



# **Commissioner for Mine Safety and Health**

Queensland Mines Inspectorate  
**Annual Performance Report 2011–12**

This publication has been compiled by Stewart Bell of the Queensland Mines Inspectorate, Department of Natural Resources and Mines.

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Cover: L–R Rob O'Sullivan, Gavin Taylor, Stewart Bell

ISBN 978-0-7345-0429-6

September 2012

The Honourable Andrew Cripps MP  
Minister for Natural Resources and Mines  
61 Mary Street  
Brisbane Qld 4000

Dear Minister

In accordance with section 73E(1) of the *Coal Mining Safety and Health Act 1999* I am pleased to submit to you the Mine Safety and Health Commissioner's annual performance report for the year ending 30 June 2012.

Yours sincerely

A handwritten signature in blue ink that reads "Stewart Bell". The signature is written in a cursive, flowing style.

Stewart Bell  
Commissioner for Mine Safety and Health



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# Abbreviations and definitions

## **Abbreviations**

**CCIM** Conference of Chief Inspectors of Mines  
**CFMEU** Construction, Forestry, Mining and Energy Union  
**DNRM** Department of Natural Resources and Mines  
**HIAC** Health Improvement and Awareness Committee  
**HPI** high potential incident  
**LTIFR** lost-time injury frequency rate  
**MISHC** Minerals Industry Safety and Health Centre  
**NMSF** National Mine Safety Framework  
**QMI** Queensland Mines Inspectorate  
**RCS** respirable crystalline silica  
**RIS** regulatory impact statement  
**RTO** registered training organisation  
**SCER** Standing Council on Energy and Resources  
**Simtars** Safety in Mines Testing and Research Station  
**WBV** whole-body vibration

## **Definitions**

**Coal mines:** mines subject to the *Coal Mining Safety and Health Act 1999* and associated regulation.

**Disabling injury:** a work-related injury or disease resulting in a worker being unable to fully perform their regular job. Alternative duties are performed.

**Duration rate:** the average time (days) lost and the time (days) on alternative duties for each lost time injury or disabling injury. In this report, time lost includes all time lost for an incident to date.

**High-potential incident:** an event, or series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person.

**Lost-time injury/disease:** an incident or disease resulting in a fatality, permanent disability or time lost from work of one shift or more. The shift on which the incident occurred is not counted as a shift lost.

**Lost-time injury frequency rate:** the number of lost-time injuries or disease per million hours worked.

**Lost-time and disabling injury frequency rate:** the number of lost time injuries or diseases and disabling injuries per million hours worked.

**Metalliferous mines:** mines subject to the *Mining and Quarrying Safety and Health Act 1999* and associated regulation.

**Quarries:** excavations of hard rock for use in construction. (These operations are covered by the *Mining and Quarrying Safety and Health Act 1999* and associated regulation.)

**Queensland Mines Inspectorate:** a regulatory unit within the Safety and Health Group of DNRM.

**Severity rate:** the time (days) lost and time (days) on alternative duties per million hours worked.

# Background

The office of the Commissioner for Mine Safety and Health was established under the *Coal Mining Safety and Health Act 1999* and the relevant provisions commenced under this Act and the *Mining and Quarrying Safety and Health Act 1999* on 1 July 2009.

The Commissioner for Mine Safety and Health's functions are to:

- advise the Minister for Natural Resources and Mines of mine health and safety matters generally
- fulfil the roles of chairperson of the Coal Mining Safety and Health Advisory Committee under the *Coal Mining Safety and Health Act 1999* and chairperson of the Mining Safety and Health Advisory Committee under the *Mining and Quarrying Safety and Health Act 1999*
- monitor and report to the minister and to parliament on the administration of provisions about safety and health under the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*
- perform the functions given to the commissioner under the provisions of the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*.

In addition, the commissioner is required under section 73E(1) of the *Coal Mining Safety and Health Act 1999*, to provide a report to the minister on the performance of the department in regulating mine safety. The Queensland Mines Inspectorate (QMI) administers the provisions of the *Coal Mining Safety and Health Act 1999*, the Coal Mining Safety and Health Regulation 2001, the *Mining and Quarrying Safety and Health Act 1999* and the Mining and Quarrying Safety and Health Regulation 2001, and advises, mentors and educates the mining industry about safety and health.

The QMI is well resourced, competent and dedicated to the regulation of the mining and quarrying industries. The remuneration base provides attraction, retention and qualification incentives approved by the Office of the Public Service Commissioner. This remuneration structure has led to a reduction in staff turnover.

The QMI's activities for 2011–12 are summarised in the body of this report. In addition, information on the operations of the Board of Examiners, the advisory committees and more comprehensive mining industry safety and health information can be obtained in the following annual reports:

- Board of Examiners Annual Report
- Coal Mining Safety and Health Advisory Committee Annual Report
- Department of Natural Resources and Mines Annual Report 2011–12<sup>1</sup>
- Mining Safety and Health Advisory Committee Annual Report
- Queensland Mines and Quarries Safety Performance and Health Report.

Copies of these reports can be obtained from the DNRM website [www.dnrm.qld.gov.au](http://www.dnrm.qld.gov.au)

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<sup>1</sup> Refer to this report for the Safety and Health Levy financial statements.

## From the Commissioner for Mine Safety and Health



The mining industry in Queensland continues to expand, with the result that greater numbers of untrained personnel are entering the mining workforce. This influx of novice miners creates risks for the new miners themselves and the people they work with. One of our continuing focuses has been ensuring that these so-called 'greenskins' get through their initiation to the mining industry unharmed. As we all know, mining does not have to be a dangerous business as long as miners follow the processes and procedures that have been designed to get them home safe and healthy to their families every day.

Areas on which we have focused in 2011–12 are summarised below.

### ***Mine Safety and Health statistics***

This year I regret to report that one fatality was reported for 2011–12. This occurred at a quarry near Moranbah and I would like to extend my sympathies to the family of the young man who died. One fatality is always one too many and we continue to remain focused on ZERO HARM.

Unfortunately the other safety parameters we measure have increased significantly with the lost-time injury frequency rate (LTIFR) in underground coal mines moving from 4.2 in 2010–11 to 6.8 in 2011–12. This is a large increase and a cause for concern. LTIFR in other mining areas, with the exception of quarries, also increased by 15–20 per cent. It should be noted that these are preliminary numbers and when we have all the data collected there may be some differences. While I acknowledge that these are lag indicators they ring an alarm bell that we cannot ignore.

Encouragingly I can acknowledge reporting of high-potential incidents (HPIs) has increased. This will allow the industry and QMI to learn from these incidents and work to prevent injuries and fatalities.

### ***Galilee Basin***

Mines are now being developed in the Galilee Basin; this will put extra strain on the QMI and might mean that we will need to base some of our mines inspectors out in that region to minimise the risks of driving long distances and to provide a better service.

### ***Pike River***

As you may be aware, I have spent a significant part of the last 12 months in New Zealand assisting the Pike River Royal Commission. This has been one of the most challenging tasks I have ever undertaken. Twenty-nine men never came home on 29 November 2010 and we owe it to them to create an environment where a disaster such as this can never happen again. The report will be presented to the Governor-General of New Zealand on 28 September 2012 and I hope miners around the world will benefit from the recommendations contained in the report.

We further assisted the New Zealand Mines Inspectorate by seconding Gavin Taylor, Chief Inspector of Coal Mines, to New Zealand for a period of five months. During that time, Gavin visited mining operations across the whole of the country and provided training and mentoring to the New Zealand Mines Inspectorate. We also provided short-term electrical and mechanical inspectorate assistance. I am indebted to Ken Singer who acted as Chief Inspector while Gavin was in New Zealand.

## ***Maintaining inspectorate numbers***

At the time of writing this report, the QMI strength stood at 45 out of an approved total of 50. The competitive nature of the mining industry means that we are always looking to recruit suitable personnel and conversely we are always losing people back to the industry. This refreshment of the inspectorate is not a bad thing and adds new skills to our team.

This problem is not confined to Queensland: all regulators suffer the same problems. The age profile of the inspectorate is also an issue with many of our people aged over 60 and looking at retirement in the next few years. We are still recruiting inspectors from overseas and this year we successfully attracted experienced mining professionals from South Africa. Recruitment is an ongoing activity for the QMI and we are constantly looking at ways to make working for the QMI a more attractive proposition.

## ***Proximity detection/collision avoidance***

As you are no doubt aware, I have been advocating proximity detection/collision avoidance as a means of reducing the number of vehicle accidents that continue to occur. Vehicle interactions are still happening on a weekly basis but there has been an improvement in the number of mines adopting proximity detection/collision avoidance systems. I am also happy to report that there are now systems available for underground coal mines and trials are occurring in Queensland this year. I encourage mines to keep looking at these systems. When mines do trial a system they need to make sure that they have fully assessed their needs to get the best out the system. Mandatory adoption of these systems is not far away but will not happen until we are satisfied that the technology is fit for purpose.

## ***Fatigue***

We have put the final touches to our fatigue guidance note and will be taking it to the advisory committees later this year. This process has taken too long and we need to get a guideline out there that will do the job and cover the needs of all parties. The guideline we are proposing has been internationally reviewed and, following some minor modifications, has been given the stamp of approval by the Health and Safety Executive of the United Kingdom.

## ***Board of Examiners***

The board meets four times a year in September, December March and June. During the 2009–10 and 2010–11 financial years the number of candidates and examinations processed by the board doubled. In this last financial year (2011–12) there was a 60 per cent increase in written examinations and a 70 per cent increase in oral examinations. In addition to the certificate of competency examinations, there were 123 site senior executive examinations.

The eight-member board comprises three mines inspectors and five industry representatives. Each member holds a certificate of competency under the *Coal Mining Safety and Health Act 1999* or the *Mining and Quarrying Safety and Health Act 1999* and has at least 10 years practical experience in the mining industry. The board meets twice a year with the New South Wales Coal Competence Board to discuss matters of mutual interest, in particular maintenance of competency and harmonisation of qualifications and work history required to obtain certificates of competency in Queensland and New South Wales. The National Mine Safety Framework (NMSF) 'non-core' proposals for adoption by Queensland, New South Wales and Western Australia contain several additional statutory positions. Queensland is considering its position with respect to the introduction of any further statutory positions.

During April 2012, the board held an information roadshow on the written and oral examination process that the board uses to assess candidates applying for a coal mining statutory certificate. The percentage of candidates successfully passing the examinations increased dramatically following similar information sessions held in 2011.

## ***Committees***

Due to circumstances beyond our control, there has been a long break between meetings of the mining advisory committees. New members have now been approved and meetings will resume in the next few months. I intend to have at least one meeting of each committee before the end of 2012. The fatigue guideline will be one of the first matters attended to.

## ***Health Improvement and Awareness Committee***

The Health Improvement and Awareness Committee (HIAC) met three times (on 23 November 2011, 21 March 2012 and 20 June 2012). Initiatives and discussions from the meetings included:

- thermal work limit and use in underground coal mines
- managing heat stress, medical conditions and drugs (licit and illicit) and effects on heat stress
- Mines and Quarries Safety Performance and Health Report
- permanent hearing incapacities
- NMSF
- Berlin data review
- a noise-induced hearing loss sub-committee was formed to promote education of workers, employers and health professionals.

## ***Spontaneous combustion***

At time of writing, a Bowen Basin mine was working hard to control a spontaneous combustion event. It's a timely reminder that spontaneous combustion is still with us and can be a serious problem. All underground coal mines must ensure that they have systems in place to detect spontaneous combustion and also have suitable control mechanisms available to be applied early if required.

## ***Exposure to respirable crystalline silica in Queensland small mines and quarries***

The QMI has continued to investigate exposure to respirable crystalline silica (RCS). During 2011–12 a number of small mines and quarries were selected to participate in comprehensive personal dust monitoring and health surveillance programs coordinated by the Inspector of Mines (Occupational Hygiene). Exposures were assessed and the inspectorate made recommendations to improve dust control. All exposure and health surveillance data was de-identified and provided to the University of Western Sydney as part of a joint research project. The message from this project is that we need to remain vigilant with respect to RCS exposure and ensure that we are not creating health problems for the future.

## ***Polymeric chemical use in underground coal mines***

Advances in rock glue technologies through the use of specifically designed resins have enabled mines to successfully deal with strata control challenges in a timely and safe manner. However it is important that the use of these products does not introduce new hazards that could affect the health of coal mine workers. The QMI, through the Inspector of Mines (Occupational Hygiene), has continued to review and monitor the use of these chemicals. This project focuses on the potential health effects that might exist if exposures are not adequately controlled. This has involved personal exposure monitoring at a number of underground coal mines during the injection of these products. The benefits of biological monitoring techniques to assess worker exposure are also being investigated. This will be an ongoing project.

## ***Management of oxides of nitrogen***

The orange cloud containing oxides of nitrogen associated with blasting became an issue in early 2011. The number of people with potential exposure had increased and it was necessary to ensure mines had adequate processes in place to prevent, manage, and treat exposed individuals. The fume has a pungent odour and taste that can be perceived at a very low threshold. Everyone exposed was released after short-term observation to confirm that the level of fume exposure was not affecting their lungs. The fume, containing nitrogen dioxide, in large enough doses (>5ppm) can cause pulmonary oedema where the fume combines with moisture to affect the lungs of the exposed person. No person to date has developed any symptoms beyond mild eye irritation.

On 18 March 2011, the chief inspectors of Coal Mines and Explosives called together mines, explosives companies and the Construction, Forestry, Mining and Energy Union (CFMEU) to form the Fume Steering Group. The group delivered six seminars across the major open-cut coal mining centres and produced Queensland Guidance Note 20 *Management of oxides of nitrogen in open cut blasting*. This note provides guidance on preventing fume occurrence through processes such as blast design, loading techniques, and explosives product choice; managing fume events by understanding issues during preparation of the blast and taking into account meteorological conditions to establish a fume management exclusion zone; monitoring of the actual blast; and the treatment of exposures ensuring that affected people receive tailored medical support associated with fume exposure.

The DNRM website contains information on the management of fume, including presentations from the seminars and a fact sheet. During 2011–12, blasting was halted at a number of sites to ensure that blasting could be conducted at an acceptable level of risk.

The Fume Steering Group continues to meet and will produce a new version of the guidance note that will incorporate learnings from the data provided by open-cut blasts over the last year.

## ***Changing face of QMI***

Unfortunately we are all getting older and over the next 12–18 months my two Chief Inspectors of Metalliferous Mines and Coal Mines and I will retire. We intend for these events to take place with minimal disruption to our operations so succession planning is underway to make this happen.

# The Commissioner for Mine Safety and Health's significant achievements for 2011–12

During the year, the Commissioner for Mine Safety and Health:

- consulted with stakeholders throughout the year on a wide range of issues and QMI activities
- conducted numerous radio interviews and provided media statements to raise awareness in the community on the safety and health issues facing the mining industry
- attended three Safety in Mines Testing and Research Station (Simtars) board meetings
- conducted six Level 4 compliance meetings with mining companies
- made a number of mine visits including these destinations:
  - Austar Coal Mine, Newcastle
  - Carborough Downs
  - Collinsville
  - Mount Morgan
  - Croydon
  - Herberton
- attended the Pike River Royal Commission hearings
  - The actual hearings relating to the Pike River Royal Commission were held in Greymouth and were completed in early March 2012. The report is now being finalised and will be presented to the Governor-General of New Zealand on 28 September 2012. The only possible delay to this timetable relates to a judicial review brought by one of the participants which is being heard on 3–4 September 2012. Learnings from this disaster will be disseminated to the Queensland mining industry as a matter of urgency.
- attended and presented at a broad range of mining industry conferences, meetings and seminars, including international events, on mine safety and health issues currently facing the industry, including:
  - Queensland Mining Industry Health and Safety Conference, Townsville.
  - Fourth Annual Bowen Basin Coal and Energy Conference, Mackay.
  - Australia and China Coal Mine Safety Demonstration Project, China.
  - Collisions Avoidance Conference, Perth.
  - Annual Quarrying Safety and Health Seminar, Brisbane.
  - Queensland Resources Council Forum, Yeppoon.
  - Queensland Mines Rescue Memorial Cup Competition, Oaky North Underground Mine, Tieri
  - Queensland Mines Rescue 41st E K Healy Cup Competition, Cook Colliery Mine, Blackwater
  - Queensland Mines Rescue Memorial Cup Competition, Kestrel Mine, Emerald
  - Queensland Government Community Cabinet Meeting, Thursday Island, Torres Strait
  - Queensland Mines Rescue Service Board Meeting, Mackay
  - Queensland Mines Rescue Service Board Meeting, Brisbane

Commissioner Bell represented:

- Queensland at three meetings of the National Mine Safety Framework Steering and Legislation Groups (16 November 2011, 22–23 March 2012, 21–22 June 2012)

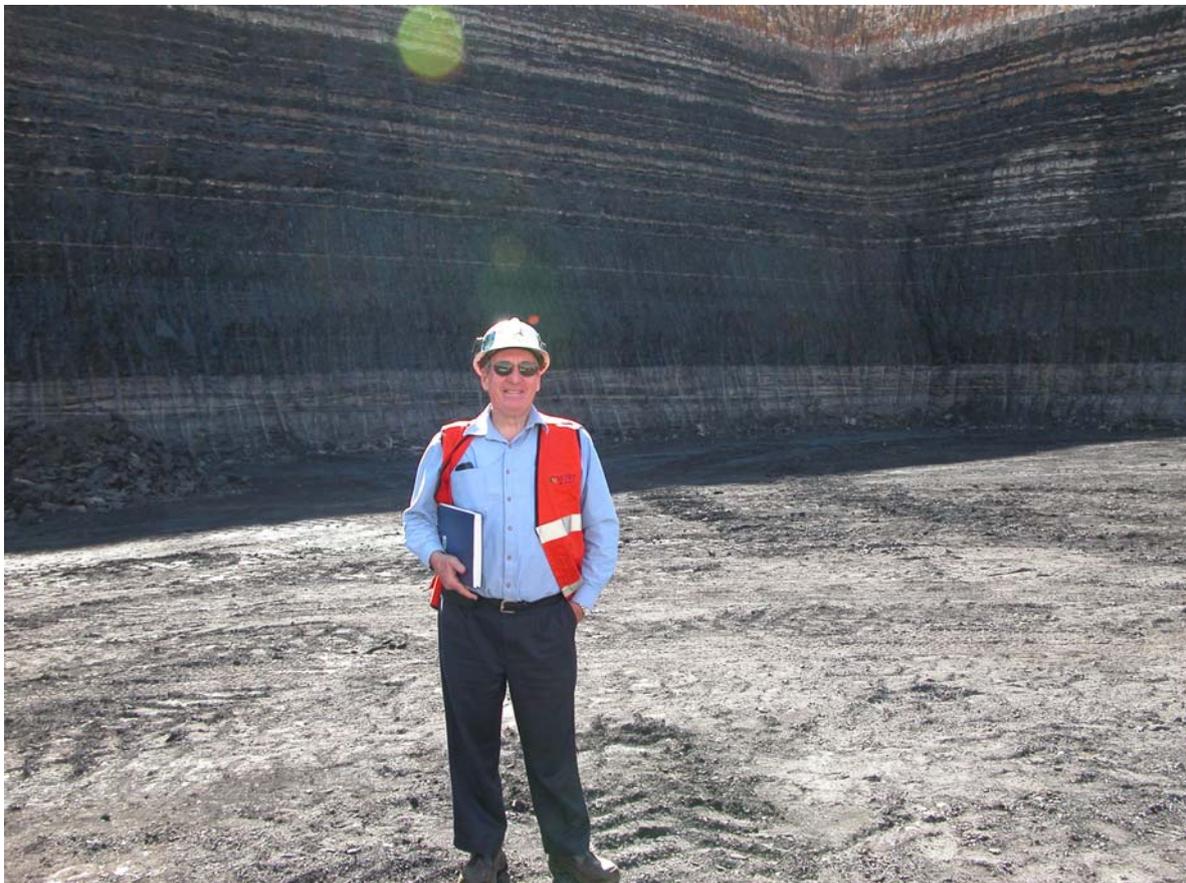
Commissioner Bell chaired:

- one Coal Mining Safety and Health Advisory Committee meeting
- two Technical Advisory Committee Queensland Mines Rescue meetings
- two Electrical Transmission Distribution Industry Health and Safety Committee meetings
- the 2012 Queensland Mining Industry Health and Safety Conference Committee

- the planning and execution of the Miners Memorial Day Service held on 19 September 2011 at Mount Isa and the planning committee for a permanent Queensland Miners Memorial site at Redbank. A Queensland artist was engaged to design and create the monument when the site becomes available in late 2012. Planning for the 2012 Miners Memorial Day Service in Redbank has been completed.

Commissioner Bell issued two Office of the Commissioner for Mine Safety and Health Alerts:

- Safety Alert 2 *Proximity-detection systems—selecting the right one for your mine site.* 26 July 2011.
- Safety Alert 3 *Rail corridors on coal mine sites.* 14 February 2012.



*Senior Inspector of Mines Kevin Clough—Hancock Alpha Project First Coal*

## QMI and staff achievements 2011–12

The QMI's significant achievements for 2011–12 included:

- conducted 56 audits and 1573 inspections of mine sites throughout Queensland totalling 1865 staff days
- conducted 191 investigations of mine accidents and incidents throughout Queensland totalling 921 inspectorate days
- issued 375 directives and 1444 substandard condition or practice notices to mines
- conducted seven Level 4 and nine Level 3 compliance meetings with mining companies
- published 16 safety alerts, 8 safety bulletins and 1 significant incident report
- participated in the Seventh Annual Small Mines and Quarries Safety and Health Seminar, Closing the Gap, in Townsville on 24 April 2012.
- participated in three HIAC meetings, on 23 November 2011, 21 March 2012 and 20 June 2012. (This committee develops health hazard control information which is published on the department's website. HIAC also hosted a successful Heat Risk Management Seminar in Brisbane on 24 November 2011.)
- participated in the Diesel Particulate Matter Steering Committee that met on 28 September 2011 in Blackwater, 17 February 2012 in Mackay, and 16 May 2012 in Moranbah.
- participated in the Tenth Annual Quarrying Safety and Health Seminar at the Brisbane Convention and Exhibition Centre on 13 June 2012.
- participated in the NMSF meetings including the Steering Group, Non-Core Legislative Working Group, and the Non-Core Regulators Group (See Appendix 1.)
- amended the Coal Mining Safety and Health Regulation 2001 to facilitate the election of site safety and health representatives
- presented at a broad range of conferences, industry workshops, seminars and meetings throughout the year (See Appendix 2.)
- attended professional and/or vocational training sessions to update skills, knowledge and understanding of current technical, regulatory and administrative practices. (See Appendix 3.)
- co-hosted the Queensland Mining Industry Health and Safety Conference, Embracing the age –supporting people and technology, with the Queensland Resources Council and mining unions, 21–24 August 2011. (See Appendix 2.)
- attended the Queensland Mine Electrical Safety Association Inc. Committee meetings. (The committee identifies electrical safety problems within the mining industry and, through consultation, makes recommendations to improve safety and productivity.)

### ***Individual inspector activities***

Electrical inspectors in the inspectorate:

- contributed to Australian Standards development through different committees especially EL23 Electrical Equipment for mines (Standards Australia named the EL23 committee its Most Outstanding Committee for 2012.)
- conducted well-attended biannual meetings for all open-cut and underground mine electrical engineering managers
- attended New South Wales' mine electrical inspectors meetings and conference and presented papers
- conducted major initiatives on the use of variable voltage variable frequency (VVVF) drives in underground mines
- participated in the Fume Steering Group and drafted Queensland Guidance 20 Management of oxides of *nitrogen in open cut blasting*. (Six related workshops were facilitated throughout the Bowen Basin and Southern Region coal mining districts.)

The Inspector of Mines (Occupational Hygiene) conducted investigations into personal RCS exposure during mining and processing of silica sands. Information gathered was submitted to a joint research project conducted with the University of Western Sydney.

The Chief Inspector of Coal Mines Gavin Taylor and the Chief Inspector of Mines (Metalliferous and Quarries) Robert O'Sullivan:

- attended the 53<sup>rd</sup> annual Conference of Chief Inspectors of Mines (CCIM) in Darwin 4–9 September 2011.
  - The CCIM is no longer a subcommittee of the Ministerial Council on Mineral and Petroleum Resources but is independently convened as a peak body for mining regulators. Discussions included fatalities and major incidents, NMSF, governance issues, inspector training initiatives and the National Mining Industry Safety Handbook.
- participated in the planning and execution of the Queensland Level 1 State Mine Emergency Exercise at Aquila coal mine on 18 October 2011.
  - Members of the organising committee include QMI (Deputy Chief Inspector of Coal Mines as the chair), Simtars, CFMEU, Minerals Industry Safety and Health Centre (MISHC) and a range of mining company personnel. The 2011 exercise resulted in 10 major recommendations applicable to all underground coal mines. The final report has been published on the department website, and the Deputy Chief Inspector of Coal Mines wrote to site senior executives (SSEs) of underground coal mines requesting them to review the recommendations in accordance with requirements of the safety and health management system of the mine. In addition, all underground mines received a computer disk containing the materials to conduct desktop exercises related to the exercise scenario.

### ***Pike River involvement***

As a result of the Pike River mine disaster in South Island New Zealand, that country's Department of Labour reviewed its regulation of Pike River and concluded that the department's application of regulations could have been much better. Although this does not detract from the fact that the operators were ultimately responsible for the safety of their people, stronger regulation may have assisted in preventing this tragedy.

To address these perceived shortfalls, the Department of Labour set up a High Hazards Unit specifically to regulate the two main high hazard industries: mining, and petroleum and gas. The Chief Inspector of Coal Mines, Gavin Taylor was invited to act as the Chief Inspector of Mines until such time as New Zealand could attract and retain a permanent chief inspector. His role was to provide leadership and direction to the new unit and to develop regulatory skills while helping to develop the new regulations for the mining industry.

While in New Zealand, the Chief Inspector became aware that very little or no auditing was being conducted. Auditing provides the opportunity to 'dig deep' into safety and health management systems and can reveal fundamental safety and health concerns that a routine 'kick the tyres' inspection would not normally detect. John Smith, Senior Inspector of Mines (Mechanical), and Peter Herbert, Senior Inspector of Mines (Electrical), were invited to New Zealand to introduce the methodology of auditing. Their invitation had two advantages: both inspectors are well versed in the QMI's Safe Guard Auditing System and have training qualifications; and, as New Zealand had no electrical or mechanical inspectors in the mining field, their presence would enable New Zealand mining inspectors to be trained in auditing and permit mechanical and electrical inspection of selected mines.

The training was exceptionally well received and the New Zealand inspectors took to the system extremely well. Two audits were conducted with Inspectors Smith and Herbert and subsequently another three audits have been conducted to good effect.

Chief Inspector Taylor's efforts in New Zealand over five months were highly regarded and currently the QMI is in discussion with the Department of Labour for Mr Taylor to act as a consultant if additional higher level assistance and regulation is required.

## Providing advice to the minister on mine health and safety matters

As required by the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*, the Commissioner provides weekly advice to the minister on mine health and safety matters. In undertaking this role, the Commissioner met regularly with the Minister for Natural Resources and Mines, the Honourable Andrew Cripps MP and/or his ministerial staff. The Commissioner kept the minister fully apprised of all important safety and health matters and provided independent advice on legislative reviews and policy issues relevant to the administration of Queensland's mining legislation.

In addition to providing general advice on mine health and safety, the Commissioner also advised the minister of any fatalities, high potential incidents or accidents that occurred in Queensland. These conversations were informed by the Commissioner's communications with mines inspectors, investigators, occupational physicians, occupational hygienists, ergonomists, industry safety and health representatives (ISHRs), district workers' representatives, industry representatives and other relevant individuals and organisations.



*Truck short dumping, Thiess Australia, Tarong Coal Project, Meandu Mine*

# Mining and Coal Mining Safety and Health Advisory Committee meetings

The Coal Mining Safety and Health Advisory Committee and the Mining Safety and Health Advisory Committee<sup>2</sup> were established to give advice and make recommendations to the minister about promoting and protecting the safety and health of workers at coal mines and metalliferous mines and quarries.

Union and industry representatives and the QMI are represented on both committees. The Coal Mining Safety and Health Advisory Committee comprises members from the CFMEU, the Electrical Trades Union, the Queensland Resources Council and the QMI. The membership of the Mining Safety and Health Advisory Committee comprises the Australian Workers Union, Australian Manufacturing Workers Union, the Queensland Resources Council, Queensland quarrying industry representatives, and the QMI.

In 2011–12 both committees made significant contributions to improving the safety standard at all mines and quarries. Their achievements are highlighted below.

Table 1 Coal Mining Safety and Health Advisory Committee meetings for 2011–12

Meeting number	Date
54	21 October 2011
55	7 December 2011

Key Achievements 2011–12
<p><b>National Mine Safety Framework:</b> Regular updates were provided to the committee on the progress of the NMSF which was being developed under the auspices of the Standing Council of Energy and Resources (SCER). Committee concerns over the associated regulatory impact statement (RIS) were passed on to the relevant federal ministers and further expressed at a Safework Australia focus group attended by the RIS authors.</p>
<p><b>Concerns about the provision of S1, S2 and S3 competency units:</b> The committee requested the coal sector section of the Skills DMC organisation to review the adequacy of the S1, S2 and S3 coal mining competency units (covering risk management, safety and health investigations, and communications). This review was to include the resources used in the competency standards, and suggestions on improvements or updates that could be made, including any timeframe for the development.</p>
<p><b>Competencies recognised by the advisory committee:</b> Changes to advisory committee requirements, and updated competency unit designators, resulted in several amendments to the table of competencies recognised by the Coal Mining Safety and Health Advisory Committee. Changes to competency unit designations led, in many cases, to reevaluation by the committee before final approval.</p>
<p><b>Health Improvement and Awareness Committee (HIAC):</b> The committee received regular updates from HIAC and provided advice and feedback on its activities and achievements during the year.</p>

<sup>2</sup> The Coal Mining Safety and Health Advisory Committee and the Mining Safety and Health Advisory Committee submit a separate annual report to the Minister detailing their operations for the year.

Table 2 Mining Safety and Health Advisory Committee meetings for 2011–12

Meeting number	Date
32	22 September 2011
33	8 December 2011

Key Achievements 2011–12
<b>Health Improvement and Awareness Committee:</b> The committee received regular updates from HIAC and provided advice and feedback on its activities and achievements during the year.
<b>National Mine Safety Framework:</b> Regular updates were provided to the committee on the progress of the NMSF which is being developed under the auspices of the SCER.

## Reviews of the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*

The QMI regularly reviews its legislation, in consultation with stakeholders and representative bodies, to ensure the legislative framework is robust and promotes industry best practice to minimise risk to people at mine sites. During 2011–12, the QMI initiated and implemented amendments to the Coal Mining Safety and Health Regulation 2001. The Coal Mining Safety and Health Amendment Regulation (No. 1) 2012 amended the regulations to ensure a balanced approach to the election of site safety and health representatives (SSHRs) was taken at coal mines.

The QMI will continue to work with unions and industry representatives to ensure Queensland's mining safety and health legislation supports the safe operation of mines and protects the safety and health of the workers.

## Safety and health regulation

The QMI collects accident and incident data from Queensland mines and quarries that are subject to the provisions of the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999*. This information allows QMI and industry to assess and benchmark safety and health performance. The data also informs QMI of:

- legislative changes needed to reduce accident and incident rates
- areas of concern that need to be targeted, highlighted and assessed.

A measure of an open and efficient safety and health management system and an empowered workforce is the number of high-potential incidents reported. The QMI encourages reporting of high-potential incidents because this allows the industry and the QMI to learn from these incidents and work to prevent injuries and fatalities.

More detailed and comprehensive data on safety performances are published in the annual *Queensland Mines and Quarries Safety Performance and Health Report*, which can be accessed on the department's website.

Table 3 Safety and health statistics

### All sectors<sup>#</sup>

Outcomes	2010–11	2011–12
Lost-time injuries and disabling injuries	851	1047
High-potential incidents	1960	2370
Fatal injuries	3	1
Lost-time injury frequency rate	3.4	3.9
Lost-time injury and disabling injury frequency rate	9.2	9.4
Lost-time injury and disabling injury severity rate	219.5	168.5
Lost-time injury and disabling injury duration rate	23.9	17.9

### Coal mines<sup>#</sup>

Outcomes	Underground		Surface*	
	2010–11	2011–12	2010–11	2011–12
Lost-time injuries and disabling injuries	242	264	413	454
High-potential incidents	358	408	1214	1372
Fatal injuries	0	0	2	0
Lost-time injury frequency rate	4.2	6.8	3.0	3.3
Lost-time injury and disabling injury frequency rate	18.0	16.8	8.5	8.3
Lost-time injury and disabling injury severity rate	390.1	227.1	216.8	136.4
Lost-time injury and disabling injury duration rate	21.7	13.5	25.6	16.5

## Metalliferous mines#

Outcomes	Underground		Surface*	
	2010–11	2011–12	2010–11	2011–12
Lost-time injuries and disabling injuries	79	138	88	126
High-potential incidents	135	216	185	301
Fatal injuries	1	0	0	0
Lost-time injury frequency rate	2.7	3.4	2.9	3.5
Lost-time injury and disabling injury frequency rate	7.7	10.0	4.9	6.3
Lost-time injury and disabling injury severity rate	154.3	226.6	103.9	118.7
Lost-time injury and disabling injury duration rate	19.9	22.6	21.3	18.8

## Quarries#

Outcomes	2010–11	2011–12
Lost-time injuries and disabling injuries	29	35
High-potential incidents	68	104
Fatal injuries	0	1
Lost-time injury frequency rate	14.8	12.0
Lost-time injury and disabling injury frequency rate	14.8	16.8
Lost-time injury and disabling injury severity rate	517.8**	385.3
Lost-time injury and disabling injury duration rate	35.1**	22.9

\* Exploration statistics have been included in the surface numbers for coal and metalliferous mines

\*\* Two accidents accounted for the majority of this number.

# The data is derived from the QMI's Lost-Time Accident Database and information, including survey responses supplied by mining and quarrying operators throughout Queensland.

Some data have been summarised or consolidated to present a standardised format.

**Note:** The figures reported in this document are collected from mine sites on an on-going basis. The figures are not finalised until the following year. For this reason there may be variation in the figures reported for the previous period of 2010–11.

Although the department makes every effort to verify supplied data, it accepts no responsibility for data that was incorrect when supplied. The data may not be fully representative of the industry or any component of it.

## Published material

### **Guidance notes**

QGN20 v3 *Management of oxides of nitrogen in open cut blasting*. July 2011. *Mining and Quarrying Safety and Health Act 1999, Coal Mining Safety and Health Act 1999, Explosives Act 1999*.

[www.mines.industry.qld.gov.au/safety-and-health/guidance-notes.htm](http://www.mines.industry.qld.gov.au/safety-and-health/guidance-notes.htm)

### **Policies, guidelines, reports and manuals**

Institute of Quarrying Australia and Queensland Government. October 2011. *Traffic management booklet: a guide for your safety*. Institute of Quarrying Australia, Brisbane

### **Recognised standards**

Recognised Standard 10 v1.02 *Mine surveying and drafting*. September 2011 *Coal Mining Safety and Health Act 1999*

[www.mines.industry.qld.gov.au/safety-and-health/standards-directives-policies.htm](http://www.mines.industry.qld.gov.au/safety-and-health/standards-directives-policies.htm)

### **Safety alerts**

Safety Alert 271 *Longwall fluid-injection injury*. 15 July 2011.

Safety Alert 272 *Ignition on the surface at a seam borehole*. 29 July 2011.

Safety Alert 273 *Hydraulic hoses fail on excavator booms*. 20 September 2011.

Safety Alert 274 *Rear boom arm pivot failure on load haul dump unit*. 20 September 2011.

Safety Alert 275 *Tyre air-blast catches three maintenance personnel*. 27 September 2011.

Safety Alert 276 *Articulated dump truck rollover*. 6 December 2011.

Safety Alert 279 *Park safely to prevent uncontrolled vehicle movement*. 13 December 2011.

Safety Alert 280 *Emergency refuge bay explosion*. 18 January 2012.

Safety Alert 281 *Fire ants found in mining equipment in Roma*. 23 December 2011.

Safety Alert 282 *Catastrophic structural failure of excavator boom*. 20 January 2012.

Safety Alert 283 *Screenbox flywheel failures on Powerscreen® Chieftain 2-deck screening plants*. 18 January 2012.

Safety Alert 284 *Severe acid burns to foot as drain collapses*. 18 January 2012.

Safety Alert 285 *Inappropriate use of pre-workout supplements*. 31 January 2012.

Safety Alert 286 *Coal mine worker hit by loose discharge hose*. 8 May 2012.

Safety Alert 287 *Alloy rim cracking and failure*. 25 May 2012.

Safety Alert 291 *Fatality on a mine site*. 22 June 2012.

[www.mines.industry.qld.gov.au/safety-and-health/mines-safety-alerts.htm](http://www.mines.industry.qld.gov.au/safety-and-health/mines-safety-alerts.htm)

### **Office of the Commissioner for Mine Safety and Health**

Safety Alert 2 *Proximity-detection systems – selecting the right one for your mine site*. 26 July 2011.

Safety Alert 3 *Rail corridors on coal mine sites*. 14 February 2012.

[www.mines.industry.qld.gov.au/safety-and-health/mines-safety-alerts.htm](http://www.mines.industry.qld.gov.au/safety-and-health/mines-safety-alerts.htm)

## **Safety bulletins**

Safety Bulletin 111 *Health risks of smoking synthetic cannabinoids*. 29 July 2011.

Safety Bulletin 112 *Mine road safety*. 26 October 2011.

Safety Bulletin 113 *Equipment fires, investigation and response*. 12 October 2011.

Safety Bulletin 114 *Storm season is coming – be prepared*. 6 December 2011.

Safety Bulletin 115 *Risk management of heat exposure in mining*. 11 January 2012.

Safety Bulletin 117 *Pressure build-up in silos*. 13 April 2012.

Safety Bulletin 118 *Working safely with tyres: highway-style trailer haulage*. 14 May 2012.

Safety Bulletin 119 *Explosion-protected diesel engine system standard updated*.  
15 February 2012.

[www.mines.industry.qld.gov.au/safety-and-health/mines-safety-bulletins.htm](http://www.mines.industry.qld.gov.au/safety-and-health/mines-safety-bulletins.htm)

## **Serious accidents and high-potential incidents**

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for July 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for August 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for September 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for October 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for November 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for December 2011.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for January 2012.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for February 2012.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for March 2012.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for April 2012.

Serious accidents and high potential incidents—Mining and Quarrying—Compilation of reports for May 2012.

[www.mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm](http://www.mines.industry.qld.gov.au/safety-and-health/accident-incident-reports.htm)

## **Significant incident reports**

Significant incident report 78 *Longwall shearer frictional ignition hazard*. 10 August 2011.

[www.mines.industry.qld.gov.au/safety-and-health/significant-incident-reports.htm](http://www.mines.industry.qld.gov.au/safety-and-health/significant-incident-reports.htm)

## **Papers**

Tilbury, T. & Sanderson, L. (2012) 'Using MSD prevention for cultural change in mining: Queensland Government/Anglo Coal Industry partnership'. *Work*, Vol 41, 1. pp 4457–59.

## Our staff

### **Recruitment and retention activities**

Mining in Queensland has grown significantly over the last few years and, despite a minor downturn in employee numbers due to the global financial crisis, numbers are again on the rise. As at 30 June 2012 there were more than 54 000 employees in Queensland's mining sector.

Increased industry activity has led to a continuing shortage of trained staff and the possible risk exposure of untrained or poorly trained workers on mining sites.

Because all coal mine inspectors (mining) are required to hold statutory certificates of competency, the department has continued to recruit people with international experience from interstate and overseas who will be able to obtain Queensland statutory certification in a short period of time. The QMI is exploring new areas of expertise including South Africa. In this way, we will ensure the correct level of competence and numeric strength to continue regulatory inspection at a high level, particularly with respect to underground coal mines.

We, as the mine safety and health regulator, are working diligently to ensure sufficient suitably qualified individuals will continue to be available, so that the mining industry can maintain sustainable growth within the regulatory requirements to maintain world's best practice with respect to safety and health in the mining industry.

*Table 4 Positions supporting the activities and functions of the Queensland Mines Inspectorate*

Unit	Location	Positions	
		Title	Number
Queensland Mines Inspectorate	Central Region: Rockhampton	Manager, Safety and Health	1
		District Inspector of Mines	1
		Inspector of Mines (Electrical)	1
		Inspector of Mines	5
		Principal Investigation Officer	1
		Inspection Officer (Mechanical)	1
		Senior Administration Officer	1
		Administration Officer	3
	Central Region: Mackay	District Inspector of Mines	1
		Senior Inspector of Mines (Electrical)	1
		Inspector of Mines (Mining)	6
		Inspector of Mines (Mechanical)	1
		Inspector of Mines (Senior Principal Occupational Hygienist)	1
		Inspector of Mines (Senior Principal Ergonomist/Principal Human Factors Adviser)	1
		Principal Investigation Officer	1
		Administration Officer	2
	North Region: Townsville	Manager Safety and Health	1
		Senior Inspector of Mines	1
		District Inspector of Mines	1
		Inspector of Mines (Small Mines)	1
		Inspector of Mines	2
		Senior Principal Occupational Hygienist	1
		Principal Investigation Officer	1
		District Workers Representative	1
Administration Officer	2		

Unit	Location	Positions	
		Title	Number
	North Region: Cairns	Inspector of Mines (Mechanical)	1
	North Region: Mount Isa	District Inspector of Mines	1
		Inspector of Mines (Electrical)	1
		Inspector of Mines (Chem/Metallurgical)	1
		Inspector of Mines (Geomechanical)	1
		Inspector of Mines	2
		Inspection Officer (Mechanical)	1
		Administration Officer	1
	South Region	Regional Inspector of Mines	1
		Inspector of Mines (Electrical)	1
		Inspector of Mines (Mechanical)	1
		Inspector of Mines (Small Mines)	1
		Inspection Officer	1
		Principal Investigation Officer	1
		District Workers Representative	2
		Administration Officer	1
	Head Office Inspectorate	Chief Inspector of Mines	1
		Chief Inspector of Coal Mines	1
		Deputy Chief Inspector of Coal Mines	1
		Senior Inspector of Mines (Mechanical)	1
		Senior Inspector of Mines (Electrical)	1
		Senior Inspector of Mines	1
		Executive Assistant	1
Health Surveillance Unit	Head Office	Health Surveillance Manager	1
		Statistician	2
		Occupational Physician (part-time)	1
		Senior Occupational Health Advisor	1
		Administration Officer	1
		Administration Officer (Medical Records Officer)	1
Board of Examiners	Head Office	Secretary, Board of Examiners	1
		Administration Officer	1
Directorate	Head Office	Commissioner for Mine Safety and Health/Deputy Director-General Safety and Health	1
		Executive Director Statewide Operations	1
		Principal Advisor Policy and Coordination	2
		Principal Project Officer	1
		Training Officer	1
		Executive Officer	1
		Levy Administration Officers	3
		Senior Administration Officer	1
		Lotus Notes Developer	1

**Note:** The positions listed in this table are restricted to those directly aligned with or who support the functions and activities of the QMI. However, it should be noted that the directorate positions also provide the same support for the Explosives Inspectorate and the Petroleum and Gas Inspectorate.

# Looking ahead: the Queensland Mines Inspectorate's strategic priorities

## ***Safety and health management systems***

Many in the industry agree that safety and health management systems have become overly complex and they are in danger of losing their effectiveness. The Chief Inspector of Mines has addressed numerous industry groups on this topic.

The QMI, with a number of senior safety professionals and industry safety and health representatives (ISHRs), has commenced a discussion and study group to assess how plans can be simplified while remaining effective for those conducting the task.

Due to other commitments, this project has been delayed but it is intended to recommence in the near future.

## ***Management of contractors***

The effective management of contractors is a continuing concern. The QMI will audit and inspect contractor managements systems and induction programs.

## ***Contract statutory officials***

The level of commitment to and compliance with the legislation by some statutory officials is still a concern for the QMI. Despite the fact that one explosion risk zone (ERZ) controller surrendered his certificate as a result of compliance action by the department and another two were successfully prosecuted, another contract ERZ controller was questioned over his failure to comply with legislative requirements.

The QMI will continue to pursue all officials, contract or not, who do not discharge their obligations to the letter of the law.

## ***Competency of appointed persons***

The QMI will be auditing persons appointed to the management structure at coal mines and also the competencies held to be a supervisor. A number of people being appointed to senior positions do not, in the Inspectorate's opinion, have the competencies to effectively manage the risks associated with various hazards on mine sites.

## ***Ergonomics (whole-body vibration)***

Significant research work is still being carried out by Safety and Health Group into the effective ergonomic design of equipment; in particular, the relationship between seating design and whole-body vibration (WBV).

WBV information sheets, toolbox talks and 'train the trainer' packages for the coal industry were sent out to all coal mines and site safety and health representatives (SSHRs) in a DVD. The project was part of a HIAC initiative for the benefit of the mining industry. The packages received positive feedback.

All surface coal mines and construction sites on coal mining leases were sent a WBV self-assessment form to identify how WBV is being managed on-site. The results of the surveys will establish priorities for the QMI and coal mines.

## **Recognised training organisations**

The QMI continues to receive complaints about registered training organisations (RTOs). As stated in previous reports, current legislative powers give us very little power to act decisively but where we can we will if it is proved RTOs are not training or assessing in line with published standards. However, we will remind all organisations engaging RTOs that they have much greater power than the QMI. These organisations have the power to engage or not to engage such organisations.

## **Proximity detection**

The QMI continues to investigate and encourage the use of collision-avoidance equipment, incorporating proximity-detection and warning systems. These systems are designed to reduce the risk of mine vehicles colliding with moving or stationary objects. Their use will prevent harm to people and damage to property. The QMI is monitoring promising emerging innovations in these systems and is assessing their suitability for mining operations.

By the time this report is published inspectors will have viewed the first underground coal trial of a promising IS (intrinsically safe) system which is scheduled to occur on 2 August 2012 at Peabody's North Goonyella mine.

## **Fatigue**

Significant work has been undertaken by the Coal Mining Safety and Health Committee and the Metalliferous and Quarries Safety and Health Committee on the vexatious question of fatigue. When the new committees meet next we hope they will endorse draft Queensland Guidance Note 16: *Guidance Note for Fatigue Risk Management* and the document can be released to industry.

## **Small Mines Initiative**

The Small Mines Initiative continues to be a strategic priority for the QMI.

The QMI will continue to run workshops to train gem and opal miners to develop a basic safety and health management systems training and the fundamentals of risk management.

Similar training will also be provided to the site senior executives of the many new small quarries that are being established to satisfy the demand for quarry products from regional councils' flood reconstruction programs. Stage 2 of the small mines initiative involving opal and gemstone miners will be completed by the end of calendar year 2012.

Most existing small mines and quarries in the State participated in the small mines safety and health management system training. Follow-up audits and inspections of these small operations indicate that the site senior executives require further training and support to assist them with effectively implementing their systems.

Support is needed for risk management practices (particularly those associated with ground control, traffic management and maintenance activities), contractor management, supervision, training and competency assessment. Training material will be developed and workshops arranged to meet this need.

Following on from the publication of the popular practical guides *Slope stability field book* and *Traffic management booklet* which were developed with assistance from quarrying industry representatives and the Institute of Quarrying Australia, another guide will be published by the end of 2012: *Working safely with electricity field book*.

## ***Exploration safety guidance***

Significant expansion in exploration activities in the coal and metalliferous sectors across the State prompted a review of the Minerals Exploration Safety Guidance Note which was last updated in 2004. The review is being conducted by a small team that comprises QMI officers and experienced exploration industry representatives. After its publication in early 2013, the review team will present the new document to the industry at a statewide series of workshops.

In conjunction with the revision of the guidance note, a seminar addressing legislative requirements and general safety at exploration sites was scheduled to be held at the end of August 2012. All major exploration companies and drillers have been invited to attend. Going forward from this, additional inspections will be undertaken to ensure compliance.

## ***Mining face risk reduction***

In recent years there were fewer rockfall incidents in underground metalliferous mines. However, at the development mining face, where mining crews are interacting closely with the exposed rock face, rockfall incidents have increased. Consequently a specific project to reduce the risks of working at the mining face will be undertaken in 2012–13. The project will focus on managing the risks of rockfalls at the mining face and unplanned detonation of misfires in the mining face.



*Occupational Hygiene survey in progress, Senior Occupational Hygienist Deborah van Zanten*

# Appendix 1: National Mine Safety Framework 2011–12

One of the Council of Australian Government regulatory reforms is to implement the NMSF to create a nationally consistent health and safety regime in the Australian mining industry by delivering the following strategies:

1. nationally consistent legislative framework (consistent with the provisions of the nationally uniform workplace health and safety model legislation)
2. competency support
3. compliance support
4. nationally coordinated protocol on enforcement
5. consistent and reliable data collection and analysis
6. effective consultation mechanisms
7. collaborative approach to research.

The information below details the progress made against key milestones:

## **Strategy 1. Drafting instructions for a nationally consistent legislative framework**

NMSF Mining Work Health and Safety Mines Regulations (Chapter 10) are now in their 18<sup>th</sup> version and are close to finalisation.

As an adjunct to Strategy 1, New South Wales, Queensland and Western Australia are developing legislative proposals in addition to Chapter 10, to provide mine safety regulations suited to the level of mining activity in those states and with consistent operational provisions.

It is anticipated that New South Wales, Queensland and Western Australia will implement new mine safety provisions during 2013.

## **Strategy 2. Industry competency**

A proposal is being developed to establish a training and competencies advisory committee to provide oversight and consistency in training and competency requirements across New South Wales, Queensland and Western Australia.

## **Strategy 3. Finalise development of an online repository of compliance information to assist duty holders by December 2010**

The Compliancegate site was established prior to the 10 August 2010 NMSF Steering Group meeting where it was demonstrated by Professor David Cliff, from the Minerals Industry Safety and Health Centre (MISHC), University of Queensland. Feedback from jurisdictions was sought at, and subsequent to, the meeting. The site became publicly available on 4 March 2011.

[www.mirmgate.com/index.php?gate=compliancegate](http://www.mirmgate.com/index.php?gate=compliancegate)

## **Strategy 4. Establish a national regulators forum by June 2010**

The national regulators forum is currently expected to take place on 1–2 November 2012 with the objective of establishing a nationally consistent approach to regulatory enforcement.

## **Strategy 5. Progress of the database for consistent and reliable data analysis**

SRA Information Technology was approved as the preferred tenderer at an SCER standing committee of officials meeting on 18 April 2011. The milestone for the finalisation of the database was delayed because the development was not completed until May 2012. However, SRA Information Technology is currently reviewing an agile development model, which may shorten the development timeline and bring this date forward. This delay did not affect the achievement of the 2012–13 milestones for jurisdictions to commence inputting data into the national database from 1 July 2012.

### **Strategy 6. Effective consultation mechanisms**

The work on this strategy involved the development of a national consultation framework that identified broad legislative requirements regarding the duty of an employer to consult, and how and when consultation should occur. The consultation framework was endorsed in the NMSF implementation report, and effectively wrapped up into the NMSF legislative framework drafting instructions.

### **Strategy 7. Research strategy overview**

The University of Queensland's MISHC hosts a repository for research material on its Minerals Industry Risk Management Gateway (MIRMgate) site. It contains a comprehensive library of information related to hazard and risk management in the mining, minerals processing and quarrying industries. MIRMgate provides direct access to online resources.

## Appendix 2: Workshops, seminars, conferences, presentations 2011–12

This year we travelled around the country to share information about the QMI's work with industry, interstate regulators and others interested in improving safety and health in the mining industry.

Date	Audience	Topic	Presenter/s	Location
1 July 2011	Institute of Quarrying Australia	Improving electrical efficiency in quarries	Lionel Smith	Melbourne
7 July 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshop	Phil Casey Steve Firth	Winton
18–19 July 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Graham Callinan	Mackay
20 July 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Wayne Scott Simon Cole	Brisbane
27 July 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Phil Casey Steve Firth	Mareeba
27 July 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Wayne Scott Simon Cole	Brisbane
4 August 2011	CEO General Forum	Proximity detection systems	Tilman Rasche Peter Herbert	Brisbane
9 August 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Phil Casey Steve Firth	Winton
21–24 August 2011	Queensland Mining Industry Health and Safety Conference	Pike River overview	Ken Singer Wayne Hartley (QMRS) Stewart Bell	Townsville
21–24 August 2011	Queensland Mining Industry Health and Safety Conference	Formal close of conference	Stewart Bell	Townsville
26 August 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Wayne Scott Simon Cole	Brisbane
13 September 2011	Queensland police	Role of the QMI	Simon Cole	Charleville

Date	Audience	Topic	Presenter/s	Location
13 September 2011	2011 Mining Industry Skills Centre Conference and Training Awards	Combined training network workshop	Trevor Brown	Brisbane
28–29 September 2011	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Graham Callinan Gary Barton	Sapphire
19 October 2011	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Toowoomba
2 November 2011	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Gladstone
9–10 November 2011	NSW Electrical Engineering Safety Seminar	The Dawson Arc flash incident	Neville Atkinson	Sydney
		Australian Standards	Peter Herbert	
18 November 2011	Mining industry	2011 Mines Inspectorate annual briefing to industry leaders	Stewart Bell, Paul Harrison John Kabel Rob O'Sullivan Ken Singer Gavin Taylor	Brisbane
22 November 2011	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Brisbane
3 December 2011	29 <sup>th</sup> Australian Institute of Occupational Hygienists Annual Conference	Health effects of hand–arm and whole–body vibration (workshop co-presenter)	Trudy Tilbury	Brisbane
6 December 2011	29 <sup>th</sup> Australian Institute of Occupational Hygienists Annual Conference	Exposure to isocyanates during the injection of polyurethane resins used for ground stabilisation	Fritz Djukic	Brisbane
16 January 2012	Underground coal industry	Meeting to review the parts of the Jason Blee fatality that involved the shuttle car; as required by Coroner's Recommendation #9	Bruce McKinnon Peter Herbert	Mackay
7 February 2012	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Brisbane
20 February 2012	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Cairns

Date	Audience	Topic	Presenter/s	Location
22 February 2012	Electrical Safety in the Resource Industry Conference	Electrical safety in Queensland	Lionel Smith	Perth
28 February 2012	Mining industry	Training and competency assessment workshop (Standard 11)	John Sleigh Trevor Brown	Emerald
1 March 2012	Mining industry	Training and competency assessment workshop (Standard 11)	Trevor Brown Ken Singer	Toowoomba
14 March 2012	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Trevor Brown	Chinchilla
16–20 April 2012	Coal mining industry	Board of examiners roadshow: How to be an effective statutory official	John Sleigh Ken Singer	Mackay, Moranbah, Middlemount, Emerald
24 April 2012	7th Annual Small Mines and Quarries Safety and Health Seminar	Contractor management	Mark Parcell	Townsville
		Dust exposure profiles in quarrying	Mark Desira	
		Queensland response to the Pike River mine disaster	Ken Singer	
		Slope stability	Katie Ormonde	
		2011 accidents and incidents	Hermann Fasching	
		Mines Inspectorate update	Rob O'Sullivan	
16–17 May 2012	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Graham Callinan	Sapphire
17 May 2012	Site senior executives	Department views, SSE training course	John Smith	Brisbane
22 May 2012	Quarry industry	Electrical awareness for quarry managers and supervisors	Lionel Smith Neville Atkinson Paul Sullivan	Mackay
24 May 2012	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Wayne Scott Gary Barton	Brisbane
25 May 2012	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Graham Callinan	Rockhampton
5–6 June 2012	Opal and gemstone industry	Opal and Gemstone Safety and Health Management Systems Workshops	Graham Callinan Andrew Broadfoot	Sapphire
13 June	10 <sup>th</sup> Annual	Welcome address	Stewart Bell	Brisbane

<b>Date</b>	<b>Audience</b>	<b>Topic</b>	<b>Presenter/s</b>	<b>Location</b>
2012	Quarrying Safety and Health Seminar	Harmonisation	Rob O'Sullivan	
		IQA Safety Awards	Wayne Scott	
20–21 June 2012	Opal and gemstone industry	Opal and gemstone safety and health management systems workshops	Simon Cole Gary Barton	Sapphire

## Appendix 3: Training and professional development 2011–12

As a regulator, the QMI's role is to ensure acceptable safety and health standards are established and practised within the mining and quarrying industries and to enforce compliance. The QMI relies on its inspectors to carry out audits, investigations and inspections to monitor and enforce compliance. As such, the inspectors need to be highly skilled and to have a thorough understanding of issues facing the industry. To this end, the QMI requires its inspectors to undergo comprehensive training to ensure their skills and knowledge are current and relevant. The courses and training programs undertaken by QMI in 2011–12 are given in the table below.

<b>Courses undertaken by mines inspectors in 2011–12</b>	
Managing major incidents and emergencies	Promoting the values and ethos of public service
Participating in the investigation of incidents	Establishing and maintaining the OHS management system
Giving evidence	Establishing and maintaining the risk management system
Managing conflict	Investigating complex issues
Establishing effective workplace relationships	Managing emerging issues
Using complex workplace communication strategies	Auditing management systems
Promoting compliance with legislation in the public sector	Incident Cause Analysis Method / Human Factors
Report writing skills	Master class on investigations / Crown Law investigations workshops
Diesel engine systems	Automotive training
Mine ventilation systems	Drilling rigs—conventional and CSG rigs
Occupational hygiene	Mines rescue
Manage and lead inspection and monitoring programs	Manage regulatory compliance
Manage knowledge and information	Direct complex project activities
Contribute to the development and revision of legislation and related documents	Investigate breaches of workplace legislation