

minesafe

WESTERN AUSTRALIA

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Government of Western Australia
Department of Mines and Petroleum
Resources Safety

Conveyors – guarding against inadequacy

TOOLS TO HANDLE WORKPLACE
OSH ISSUES

FEEDBACK SOUGHT ON
DRILLING CODE OF PRACTICE

MINES SAFETY PRIORITIES FOR
THE REGULATOR



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Welcome to the third and final issue of *MineSafe* for 2011. Consultation and communication feature strongly in this issue. We want to hear what you think about the recommendations from the MIAC review, and also the content and structure of the draft code of practice for mineral exploration drilling. You are also invited to participate in various activities to identify regulatory priorities for mines safety in Western Australia.

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Several articles summarise the year that was for the State, and there is information about international organisations responsible for safety and health at the global level. Those involved with explosives on mine sites should check out the dangerous goods section for the latest news.

This issue contains wide-ranging reports on safety alerts, guidance materials and emergency response competitions. It is particularly pleasing to see the rising number of safety and health representatives in the mining industry, with the rate of increase exceeding workforce growth.

As always, enjoy your reading.

Malcolm Russell
Executive Director, Resources Safety

HARMONISATION OF OCCUPATIONAL HEALTH AND SAFETY LAWS

In 2006, the Council of Australian Governments identified occupational health and safety laws across Australia as a priority area for business regulation reform. It was subsequently agreed that the best way to achieve the desired reform was to develop a model Act and model Regulations, supported by national Codes of Practice.

Each jurisdiction undertook to pass its own laws to mirror the model laws, but they retained the right to keep specific provisions which were in the best interests of industry and workers. An example of this would be where a particular jurisdiction wished to retain prescribed consultative arrangements, such as the Western Australian Mining Industry Advisory Committee.

Progressively, the model Act, model Regulations and Codes have been subject to public consultation. The model Act itself evolved from the findings of an independent review of Australian workplace safety laws carried out in 2008, and that review also included extensive public consultation.

The three primary mining states of Western Australia, New South Wales and Queensland have also agreed that the model regulations as drafted (known as the "core" regulations) were not sufficient to cover all the particular work situations that are experienced in the mining industry. Underground ventilation, access and egress from underground workings and naturally occurring radiation are obvious examples where general workplace regulations would not suffice. For this reason, these three jurisdictions are developing a set of stand-alone "non-core" regulations, which will be subjected to public consultation before finalisation.

The current state-of-play in Western Australia is that mirror legislation is being drafted that will repeal and replace the existing *Mines Safety and Inspection Act* and *Occupational Safety and Health Act* at the same time, on a date to be determined by Government. Until then, the existing Acts and regulations continue to apply to Western Australian workplaces.

We will keep you informed of developments throughout 2012.

WANT TO KNOW MORE?

Visit Safe Work Australia's website at www.safeworkaustralia.gov.au or check out recent back issues of *MineSafe* magazine for more information on the harmonisation process.

COMMENT SOUGHT FOR MIAC REVIEW

An independent review of the Mining Industry Advisory Committee (MIAC) was commissioned in 2011 by the Department of Mines and Petroleum to evaluate the performance and effectiveness of the committee. The report was provided to the Minister for Mines and Petroleum, who has requested industry feedback on the review and its recommendations.

WHAT IS MIAC?

Established in April 2005, MIAC is a statutory advisory body on matters relating to occupational safety and health in the mining industry. Its key objectives are listed below.

- Advise and make recommendations to the Ministers responsible for occupational health and safety (OSH) in Western Australia and the Commission for Occupational Safety and Health (the Commission) on OSH matters concerning the mining industry.
- Liaise with the Commission to coordinate activities on related functions and to maintain parallel standards.
- Inquire into and report to the Ministers regarding any matter referred to it by the Ministers relating to occupational safety and health in the mining industry.
- Make recommendations to the Minister for Mines and Petroleum regarding the formulation, amendment or repeal of laws relating to occupational safety and health for which that Minister is responsible.

- Prepare or recommend the adoption of codes of practice, guidance material, standards and specifications or other forms of guidance for the purpose of assisting employers, self-employed persons, employees, manufacturers or other persons to maintain appropriate standards of occupational safety and health in the mining industry.
- Provide advice on education and publications, and training and training courses, with respect to occupational safety and health in the mining industry.

The MIAC report and further information about MIAC, including current membership and meeting minutes, can be accessed at www.dmp.wa.gov.au/ResourcesSafety via the "What's new in mining safety and health" link.

Please submit any feedback on the review and recommendations to the MIAC Executive Officer at RSDComms@dmp.wa.gov.au by Friday, 24 February 2012.



REGULATORS MEET IN DARWIN

The 2011 Conference of Chief Inspectors of Mines (CCIM) was held in Darwin from 4 to 9 September, and hosted by NT WorkSafe and the Northern Territory Department of Resources. Some of the outcomes are summarised below. Visit www.ga.gov.au/ccim for more information.

FATALITIES AND SERIOUS INCIDENTS

A significant activity for the CCIM is to review the circumstances involved in fatalities and serious incidents over the previous twelve months, and share the findings. For 2011, the three common contributory factors identified were:

- inappropriate use of risk analysis tools
- ineffective supervision
- poor change management practices.

In Western Australia, Resources Safety will continue to raise awareness of these causal factors through its compliance audits and inspections, as well as *MineSafe* magazine and roadshow program.

NATIONAL MINE SAFETY FRAMEWORK

The National Mine Safety Framework (NMSF) Steering Group Secretariat provided an update on implementation of the NMSF as well as the national occupational health and safety harmonisation process, particularly in relation to work on the “non-core” drafting instructions, which address additional regulatory provisions for mining required by Western Australia, Queensland and New South Wales.

Development of the National Mine Safety Database, which will provide mine sites and regulators with a data reporting and statistical analysis tool, is expected to be completed in early 2012.

GOVERNANCE ISSUES

The CCIM promotes the implementation and maintenance of the NMSF and harmonisation as applied to mining occupational health and safety legislation. As the peak forum for mining regulators, it has proved to be effective in sharing knowledge and developing consistency, in the spirit of harmonisation.

INSPECTOR TRAINING INITIATIVES

The CCIM reviewed each jurisdiction’s inspector training initiatives and agreed on a process to share training information.

NATIONAL MINING INDUSTRY SAFETY HANDBOOK

New South Wales provided an update on revision of the *National Mining Industry Safety Handbook*, which is likely to be completed during 2012 when the final form of the harmonised mining occupational health and safety legislation is known.

A world map with a grid overlay. A red location pin is placed over Darwin, Australia, with the word "DARWIN" written in white inside the pin. The map is primarily blue, with landmasses in a light tan color.

WHAT IS CCIM?

The Conference of Chief Inspectors of Mines (CCIM) is a consultative forum drawing its members from the mines inspectorates of Australia, New Zealand and Papua New Guinea. The Chief Inspectors of Mines are the most senior technical officers with regulatory responsibility and accountability for mining operations in each jurisdiction.

The role of the CCIM is to provide high level technical advice to governments and to take the lead to improve safety and health outcomes for a sustainable Australasian mining industry.

The CCIM meets annually, and ongoing issues are dealt with out-of-session. The CCIM Chair rotates annually among member jurisdictions. The Commonwealth, through Geoscience Australia, provides administrative and secretariat support.

The CCIM's primary task is facilitating in the development and implementation of a more consistent nationwide approach to mine safety and health. CCIM members contribute to the National Mine Safety Framework (NMSF) through their representation on the NMSF Steering Group and their active participation in the working parties for the seven framework strategies.



Andrew Gunua (left) with Collie-based mines inspector Aaron Graham SH

RESOURCES SAFETY HOSTS PM'S 2011 PACIFIC AWARD RECIPIENT

In late 2011, Resources Safety hosted Andrew Gunua, the Prime Minister's 2011 Pacific Award recipient. Funded by the Australian Federal Government, this award gives recipients from the Pacific region an opportunity to undertake a practical work placement after completing their Australian postgraduate studies in Australia.

Andrew came to Perth from Papua New Guinea as part of the Pacific Award program in mid-2009 to study a Masters in Mineral and Energy Economics at Curtin University of Technology. He completed his degree in June 2011.

Following his studies, Andrew was offered three months' work experience at Resources Safety to gain further technical skills relevant to his postgraduate study. The placement was organised by the Australian Agency for International Development (AusAID). The Pacific Award program covers all costs of a recipient's placement and asks that the host organisation provides a mentor or supervisor for the duration of the placement.

"I chose to complete my Masters in Perth because Western Australia is booming with mining and petroleum activities", said Andrew, "and Curtin University provided advanced knowledge in the field of mining, petroleum and economics".

He said that the placement provided mining engineering experience and increased his understanding of Australian workplace culture and protocols.

"My time at Resources Safety has given me a better understanding of operational practices and functions in Western Australia's mining sector", Andrew said.

"I learnt about the roles of mines inspectors, operational plans and inspectorate boundaries, dangerous goods safety, investigation processes and procedures, policy and the regulatory framework."

Before coming to Perth, Andrew completed an undergraduate degree in mining engineering. He has returned to Papua New Guinea with plans to work in a government office similar to the Department of Mines and Petroleum.

ROADSHOWS INCREASE OPPORTUNITIES FOR CONSULTATION

MINES SAFETY ROADSHOW 2011

In October 2011, Resources Safety took the seventh annual Mines Safety Roadshow series to Perth and the regional centres of Port Hedland, Karratha, Newman, Bunbury and Kalgoorlie. The 2011 series was opened in Perth by the Minister for Mines and Petroleum, the Hon Norman Moore MLC.

There were about 500 industry participants, representing a range of industry perspectives including managers, supervisors, directors, safety and health representatives, occupational safety and health (OSH) officers and consultants.

Mental health and its impact on safety outcomes in the workplace was a focus of the program. Presenters from the Australasian Centre for Rural and Remote Mental Health (ACRRMH) led the workshop. Drs Jennifer Bowers and Jane Harte spoke about a sustainable mental health “road map” for the mining industry so the issue is addressed strategically and integrated with other occupational safety and health issues.

Overall, audiences reacted positively to this subject and the engaging forum in which it was conducted. This was particularly so in the regions where the groups were smaller. A creative environment was also inspired by John Schumann sharing his experiences — he wrote the song “I was only 19” and had just returned from a Department of Defence entertainment tour of Afghanistan.

The workshop provided an example of how workplaces could start the conversation about mental wellbeing and its importance for a safe workplace. There was a strong call from participants at all venues for further discussion regarding practical ideas to address the mental as well as physical health components in safety management systems.

EXPLORATION SAFETY ROADSHOW 2011

In December 2011, some ninety industry representatives attended the fourth annual Exploration Safety Roadshow series presented by Resources Safety in Kalgoorlie and Perth.

As well as presentations by Resources Safety staff, James Colby and Simon Fitzgerald from the Australian Drilling Industry Association explored the topic of drilling performance bonuses and penalties and their influence on safety outcomes.

A key objective of the roadshow was to consult with industry on the proposed structure and content of the draft code of practice on mineral exploration drilling before its formal release for public comment in 2012. Discussions about the hazard chapters continued beyond the advertised finish times in both venues. Participants are thanked for their constructive input and suggestions.



ACRRMH presenters John Schumann and Jennifer Bowers (back row) with participants at the 2011 Mines Safety Roadshow in Port Hedland

► **MINES SAFETY ROADSHOW**



Perth NE



Perth DH



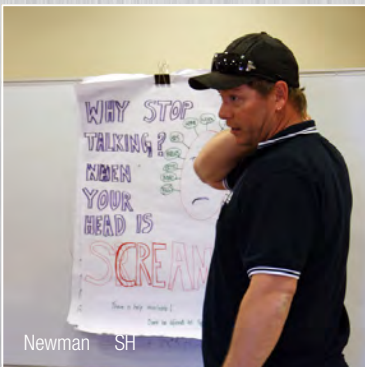
Port Hedland NE



Karratha NE



Newman SH



Newman SH



Bunbury NE



Bunbury NE



SH



NE



Kalgoorlie SH

▼ ACRRMH presenter Jane Harte in Kalgoorlie talking about the importance of mental wellbeing in the mining industry

▲ Mines inspector Peter O'Loughlin (left) was joined in Bunbury by DMP Director General Richard Sellers, who drove from Perth to participate

► **EXPLORATION SAFETY ROADSHOW**



Perth SH



Resources Safety's Mines Inspectors Forum, November 2011

Left to right: Bob Hirte (Rio Tinto OSH expert who worked with Resources Safety in 2011), Barry Healy (Resources Safety's Training and Education Officer), Malcolm Russell (Executive Director, Resources Safety) and Simon Ridge (State Mining Engineer)

2011 WAS A MOMENTOUS YEAR OF CHANGE

Both the Department of Mines and Petroleum and the industry it serves have seen momentous change during 2011. Industry has bounced back from the slight shrinkage of employment statistics in 2010 to record employment levels and investment. A number of major expansion projects are reaching the production stage, while new expansions are leaving the drawing board and creating additional employment opportunities.

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There is no reason to believe that this trend is about to reverse. Such unprecedented growth brings with it significant risks, which must be diligently managed. These include an influx of less-experienced workers, which presents a particular challenge to supervisors, trainers and safety and health representatives.

Employers also face the challenge of maintaining a stable workforce when individuals may be attracted to different rosters or newer camps, leading to the unwanted outcome of high staff turnover. Such factors can adversely influence safety performance.

The mines inspectorate is also subject to similar pressures. During 2011, the safety regulator was able to recruit, train and graduate 22 new inspectors. The next challenge is to use this additional resource productively.

The Reform and Development at Resources Safety initiative, commonly termed RADARS, is beginning to bear fruit. One example is the establishment of focus groups tasked with developing programs that address "big ticket" items in the industry's safety lexicon. The inspectorate has actively sought input from stakeholders in the development of new approaches for issues such as submissions for high voltage installations, working at heights underground and a risk-based framework for CONTAM quota setting. Focus groups are also involved in drafting guidance for topics as diverse as exploration drilling safety and the role of gendered behaviours in determining safety outcomes (i.e. toughness in mining). The work of the focus groups is based on industry input and analysis of incidents. Such initiatives and the ongoing work of the focus groups will ensure a consistent and measured approach to real issues in the mining safety arena.

Although the Department has just completed Phase 5 of the RADARS-related recruitment project, we will continue to seek suitable specialists in the fields of mining, mechanical and structural engineering to deliver the required level of regulatory services.

Simon Ridge
State Mining Engineer

DMP LEGISLATIVE PROGRAM AS AT 31 DECEMBER 2011

DANGEROUS GOODS SAFETY

Resources Safety continues to progress amendments to reduce the regulatory burden and streamline administrative processes associated with dangerous goods safety legislation. Amendments to the explosives regulations are expected to be gazetted within the coming months, with changes to the regulations on the storage and handling of non-explosives anticipated shortly.

The licensing structure for dangerous goods sites in Western Australia is being overhauled. Amendments will also include the introduction of a cost-recovery regime for the regulation of dangerous goods safety. In response to requests from industry, there has already been a move from three-year terms to annual licensing, as allowed by recent amendments to the regulations, in preparation for the licensing changes.

PETROLEUM AND GEOTHERMAL ENERGY SAFETY LEVIES

The *Petroleum and Geothermal Energy Safety Levies Act 2011* and the *Petroleum and Geothermal Safety Levies Regulations 2011* commence on 1 January 2012. The first levy period will run from 1 January through to 31 March 2012.

GLOBAL BLUEPRINT FOR SAFETY AND HEALTH AT WORK

While there is a natural tendency to focus on what is happening in our own workplaces and industry, it is useful to occasionally cast our gaze wider and see what is happening internationally.

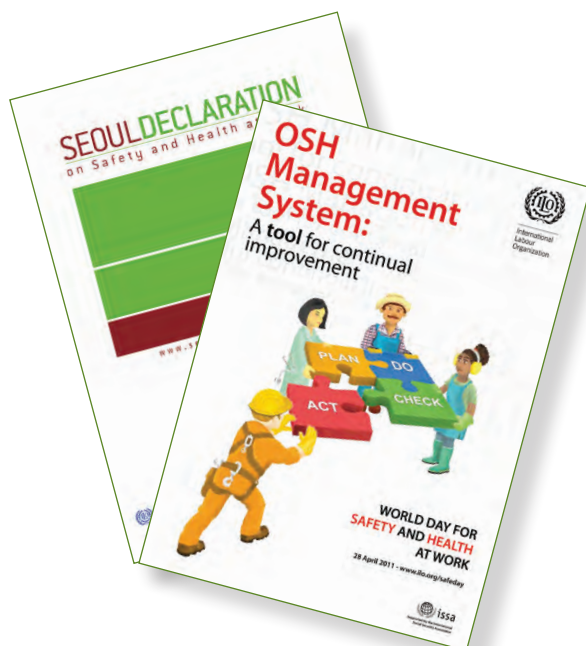
INTERNATIONAL LABOUR ORGANIZATION (ILO)

The ILO is a specialised agency of the United Nations and is responsible for drawing up and overseeing international labour standards, as well as strengthening dialogue on work-related issues. It is the only tripartite UN agency, with government, employer and worker representatives shaping policies and programs promoting "decent work for all".

In April 2011, the ILO published *OSH Management System: A tool for continual improvement*, which provides a succinct introduction to the concepts of hazards and risk reduction, and describes how an OSH management system is useful. The document is available at www.ilo.org in the publications section.

The ILO has also produced some interesting international hazard datasheets on occupations that contain information on the hazards, risks and notions of prevention related to a specific occupation (e.g. shotfirer, arc welder, civil engineer). The database is accessible at www.ilo.org/safework via the information resources section.

CISDOC, a bibliographic database, and ILO's Encyclopaedia of Occupational Health and Safety can be accessed via the statistics and databases section of the ILO website. CISDOC is continuously updated and contains about 70,000 citations of documents dealing with occupational accidents and diseases as well as ways of preventing them. The database contains laws and regulations, data sheets, training material, articles from periodical publications, books and standards.



2008 SEOUL DECLARATION ON SAFETY AND HEALTH AT WORK

The Seoul Declaration on Safety and Health at Work calls for a preventative safety and health culture, which gives the right to a safe and healthy workplace and is respected at all national levels. The Declaration was adopted on 29 June 2008 by the Safety and Health Summit during the XVIII World Congress on Safety and Health at Work.

The signatories commit to actively participate in the securing of a safe and healthy working environment through a system of defined rights, responsibilities and duties, where the principle of prevention is accorded the highest priority.

Visit www.seouldeclaration.org for further information.

INTERNATIONAL SOCIAL SECURITY ASSOCIATION (ISSA)

The ISSA is the principal international institution bringing together social security agencies and organisations. The prevention of occupational accidents and diseases has a high priority in the ISSA's program, and its Special Commission on Prevention initiates, coordinates and conducts international-level activities designed to promote prevention. The Commission also adopts specific positions on important prevention issues.

Visit www.issa.int/About-ISSA/Prevention-Sections for further information.

REPORTING IN THE USA

In late December 2011, the United States Securities and Exchange Commission implemented the Dodd-Frank Wall Street Reform and Consumer Protection Act. According to the Commission Chair, this legislation sets out to reshape the US regulatory landscape, reduce systemic risk and help restore confidence in the financial system.

One of the rules adopted requires mining companies to include information about mine safety and health in the annual and quarterly reports they file with the Commission. These periodic reports must now disclose specific safety and health information that relates to compliance with the US Federal *Mine Safety and Health Act of 1977*, which is administered by the Mine Safety and Health Administration.

The required information includes specified health and safety violations, orders and citations; related assessments and legal actions; and mining-related fatalities.

Visit www.sec.gov/spotlight/dodd-frank.shtml for more information.



MININGFM PRODUCES ANOTHER GEM FOR FAMILIES

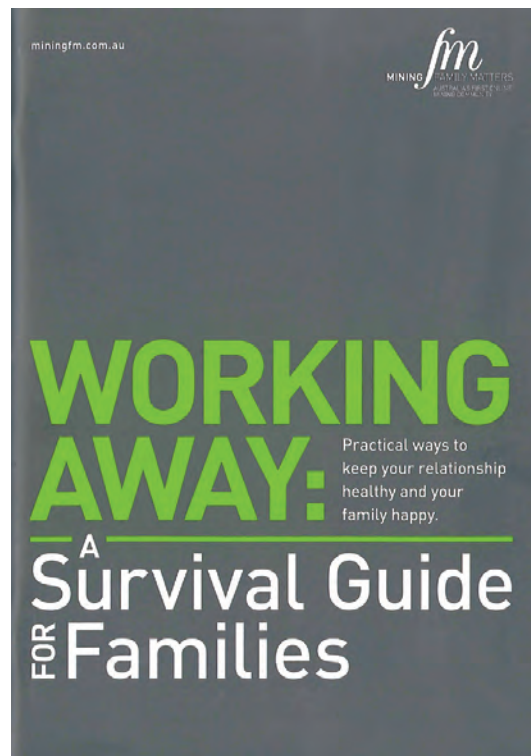
Mining Family Matters' *Survival Guide for Mining Families* booklet, which was launched in March 2011, has been a great success with sales of over 23,000.

With more Australians now working away from home, MiningFM creator Alicia Ranford said that they had been receiving requests from companies and individuals outside mining and resources. So MiningFM has published a new guide *Working Away: A Survival Guide for Families*. *Working Away* is aimed at both new and existing employees to help families handle the pressure of one partner working away from home, regardless of the industry.

Like the original guide aimed at fly-in fly-out (FIFO) families, the latest guide is a practical and straightforward publication. There have been minor changes to the order of topics and information has been added in places to address common online requests. The latest version also has new sections on:

- what to expect in the first few months
- identifying stress and depression
- the art of making new friends.

Visit www.miningfm.com.au for information about how to order the guide or to ask a question.



MORE TO CONTAM THAN MEETING QUOTAS

CONTAM is the Resources Safety database for storing atmospheric occupational hygiene monitoring data submitted by mine sites around the state.

Traditionally, sites have been sent CONTAM quotas representing the minimum number of samples that should be taken for each group of employees exposed to atmospheric contaminants at the site over the next year. The quotas were set by occupational health inspectors based on the information provided by sites in the workforce survey – the number of workers and the contaminants they may be exposed to.

However, the significant increase in mining activity over the last decade or so, coupled with the sheer size and scope of many operations, mean that a quota based solely on the workforce survey may not result in a representative sampling program. In addition, some mines base their monitoring programs on the CONTAM quota system, rather than critically analysing their site's specific needs.

Resources Safety is now moving toward a risk-based system in which mine sites are required to carry out a structured risk assessment of their occupational hygiene hazards. Managers are sent an occupational hygiene risk assessment report template to assist the occupational hygienist or ventilation officer in producing an evidence-based occupational hygiene monitoring program for the site. The completed risk assessment is then sent to Resources Safety to determine the quota.

This process allows sites to better characterise and assess their occupational hygiene hazards, while providing Resources Safety with regulatory oversight of the monitoring programs and their outcomes. This approach should result in more meaningful use of monitoring resources and lead to a more targeted and effective application of controls.

Further information on the CONTAM system, including online sample reporting, is available in the occupational health section of the Resources Safety website.

WHY CONTAM?

CONTAM serves several purposes including:

- ensuring the maintenance of a required standard of occupational health and hygiene management on mine sites in relation to atmospheric contaminant monitoring, assessment and control
- developing a profile of contaminants present on various mine sites
- confirming compliance with occupational hygiene monitoring requirements
- developing and retaining a body of knowledge with regard to the distribution of atmospheric hazards on mine sites, together with employee exposure profiles.

In reality, the onus has always been on the mine site to anticipate, recognise, assess and control their occupational hygiene hazards including:

- atmospheric contaminants such as dusts, fibrous minerals and particulates, gases, smoke and fumes
- noise and vibration
- radiation
- biological hazards
- heat and cold
- ergonomics.

REPORT MISSING EXPLOSIVES

In 2011, Resources Safety received a number of reports of deficient packages of explosives. The reports have covered a range of explosive types, including boosters and cartridge emulsion explosives, and the deficiencies have ranged from one to three items fewer than the number given on the package label.

Some stockholders have advised that the discrepancy was detected at the time of opening the box and counting the contents to confirm quantity. In other instances, the shortfall was not detected until the box was nearly empty, when the remaining quantity did not tally with the stock record.

It is a requirement under the Dangerous Goods Safety (Explosives) Regulations 2007 to keep an accurate account register of stock being stored inside a magazine at all times. A stocktake must be conducted at least monthly. Where there is a discrepancy, an investigation must be conducted to reconcile the difference.

The explosives regulations also require any unexplained loss of an explosive to be reported to the Chief Officer and investigated. The licence holder must report all situations where a case of explosives is found to be missing items.

Where the loss is discovered upon opening a manufacturer-sealed package, the licensee should advise Resources Safety. The regulator will contact the explosives supplier and direct them to investigate the discrepancy and determine the measures required to prevent a repeat incident. Resources Safety needs to be satisfied that the proposed remedial action is sufficient to avoid a recurrence.

Where a discrepancy is identified between the stock physically held inside the magazine and what is recorded in the stock register, and an investigation readily identifies and corrects the problem (e.g. an arithmetical error), it is not necessary to notify the Chief Officer. However, if the discrepancy is not readily explained, it must be reported to the Chief Officer.

Dangerous goods incident reporting forms are available in the forms section of the Resources Safety website.

IS YOUR EXPLOSIVES OR SRS LICENCE STILL VALID?

Both the explosives and security risk substances (SRS) regulations require licensees to specify at least one person who has management responsibility for the safety and security of explosives or SRS at a site.

What you may not know is that a licence ceases to have effect if every individual specified in the licence is no longer involved in management of the site or employed at the site, or ceases to have a security clearance. This action is automatic and not appealable.

Currently, licensees are required to notify Resources Safety of changes in nominated responsible persons. Given the high turnover of personnel in the industry, this has created a considerable and unnecessary administrative load on both the companies and the regulator. Work is now underway to remove this notification requirement.

In consultation with interstate explosives regulators, Resources Safety is also considering the appropriateness of the automatic licence cancellation provisions and possible alternative approaches.

In the meantime, all companies with an explosives or SRS licence should review the status of their responsible persons and confirm that the records held by Resources Safety are current and accurate. It is recommended that at least two, and preferably three, responsible persons are listed on the licence. If your licence has ceased to have effect for the reasons outlined above, you must cease storing and handling the explosives or SRS until you have obtained a new licence.

If you have any questions about these matters, please direct them to dgsb@dmp.wa.gov.au

WHAT'S IN A NAME?

Another common issue for explosives or SRS licences is that the licence is not in the legal name of the entity actually operating the magazines. In some cases, it is another company altogether that should hold the licence. In others, the company has provided its trading name rather than the legal entity name.

Licensees are advised to check their licence documentation and contact Resources Safety to get their records corrected if necessary.

SHOTFIRER TRAINING – NEW COMPETENCIES

The only training course providers accredited to deliver the national units of competency for blasting under the Resources and Infrastructure Industry Training Package (RIIBLA) are those listed on the Resources Safety website in the explosives and fireworks safety guidance section. They have been accredited by the Training Accreditation Council (TAC).

Prospective shotfirer trainees should only obtain training from these organisations as no other training will be accepted by Resources Safety as evidence of competency for a shotfirer licence application.

Shotfirers need to be reassessed against the relevant RIIBLA competencies every five years for licensing renewal purposes.

Visit www.skillsdmc.com.au for detailed information on the national units of competency for blasting.

APPLICATION	UNITS OF COMPETENCY	
For all surface operations outside of town boundaries	RIIBLA205A	Store, handle and transport explosives
	RIIBLA301A	Conduct surface mining operations
	RIIBLA305A	Conduct secondary blasting
For all surface operations <i>inside</i> and <i>outside</i> of town boundaries	RIIBLA205A	Store, handle and transport explosives
	RIIBLA301A	Conduct surface mining operations
	RIIBLA305A	Conduct secondary blasting
	RIIBLA402A	Monitor and control the effects of blasting on the environment
For all underground operations except underground coal operations	RIIBLA205A	Store, handle and transport explosives
	RIIBLA303A	Conduct underground production shotfiring
	RIIBLA304A	Conduct underground development shotfiring
	RIIBLA305A	Conduct secondary blasting
For all underground coal operations	RIIBLA205A	Store, handle and transport explosives
	RIIBLA302A	Conduct shotfiring operations in underground coal mines
	RIIBLA305A	Conduct secondary blasting



ZERO BAC LAWS – CLARIFICATION

The new zero alcohol law, publicised in the September 2011 issue of *MineSafe*, applies to all drivers who transport placarded loads of dangerous goods or drive placarded vehicles of explosives (rather than to the transport of “bulk” dangerous goods).

MINES SAFETY PRIORITIES FOR THE REGULATOR

Resources Safety is committed to open consultation with the mining industry when setting priorities for its annual operational plans.

Individuals and operators can influence the way Resources Safety delivers its safety regulatory services by providing feedback on current activities and information on areas of particular interest or concern. This enables the safety regulator to refine its inspection and audit schedules, and adjust its safety awareness programs, to make the most of the available resources.

In April 2011, Resources Safety hosted an industry workshop attended by representatives from large and small companies, industry associations, and elected safety and health representatives. This independently facilitated forum provided some very useful insights into the views and opinions of key people from the industry we regulate. The outcomes from the workshop were fed into the various compliance monitoring programs for the 2011-12 operating period. Other priorities, such as greater support for safety and health representatives, have led to the establishment of specific focus groups tasked with improving service delivery.

For 2012, we are looking to build on the work of the inaugural workshop and seek broader input through one of the most important events on the Western Australian safety calendar — the 2012 Chamber of Minerals and Energy Safety and Health Conference. The CME Conference will be held on 26 and 27 March 2012 at the Perth Convention and Exhibition Centre. Visit www.cmewa.com for conference registration details.

It is proposed to give industry leaders and delegates to the CME Conference the opportunity to identify and discuss safety and health issues facing the mining sector at this time.

Visit www.dmp.wa.gov.au/events for further details as they become available.

A broader group of industry representatives will be surveyed in early April 2012 to establish their views.

The results of the wide-ranging consultation will be used by Resources Safety to guide the setting of mines safety priorities for the following year.

2012 IMPORTANT DATES

Details will be provided at www.dmp.wa.gov.au/events as they become available.



CME Safety and Health Conference



**Mines Safety Roadshow
Port Hedland**



CME Safety and Health Conference



**Mines Safety Roadshow
Karratha**



**Exploration Safety Roadshow
Kalgoorlie**



**Mines Safety Roadshow
Newman**



**Exploration Safety Roadshow
Perth**



**Mines Safety Roadshow
Bunbury**



**Mines Safety Roadshow
Geraldton**



**Mines Safety Roadshow
Perth**



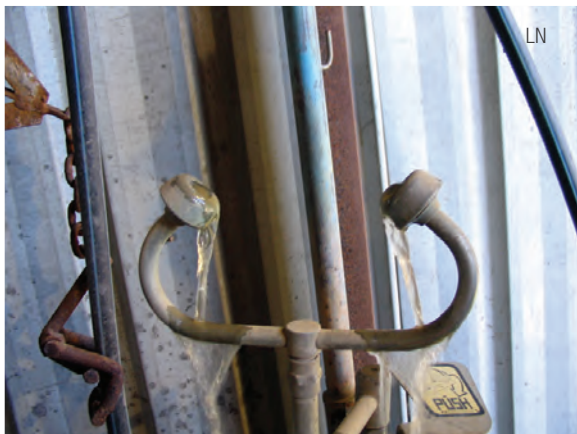
WILL YOUR SHOWER WORK IN AN EMERGENCY?

Site visits by mines safety inspectors and dangerous goods officers over the past year have revealed that far too many safety shower and face or eye wash combination units do not comply with clause 9.5(b) of the current Australian Standard AS 4775:2007 *Emergency eyewash and shower equipment*. That is, the shower and wash components do not perform efficiently when used simultaneously.

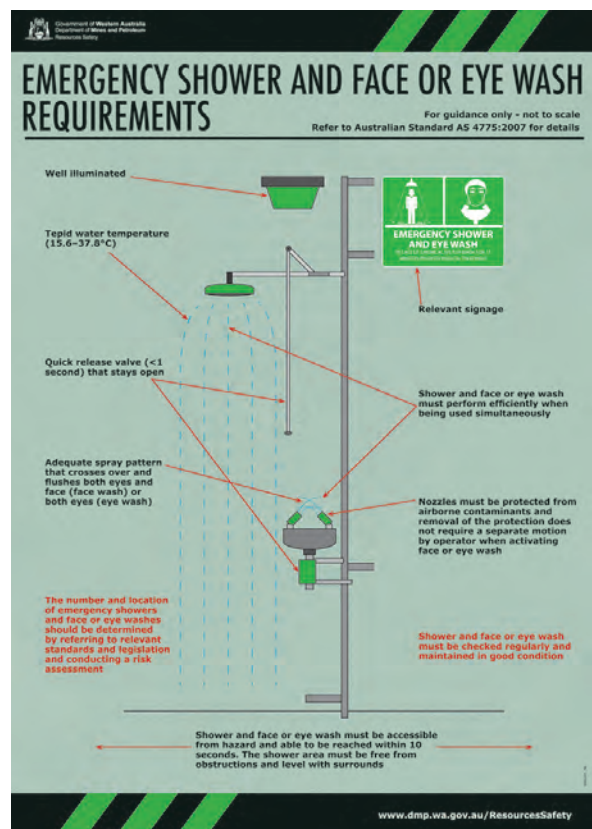
The safety inspections carried out by the regulator have identified the most common fault as water supply pressures that are low and do not meet the manufacturers' minimum requirements.

Not only do showers and face or eye washes need to be regularly checked by the mine operator, they must also be maintained in good condition — no-one wants to discover there is a problem when they already have a hazardous substance on their skin or in their eyes.

To raise awareness of this issue, Resources Safety has produced a poster that summarises the requirements of the Standard, and can be used as a prompt when checking these emergency installations. The poster can be downloaded from the Resources Safety website or ordered in hard copy format.



How useful would this eye wash be in an emergency?





WE CAN HELP

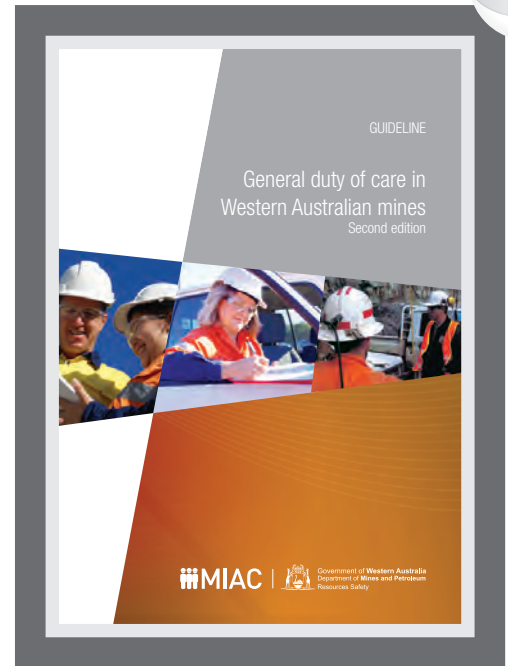
Are you putting together induction or training packs or setting up a safety display? Resources Safety publishes a wide range of guidance material that you may find useful, including:

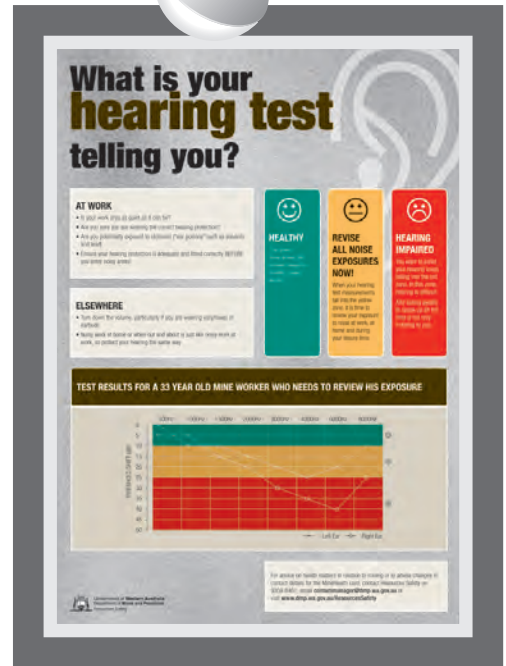
- brochures
- posters
- guidelines
- codes of practice
- toolbox presentations
- audit guidelines and templates
- safety alerts.

All publications can be downloaded from the Resources Safety website, and many are available in hard copy format at no cost.

Download the publications order form from the Resources Safety website in the mining publications section.

Email RSDComms@dmp.wa.gov.au or telephone 08 9358 8154 for more information





INCIDENT REPORTING GUIDELINE UPDATED

The second edition of the guideline on accident and incident reporting is now available. It has been revised to accommodate the introduction of online reporting via the Safety Regulation System (SRS).

There are now over 2,000 registered industry users for SRS, which was launched in November 2010. Since then, online submissions have included:

- over 7,500 monthly status forms
- over 1,900 injury forms
- over 3,600 occurrence forms.



CONVEYORS — GUARDING AGAINST INADEQUACY

José Sanchez is a Special Inspector of Mines (Mechanical Engineer) at Resources Safety. Here he turns his mind to an issue that is never far beneath the surface when dealing with moving and rotating parts on mining plant, particularly conveyors and their guarding.

Guarding can be a vexed issue, particularly for mining conveyor systems. There are questions about where to guard and how to guard. There is also the question of whether lift-off guards are an adequate control measure in any circumstances.

Duty holders and safety practitioners must be informed by the requirements of the Mines Safety and Inspection Regulations 1995, as well as Australian Standard AS 1755:2000 *Conveyors – Safety requirements* and relevant codes of practice.

Decisions need to be made in the following context:

- Regulations 6.2(2)(a) and 6.4(2)(a) call for any plant at a mine to be manufactured, inspected and tested to Australian Standards, as a minimum.
- Section 3.1 of AS 1755:2000 states that for mining applications complying with Clause 4.5, guards may be of the lift-off design not incorporating the interlocking device.
Note: Clause 4.5 specifies the requirements for emergency stop controls, pull wire system, restart and prestart warning.
- Regulation 6.2(2)(f) calls for all guarding to be either a permanent physical barrier, an interlocked physical barrier or a physical barrier secured such that it can only be removed with a tool or key.
- Regulation 6.2(2) is prefaced by the statement that, as a minimum, consideration should be given to the following methods of risk reduction, and then lists the methods.
- A code of practice on the safeguarding of machinery and plant was jointly published in 2009. It was endorsed by the Mining

Industry Advisory Committee (MIAC) and approved by the Minister under Section 93 of the *Mines Safety and Inspection Act 1995*. The hierarchy of guarding described on page 16 of the code is consistent with regulation 6.2(2)(f), and the code refers elsewhere to AS 1755:2000.

The question of what constitutes best practice (in a practical sense) and compliance with regulation 6.2(2) needs to be resolved and, in this regard, other provisions of the legislation are helpful:

- Australian Standards and codes of practice are generally regarded as subsidiary to the specific provisions within an Act or regulations. Section 104(6) of the Act provides that the regulations may adopt specific Australian Standards. However, AS 1755:2000 is not specifically referred to in the regulations.
- Regulation 6.2(1) states “The Principal Employer ... must ensure that ... all practical measures are taken to reduce ... risks.” A bolt-on guard or a lift-off guard secured, for example, with one or more bolts or padlocks is clearly practical. The risk (probability) of somebody becoming entangled in moving parts is likely to be higher with a lift-off guard that is unsecured rather than one that is secured with a tool. Even if warning signs and a tag-out system are in place to discourage personnel from removing a guard without first isolating the conveyor, such administrative controls are less effective than engineering controls. Lift-off guards, because of their perceived lack of permanence, may encourage personnel to remove them without first isolating the conveyor.
- Regulation 4.4(3) applies to all plant and requires screening or guarding to prevent inadvertent contact. Incidents where personnel have been injured by moving parts of conveyors have usually been caused by the absence of guarding rather than the method of guarding.
- With respect to regulation 4.10.1(b) and posting signs to identify hazards, it is good practice to include signage on any guard warning people not to remove the guard without first isolating the conveyor. Warning signs may be needed on each removable panel.



- Under regulations 6.21(c) and 6.27(1), a suitable work permit system or lock-out procedure must be established and applied, regardless of the design of the guarding.
- Regulation 4.6 contains some mandatory requirements for conveyor haulage safety in general.
- Section 9(1)(a) of the Act states “An employer must . . . provide and maintain workplaces, plant and systems of work of a kind that, so far as is practicable, the employer’s employees are not exposed to hazards.” A uniform system of, for example, padlocks all keyed alike, and where the keys can only be obtained with a valid isolation permit may be a practicable approach to adopt. Such a system would remind personnel of the risk of guard removal.
- The guarding code of practice emphasises a risk management approach and the application of the “hierarchy of controls.” A guarding system requiring a tool, such as a key, for removal is generally a more robust engineering control than a lift-off guard.

ARE LIFT-OFF GUARDS ADEQUATE FOR MINING CONVEYORS?

Lift-off guards on conveyors may comply with AS 1755:2000, but may not fully comply with the regulations. If a person was injured by a conveyor because a lift-off guard had been removed without first isolating the conveyor, those having a duty of care might be liable.

In summary, lift-off guards may not be an adequate control measure to prevent inadvertent contact with rotating or moving parts on mining conveyor systems, and Resources Safety strongly advocates the use of a risk-based approach.

This particular example demonstrates that when seeking practical solutions for safe engineering design, the regulations should not be read in isolation.

WHAT DOES THIS MEAN FOR LIFT-OFF GUARDS?

The fact that there have been recorded incidents of personnel being injured by conveyors when lift-off guards have been removed tells us that the risk is significant. Furthermore, the hazard increases as conveyors become larger, with faster belt speeds and higher tensions. Therefore, a risk management approach is best because simply complying with prescriptive rules may not be enough to sufficiently control the risk in all cases.

One of the reasons used to justify lift-off guards on conveyors is that they are easily removable for cleaning purposes. By itself, this is not sufficient justification to adopt this style of guarding.

WHAT ABOUT USING CABLE TIES TO SECURE LIFT-OFF GUARDS?

It has been suggested that lift-off guards are acceptable if secured with heavy duty plastic cable ties because a tool is needed to break a cable tie. Although better than nothing, this is not a permanent solution.

SAFETY ALERT ON CONVEYOR GUARDING

Resources Safety released *Mines Safety Bulletin No. 96* on 12 December 2011. The safety alert was prompted by inspectorate concern at the increasing number of serious incidents involving conveyors where guarding was inadequate or absent. In the most recent incident, an employee was injured when the tool being used inadvertently contacted an unguarded conveyor return roller. The employee was injured when he was pulled into the “nip” point.



STOPPING SCENARIOS FROM BECOMING REAL

The value of emergency response training cannot be underestimated but it is also important that live training exercises do not become real-life emergencies. *Mines Safety Significant Incident Report No. 173* describes how an employee was burnt while setting up fire scenario for emergency response training.

While there were difficulties with the scenario set up, the subsequent confusion surrounding communications and terminology contributed to the incident by delaying the arrival of help.

Conducting live drills in the workplace provides opportunities to test not only the emergency response skills in the environment in which they may be needed, but also assess whether other parts of the site respond appropriately. However, the same rigour and standards need to be applied when planning any workplace activity, whether processing ore or running a team drill.

Emergency response competitions provide an ideal opportunity, as either a competitor or observer, to gather ideas about scenarios and how to conduct them safely. If uncertain about how to conduct a live fire drill, particularly if resources are limited, emergency response training providers and FESA may be able to provide specialist advice.

▲ The fire fighting scenarios at emergency response competitions are usually more complex than those encountered at training, and provide a good test of decision-making and other skills.



KT

▲ Example of well laid-out diamond core drilling operation
Photo courtesy DDH1 Drilling Pty Ltd

INDUSTRY FEEDBACK SOUGHT ON DRILLING CODE OF PRACTICE

Drilling in any environment is potentially hazardous but mineral exploration in remote locations, such as those encountered in Western Australia, presents additional risk factors.

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To aid those working in the Western Australian minerals industry, Resources Safety has developed a draft code of practice that provides a practical and accessible guide to help identify hazards and risk factors associated with drilling operations.

The code of practice has been written to be used by anyone involved in drilling operations, from the driller's offsider to the managing director, and addresses hazards associated with the drilling methods commonly used in remote exploration in the State.

Resources Safety is seeking public comment on the draft code of practice, which has been developed with industry input from various sources.

When completed, the code of practice will be presented to the Mining Industry Advisory Committee (MIAC) for consideration. Once endorsed by MIAC, it will be submitted to the Minister for Mines and Petroleum for approval to publish.

As well as industry feedback, companies and organisations are invited to submit photographs for designated hazard chapters to show best or leading practice. Contact the Manager Safety Communications (telephone 08 9358 8149, su.ho@dmp.wa.gov.au) for submission details.

Download the draft code at www.dmp.wa.gov.au/12369.aspx or contact Resources Safety (telephone 08 9358 8154, RSDComms@dmp.wa.gov.au) to receive a hard copy.

Please send comments to the Manager Safety Communications at su.ho@dmp.wa.gov.au by 5 pm Friday, 30 March 2012.

TAKING UP THE CHALLENGE

The last annual Chamber of Minerals and Energy's South West Emergency Response Skills Challenge will go down as one of the more memorable competitions in recent history. Hosted by Talison Lithium and Global Advanced Metals in Greenbushes over the weekend of 17-18 September, the 2011 competition featured seven teams battling it out in weather conditions that ranged from bleak to downright miserable.

Event coordinator Greg Kennedy said that, despite the trying conditions, the teams performed admirably.

"The weather certainly didn't do us any favours, but everyone just battened down and did what they had to do," Mr Kennedy said. "It didn't faze them."

While the competition was fierce, the sense of camaraderie was equally evident.

"There was a good spirit about (amongst the teams)," Mr Kennedy said. "And the competition went really well."

This was reflected in the number of teams in this year's event increasing from four in 2010 to seven, making for an exciting weekend of competition.

"It was really good to see extra teams come along," Mr Kennedy said. "It makes the event a little bit more interesting in terms of the results. It's not just a one-band-show."

Mr Kennedy said that the extra teams brought extra skills.

"It's good for the teams, because they get to see what other people do, and learn from the instructors," he said. "They get to look at the other sorts of equipment out there and the techniques that other teams use."

"It's very important for teams to come out here and give it a try. It's all about having a go, rather than winning something."

Having said that, there could be only one "official" winner, and this year it was the combined team from Newmont.

Chamber Director Nicole Roocke congratulated the competing teams, event management personnel, volunteers and organisers who rose to the occasion to produce a very successful event.

"More than 200 people visited the site to watch the teams as they were put through their paces, which is an excellent turnout," she said.

"CME is proud to host these skills challenges and it's great to see how passionate and dedicated toward safety these companies are."

After three years at Greenbushes, the skills challenge will move to Newmont's Boddington Gold Mine in 2012.

COMPETING TEAMS

Alcoa Mining

BHP Billiton Nickel West Kambalda and Kwinana

BHP Billiton Worsley Alumina

Newmont Boddington Gold

Newmont Combined Team

Premier Coal

Talison Greenbushes

HONOUR BOARD

Best team winner

Boddington Gold Mine

Best team runner-up

Newmont Combined Team

Confined space rescue

Talison Greenbushes

Fire fighting

BHP Billiton Worsley Alumina

First aid

Newmont Combined Team

Hazardous materials

Newmont Combined Team

Road crash rescue

BHP Billiton Nickel West

Rope rescue

Boddington Gold Mine

Team and breathing apparatus skills

Talison Greenbushes

Theory

Talison Greenbushes



HJCU
KR

723739 0
43

MSA

723739 0
3.85
8.50
25.59
50.620
57.75
38.6

MADE IN
USA

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SHIPPING
CO. LTD

A hail storm hits as Wesfarmers Premier Coal prepares to mount a rescue in the fire fighting event LD

MOTLEY CREW GETS THE JOB DONE

Trying to assemble an emergency response team can be difficult at the best of times, let alone when you have to draw members from three geographically widespread sites, including one from another country.

.....

This was the problem that faced Ben Armstrong, Emergency Services Officer at Boddington Gold Mine, when assembling the Newmont Combined Team for the 2011 South West Emergency Response Skills Challenge. The team was drawn from Newmont workers from New Zealand, Kalgoorlie and the South West.

"We had one guy from the Waihi operations, another from KCGM, and the rest were from Boddington," Ben said.

Despite the geographical separation, Ben said that it wasn't too difficult to assemble the team and get them up to speed.

"You usually find certain types of characters are drawn to emergency response, so it only took them about a day or two to gel," he said. "It was quite interesting to see how the dynamics of the team played out."

Coming from different sites also had some advantages.

"They all brought their own skills and experience," Ben said. "It definitely helped."

While they hoped to be competitive, the Newmont Combined Team's expectations were not set too high.

"Not only was it a green team, but we had guys from different sites, which can make it difficult," Ben said. "I wasn't expecting much, just as long as they were learning something and having fun."

They had more than a bit of fun. The team took out the overall challenge.





Preparing for fire fighting LD

“For them to come out like that and win the competition was a bit of a blast,” Ben said.

That is not to say that the scenarios were a breeze for the Newmont team.

“The confined space and ropes scenarios were a good challenge,” Ben said.

For rope rescue, teams were required to abseil down a “pit wall” to rescue someone from a dump truck that had gone over the edge.

“Some of the guys hadn’t come across that kind of a scenario so that was a new challenge to them.”

The team also expected a difficult test with the confined space scenario.

“Confined space rescues are always a challenge,” Ben said. “Especially when you are in such a tight, dark environment on your own and the team is not there with you.”

According to Ben, the team’s strongest scenario was Hazmat.

“They took control of the scene straight away,” he said.

Despite taking out the competition, Ben said that the most important things to take away from the weekend were the new skills.

“These skills-based competitions are paramount to the team’s learning,” he said. “It is a controlled situation, so they are learning these skills in an environment where there isn’t the same level of risk as in real life.”

Although the number of teams competing increased in 2011, Ben hoped that the event would grow even bigger.



THESE SKILLS-BASED COMPETITIONS ARE PARAMOUNT TO THE TEAM’S LEARNING, IT IS A CONTROLLED SITUATION, SO THEY ARE LEARNING THESE SKILLS IN AN ENVIRONMENT WHERE THERE ISN’T THE SAME LEVEL OF RISK AS IN REAL LIFE

BEN ARMSTRONG



Ben Armstrong at rope rescue LD

FIRST AID SCENARIO IN TEMPO WITH DRUM WARNINGS

It is a scenario that could take place at any number of workplaces in Western Australia. Some workers have been instructed to cut open a 205-litre drum. It is going to be used as an inexpensive workplace barbecue.

One of them grabs an angle grinder and sets to work cutting it lengthways. A spark from the angle grinder provides a more than adequate ignition source for the residual vapours that remain in the drum. An explosion rips through the workshop and a number of people are caught up in the blast.

While this particular scenario was a work of fiction, used for the first aid component of the 2011 South West Emergency Response Skills Challenge, its genesis was influenced by recent events.

Both Resources Safety and WorkSafe issued safety bulletins in 2011 regarding the danger of re-using old fuel drums. This is a very real danger. In the past few years, two people have been killed and another seriously injured after explosions caused by using angle grinders on 205-litre drums.

Check out Dangerous Goods Safety Bulletin No. 0111 on the unsafe disposal of dangerous goods drums in the September 2011 issue of MineSafe, or download it from the dangerous goods publications section of the Resources Safety website.

First aid scenarios at mine emergency response competitions traditionally provide multiple opportunities for Sue Steele of Red Earth Health Solutions to raid her theatrical props bag and create realistic-looking injuries. The Greenbushes event was no exception, with pieces from an exploding drum damaging anything — and anyone — in their path.





BEAU PUTS HIS BODY AND MIND ON THE LINE

The Department of Mines and Petroleum is a strong supporter of mine emergency response competitions and sponsored the overall winner category of the 2011 South West Emergency Response Skills Challenge. The award was presented by Simon Ridge, State Mining Engineer. Other Resources Safety staff involved in the weekend's activities included Graham Bloomfield as a team skills adjudicator, Gary Hussey as a Hazmat adjudicator, and Luke Davey and Su Ho as both official photographers and casualties for the fire scenario.

Beau Pearson, a departmental Communications Officer, not only wrote about the weekend's events for MineSafe, but also volunteered as the casualty in the road crash rescue scenario. He recounts here how the experience was not unfamiliar.

My body tenses as I hear a muted crack. A shower of glass cascades over the protective sheeting that covers me. It sounds like rain on a tin roof.

.....

The cold outside air blasts through the car, as the emergency response team scrambles to get me out of the wreck. This time it's a Holden, but so far today I've been pulled out of a Mazda, a Ford and a Hyundai.

Fortunately, this is not an indication of my driving skills. Rather, I'm acting as a casualty in the Chamber of Minerals and Energy's 2011 South West Emergency Response Skills Challenge. This is my second experience as a casualty at such a competition, and it is by far the most harrowing.

I volunteered for the Kalgoorlie surface competition in early 2011 and wrote about the experience in the September 2011 issue of MineSafe. In that scenario, I was stuck in a concrete pipe and needed to be rescued. The premise of the scenario was so unfamiliar that there was an element of excitement in being challenged. The fact that I don't suffer from claustrophobia also helped.

The scenario at Greenbushes is a completely different experience. I have been in two real-life car accidents. Both were when I was younger, and both were as a passenger. Luckily, no-one involved in either accident sustained permanent injuries. Nevertheless, they were both traumatic events. Experience provides the kind of perspective no road trauma advertising campaign can replicate, no matter how shocking it is. These unpleasant memories feed my anxiety as I wait to be rescued.

A viscous tide slowly snakes its way over the top of my brow and into my eyes. At first I don't know what it is and wipe it away. The back of my hand is now a bright, blood red and my eyes start to sting. This



helps to take away the anxiety of being stuck in the car. Now I am more worried about the increasing pain from the fake blood in my eyes.

It stings like hell, but the team is still half way through the scenario, and I am determined not to break character.

Besides, I'm not in as bad a shape as my "passenger" Kevin. The impact of the crash has thrown Kev straight through the windshield. His nearly lifeless body is half inside, half outside the car.

Kevin is an 80 kg dummy, perfect for simulating the dead weight of an adult casualty. Having helped put Kevin into the wreck, I have felt a good deal of every kilogram.

The rescue team talks to Kevin. Unsurprisingly, he does not respond.

I have been told to make it particularly difficult for the rescue teams. I do this by constantly questioning them about Kevin's condition, what they are doing and why aren't they getting me out. You can sense the team's frustration increasing as I become more and more difficult to deal with.

"Kevin!" I shout. "What's happening with Kevin?"

They tell me Kevin is fine. Judging by the flower-like pattern of shattered glass surrounding Kevin's abdomen, I think they might be lying.

The now familiar hum of the compressor signals the start of the team's effort to cut me out. The "jaws of life" grip onto a vulnerable section of the car. The metal slowly slices open from the immense pressure. A loud crack signals that the jaws have successfully cut through the section.

"You have to get me out of here!" I yell.

The team makes a couple more cuts and then grabs another piece of equipment. This one is designed to pop the hinges. It looks like a giant pair of reverse pliers. It is put into position and then widened to the point where the hinges give way. The first hinge pops open with a

loud jolt. The team quickly repositions the equipment, and the second hinge gives way with the same jolt-inducing pop thirty seconds later.

The rescue team can now start trying to get me out of the car — not that I'm going to make it easy for them. I have suffered a broken pelvis in the crash, so even the smallest movements are supposed to make me scream.

One of the team members starts to lower my seat so they can get a brace onto me. I scream in pain as they adjust my seat.

"Don't move me!"

The rescue team stop for a second, but quickly decide that I will just need to put up with the pain.

I have never carried on so much in my life. But the whole point was to make it a challenging, uncomfortable experience for my rescuers. This team, like the teams before, handles my carry-on with suitable composure.

When they finally get me out of the car, it starts to rain.

I am in a set of disposable white overalls and a pair of boxers. I start to shiver as the wind and rain combine to send my body temperature plummeting. The team quickly looks to cover me up with a blanket. My shivering becomes a bit more manageable as the adjudicators yell "time".

Five minutes later and the fake blood is out of my eyes, I have some warmer clothes on, and there is a cup of coffee in my hand.

The adjudicators run through the scenario with the team. They let the team know what they did well and what they need to work on.

Every team receives feedback from the adjudicators and it is a vital part of the competition. While some teams perform better than others, it is often the less experienced teams that learn the most. And what better way to learn than in a pressured environment, but where lives aren't at stake, just points in a competition. Either way, I would be happy to have any one of the teams on hand if I ever need rescuing.

“

I HAVE NEVER CARRIED ON SO MUCH IN MY LIFE. BUT THE WHOLE POINT WAS TO MAKE IT A CHALLENGING, UNCOMFORTABLE EXPERIENCE FOR MY RESCUERS. THIS TEAM, LIKE THE TEAMS BEFORE, HANDLES MY CARRY-ON WITH SUITABLE COMPOSURE.

BEAU PEARSON

”

2011 SOUTH WEST EMERGENCY RESPONSE SKILLS CHALLENGE

► THEORY



► FIRE FIGHTING



► CONFINED SPACE



► FIRST AID



2011 SOUTH WEST EMERGENCY RESPONSE SKILLS CHALLENGE

▶ ROPE RESCUE



Newmont Combined Team LD



Newmont Combined Team LD



Rope rescue adjudicators LD



Talison Greenbushes SH



Talison Greenbushes SH

▶ TEAM AND BA SKILLS



Alcoa Mining LD



BHPB Nickel West SH



BHPB Nickel West SH



Newmont Boddington Gold SH



Team and BA skills adjudicator SH

▶ ROAD CRASH RESCUE

Alcoa Mining LD



Alcoa Mining LD

Newmont Combined Team SH



Talison Greenbushes SH



Road crash rescue adjudicators SH

▶ HAZARDOUS MATERIALS

BHPB Worsley Alumina SH



BHPB Worsley Alumina SH



Hazardous materials adjudicators SH




Talison Greenbushes LD



Premier Coal SH

COMPETING TEAMS

Barrick Kanowna – Barrick Gold of Australia
Focus Ferals – Focus Minerals
Golden Grove Mines Rescue – MMG Golden Grove
Jundee Operations – Newmont Asia Pacific
Kambalda Mutual Aid
KCGM Ratz – Kalgoorlie Consolidated Gold Mine
La Mancha Resources – La Mancha Resources Australia
Paddington ERT – Norton Goldfields, Paddington Operations
St Barbara Southern Cross Operations – St Barbara
St Ives Gold Mine – Gold Fields Australia
Sunrise Dam Gold Mine – AngloGold Ashanti Australia
Wattle Dam – Ramelius Resources
Xstrata Nickel Cosmos – Xstrata Nickel Australasia
Yilgarn One (Lawlers and Plutonic) – Barrick Gold of Australia
Yilgarn Two (Granny Smith and Darlot) – Barrick Gold of Australia



Sunrise Dam's Michael Nugus (left) with search and rescue adjudicator Peter O'Loughlin of Resources Safety SH



HONOUR BOARD

1st best team

Sunrise Dam Gold Mine

2nd best team

Golden Grove Mines Rescue

3rd best team

La Mancha Resources

Breathing apparatus skills

Sunrise Dam Gold Mine

Fire fighting

La Mancha Resources

First aid

Barrick Kanowna

Rope rescue

Sunrise Dam Gold Mine

Search and rescue

Sunrise Dam Gold Mine

Team skills

La Mancha Resources

Theory

Golden Grove Mines Rescue

Individual theory

Adam Bird (St Barbara Southern Cross Operations)

Team safety

Sunrise Dam Gold Mine

Incident management

Michael Parotte (Jundee Operations)

Overall breathing apparatus skills

Sunrise Dam Gold Mine

Overall first aid

Yilgarn Two

Best new captain

Frans Vink (Golden Grove Mines Rescue)

Best new team

St Barbara Southern Cross Operations

Best captain

Michael Nugus (Sunrise Dam Gold Mine)

Best scenario

Fire fighting

2011 UNDERGROUND MINE EMERGENCY RESPONSE COMPETITION



Sunrise Dam Gold Mine preparing for BA skills SH

SUNRISE DAM CONTINUES WINNING TREND

The Chamber of Minerals and Energy's 2011 Underground Mine Emergency Response Competition was held at Kalgoorlie Consolidated Gold Mine's Mount Charlotte operations. It was the second year running that KCGM had hosted the underground competition.

Fifteen emergency response teams from across the State competed in the annual event to test their knowledge and skills in fire fighting, first aid, search and rescue, team safety, rope rescue, team skills and theory.

For the second consecutive year, the team from AngloGold Ashanti's Sunrise Dam operations took out top honours.

State Mining Engineer, Simon Ridge, said that the event showcased the importance of mine rescue to the industry in the Goldfields and the State.

"This year's competition attracted 15 teams for two days of competition and is indicative of the priority that operations in the Goldfields give to their emergency response teams," Simon said. "The competitions are an important way to gauge the capacity of mine sites to deal with on-site emergencies.

"It gives emergency response teams a good understanding of what their strengths are and the areas where they can improve," he

added. "This is vital in ensuring competence across all areas of mine emergency response."

Simon said that the trophies and awards were insignificant compared to the experience and knowledge teams receive by participating in such competitions.

"Workers from all the sites represented can be assured of the priority their companies give to having well trained rescue teams," he said.

"The commitment to emergency response shown by the teams and companies involved should never be taken for granted. Having skilled mine rescue teams should not be seen as a luxury but as a necessity."

Chamber Director Nicole Roocke congratulated everyone involved and said that the competing teams, event management personnel, volunteers and organisers rose to the occasion to produce a very successful event.

"The resources industry places the highest importance on safety and CME is proud to host these skills competitions to ensure companies are on top of their training, enhancing their skills and learning from each other," she said. "It's great to see how passionate and dedicated toward safety these companies are.

"As site hosts, KCGM worked very hard to provide the facilities, staff for marshals and drivers over the weekend."

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THE COMMITMENT TO EMERGENCY RESPONSE SHOWN BY THE TEAMS AND COMPANIES INVOLVED SHOULD NEVER BE TAKEN FOR GRANTED. HAVING SKILLED MINE RESCUE TEAMS SHOULD NOT BE SEEN AS A LUXURY BUT AS A NECESSITY.

SIMON RIDGE

”



2011 UNDERGROUND MINE EMERGENCY RESPONSE COMPETITION



SH

UNIVERSAL LANGUAGE OF MINE RESCUE

PISIN: "BILONG LUKAUTIM YU"

ENGLISH: "LOOKING AFTER YOU"

Travelling long distances is not unusual for teams competing in the mine emergency response competitions held in the Eastern Goldfields. Over the years there have been teams from the Mid West, Pilbara and even the eastern states. However, one team travelled more than 3,500 km from the highland rainforests of Papua New Guinea to the arid plains of Western Australia just to watch the 2011 underground competition. That team was from Barrick's Porgera gold mine.

The Porgera gold mine is operated by Porgera Joint Venture, which is one of Papua New Guinea's largest resource projects with a workforce of about 3,000 in its underground and open pit operations. Porgera commenced operations in 1990, and produces gold and silver.

Stewart Philip works at Porgera and was one of the mine's emergency response team members who travelled to Kalgoorlie with Bruce Hill, Porgera JV Underground Mine Rescue, to watch the competition.

"We came here to see how other mines perform mine rescues for different scenarios," Stewart said. "This experience will help us gain skills and knowledge to take back to our own mine site."

He added that the team had learnt a lot from watching the competition.

"Some of the scenarios, like fire and ropes, we haven't done much training for back home," he said. "It will be good to put what we have learnt here into practice back home."

For a number of the Porgera team members, this was their first taste of mine emergency response in action on such a scale.

"Some of the team members are new so they were learning, and I was learning too," Stewart said. "Everybody is getting new ideas."

The importance of the adjudicators' feedback was also not lost on the Porgera team.

"It is good to make mistakes (in these competitions) because you can learn from them. You remember the mistakes," Stewart observed.

While happy to just watch the competition unfold this year, Stewart hopes that the Porgera team can take what it has learnt and return to the Goldfields to compete in the near-future. Regardless of what happens, the Porgera team is certainly better for the experience.

"We came here, we learnt a lot and we will go back and pass on what we have learnt," Stewart said.

ABOUT THE PORGERA GOLD MINE

- The Porgera gold mine is located more than 2,000 m above sea level in rainforest-covered highlands.
- The mine is operated by a joint venture between the Enga Provincial Government, local Iplili landowners who own the land contained in the mining lease, and two PNG subsidiaries of Barrick Gold Corporation. Barrick Gold owns 95 per cent of the Porgera Joint Venture.
- Porgera Joint Venture is one of largest private sector employers in Papua New Guinea, with about 2,500 employees and 500 contractors.
- The mine comprises a large open pit and an underground operation.
- Production began in 1990. Between 1990 and 2009, the mine produced more than 16 million ounces of gold and almost 3 million ounces of silver.
- The mine accounts for about 12 per cent of Papua New Guinea's national export earnings.

P J V



EMERGENCY RESPONSE
"BILONG LUKAUTIM YU"

2011 UNDERGROUND MINE EMERGENCY RESPONSE COMPETITION



Event briefing SH



Newmont JUnder SH



KCGM Ratz SH



CME team SH



Barrick Yilgarn Two LD



Kambalda Mutual Aid LD



The tally room SH



Goldfields St Ives SH



Xstrata Nickel SH



Launch SH



Launch SH



Launch SH



Barrick Filgarn teams warm up SH



In the winder room SH



Some of the sponsors SH



Whose vehicle is that? SH

▼ THEORY



Ready to start LD



Newmont Jundee SH



Xstrata Nickel SH

▼ TEAM SKILLS



La Mancha LD



La Mancha LD



St Barbara LD

▼ FIRE FIGHTING



▼ FIRST AID



▼ SEARCH AND RESCUE



▼ BA SKILLS



▼ ROPE RESCUE



▼ INCIDENT MANAGEMENT



TOOLS TO HANDLE WORKPLACE OSH ISSUES

What would you do if an occupational safety or health (OSH) issue arose at your workplace? Would you:

- contact the Minister for Mines and Petroleum?
- lodge a complaint with Resources Safety?
- let the media know that there is a problem?

The Department of Mines and Petroleum knows from experience that sometimes this does happen, without any prior consultation or communication having taking place on site.

None of these approaches indicates a resilient site safety culture, and they certainly do not help to develop one. Experience shows OSH issues are more likely to be resolved quickly if they are addressed at the workplace.

SO, WHAT IS THE APPROPRIATE WAY TO DEAL WITH AN OSH ISSUE AT THE WORKPLACE?

If you come across a hazard at the workplace you have a duty of care to do something about it. Can you fix it safely? If you are competent to fix it, do so.

Of course, in order to recognise hazards, you need to know what it is about the job or task that makes it hazardous. Do you know and understand the direct and indirect risk factors? Are the training and supervision sufficient to ensure this?

If you cannot fix the hazard immediately then you need to make the area safe and advise your supervisor or line manager. This may be done through the safety and health representative. If you cannot make the area safe, restrict access so no-one else is exposed to the hazard and advise your supervisor or line manager.

Once the issue is reported to the supervisor or line manager, they need to address it. In some cases, the solution may be simple and easy to implement. In others, it may take time to develop an effective long-term solution.

Ideally, the solution should be discussed with affected workers and safety and health representatives to ensure the control measures work for everyone. Ultimately, however, management is responsible for the final decision about how to proceed.

WHAT IF THERE ARE WIDER RAMIFICATIONS FOR THE REST OF THE MINING OPERATION, OR THE CONTROL MEASURES ARE UNSATISFACTORY – THEY DON'T REDUCE THE RISK OR ARE DIFFICULT TO ADOPT?

Your supervisor or line manager should take the matter further. This might mean they take it to their line manager or the safety and health committee, if one exists. The safety and health representative can also raise the matter with the committee.

Once the matter has been dealt with, it is important that the people who could be affected know what the outcome is. A good way to communicate this is through the safety and health representatives and at toolbox meetings.

WHAT IF THE MATTER IS FOLLOWED-UP BUT THE OUTCOME IS NOT COMMUNICATED TO THE WORKFORCE?

Communication is important so the workforce knows about any safety system changes, and there is positive reinforcement about the value of reporting so people continue reporting.

WHAT IF PEOPLE ARE NOT HAPPY WITH THE SOLUTION AND THERE IS STILL AN OSH ISSUE?

If there is a relevant procedure for the site for dealing with OSH issues then it must be followed.

- Do you all know what your site's procedure says?
- Do you know where to find it?
- Is it readily available?
- Was it provided as part of the site induction?



WHAT IF THE SITE DOES NOT HAVE A PROCEDURE TO DEAL WITH OSH ISSUES?

Following an agreed procedure is preferable to an ad hoc approach because everyone knows what is expected and consultation is encouraged.

Resources Safety has some useful resources to assist in developing a procedure, including a joint guideline with WorkSafe on formal consultative processes at the workplace and a consultation code of practice.

WHAT IF THE MATTER IS STILL UNRESOLVED AND THERE IS NOTHING IN PLACE TO HELP?

In other words, what do you do if there is no procedure, elected safety and health representative or safety and health committee at the workplace, and genuine attempts have been made to resolve the issue but there is still no agreement on the remedy — and there is a reasonable likelihood of somebody being injured?

It is appropriate to escalate the issue to the mines safety inspectorate.

Remember that in order to decide what to do, the inspector will need to know what has happened and when, so you should record as much relevant information as possible.

One of the first matters that the mines inspector will ask about is the communication and consultation process that was followed on site. For example, was the OSH matter reported to the supervisor, line manager or a safety and health representative, where there is one? Where the site has an OSH resolution procedure, was it followed?

WANT TO FIND OUT MORE?

Check out the toolbox section of the mining guidance section of the Resources Safety website. There is a presentation from the 2011 Mines Safety Roadshow on raising and solving safety and health issues at the workplace.

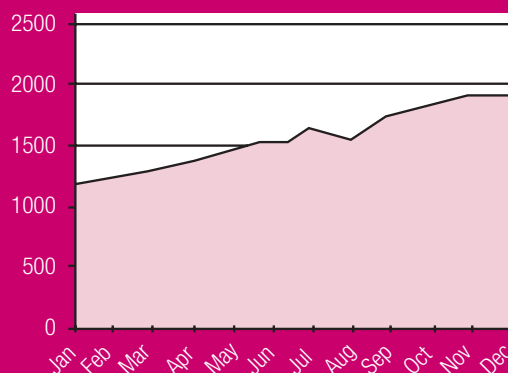
ON THE RIGHT TRACK

If you think that all mines have safety and health representatives, think again.

In each issue of *MineSafe*, we publish a map showing statistics relating to safety and health representatives. As you can see, less than half of Western Australia's mining operations have safety and health representatives, although a few will be very small operations where this may not be an issue. Mines are not required to report to Resources Safety regarding the establishment of safety and health committees so there are no statistics.

However, what is pleasing is that the latest statistics show the number of safety and health representatives has increased significantly over the past year, after consistently sitting at about 1,300 for several years.

Total safety and health representatives in 2011



FOCUS ON SHREPS

One of Resources Safety's internal mines safety focus groups is concentrating on safety and health representatives. The group's objectives are to:

- empower safety and health representatives by raising awareness of their role, developing guidance materials and providing inspectorate support
- ensure consistent and constructive inspectorate interaction regarding safety and health representative matters by developing and delivering inspector training and information sessions
- promote the recruitment and retention of safety and health representatives by encouraging employers to support such representation and provide the training and resourcing necessary for representatives to perform their duties.

FAQ ON LTI VERSUS DI

From time-to-time Resources Safety receives curly questions relating to safety performance reporting and statistics. For example, how should the following scenario be reported to Resources Safety?

Someone is injured at work and receives medical treatment. The doctor issues an initial medical certificate and indicates that the person is not fit for work. However, at the follow-up examination the next day, the doctor indicates on the progress medical certificate that the person is fit for restricted duties for a set number of days. The mine manager then rostered the person for restricted duties until they were declared fit to return to full duties.

Since the doctor has ticked the “unfit for work” box on the first visit, is the injury classified as a lost time injury (LTI)? Or, because the doctor has reviewed the injury the next day and declared the person fit for light duties, does this overrule the initial assessment and the classification is now a restricted work injury — a disabling injury (DI) in Resources Safety’s safety performance terminology?

WHICH IS IT THEN — AN LTI OR A DI?

It should be reported to Resources Safety as a disabling injury because the person was not absent from work for at least one full day or shift after the day or shift when the injury occurred.

WHAT’S THE DIFFERENCE?

LOST TIME INJURY (LTI)

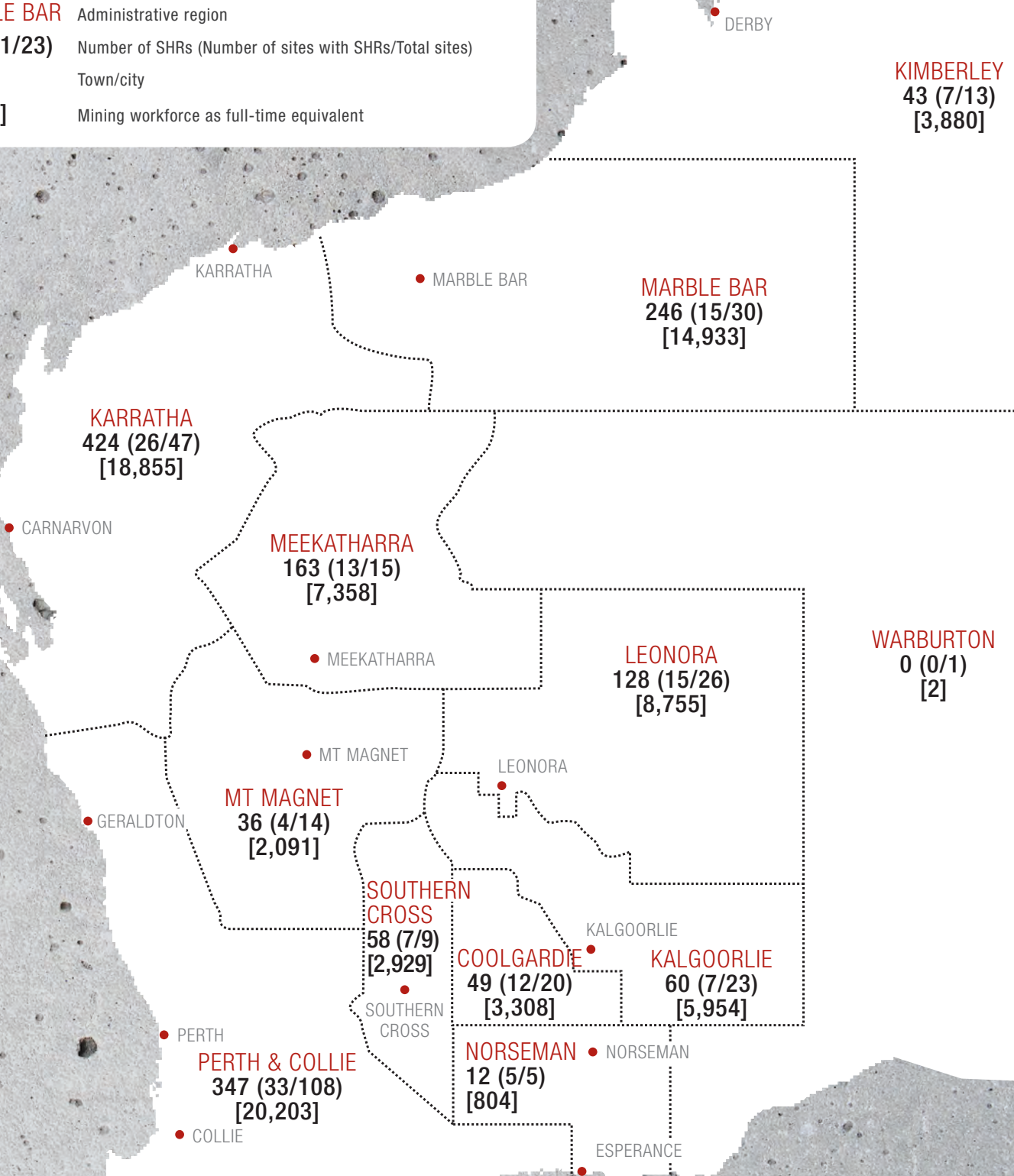
Work injury that results in an absence from work for at least one full day or shift any time after the day or shift on which the injury occurred.

DISABLING INJURY (DI)

Work injury (not LTI) that results in the injured person being unable to fully perform his or her ordinary occupation (regular job) any time after the day or shift on which the injury occurred, regardless of whether or not the person is rostered to work, and where alternative or light duties are performed or hours are restricted.

DISTRIBUTION OF SAFETY AND HEALTH REPRESENTATIVES AS AT 30 SEPTEMBER 2011

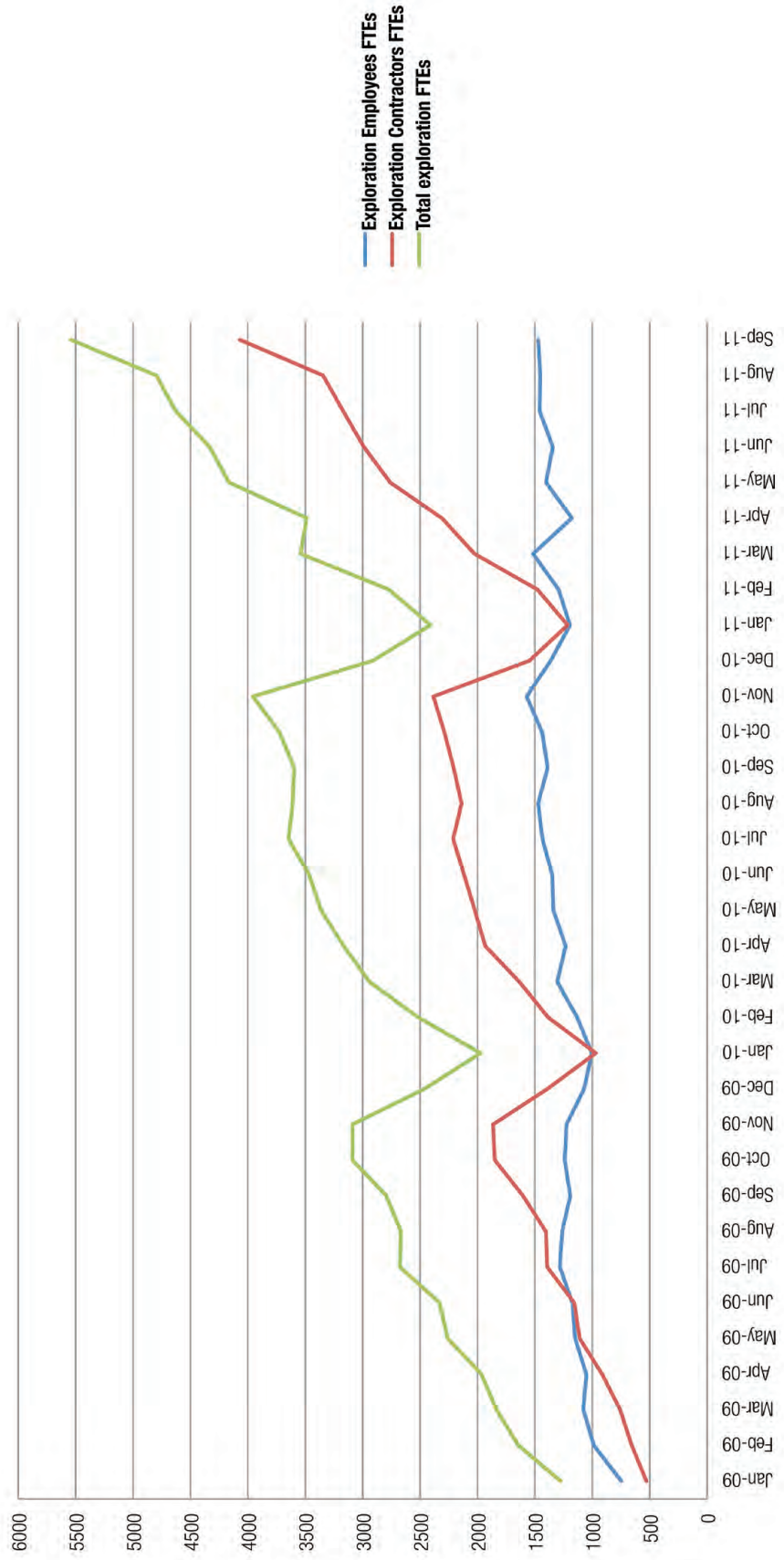
..... Mining registrars administrative boundary
MARBLE BAR Administrative region
153 (11/23) Number of SHR's (Number of sites with SHR's/Total sites)
 ● Town/city
[9,578] Mining workforce as full-time equivalent



Total active (incl. C&M) mine sites = 312
 Mine sites with SHRs = 145
 Total SHRs = 1,744
 SHRs attached to mine sites = 1,570
 Others (e.g. exploration) = 178*
 * includes 4 SHRs on Christmas Island

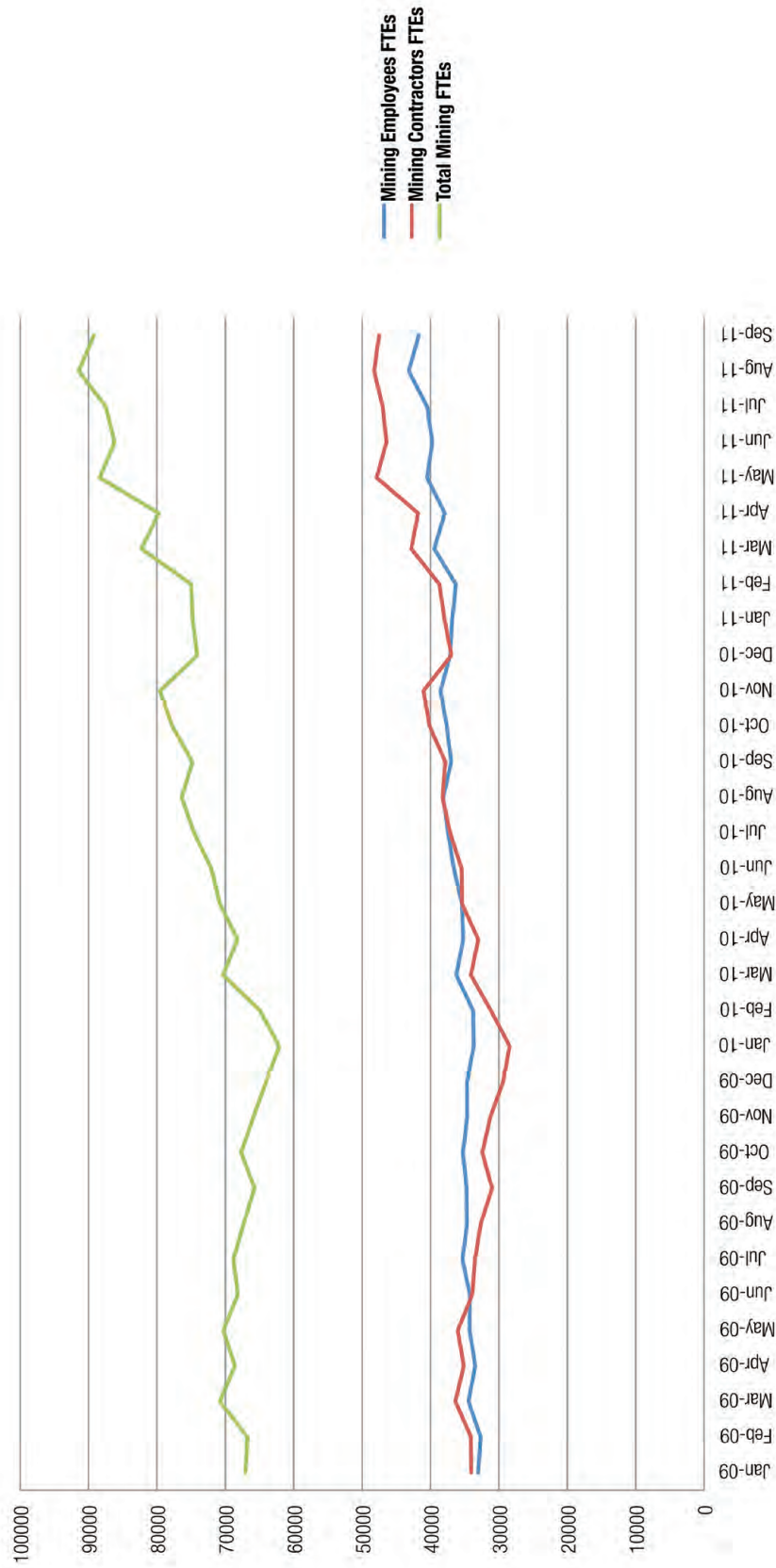
MONTHLY EXPLORATION WORKFORCE

NOTE: From 1 July 2009, monthly mining workforce figures are plotted as full-time equivalent (FTE), where 1 FTE = 2,000 hours worked per year



MONTHLY MINING WORKFORCE

NOTE: From 1 July 2009, monthly mining workforce figures are plotted as full-time equivalent (FTE), where 1 FTE = 2,000 hours worked per year



MINES SAFETY SIGNIFICANT INCIDENT REPORT NO. 173

EMPLOYEE BURNT WHILE SETTING UP FIRE SCENARIO FOR EMERGENCY RESPONSE TRAINING

ISSUED: 21 NOVEMBER 2011

Summary of incident

An employee preparing for an emergency response fire-fighting training drill was burnt on his hands, arm, back and face when he was engulfed by a fire ball. He was lighting a stack of wooden pallets using unleaded petrol as an accelerant. The fire scenario was located inside a dedicated surface training compound on a mine site.

The employee raised the alarm but there were delays in the arrival of personnel to assist him.

Probable causes

Direct

- Over 10 litres of unleaded petrol was used as an accelerant to ignite the fire. The lower explosive limit (LEL) of petrol is 1.4%, and this fuel will explode in the presence of an ignition source if petrol vapour concentration is between 1.4 and 7.6%.
- A cigarette lighter was used instead of a fire igniter, which meant that the officer was close to the ignition point.

Contributory

- There were no documented and approved task instructions for the training scenario, including how to light the fire safely.
- No risk assessment or safety analysis was conducted for the scenario.
- There was an element of haste to light the fire before the emergency response team arrived.
- Personal fire protection (e.g. coat, helmet and gloves) was not used.
- The employee was working alone and had to call for assistance himself after being burnt.
- After the alarm was raised, confusion about communications and terminology delayed the response.

Action required

Live fire drills are an essential part of emergency response training. However, practical simulations using live fire and smoke can pose a significant risk to participants. When developing safe systems of work for emergency response team drills, mine sites should apply the same rigour and standards as used for other workplace activities.

MINES SAFETY BULLETIN NO. 96

CONVEYOR GUARDING

ISSUED: 12 DECEMBER 2011

Summary of hazard

This bulletin is prompted by inspectorate concern at the increasing number of serious incidents involving conveyors where guarding was inadequate or absent. In the most recent incident, an employee was injured when the tool he was using inadvertently contacted an unguarded conveyor return roller. The employee was injured when he was pulled into the “nip” point.

Contributory factors

- In some cases, employers, supervisors, engineers, operators, maintenance personnel and other personnel working around conveyors are not sufficiently aware of the hazards associated with conveyor systems.
- In some cases, conveyor “nip” points are not sufficiently guarded to prevent inadvertent contact with moving parts.
- In some cases, there were no safe work procedures for tasks that involve working close to unguarded moving parts.

Action required

A competent person should regularly review the site's conveyor systems to ensure the adequacy of guarding.

- Conduct an audit of conveyor guarding to ensure that all practical measures have been taken to prevent access to conveyor system “nip” points.
- Conduct a risk assessment to identify priorities for replacing or installing guarding.
- Develop an action plan with due dates and responsibilities for the replacement or installation of guarding.
- Ensure all employees who may be exposed to conveyor system hazards receive adequate information, instruction and training regarding those hazards.

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Dial 000 for dangerous goods emergencies or accidents requiring attendance of emergency services

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Scan this QR code for Resources Safety contacts



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including exploration, mining and mineral processing

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mineshreps@dmp.wa.gov.au (safety and health representatives)
contammanager@dmp.wa.gov.au (contaminant monitoring and reporting)
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For a serious mining accident or incident, the mine or exploration manager must advise their District Inspector as soon as practicable

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