining a rise involving drill and blast and entry to the rise	1 month	<ul style="list-style-type: none"> • Details of methods to be used and the type of equipment • Copy of a mine plan showing an alternative means of travel to and from the face during construction
All coal mines	The establishment or discontinuance of emplacement areas	3 months	<ul style="list-style-type: none"> • An overview of the lifecycle of the emplacement area including: timeframes, design, construction, reject materials, transport, treatment, inspections, decommissioning • details of ongoing monitoring of emplacement area(s) • Engineering plans, endorsed by the manager of mining engineering, of the

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
			<p>activity, including all existing and proposed emplacement areas, geotechnical designs and any other relevant details</p> <ul style="list-style-type: none"> • Survey plans endorsed by a mine surveyor of existing and proposed emplacement areas
Underground coal mines only	<p>Sealing where notice has not been given as part of a notice for secondary extraction or in an emergency when an explosive atmosphere may result</p> <p>Note: In an emergency or change in sealing method, the mine operator must take reasonable steps to notify an inspector then confirm it in writing as soon as practicable</p>	1 month	<ul style="list-style-type: none"> • Proposed location of the seals and areas in the mine to be sealed • Proposed sealing procedure • Any evidence of ignition sources being present in the area to be sealed • Predictions of the rates at which methane and other gases will accumulate in the sealed area • The gas monitoring procedures to be carried out during and after the sealing
Underground coal mines only	Injection or application of polymeric material for ventilation or strata	1 month Initial notification of activity	<ul style="list-style-type: none"> • Details of material to be used and purpose of use • Evidence of the suitability of the polymeric material for its intended use • Copy of the Material Safety Data Sheet or Safety Data Sheet for the material • Information on the process that will be used, including the equipment to be used in the process • A summary of risks identified and controls to be put in place
Underground coal mines only	Injection or application of polymeric material for ventilation or strata	24 hours	<ul style="list-style-type: none"> • Copy of the risk assessment

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
Underground coal mines only	Hot work in an explosion risk zone underground	1 month Initial submission of hot work management plan 24 hours Each hot work occasion thereafter	<ul style="list-style-type: none"> • Purpose of the hot work • Copy of the hot work management plan • A summary of risks identified and controls to be put in place
Underground coal mines only	Driving an underground roadway with a width greater than 5.5m	7 days	No additional
Underground coal mines only	Widening an existing underground roadway	7 days	No additional
Underground coal mines only	Installation of a booster fan underground	3 months	No additional
Underground coal mines only	The introduction for the first time of a vehicle with a non-flameproof fire protected diesel engine to an underground part of a coal operation that is not an explosion risk zone	3 months	<ul style="list-style-type: none"> • Details of procedures to be followed in the case of failure of a control
Underground coal mines only	The use of voltages in excess of 4000V in an explosion risk zone 1 for electrical plant and cables associated with longwall mining	12 months	<ul style="list-style-type: none"> • For the plant and cables operating at voltages in excess of 4000V, a summary of risks identified and controls to be put in place
Underground coal mines only	The use of voltages in excess of 1200V in a explosion risk zone 1 for electrical plant other than electrical plant and cables associated with longwall mining	12 months	No additional
Underground coal mines only	Secondary extraction of a pillar or a pillar dimension reduction where the following standards are deviated from: (a) the dimension of a pillar is less than: (i) a distance that is equal to 1/10 of the thickness of the cover	4 months	<ul style="list-style-type: none"> • Preparation of safety management plan, detailing the authoritative sources used in determining that the proposed method of work can be done safely • Engineering plans, endorsed by the underground mine manager, of the work covered by the notification, showing all relevant details • Dimensional plans showing the manner and sequence of extraction

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
Underground coal mines only	<p>(to the surface); or (ii) 10m whichever is greater (b) the width of the roadways, bords, cut-throughs, headings and pillar splits not 5.5m except for that part of a roadway forming an intersection with another roadway. Secondary extraction of longwall, shortwall or miniwall</p>	4 months	<ul style="list-style-type: none"> Emergency response plans, showing details of procedures to be followed in the case of failure of a control Procedures for the recovery of buried and immobile mining equipment, at the edge of or in a goaf
Underground coal mines only	<p>Barrier mining when the width of the barrier is proposed to be less than 40m between adjoining workings of adjacent mines.</p> <p>(Definition: the mining of a barrier or protective pillar against the external boundaries of the mine, against any outcrop of the seam and between any underground workings and any open cut workings)</p>	3 months	<ul style="list-style-type: none"> Preparation of safety management plan, detailing the authoritative sources used in determining that the proposed method of work can be done safely Engineering plans, endorsed by the underground mine manager, of the work covered by the notification, showing all relevant details Dimensional plans showing the manner and sequence of extraction Emergency response plans, showing details of procedures to be followed in the case of failure of a control Procedures for the recovery of buried and immobile mining equipment, at the edge of or in a goaf Details on identified interactions between adjoining operations and hazards Survey plans certified by a mine surveyor

Applies to	Column 1 High risk activity	Column 2 Length of time between notification and when activity can be undertaken	Column 3 Information to be supplied to regulator
Underground coal mines only	<ul style="list-style-type: none"> ● Multi-seam mining ● Formations of small pillars ● Shallow depth of cover ● Mining under massive roof conditions ● Mining under significant bodies of water 	4 months	<ul style="list-style-type: none"> ● An engineering drawing, endorsed by the underground mine manager, of the work covered by the notification ● Survey plans certified by a mine surveyor
Underground coal mines only	<p>Working within outburst control zones</p> <p>For the purpose of this item, an outburst control zone is any area where the total in situ gas content and gas composition, measured in accordance with AS3980 or an equivalent standard, is greater than 9m³/tonne for methane (CH₄) or 5m³/tonne for CO₂ or, for a mixture of these two gases, a gas content in the proportion of the percentages of each gas between these two limits</p>	3 months	<ul style="list-style-type: none"> ● An analysis of how the proposed method of mining minimises the risk of gas outbursts. ● An engineering drawing, endorsed by the underground mine manager, of the activity ● Survey plans certified by a mine surveyor of the activity. ● The extract from the emergency response plan showing details relevant to outbursts

Appendix C: Statutory positions and competencies in mine safety under consideration

This schedule material covers three types of competency:

- Section 1 lists safety-critical positions, roles and functions which must be undertaken at the mine by holders of practising certificates issued by the board of examiners
- Section 2 lists safety-critical positions, roles and functions which must be undertaken at the mine by holders of qualifications or competencies (but not a practising certificate) prescribed and published by the board of examiners
- Section 3 lists identified safety positions, roles and functions which, if required to be undertaken at the mine, must be undertaken by a person with specified qualifications or competencies set by the board of examiners.

The positions listed need not be full time depending on the size, risk and complexity of the mining operations and may be contracted.

There may be more than one person appointed to these statutory positions depending on the size, risk and complexity of the mining operations.

Section 1. Each mine operator must appoint a person with a practising certificate issued by the board of examiners to the following positions:	
Coal—underground	<ul style="list-style-type: none"> • SSE • underground mine manager • undermanager (can be more than one) • electrical engineering manager • mechanical engineering manager • ventilation officer • deputy (an appropriate number)
Coal—surface	<ul style="list-style-type: none"> • SSE • surface mine manager • open-cut examiner (an appropriate number)
Metalliferous and extractive—underground mines <i>(not including opal or gemstone mines with fewer than 5 people)</i>	<ul style="list-style-type: none"> • SSE • underground mine manager • underground mine supervisor
Metalliferous and extractive—surface mines <i>(not including opal or gemstone mines with fewer than 5 people)</i>	<ul style="list-style-type: none"> • SSE • surface mine manager/quarry manager
Opal mines and gemstone mines with fewer than 5 people	<ul style="list-style-type: none"> • site senior executive

Section 2. Each mine operator must appoint a person with qualifications or competencies prescribed by the board of examiners to the following positions:

Coal—underground	<ul style="list-style-type: none"> • mine surveyor • fire officer • roadway dust sampler
Coal—surface	<ul style="list-style-type: none"> • mine surveyor • electrical engineering manager • mechanical engineering manager
Metalliferous and extractive mines <i>(not including opal or gemstone mines with fewer than 5 people)</i>	<ul style="list-style-type: none"> • mine surveyor • electrical supervisor • mechanical supervisor

Section 3—When a mine operator appoints a person to the following positions, they must have competencies as prescribed by the board of examiners:

Coal—underground	<ul style="list-style-type: none"> • ventilation engineer • supervisor • shot firer
Coal—surface	<ul style="list-style-type: none"> • supervisor • shot firer
Metalliferous and extractive mines	<ul style="list-style-type: none"> • ventilation officer • shot firer • radiation safety officer • supervisor