

# NSW mine safety update

Promoting safety in the NSW mining industry



## NSW Government addresses Mine Safety Review recommendations

One of the strategies to achieve the NSW Government's commitment to achieving zero deaths and injuries in the State's mining industries is to address the recommendations of the 2004 Mine Safety Review, according to NSW Minister for Mineral Resources Ian Macdonald.

The Government commissioned the Mine Safety Review, headed by former Premier Neville Wran. It provided the Government with a comprehensive and independent perspective on ways to enhance the safety of mineworkers.

"While Government and industry have worked successfully to reduce the number of mining accidents in NSW, we can and will do more to protect the 15,000 men and women who work in and around our mines," Mr Macdonald said.

"Since the findings were submitted, the Government has been carefully assessing each recommendation. We have a practical, workable plan that will see the recommendations in place as soon as possible."

Mr Macdonald said the safety performance of the NSW mining industry had improved dramatically in

recent years, and new measures would ensure that progress continued.

"NSW now has one of the most enviable mine safety records in the world," he said. "By implementing the recommendations from the Mine Safety Review, we can help industry further improve its track record".

Some of the key recommendations in the Review include:

- The establishment of a special Board of Inquiry, which will report on ways to improve the Government's enforcement policy and implementation
- The creation of a stronger Mine Safety Advisory Council, which will have an independent chairperson and two independent members
- The new Council be given a broader role, including the ability to conduct research, commission expert consultants, and explore issues that affect long-term safety
- An independent expert be commissioned to examine working hours and fatigue management in the mining industry.

Mr Macdonald said the State Government was finalising new regulations to the

Coal Mine Health & Safety Act 2002, as well as the Mine Health & Safety Act 2004.

It has also created a high-level working group to address a small number of recommendations that would potentially affect other State Government departments. This working group will consult with industry before finalising any concrete actions.



The 2004 Mine Safety Review recommends a stronger focus on mine-related health regulation and monitoring. Diesel particulate emissions are an example of a mine-related health hazard. Photo: NSW DPI, Mine Safety Technology Centre officers test for diesel particulate emissions.

## Mining industry safety levy to start

The NSW Government has introduced a mine safety levy as recommended by the Wran Mine Safety Review. The *Mine Safety (Cost Recovery) Act 2005* was passed last November to enable the levy to be raised.

While safety in NSW has improved markedly during the past few years, the Wran Review made 31 recommendations to further improve mine safety. This levy will fund the implementation of these recommendations and the safety functions of the Department of Primary Industries in relation to mining, together with the administrative costs of collection.

The levy will apply to employers in the mining industry and will bring the mining industry into line with other industries which currently pay the costs of their workplace safety regulation through the WorkCover scheme. In the case of contractors, the levy applies to a 'mining industry employer' which is defined as a person who employs workers in the mining industry and who has obligations under the mine safety legislation for the health and safety of those workers.

The levy will go into a special fund which will only to be used for mine safety purposes. The levy will be raised from the broad mining industry. This includes the coal mining sector, metalliferous and other mines, the extractive industries sector, all exploration activities, and oil and gas extraction. These are the areas covered by the Department of Primary Industries safety regulation functions.

The amount of the levy will be estimated by the Director-General of the Department of Primary Industries each year. A determination of contributions from coal and non-coal sectors will be calculated on wages data provided by the insurers. Other factors, including the intensity of resources applied to the regulation of safety, the comparative numbers employed in the coal and non-coal sectors, and the comparative sizes of the coal and non-coal sectors of the industry may also be used. The Director-General will notify each insurer of the amount of contributions payable following consultation with the Mine Safety Advisory Council.

For the current financial year, employers will be invoiced separately before 30 June 2006 for the first levy collection period which began on 30 January 2006.

From next financial year the levy will be collected through workers compensation insurers including Coal Mines Insurance Pty Limited, WorkCover and some self insurers. The levy is separate from workers compensation, but for convenience levy collection will happen at the same time as workers compensation premium notices are issued. The amount of the safety levy will be shown separately on the notices.

The NSW Government will continue to consult with key industry stakeholders on how the levy will be used and the benefits it will provide.



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Editors please note: any articles in this issue of NSW Mine Safety Update can be reproduced with suitable acknowledgement of their source.

Information provided in this newsletter to promote the enhancement of the safety culture of NSW mining and to alert a wide range of people to potential risks and to potential risk controls. Each site must manage its own risk according to its own hazard identification, risk assessment, control systems and monitoring process. Whereas all care is taken in producing NSW Mine Safety Update, NSW Department of Primary Industries accepts no responsibility for accuracy of information supplied. Inclusion of any product, service or company in NSW Mine Safety Update does not imply NSW Government or NSW Department of Primary Industries endorsement.



*Mine Safety Management Plans for small mines and quarries will be a key focus for participants in a series of safety workshops.*

## Practical mine and quarry safety workshops

Developing a Mine Safety Management Plan which addresses particular hazards at individual mines and quarries will be one of the skills participants will acquire in a series of mine and quarry safety workshops.

The Institute of Quarrying and the Mine Safety Operations Branch of the Department of Primary Industries are launching an initiative to continue safety management education for the small mine and quarry sector.

The development of a Mine Safety Management Plan provides employees with practical ways to work more safely.

The workshops are designed to follow on from the success of the department's Small Mines Campaign, which saw workshops and hands-on site visits covering more than 300 small mines throughout NSW.

The Institute has developed resource material with the help of the department to provide two levels of assistance.

The highly successful Small Mines Safety Management Kit will be updated and used as part of an introductory one-day workshop. This will help small operations understand and develop basic fundamentals of regular safety management. The workshop will focus on a practical approach which meets mining legislation.

A 'refresher' workshop will also be conducted for mines which need ongoing support in the review and improvement of their Mine Safety Management Plan. Attendance is not restricted to Institute members.

An information brochure and application form will be distributed to small mines and quarries throughout NSW. The first workshop will be at the introductory level and will be held in Queanbeyan during March 2006.

For further information contact the Institute on 02 9484 0577 or email [executive@quarry.com.au](mailto:executive@quarry.com.au)

## Would you like to receive Safety Alerts by email?

**Send your details including name, company, phone and email to:  
[safetyalert@dpi.nsw.gov.au](mailto:safetyalert@dpi.nsw.gov.au)**

## NSW Government committed to zero fatalities and injuries

Minister for Mineral Resources Ian Macdonald told the commemoration of the centenary of the Stanford Merthyr disaster that the NSW Government was "absolutely committed" to achieving zero fatalities and injuries in the mining industry.

Mr Macdonald delivered the keynote speech during the centenary commemoration at Kurri Kurri Cemetery on October 29 last year.

Six men were killed and another nine seriously injured when a fire broke out in the Stanford Merthyr Mine on the morning of Sunday October 29, 1905.

Had the fire and explosion occurred during a normal working day, the casualties would have undoubtedly been much worse.



Minister for Mineral Resources Ian Macdonald outlines the NSW Government's commitment to safety in the mining industry during his speech to the Stanford Merthyr disaster centenary commemoration. (Photo courtesy The Advertiser, Cessnock)



Students from Kurri Kurri High School lead the procession to the Stanford Merthyr disaster centenary commemoration at Kurri Kurri Cemetery. (Photo courtesy The Advertiser, Cessnock)

Mr Macdonald said commemorating past tragedies helped ensure people in the mining sector remained focused on the need for safety.

He said ceremonies such as this played an important role in reminding the mining industry of the need to remain vigilant.

"In our view, every accident is avoidable and we must continue to work together to achieve lasting improvements," Mr Macdonald said.

"The NSW Government has invested almost \$25 million in additional funds to improve mine safety since 1998.

"The opening of the Mine Safety Technology Centre in Thornton last June has enabled our scientists and engineers to use state-of-the-art technology to test gases, materials and equipment to maintain health and safety standards in NSW mines."

Mr Macdonald also praised the Retired Mineworkers Associations, the Coalfields Heritage Group and others involved in organising the commemoration for their commitment to their community, to its history and to the future safety of mineworkers.

## Minerals Council calls for OH&S Conference papers

The NSW Minerals Council is calling on mining industry stakeholders to submit proposed papers for this year's OH&S Conference

The theme for the 2006 conference is A Shared Vision. It will provide an opportunity to learn about new and emerging issues affecting the industry's health and safety performance and to share experiences gained from practical workplace and industry initiatives.

Conference papers will be presented on Tuesday June 20. There will be four areas focusing on health and safety issues:

**People:** human factors, ergonomics, health, OH&S leadership, OH&S consultation, fitness for work and injury management

**Prevention:** implementation of controls, case studies, OH&S training and legislation

**Performance:** OH&S measurement, behavioural safety and OH&S management systems

**Risk:** implementation of risk management and risk methodology.

Preference will be given to papers where industry personnel and service providers report on practical initiatives or research projects undertaken at NSW mines and quarries. Proposed presentations should not exceed 20 minutes.

Proposals for papers should not exceed 500 words and include an outline of the paper or workshop's objectives and content, brief biographical details on the presenters and contact details. The deadline for submission of written proposals is February 27.

The conference will be held at Leura in the Blue Mountains from June 18 to 21.

They should be sent to David Grove of the 2006 Safe Mining Conference Organising Committee, NSW Minerals Council, PO Box A244, Sydney South NSW 1235, fax to 02 8202 7255 or email to [dgrove@nswmin.com.au](mailto:dgrove@nswmin.com.au). David can be contacted on 02 8202 7200.

## Understanding mine safety in the workplace

An engineering student has gained a real-life appreciation of mine safety and mobile equipment during a summer placement with the NSW Department of Primary Industries Central West Inspectorate staff.

James Roth, a third year mining engineering student at the University of NSW, spent 10 weeks with the department between December and February undertaking a number of projects.

James liaised with underground metalliferous miners, mobile equipment suppliers and service providers; becoming familiar with the specifications and application of mobile equipment used in underground metalliferous mines. This also included identifying significant potential hazards associated with the use of this equipment and reviewing and updating contacts in the Department's COMET database.

James said the opportunity to gain first-hand experience of risk assessment within a mine environment was both enlightening and beneficial from a study perspective.

"I had a good understanding of the importance of risk assessment but now I am seeing the real life consequences," James said. "It's a



Engineering student James Roth (right) underground at the Cadia East Project at Orange with project manager Steve Powell.

great experience to see how people at mine sites are identifying hazards and undertaking assessments."

James said the vacation placement had allowed him to gain "a tremendous amount of experience and knowledge".

His project work has supported a wider original equipment manufacturers (OEM) project being undertaken by the department.

## Survey shows Local Check Inspectors Conference a success

A NSW Department of Primary Industries survey conducted following the Local Check Inspectors Conference at Penrith Panthers last year has highlighted the excellent outcomes being achieved by the event.

The aim of the conference is to provide support for organisations to achieve best practice in Integrated Risk Management Systems covering business, HSE (health, safety and environment) and quality processes. More than 80 check inspectors attended the conference, which was considered an excellent turnout.

Highlights of the survey include:

- Out of 13 areas the survey covered, eight had a majority of respondents in the 'very good' or 'excellent' category
- More than 75 per cent of respondents rated the conference facilities either 'very good' or 'excellent'
- 70 per cent of respondents rated the course relevance and usefulness to work as 'very good' or 'excellent'
- 67 per cent of respondents found the course facilitator Noel Parish to be 'very good' or 'excellent'
- 67 per cent of respondents rated the course material as 'very good' or 'excellent'
- All respondents rated the course 'good', 'very good' or 'excellent'

Attendees were also asked to rank their preference for ongoing training in the future from 1 to 5. The results indicated the top three preferences for desired topics for future courses are:

1. Inspection and auditing
2. Continuous improvement of the role of the Local Check Inspector
3. Investigation process

Topics at the 2005 conference included:

- Identification of risk management principles in the context of legislative and site requirements
- Identification of hazards by considering energy sources
- Assessing risk and identification of unacceptable risk
- Identification, analysis and implementation of risk treatments
- Understanding the process of developing a safe work procedure from a completed Job Safety Analysis

### Orange office finds a new home

The Orange office of the NSW Department of Primary Industries — Mineral Resources has a new location.

The office is now located at the head office of the NSW Department of Primary Industries at 161 Kite Street, Orange.

The postal address is Locked Bag 21, Orange NSW 2800.

Importantly, the phone numbers have changed.

General enquiries should be directed to 02 6360 5333.

The new fax number is 02 6360 5363.

The emergency contact number after normal office hours is 02 6360 5343.

## New security controls for explosives and ammonium nitrate

A new licencing system introduced under fresh laws will control the way the mining industry handles explosives.

WorkCover NSW will be the sole licence-issuing authority for the new system introduced on September 1 last year for importers, manufacturers, transporters, suppliers, users and other classes of persons.

The *Explosives Act 2003* and the supporting Explosives Regulation 2005, the *OHS Amendment (Dangerous Goods) Act 2003* and the supporting OHS Amendment (Dangerous Goods) Regulation 2005 came into effect 1 September 2005. They replaced the repealed *Dangerous Goods Act 1975*.

The legislation stipulates that people may only handle explosives and concentrated ammonium nitrate if they are working under a valid licence or supervision of a valid licence holder issued by WorkCover. Additionally, people may only have unsupervised access to explosives and/or concentrated ammonium nitrate if they hold an Unsupervised Handling Licence.

From 1 January this year it became an offence to be in possession of concentrated ammonium nitrate without a valid licence.

Authorisations for shotfirers under the *Mines Inspection Act 1901* and the *Coal Mines Regulation Act 1982* are acceptable in place of a 'Blasting Explosives Users Licence' under the *Explosives Act 2003* until September 1 this year. People who hold a current Shotfirers Certificate and/or permit will need to apply for a new licence issued under the *Explosives Act 2003*. Current Shotfirers should apply for a new 'Blasting Explosives Users Licence' at least three months before the September 1 deadline or the expiry of their current shotfiring authorisation, whichever occurs first. All shotfiring certificates or permits will be cancelled on September 1 this year.

Mining 'Blasting Explosives Users Licence' applicants will need to satisfy Department of Primary Industries (DPI) competence criteria prior to making an application for consideration by WorkCover, including a National Probity Assessment conducted by NSW Police and Commonwealth security agencies. The general arrangement is that WorkCover will not issue licences for individuals relating to mines without the recommendation of the DPI.



*New laws and a new licencing system will govern the use of explosives in the mining industry.*

Application forms and an applicant's guide for a DPI reference to WorkCover NSW are available from the DPI website at [www.minerals.nsw.gov.au/safety](http://www.minerals.nsw.gov.au/safety)

Licensees will be subject to standard licence conditions, such as limits on the amount of explosives that can be used. A Security Plan describing how access to stored explosives is protected will also be required when storing explosives on site under a WorkCover storage licence. More detailed information and suggested templates for the Security Plan are available in WorkCover's 'Guide to Completing a Security Plan (SSP) for the Storage and Handling of Explosives (including Explosives Precursors)'.

The competence assessment processes for shotfiring are being finalised and industry will be advised as soon as these are available. The processes will be very much based on those currently in use.

The 'Blasting Explosives Users Licence', which includes a security check, is valid for five years and costs \$400. The 'Blasting Explosives Learners Licence' is valid for one year and costs \$150. And the 'Unsupervised Handling Licence' is valid for five years and costs \$150 per person. Renewal of licences will include fresh security checks.

WorkCover Licence application forms and supporting documentation such as proof of identity should be submitted at Australia Post, together with payment of the appropriate licence and security clearance fees.

**For specific information relating to the mining industry contact Graham Cowan on 6572 1899 or Keith Chilman on 4931 6650 from the Department of Primary Industries. Supporting information can also be found at the WorkCover website ([www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)) or via the WorkCover information line on 13 10 50.**

*A summary table of Local Check Inspectors 2005 Conference — feedback*

	Poor (%)	Average (%)	Good (%)	Very Good (%)	Excellent (%)
Registration process	0	8.3	54.2	29.2	8.3
Facilities at venue	0	8.3	16.7	50.0	25.0
Location of conference	0	8.3	41.7	37.5	12.5
Food/refreshments provided	0	12.5	41.7	29.2	16.7
How did you rate the event?	0	4.2	37.5	41.7	16.7
Seating in conference rooms	0	20.8	37.5	33.3	8.3
Conference materials provided	0	16.7	20.8	37.5	25.0
Course content	0	4.2	29.2	54.2	12.5
Did you find the course relevant and useful to your work?	0	12.5	16.7	58.3	12.5
Rate presenter/facilitator Noel Parish	0	0.0	33.3	50.0	16.7
Thoughts on notes provided	0	0.0	54.2	33.3	12.5
Were the sample workshops practical/useful?	0	12.5	37.5	37.5	12.5
Rate conference overall	0	0	37.5	50.0	12.5

## Court holds claimholder liable for unsafe premises

A mineral claimholder from Lightning Ridge has been found guilty of failing to ensure that premises under its control were kept in a safe manner.

The full bench of the Industrial Relations Commission found on 25 November 2005 that the claimholder, Eureka Opals Pty Ltd, had breached section 17 (1)(a) of the *Occupational Health and Safety Act 1983*.

The prosecution arose from an accident that occurred in the holder's mineral claim in March 2000. In the accident a young opal miner received injuries following the fall of the roof in the area where he was working. At the time he was under the supervision of another miner, Peter Buchanan, who was prosecuted under the *Occupational Health and Safety Act 1983*.

The claimholder argued it was just holding the claim for another person and did not have any control over the claim in a day-to-day sense or the method of mining conducted by the person for whom they were holding the claim. The Commission rejected this argument, finding that a person granted a mineral claim to mine for opal at Lightning Ridge had rights and obligations to ensure the claim was worked in a safe manner without risk to the health and safety of those working at the claim.

Peter Buchanan pleaded guilty in April 2004 to the offence of failing to ensure a safe workplace and was fined \$4500. The sentencing hearing for Eureka Opals Pty Ltd will take place this year.

The ruling by the Commission leaves in no doubt that all people who have mineral claims in their names must ensure the claim is worked in a manner that does not endanger the health and safety of anyone they allow onto the claim. This applies to all people holding claims in their names, regardless of whether they work the claim or someone else works the claim for them. If a person is injured or killed on a claim, the NSW Department of Primary Industries (NSW DPI) will investigate the incident and may prosecute both the claimholder and operator of the claim if there is evidence the claim has not been operated in a safe manner.

NSW DPI will continue to assist miners to better manage occupational health and safety in their claims through the Lightning Ridge Opal Miners Safety Awareness Course and the Mine Operators Workshop. It is important all claimholders ensure they and those working their claim have a Mine Safety Management Plan and Emergency Procedure.

## Prosecutions update

### Awaba Colliery

Mr Barry Edwards was killed as a result of a roof fall at the Awaba coal mine on 17 July 1998. Charges under the *Occupational Health and Safety Act 1983* (OH&S Act) were brought against Powercoal Pty Ltd and the mine manager. These charges were originally dismissed. Following an appeal by the prosecution, on 18 November 2004 the Industrial Relations Commission found the charges proven against each of the defendants. The Commission convicted Powercoal Pty Ltd on two counts and imposed a fine of \$100,000 for each. Pursuant to section 10 of the *Crimes (Sentencing and Procedure) Act 1999* the court did not record a conviction against the mine manager. Powercoal Pty Ltd and the mine manager commenced proceedings in the NSW Court of Appeal seeking to overturn the Commission's decision on various grounds. The Court of Appeal dismissed Powercoal's and the mine manager's claims on 10 October 2005.

### CSA Mine

On or about 14 June 2001 a barricade at the CSA Mine at Cobar failed, resulting in a major inrush. Fortunately nobody was in the mine at the time. However, people had been working in the area prior to the inrush and were at risk of serious injury and death. The Department investigated the matter and prosecutions under the OH&S Act were launched against Cobar Management Pty Ltd and Clough Engineering Limited. Cobar Management Pty Ltd pleaded guilty and was fined \$110,000. Clough Engineering Limited subsequently pleaded guilty. On 30 November 2005 the Industrial Relations Commission found Clough Engineering Limited guilty and imposed a fine of \$90,000.

### Cooranbong Colliery

During the repair of a continuous miner underground at the Cooranbong colliery on 1 July 1999 power was turned on and Mr Christopher Elliott, a Powercoal Pty Ltd employee, suffered fatal injuries. Powercoal Pty Ltd (mine operator) engaged Waratah Engineering Pty Ltd (contractor) to repair the continuous miner at the colliery. Following an investigation, the Department filed charges under the OH&S Act against Powercoal Pty Ltd and Waratah Engineering. In relation to Powercoal Pty Ltd, the Industrial Relations Commission on 18 November 2003 determined a penalty of \$65,000 following a guilty plea. On appeal by the prosecution, the Full Bench of the Commission increased the penalty to \$155,000. In relation to Waratah Engineering Pty Ltd, the Commission on 19 March 2004 determined a penalty of \$64,800 following a plea of guilty on two charges. On appeal by the prosecution the Full Bench of the Commission increased the penalty to \$120,000.

### Elura Mine Cobar

Mr David Kittel, a rotary drill operator at the Elura Cobar Mine, was killed by a rock burst from the side of the drive while drilling production holes on 1 March 1999. The death was investigated by the Investigations Unit, and the then-employer Pasmenco Australia Limited was prosecuted under the OH&S Act. The matter was delayed when Pasmenco Australia Limited entered into administration in September 2001 and did not come out of administration until April 2004 when acquired by Zinifex Australia Limited, who subsequently pleaded guilty to the charges. On 18 November 2005 the Industrial Relations Commission found the company guilty and imposed a fine of \$115,000.

### Wallahah Colliery

On 6 July 1998 Mr Anthony Carroll was killed and Mr Tony Dickson seriously injured by a roof fall underground at the Wallarah Colliery. At the time of the accident the two miners were drilling rock to install rock bolts to secure the ground. The men were employees of Coal Operations Australia Ltd (mine operator). The Department conducted an investigation and later filed charges with the Industrial Relations Commission under the OH&S Act against Coal Operations Australia Ltd. On 4 September 2003 the Commission acquitted Coal Operations Australia Ltd of the charges. The prosecution appealed the decision and on 29 April 2005 the Full Bench of the Commission found Coal Operations Australia Ltd guilty and imposed a fine of \$200,000. Coal Operations Australia commenced proceedings in the NSW Court of Appeal seeking to overturn the Commission's decision on various grounds. The Court of Appeal dismissed Coal Operation Australia's claims on 10 October 2005.

Since the introduction of the new enforcement policy in 1999 there has been 30 successful prosecutions resulting in conviction. Six matters are before the courts with one of the matters involving a guilty plea.

# Mining engineering students experience industry at Perilya

The mine managers of tomorrow were given an insight into mine safety during a recent visit to Perilya Mine at Broken Hill.

University of NSW mining engineering second year students were treated to a three-day excursion to Broken Hill to learn different aspects of mining, mine safety and mining legislation.

Mine Safety Operations Central West Inspector of Mines Greg Welsh addressed the students on the need for safety management and mining legislation.

"These students will one day be mine managers and it's important for us to emphasise the safety aspects of the role and to impress upon the students the need to be aware of safety management and legislative requirements to significantly reduce the incidence of injuries," Mr Welsh said.

"Mining is a great industry and it can be quite lucrative. Some of the students were surprised to hear they'd be earning about \$90,000 to \$100,000 on graduation."

A visit to the Miners Memorial atop of the Line of Lode that forms a backdrop to Broken Hill demonstrated how dangerous mining can be. The students arrived at Perilya Mine on day two of their excursion. The group was welcomed to the site by mine general manager Barry Mitchell.

Mine manager Ron Ellis showcased the site and took the students through a mock work session which whet their appetites for the industry.

Half of the group was then showed the surface facilities necessary to support the mine operations — hoisting, crushing and screening, milling and the maintenance workshop.

The other half drove down the decline to visit the underground mine operations, inspected drilling and blasting, viewed stoping operations, and looked at some of the loading and hauling equipment.

CBH Resources General Manager at Broken Hill Rob Ogden spoke on the current exploration program and planning options covered by the mining lease in the centre of the city. The lease incorporates most of the original mining leases pegged when Broken Hill was first explored, including the original BHP pit. The group also learnt about the vast future potential of mineral sands mining in western NSW and Victoria.

Dr Paul Hagan from the University of NSW said he tried to organise at least one excursion for students to different mine sites.

"We have had feedback from prospective students that these sort of stories have sparked their interest in mining over some other programs," Dr Hagan said.

Second year mining engineering student Andrew Ireland said the excursion gave him a broader understanding of mining operations.

"The experience really impressed on us the need to have a clear understanding of our legal requirements for safety management," Andrew said.

"We look at the legislative system, safety management issues and learnt what was expected from us on the job."



*Mining engineering students from the University of NSW learn about mine safety during a visit to Perilya Mine at Broken Hill*

Andrew's father was a mining engineer and he is looking forward to working in different mine sites throughout Australia and overseas.

"We've had really decent excursions to the field," he said.

"Engineering students from other disciplines are envious of us."

The final segment of the excursion was a discussion by NSW Department of Primary Industries Senior Environmental Officer Luke Pickering on future options for rehabilitation and courses of action on the various features, many of which have historical significance.

## MIRMGate opens the door to hazard and risk management information

The mining industry now has access to a comprehensive online database of good practice information.

The Minerals Industry Risk Management Gateway (MIRMGate) is a website providing access to a useful database of information on hazard and risk management in mining, minerals processing and quarrying industries.

MIRMGate provides a single doorway to all this information. It's like an organised library of on-line resources that draws from national and international sources. Basic and advanced search options are available, as well as the ability to browse by hazard, task and subject categories.

Content on MIRMGate is carefully selected, assessed and indexed by an editorial committee of representatives of MIRMGate sponsors, such as the NSW Department of Primary Industries. These industry experts select resources according to a set of clearly defined criteria on content, form and process. The system content is based on a specifically designed framework, detailed content requirements and a resource selection process.

MIRMGate resources are ranked on their relevance to hazard identification, risk analysis, and adequate control identification, facilitating resource discovery structured to suit the tasks undertaken at minerals sites. Ranking 1 indicates 'not relevant content' and ranking 5 indicates 'excellent content.'

The MIRMGate Alert Service is an automated notification system which emails you when new records are added to the MIRMGate database that match your selection criteria. Your selection criteria may consist of hazard, subject and task categories and sub-categories. The Alert Service requires MIRMGate visitors to register their name, company and email address when they first visit the site. Registration to the Alert Service is free.

MIRMGate can be accessed at [www.mirmgate.com](http://www.mirmgate.com)

## Mine safety operations personnel develop their knowledge of risk management

Mine inspectors and mine safety officers from the NSW Department of Primary Industries (NSW DPI) have a better appreciation of risk management and a recognised competence after completing an intensive training course.

The course is designed for post-graduate use as part of the Graduate Certificate in Minerals Industry Risk Management. It is normally delivered in distance learning mode over a 13-week semester.

Most inspectors and mine safety officers from throughout NSW undertook the five-week course conducted by the University of Queensland's Minerals Industry Safety and Health Centre. The Minerals Industry Risk Management Course was a workshop-based course that consisted of a four-week self-paced study program and a five-day workshop at Toronto.

The program was developed by Professor Jim Joy of the University of Queensland and is recognised as complying with the Australian Qualifications Training Framework national competence framework *MNCG1003 – Establish the Risk Management System* as part of the mine manager's competence requirements.

It looked at the principles of risk management and risk management concepts such as losses, hazards, risk, controls/barriers, risk analysis and assessment techniques.

Risk management systems, auditing and incident investigation tools also formed a major component of the course.

NSW DPI Senior Inspector of Mechanical Engineering Gordon Jervis said the course was a valuable educational experience for mine inspectors and mine safety officers.

"The course teaches you how to organise risk and to determine what measures can be taken to address the risk," Mr Jervis said.

"It deals with ways of addressing risk and bringing it to an acceptable level."

Some of the course learning objectives were defining risk terminology, introducing key concepts and issues, dealing with ideas such as ethics and sustainability, defining key models that can help with conceptualising operations and introducing the Minerals Industry Risk Management (MIRM) model.

Course participants also studied the history of risk management as a discipline, being aware of the relevant regulatory and statutory frameworks, having the ability to identify the key components of risk management within any process or system and the ability to describe the importance of risk management to the mining industry.

Other learning objectives included the ability to analyse a risk management report or risk management processes and to apply appropriate risk analysis tools with reference to relevant minerals industry standards and guidelines.

Two of the case studies examined during the course were the Piper Alpha oil rig explosion and the Challenger space shuttle disaster.

Inspectors and mine safety officers will be putting this learning into practice out on the mine site.

## In control of electrical engineering safety

The 15th Electrical Engineering Seminar at Penrith late last year took the theme 'In Control of Electrical Engineering Safety'.

The seminar papers were targeted to assist mining electrical personnel keep abreast of technical, legislative and Australian Standards developments.

NSW Department of Primary Industries Senior Inspector of Electrical Engineering John Waudby said the need to stay up to date on safety issues in the electrical engineering discipline had never been more crucial.

Electrical engineering is a significant area of risk. If the electrical engineering safety at a mine site is not in control, then it is unmanageable.

Being in control of mining electrical engineering safety requires a fit-for-purpose apparatus, competent personnel, appropriate procedures — all in a managed environment.

"The equipment is becoming larger, more powerful and more complex. Therefore we need an increased level of vigilance and particularly for machine safety and control — the adoption of functional safety principles," Mr Waudby said.

"Seminars of this type are of utmost importance to plant suppliers and electrical engineering personnel at metalliferous and coal operations."

Speakers at the seminar included Dr Paul Middleton from the Prince of Wales Hospital, who spoke on treatment of electric shock.

Other topics included electrical safety improvements at NSW quarries, engineering solutions for safe mine earthing, modern communications in mining, verifying correct functionality of voltage reduction devices, high voltage management plans and functional safety.

## Lightning Ridge Safety Awareness Course

The Lightning Ridge Safety Awareness Course will be held on a regular basis throughout 2006.

The two-day course on Monday-Tuesday will start at 3pm on the Monday and 8am on the Tuesday. The two-day Tuesday-Wednesday course will start at 4.30pm on the Tuesday and 8am on the Wednesday.

**For further information or to book a place at the course contact NSW Department of Primary Industries Senior Mine Safety Officer at Lightning Ridge David Howell on 02 6829 0678**

### Dates for the Safety Awareness Course for the first half of 2006 are:

27 – 28 March  
28 – 29 March  
1 – 2 May  
2 – 3 May  
29 – 30 May  
30 – 31 May  
19 – 20 June  
20 – 21 June

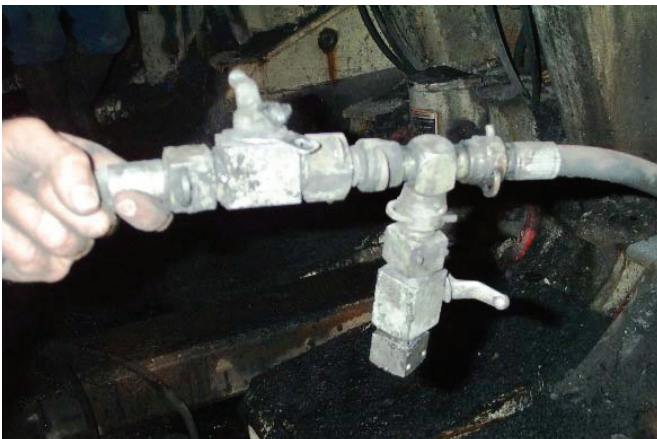


## SA05-12: Electric shock from a light fitting

A mineworker received an electric shock when his forearm made contact with a flameproof Burn Brite fluorescent light fitting (Certificate No AUS EX 424X) on a continuous miner in the hazardous zone of a coal mine. The presence of electricity external to the flameproof enclosure also presented a potential ignition source of methane. Manufacturers of light fittings and continuous miners, should review the risks to safety from their products and to promptly stipulate earthing, protection, maintenance and inspection requirements to their customers as required by the *Occupational Health and Safety Act 2000*. All mines should assess the risks to safety of the Burn Brite light fitting in a manner consistent with clause 6 of the Coal Mines (General) Regulation to decide if continued use is appropriate, and if so, under what conditions of use. All mines should review the training and competence requirements of persons responsible for maintenance of the light fitting to prevent mistaken assembly, identify cracks in the flameproof assembly and ensure adequate earthing. All mines should review the inspection, testing and maintenance of all electrical equipment to include the checking of the integrity of earthing of exposed metal parts and earth continuity testing.

## SA05-13: Stored energy

There have been a number of similar incidents and near misses involving the installation and removal of longwall roof supports using temporary hydraulic lines (whip hoses). Employees sustained superficial injuries (hand injuries) when they were hit by high pressure hydraulic fluid (350 Bar Pressure). All mines should consult with the OEMs for the recommended procedure and equipment to install and remove the roof supports and review the equipment and components of the installation and recovery hoses for fit for purpose application.



## SA05-14: Queensland fatality caused by prime mover rim assembly failure

A person suffered fatal injuries while changing a dual tyre and rim assembly on a drive axle bogey of a road train prime mover. A rim assembly failure released the potential energy of the tyre with explosive force, propelling the outer tyre and rim assembly and failed components of the inner rim assembly off the hub. Mines should be aware of the current Australian Standard (AS 4457:1997) Earth-moving machinery – Off-Highway Rims and Wheels-Maintenance and Repair which is very specific for the demounting of this type of tyre and rim assembly. Mines and

equipment designers, manufacturers and suppliers should also be aware of their obligations under the *Occupational Health and Safety Act 2000* relating to health, safety and welfare at work.

## SA05-15: Dangerous uncontrolled release of hydraulic energy



An operator sustained minor injuries when the hydraulic hose for the bucket tilt function burst allowing pressurised fluid to smash the front windscreen on his wheel loader. While the wheel loader was being operated a corroded hydraulic hose end released uncontrolled hydraulic fluid which ejected towards the driver's windscreen.



The energy from the uncontrolled release of hydraulic oil was sufficient for the hydraulic oil to penetrate the front windscreen of the loader, enter the driver's compartment and hit the driver. This incident highlights the hazardous nature of uncontrolled pressurised fluids. Hydraulic energy is a major hazard if uncontrolled. To meet OH&S obligations equipment designers, manufactures and hirers must take all reasonable steps to advise equipment owners of faults and details to rectify faults with their equipment. All mines should inspect all high-risk hydraulic hoses on equipment to ensure they are fit for purpose and free of defects, remove exposed risk, and ensure all high-risk hydraulic systems are securely protected by guards or other such devices that will diffuse the hydraulic energy and provide equivalent levels of safety. They should also develop a hydraulic hose management system that allows hose replacement, failures and damage to be monitored and to implement predictive maintenance strategies.

*Safety Alerts continued page 10*

### SA05-16: Blast control – flyrock incident

During a quarry blast under the control of a contractor, flyrock was projected more than 500 metres onto the Pacific Highway. A rock of approximately 100mm diameter was also projected onto a nearby property where it caused damage to a shed and parked vehicle. In addition, the windscreen of a front end loader in the quarry was broken but there was no other damage or personal injury. Changes in procedures should be implemented where there is a potential for the explosives to run through the cracks in the rock mass, a procedure should be followed to deal with the loss of explosives; profile and boretrack methods should be applied where there is a potential for drill wander due to cracked ground; where anomalies occur during loading, shotfirers must determine the causes and take action to ensure overloading does not occur; careful consideration should be given to the orientation of quarry faces to ensure appropriate safe firing direction; stemming heights could be increased; the risk

assessment should take into account the unique quarry location and external areas that come under the influence of the blast; and the risk management procedure should allow for reassessment of risks if significant changes in circumstances occur.

### SA06-01: Dangerous Unplanned Movements – Shuttle Cars and Continuous Miners

Recently there have been three unplanned movements of coal mining machinery that had the potential to seriously injure or kill mineworkers. One unplanned movement involved a shuttle car and two unplanned movements involved continuous miners. The three accidents occurred at different mines. All the incidents related to the restoration of power to a circuit breaker. All mines need to review mobile machinery design to establish that the safety-related functions and safety-related electrical control systems are adequately designed. Involving the machinery designer, involving the machinery manufacturer and the use of appropriate standards should be considered in that review.

## TAFE students learn about mine safety

TAFE students hopeful of securing employment in the mining industry have gained an insight into mine safety.

NSW Department of Primary Industries Inspector of Mines at Broken Hill Greg Welsh delivered a presentation to students undertaking an indigenous pre-employment course, calling on his own personal experiences.

The course is being conducted by William Angliss Institute of TAFE at Mildura for BeMax. It is hoped at least three of the course participants will gain a traineeship at the company's Gingko mine site.

Course co-ordinator Alan Hickman approached Mr Welsh and asked him if he would give the participants a presentation on mine safety.

He said Mr Welsh's industry insights had a profound effect on the students.

"He had a Power Point presentation which was great, but it was what he said and how he said it that was so marvellous," Mr Hickman said.

"Greg gave lots of actual industry and mine examples and spoke from his personal experience.

"He totally engaged every single person in the room. I can't find the words to express how critical his words to the class were. He has 'made' the course."

Mr Welsh recounted his time training indigenous people at the Golden Grove mine site in Western Australia.

He provided realistic explanations of work accidents and advised students to have a constant awareness of occupational health and safety.

The students were informed about the broad spectrum of safe work procedures, from conducting pre-start checks before operating mine vehicles to servicing mine screening plants.

Mr Hickman said the presentation had boosted the students' outlook and confidence.

More information on the TAFE course can be gained by contacting William Angliss Institute of TAFE on 1300 850 272.

## Safe installation, operation and maintenance of crushing and screening equipment

The NSW Department of Primary Industries (NSW DPI), Institute of Quarrying Australia (IQA) and original equipment manufacturer Terex Jaques provided two crushing and screening workshops to 100 quarry operators at Coffs Harbour and Tamworth late last year.

Participants received up-to-date information on the selection, performance, maintenance and safety aspects of typical crushing and screening equipment. The workshop also introduced the IQA to the area, including an explanation of the Professional Development Program (PDP) which will complement the recently announced Quarry Management Certification System (QMCS).

The Department and IQA are considering more workshops to further develop quarry operators competencies ..

For more information contact your local NSW DPI office or IQA representative.



Graham Cook (Terex Jaques), Peter Ward (Reedy Creek), Darrell Adam (Institute of Quarrying Australia), Inspector of Mines Angus Mc Douall (Department of Primary Industries) and Andrew Mactier (Terex Jaques) at the crushing and screening safety workshops.



*Senior Scientific Officer at the Mine Safety Technology Centre Greg Browning tests gases using the mobile gas testing laboratory.*

# Mobile diesel gas testing service available for mines

The new Mine Safety Technology Centre at Thornton has two mobile gas testing laboratories to undertake diesel exhaust testing. The service is available to all underground mine operators in NSW and equipment manufacturers.

The mobile gas laboratories have made an enormous difference to the testing of diesels. Years ago, samples were collected in glass bottles, brought back to the laboratory in Sydney and analysed. If the results were not satisfactory, the manufacturer was asked to make adjustments to the engine, and the procedure repeated.

With a mobile laboratory it is possible to analyse samples directly from the engine and, if necessary, suggest adjustments and then retest the engine. The whole operation is faster, more efficient and gives greater cause for confidence in the results.

Staff also provide on-site gas monitoring during coal mine heatings or fires.

The diesel gas testing service is one of many scientific testing and analytical services provided to the NSW mining industry by the Mine Safety Technology Centre.

The centre is staffed and equipped to provide state-of-the-art services for the mining industry, specialising in gas analysis; analytical services; occupational hygiene; equipment compliance certification and evaluation of electrical safety in underground mines. Other functions include calibration of instruments, gas blending devices and flow controllers; dust analysis; gas analysis; noise and illumination surveys; breathing apparatus and materials testing; and performance evaluation of gas monitors.

The centre works closely with the mining industry; mines inspectors and the Investigations Unit, to improve safety in the mining industry. It is part of the NSW Department of Primary Industries — Mineral Resources Division, and is located at Thornton in the Hunter Valley.

To access the services contact Greg Browning at:

Mine Safety Technology Centre,  
PO Box 343, Hunter Regional Mail Centre, NSW 2310  
Phone (02) 4924 4000 or fax (02) 4924 4080

## Grahame Fawcett retires

Grahame Fawcett retired as Manager of the Mine Safety Technology Centre in December 2005 after a long and distinguished career with the NSW Department of Primary Industries.

Grahame served with absolute dedication throughout his 35-year career and the department will miss his depth and breadth of knowledge. He is recognised nationally and internationally as an expert in the scientific and technical aspects of mine safety, particularly in relation to coal mine gas analysis.

He has also been recognised by the department for his dedicated work in establishing the Mine Safety Technology Centre at Thornton and providing continuity during this challenging period. He carefully selected the new staff and oversaw the unit's relocation from Lidcombe.

The Mine Safety Technology Centre is now building on his expertise. Recruitment for Grahame's replacement is continuing.

Senior Inspector of Coal Mines Glyn McDonald is overseeing management of the centre, while Senior Scientific Officer Greg Browning is organising client services.

## New manager for Investigation Unit

Steve Millington has been appointed Manager of the NSW Department of Primary Industries' Investigation Unit. The unit is based at the Mine Safety Technology Centre at Thornton in the Hunter Valley.

Steve held the position of Inspector of Electrical Engineering, based at the department's Singleton office for six years before his appointment to the unit on January 3 this year. He left school to undertake an electrical apprenticeship at the Awaba coal mine and gained a certificate of competency in mine electrical engineering. Steve held a number of positions within the mining industry, including electrical engineer in charge at Tower Colliery and engineering manager (electrical/mechanical) at West Wallsend Colliery.

The Investigation Unit is an autonomous unit which reports to the Director-General. It conducts investigations into major accidents and incidents in the NSW mining industry for coroner's reports and legal proceedings. The unit aims to contribute to a better understanding and management of the safety hazards and risks in mining operations. It provides industry with information on the lessons learned from past accidents and incidents to increase safety awareness.

The Investigation Unit also provides training to the department's safety officers and mechanical and electrical engineering groups. This training enhances the knowledge and skills of officers who investigate incidents and accidents, enforce legislation and may be required to give evidence in court.



*Steve Millington has been appointed Manager of the Department's Investigation Unit.*

# CALENDAR OF EVENTS

**OHS Conference Mine Safety Conference**, 18-21 June 2006, Peppers Resort, Leura, Blue Mountains  
NSW Minerals Council — David Grove 02 8202 7200, [dgrove@nswmin.com.au](mailto:dgrove@nswmin.com.au)

**Mine Operators Workshops 2006**, Workshops held regularly, Morilla Street, Lightning Ridge  
Janet Town, DPI, 02 6829 0678

**Mine Safety Awareness Course**, Courses held regularly, Lightning Ridge Bowling Club.  
Janet Town, DPI, 02 6829 0678

**Hunter Valley Underground Mine Mechanical Engineers Meeting**, Quarterly meeting, June, additional dates TBA  
West Wallsend Colliery, Paul Drain, Mine Safety Officer, DPI (02) 4931 6652

**Hunter Valley Opencut Mine Mechanical Engineers Meeting**, Quarterly meetings, venues TBA  
BHP Mt Arthur, Matt Willoughby, Mine Safety Officer DPI (02) 65 721899

**Southern & Western Coalfields Mechanical Engineers meeting**, location & dates TBA (Quarterly meeting)  
Graham Johnston, Mine Safety Officer, DPI (02) 4222 8307 or Wally Kope, Inspector Mechanical Engineering, DPI (02) 4227 1699

**Meeting with Industry Groups**, Location & date TBA (3 meetings per annum)  
Gordon Jervis, Snr Inspector of Mines Mechanical Engineering (02) 4931 6642

**Mechanical Engineering Safety Seminar**, 9 and 10 August 2006, Penrith Panthers  
Gordon Jervis, Snr Inspector of Mines Mechanical Engineering (02) 4931 6642 or Tracey Lee Smith (02) 4931 6546

**Mechanical Safety Presentations to the Extractive Industries**, Closed workshop 'onsite'. Bookings — generally workshops are not open to broader industry however if you would like more information please contact DPI. Held periodically throughout the year, as required  
Angus McDouall, Inspector Mines, DPI (02) 6776 0309. Paul Drain, Mine Safety Officer, DPI (02) 4931 6652 (Nth Coast)  
Matt Willoughby, Mine Safety Officer, DPI (02) 6572 1899 (Mid North Coast)

**Hunter Valley Electrical Engineers meeting**, Held bi-monthly on the first Friday of the month — venues change for each meeting  
Contact John Waudby Senior Inspector Electrical Engineering (02) 4931 6641 or 0418 295 656

**Southern and Western Coalfields Electrical Engineers meeting**, Date TBA held approx. quarterly (limited numbers).  
TestSafe, Londonderry, Bob Kennedy, Inspector of Electrical Engineering (02) 4227 1699 or 0417 226 362

**HIESN (Hunter Industry Electrical Safety Network) meeting**, Meets the first Thursday of each month — venues change.  
Peter Henderson, Tomago Aluminium 0408 683 544

**Western & Central Western NSW (Cobar, Broken Hill, Orange) Mine Electrical Engineer meeting**, Venue & date TBA  
Stan Maginnis, Inspector of Electrical Engineering, (02) 6351 3052 or 0417 223 875

**DPI Annual Electrical Engineering Safety Seminar**, 15 and 16 November 2006, Penrith Panthers  
John Waudby, Senior Inspector Electrical Engineering, (02) 4931 6641 or 0418 295 656 or Tracey Lee Smith on 02 4931 6546

**Remote Control Equipment Advisory Group meeting**, Invite required, see contact for more details. Meets Quarterly — Next meeting date TBA  
John Waudby, Senior Inspector Electrical Engineering, (02) 4931 6641 or 0418 295 656

**MEMMES (Mining Electrical and Mining Mechanical Engineers Society of the IEAust) Meeting**, Monthly, Meeting  
Meetin: 21 Mar — Visit to Bambach Cables, Brookvale, time TBA  
Contact: Ron Rennex, Acting Secretary (02) 4938 0194

For more information go to: [www.minerals.nsw.gov.au/safety/upcoming\\_events](http://www.minerals.nsw.gov.au/safety/upcoming_events)

## NSW DPI — Mineral Resources Offices

### MAITLAND

NSW Department of Primary Industries  
Mineral Resources  
516 High Street, Maitland NSW 2320  
(PO Box 344, Hunter Region MC NSW 2310)  
Phone: (02) 4931 6666, Fax: (02) 4931 6790

### ARMIDALE

NSW Department of Primary Industries,  
Earth Sciences Building (C2)  
University of New England, Armidale NSW 2350  
Phone: (02) 6738 8500, Fax: (02) 6772 8664

### BROKEN HILL

Level 2, 32 Sulphide Street,  
Broken Hill NSW 2880  
(Note changed PO Box number)  
(PO Box 696 Broken Hill NSW 2880)  
Phone: (08) 8088 9300, Fax: (08) 8087 8005

### COBAR

Government Offices, 62–64 Marshall Street,  
Cobar NSW 2835  
(PO Box 157 Cobar NSW 2835)  
Phone: (02) 6836 4392, Fax: (02) 6836 43955

### LIGHTNING RIDGE

Lot 60 Morilla Street, Lightning Ridge NSW 2834  
(PO Box 314 Lightning Ridge NSW 2834)  
Phone: (02) 6829 0678, Fax: (02) 6829 0825

### LITHGOW

Suite 1, Level 1, 184 Mort Street, Lithgow NSW 2790  
(PO Box 69 Lithgow NSW 2790)  
Phone: (02) 6350 7888, Fax: (02) 6352 3876

### LONDONDERRY

Core Library  
947–953 Londonderry Road,  
Londonderry NSW 2753  
Phone: (02) 4777 4316, Fax: (02) 4777 4397

### ORANGE

(Note changed address and telephone numbers)  
161 Kite Street, Orange 2800  
(Locked Bag 21, Orange NSW 2800)  
Phone: (02) 6360 5333, Fax: (02) 6360 5363  
After hours – emergency only – (02) 6360 5343



NSW DEPARTMENT OF  
**PRIMARY INDUSTRIES**

### SINGLETON

1 Civic Avenue, Coal Services Building,  
Singleton NSW 2330  
(PO Box 51 Singleton NSW 2330)  
Phone: (02) 6572 1899, Fax: (02) 6572 1201

### THORNTON

Mine Safety Technology Centre  
8 Hartley Drive, Thornton NSW 2310  
(PO Box 343, Hunter Region Mail Centre,  
NSW 2310)  
Phone: (02) 4924 4000, Fax: (02) 4924 4080

### WOLLONGONG

State Government Offices  
Level 3, Block F, 84 Crown Street,  
Wollongong NSW 2500  
(PO Box 674 Wollongong NSW 2520)  
Phone: (02) 4222 8333, Fax: (02) 4226 3851

**NSW DPI—Minerals Resources, Tollfree 1300 736 122**