



NSW mine safety update

Promoting safety in the NSW mining industry

Strengthened Mine Safety Advisory Council



A strengthened Mine Safety Advisory Council will aim to increase the emphasis on safety and health within the mining industry by reviewing and analysing safety performance, setting strategic directions, providing advice and developing policy recommendations.

NSW Minister for Mineral Resources Ian Macdonald has strengthened the role and capacity of the Council by:

- the proposed appointment of two independent experts in OHS
- setting up a secretariat within the existing structure of the NSW DPI
- making resources available, when appropriate through the NSW DPI, on the Council's recommendation to explore issues and commission research.

A new chairman - Norman Jennings – has also been appointed to the Council (see accompanying story). The chairman's role is to assist in joint consideration of critical issues and consensual strategy development and decision making.

The Council now includes senior officials from some of the most respected bodies in the mining industry including the CFMEU (Mining and Energy Division), Australian Workers Union, NSW Minerals Council and Cement Concrete and Aggregates Australia.

The Council was established to provide the Minister with advice on critical OHS issues of importance to the NSW Government. The Minister will bring these matters to the Council for its consideration, requesting its advice on appropriate ways forward in the continual strive to foster improved OHS performance in the industry.

Strengthening the Council and broadening its functions has been made possible through the implementation of the Mine Safety Levy.

The Government will be looking to the Council for advice and strategic direction on a range of issues including:

- the Wran Mine Safety Review recommendations indicating Council action
- mining industry action plan agreed by stakeholders at the 2005 Safety Summit
- the roll-out of the new OHS legislative framework
- National Mine Safety Strategy Framework
- oversight of industry sector advisory committees
- performance measures.

The NSW Government's vision is for the Council to operate in an environment of trust and co-operation to address these issues and that all stakeholders demonstrate a willingness to support the work of the Council and move forward on mutual matters of importance as one group.

The Council's purpose, in conjunction with three industry sector committees (covering coal, metalliferous and extractive minerals), is to ensure ongoing consultation with the mining industry (government, unions and employers) on mine safety matters in NSW.

It will establish strategic safety and health direction and goals, analyse and review the safety performance of the industry and provide information to stakeholders. This will allow safety performance improvement, and provide leadership to the mining industry to develop safe and healthy workplaces.

At the first meeting of the strengthened Mine Safety Advisory Council are (front, L-R) Doug Hocking (Executive Director, Biosecurity Compliance and Mine Safety, NSW Department of Primary Industries), NSW Minister for Mineral Resources Ian Macdonald, Council chairman Norman Jennings, (back) and new Council members Tim Leahy (NSW Minerals Council), Wayne McAndrew (CFMEU), Ian Murray (CFMEU), Mick Buffier (NSW Minerals Council), Susan Fields (Cement Concrete and Aggregates Australia) and Mathew Wilmore (AWU).

Norman Jennings new chairman of the MSAC

The NSW Government has appointed Norman Jennings as the chairman of the NSW Mine Safety Advisory Council.

Mr Jennings brings a wealth of national and international experience in the resources, energy and safety fields to the Council.

After graduating with a Bachelor of Science (Fuel Science) from the University of Leeds, United Kingdom in 1966, Mr Jennings gained employment with Australian Iron and Steel at its Port Kembla steelworks as a combustion engineer.

He then held senior positions with the Department of Resources and Energy in Canberra and the International Energy Agency in Paris, dealing with energy policy and analysis.

Mr Jennings joined the International Labour Office (ILO) in Geneva as its mining specialist in 1987, becoming Acting Director of the Sectoral Activities Department in 2004. Throughout his career in ILO, Mr Jennings was directly responsible for the ILO's activities in mining and metal production.

Among his many ILO activities, Mr Jennings managed a large ILO department, the commissioning of consultants, chaired international meetings, co-authored a handbook on safety and health in small-scale mines, prepared major reports, papers and chapters for books and papers on the mining and metals industries, developed ILO country strategies and tripartite programs to improve mine safety in a number of countries, including coal mine safety in China, and promoted the ratification and implementation of ILO Convention 176 (Safety and Health in Mines).

Mr Jennings attained a Graduate Diploma in Applied Economics from the University of Canberra, is a Chartered Engineer, Fellow of the Energy Institute and Member of the Institution of Gas Engineers and Managers.



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Photography: David Barnes & Mine Safety Staff
Design: Nicole Irvine

© NSW Department of Primary Industries
NSW Department of Primary Industries
Mineral Resources Division
516 High Street
Maitland NSW 2320
PO Box 344
Hunter Region Mail Centre NSW 2310
Australia

**For any enquiries or to obtain publications:
T: 1300 736 122**

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.



NSW DPI Mine Safety Officers will be conducting audits to ensure all moving parts on machinery used in opal mining have guards installed.

Fit guards to moving parts on opal mine machinery

Opal miners must fit appropriate guards to moving parts on all machinery operating on their mining titles by 25 July 2006.

NSW Department of Primary Industries Senior Mine Safety Officer David Howell said although many miners have now guarded their equipment, there are still some who are putting themselves - and those at their workplaces - at risk of severe injury and amputation.

A young opal miner recently received severe leg injuries when his shorts became entangled in the drive line of an agitator while the machine was being refuelled. Mr Howell said the miner was lucky compared to miners who, in the past, suffered severe injuries caused by moving machine parts.

These accidents can be easily prevented by fixing appropriate guards over the moving parts.

NSW DPI has been advising opal miners for some years that all moving parts on machinery operating on a mining title must be protected by an appropriate guard.

Mining and occupational health and safety legislation require people who have a mining title in their name to identify hazards and assess the risks associated with their mining operation.

After 25 July 2006, NSW DPI Mine Safety Officers will conduct audits of Mining Purpose Leases to ensure all moving parts on conveyors and agitators and other machinery are guarded.

Should equipment be found which is not adequately guarded, the lease holder may be issued with a notice to stop all operations on the lease until NSW DPI has been advised that the notice has been complied with.

Audits will also be conducted on mineral claims and opal prospecting blocks to ensure that drill rigs, hoists, generators, air compressors, blowers and all other equipment being used on the mining title have the moving parts protected by guarding.

Would you like to receive Safety Alerts by email?

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

Sharing a vision of safety in the mining industry

Industry participants will be encouraged to adopt *A Shared Vision* of safety during the 2006 NSW Minerals Industry Occupational Health and Safety Conference.

The annual OHS Conference, to be held at Leura in the Blue Mountains from June 18 - 21, will attract delegates from mining companies, employee groups, contractors, government, OHS specialists and universities.

The theme of the conference will centre on the co-operation and collaboration necessary between industry, employees, government and unions to deliver an industry free of fatalities, injuries and workplace-related disease.

Delegates will have the opportunity to learn about new and emerging issues affecting the mining industry's health and safety performance and to share practical workplace and industry initiative experiences.

An exceptional line-up of speakers has been gathered for the conference, including internationally recognised health and safety experts Professor Patrick Hudson and Jim Spigener (see accompanying story).

Former prime minister Bob Hawke AO, AFL Living Legend Ron Barassi AM and Sydney Olympics chief executive Sandy Hollway AO will share their insights into uniting teams to a common position in difficult and adverse circumstances.

This will take place during a panel session convened by ABC journalist and commentator Margaret Throsby AM.

Former Australian Test cricketer Merv Hughes will present an address on back safety, general safety attitudes, recovery from injury and motivating the workforce.

Mining industry leaders Tony Maher (CFMEU, General President Mining and Energy Division), Colin Bloomfield (President, Illawarra Coal BHP Billiton) and Tim Lehany (General Manager, Margin Improvement Program, Newcrest Mining) will each present sessions on co-operation, leadership and safety and a case study on 'working together'.

Expert presentations from NSW Department of Primary industries, industry practitioners and their peers on health/people, legal/prevention, contractors/communication and cases studies/risk will be a highlight.

The conference will also feature the annual innovation awards and dinner, which recognises creative and practical solutions to health and safety problems. A trade exhibition with displays from a wide range of industry organisations will be operating throughout the conference.

For more information contact David Grove from the NSW Minerals Council on 02 8202 7200 or email to dgrove@nswmin.com.au

AFL legend Ron Barassi, former prime minister Bob Hawke AO and Sydney Olympics chief executive Sandy Hollway AO will share their insights into uniting teams to a common position in difficult and adverse circumstances on a panel convened by ABC journalist and commentator Margaret Throsby AM. Former Australian Test cricketer Merv Hughes will present an address on back safety, general safety attitudes, recovery from injury and motivating the workforce.

Internationally recognised speakers for conference

Two international keynote speakers headline an impressive list of presenters at the 2006 NSW OHS Conference.

Professor Patrick Hudson will speak on *Becoming a Safety Culture – What Does It Take?* while Jim Spigener will focus on *Safety Leadership*.

Professor Hudson is internationally recognised for his work on safety management systems. He is based at Leiden University in Amsterdam and is an active member of the ICAO Human Factors Awareness Group.

Jim Spigener has been with consulting firm Behavioural Science Technology since 1990. He is described as an inspiring and passionate presenter on safety leadership. He has helped hundreds of companies worldwide implement successful behavioural systems in the fields of safety, quality and reliability.

As well as their keynote addresses, Professor Hudson and Mr Spigener will each present workshops during the conference.

Professor Hudson's workshop is titled *Hearts and Minds*.

Mr Spigener will present workshops on *Better Safety Decision Making by Eliminating Bias* and *Influential Leadership*.



Professor Patrick Hudson and Jim Spigener will present keynote addresses at the OHS Conference.



Update for Remote Controlled Mining Equipment Guideline

A metalliferous mines version of Mining Design Guideline 5002 *Guidelines for the use of remote controlled mining equipment* is about to be released following an extensive review process.

The review was co-ordinated through the Remote Control Equipment Advisory Group (RCEAG) and was carried out by an underground metalliferous mine working group with representatives from all underground metalliferous mines using remote controlled mining equipment in NSW.

Remote control equipment maintainers, suppliers and consultants were also involved in the review process. A coal version of the guideline is currently being developed through the RCEAG.

The Guideline review process included three workshops, two at Cobar and one at Parkes. The workshop participants included managers, supervisors, remote control equipment operators, maintenance personnel and NSW Department of Primary Industries officers.

Draft versions of the guideline were also widely distributed to other stakeholders for comments and feedback, including the Metalliferous Industry Safety Advisory Committee.

The workshops identified and assessed the main risks associated with the use of remote controlled mining equipment and considered controls to eliminate or minimise the identified risks.

The main risks and main risk considerations, along with additional guidance material, is contained in the new guideline. Experience and information gleaned from previous remote control incidents were incorporated into the final document.

The most pleasing aspect of the review process was the commitment of the NSW underground metalliferous mining industry to be actively involved in the development and review process. There was a clear focus on improving the safety standards associated with the use of remote controlled equipment.

Underground metalliferous mines using remote controlled mining equipment were only too willing to provide experienced personnel, copies of remote controlled equipment procedures and other documentation.

A number of sites have already adopted and implemented a number of the procedures and systems outlined in the new guideline.

When available, it is recommended mines obtain a copy of the guideline and audit their current remote control systems against the new guideline as part of a continuous improvement process.

Industry will be advised when the guideline is published. It will be available on the DPI website at www.minerals.nsw.gov.au/safety

Small mines and quarries focus of safety workshops

Operators of small mines and quarries are the focus of a series of workshops being jointly conducted by the NSW Department of Primary Industries and the Institute of Quarrying Australia.

The first workshop – Introduction to Safety Management - facilitates the process of utilising the *Small Mines Safety Management Kit*, a two-part guide that gives information about programs that may make up a safety management plan and 'do-it-yourself' templates that form the basis of such a plan.

Each workshop will be presented by officers from NSW DPI and the Institute, and will assist production managers, mine workers, supervisors, maintenance people and plant operators begin development of safety management plans for their site.

If you do not already have a safety management plan in place or would like help in improving your existing plan, you are strongly encouraged to attend the workshop as your first step in meeting your legal obligations.

Workshops are planned for Wagga, Dubbo, Queanbeyan, Penrith, Tamworth and Batemans Bay.

The second workshop – Refining Your Safety Management Plan - is an extension to previous workshops that explained the need for safety management plans and provided guidance in their development. It will update those already underway with their safety improvement and provide additional guidance.

The workshop will suit those who already have a safety management plan and who wish to gain additional insight into critical components in the implementation of their plans. It will help meet today's increased levels of due diligence and duty of care in making their site safe and in systematically managing risks.

Particular emphasis will be given to:

- Is your safety management plan working?
- Is it easy to use and easy to communicate?
- Are you measuring progress and using appropriate standards?



- Identifying and accomplishing improvements (such as hazard identification, workplace inspections, keeping appropriate records, annual safety improvement actions, risk control strategies and major hazard plans)
- What to do with contractors.

The workshop will be practical, with additional resources supplied, and participants will be able to share their experiences with others and seek individual feedback/assistance from the facilitators.

Workshops are planned for Wollongong, Queanbeyan, Thornton, Penrith, Tamworth, Wagga, Deniliquin, Narooma, Broken Hill and Orange.

The registration fee for the workshops covers the cost of catering, venue hire and resource material. Second and subsequent registrations from the same site may be made at a significant discount.

Further details are available from Darrel Adam, Education Officer with the Institute of Quarrying Australia on 02 4229 3661, 0416 261 014 or via email at education@quarry.com.au or your local NSW DPI Mine Safety Operations officer.

New guideline on airblast prevention in underground mines

Mining Design Guideline 1031 *Guideline for managing the risk of an airblast in an underground mine* will be published shortly.

Following a major incident at Northparkes Mine in November 1999 when four people were killed, numerous presentations and technical papers have been circulated to prevent a similar occurrence.

An eminent working group has worked with Mine Safety Operations officers in Orange who developed this guideline.

This group consisted of people from four states and included coal and metalliferous industry representatives as well as tertiary educators. Historically airblasts have occurred in NSW in metal mines and a number of coal mines.

Final submissions from the NSW Metalliferous Industry Safety Advisory Committee and the NSW Coal Safety Advisory Committee are being reviewed to complete the document. Publication of MDG 1031 is expected soon. Copies can be ordered after publication on the NSW DPI website:

www.minerals.nsw.gov.au/prodServices/publications/mine_safety

Prosecution and fine highlights hired plant suppliers' OHS obligations

The fining of a company has highlighted the obligations suppliers of hired plant have with the safe operation of equipment.

Hire firm Sherrin Hire Pty Ltd pleaded guilty and was fined \$48,750 in the NSW Industrial Relations Commission in October 2005 for a breach of section 11 of the Occupational Health and Safety Act 2000.

The prosecution was the result of a workplace accident in which an electrical linesman suffered injuries while using an elevated work platform mounted on a truck. The truck toppled with the linesman in the bucket of the machine when it became unstable as the boom of the machine was extended.

The plant had been hired from Sherrin Hire by the linesman's employer for repair work on overhead power lines.

Section 11 of the Act provides that anyone who designs, manufactures or supplies any plant or substance for use by people at work must ensure the plant or substance is safe and without risks to health when properly used. They must also provide or arrange for the provision of adequate information about the plant or substance to the persons it is supplied to, to ensure its safe use.

The plant need not be exclusively designed, manufactured or supplied for use by people at work. The legislation also extends to supply by way of sale, transfer, lease or hire, either as principal or agent.

The Commission found that Sherrin Hire had failed to ensure that the plant was safe and without risk to health when properly used and also failed to provide or arrange for the provision of adequate information about the plant to those it was supplied to, to ensure its safe use.

Further, the Commission found Sherrin Hire had relied on incorrect information provided by the manufacturer and designer. There was also misunderstanding of what a Victorian WorkCover Authority Certificate conveyed, despite conducting its own testing of the plant to ensure it was in safe working order when supplied.

The plant was independently tested after the accident and then modified to ensure its safe operation. The maximum penalty for a first offence under section 11 of the Act is \$550,000.

Inexperienced and young workers require proper training and supervision

Companies in the mining industry using heavy machinery and equipment which fail to provide proper induction, training and supervision risk serious injury or death to young, inexperienced or new workers.

A Hunter Valley company and one of its directors were fined \$107,000 in the NSW Industrial Relations Commission after two young workers were injured on their first day at work.

Hunter Galvanizing Pty Ltd of Tomago was fined \$100,000 and director Kerry Bartholomew was fined \$7000 after pleading guilty to breaches of Section 8(1) and Section 26(1) of the Occupational Health and Safety Act 2000.

The two workers, aged 17 and 20, were injured on 24 March 2004 when a one tonne steel headframe they were loading fell 2.3 metres from its supporting cradle and struck them. One of the workers suffered a fractured skull, which required the insertion of a steel plate.

In handing down her judgement Justice Backman said the two young and inexperienced workers received cursory and inadequate instruction and minimal supervision. The incident occurred within two hours of the workers starting work.

Justice Backman said simple remedial steps, such as express work instructions when loading the headframe and adequate supervision would have obviated the risk to safety. Given the workers' youth and inexperience, she said it was of critical importance that they be closely supervised and receive detailed instructions and information about tasks they were directed to perform.

Large mines must address long distance road transport driver fatigue

Provisions covering long distance road transport driver fatigue in the Occupational Health and Safety Amendment Regulation 2005 commenced on 1 March 2006.

Large mines will have duties under the regulation as consignors or consignees when having freight transported more than 500km (either single or in a series of trips). The Regulation applies to heavy trucks with a GVM of 4.5 tonnes or more.

The Regulation requires employers of drivers and head carriers, undertaking this type of work, to ensure that the risk of harm arising from truck driver fatigue is either eliminated or appropriately managed. They also need to develop and implement Driver Fatigue Management Plans (DFMPs) in consultation with their affected employees/drivers.

Consignors or consignees have legal responsibilities if they have 200 or more employees and carry on a business where a substantial part is a prescribed business, such as mining. WorkCover's Assistance Service (13 10 50) will be available to provide advice and assistance to industry and answer questions directly linked to the Regulation's implementation. Guidance material is available at the WorkCover website at www.workcover.nsw.gov.au

DPI targets electric shocks in mines

NSW Department of Primary Industries has employed an additional temporary Inspector of Electrical Engineering to assess how open cut coal mines and declared coal preparation plants manage electrical engineering safety at their operations.

The department has identified an increase in the number of electric shocks in the NSW coal industry and has adopted a plan to address the issues, which will conclude in July 2006.

Electric shock incidents are investigated by NSW DPI, enforcement notices are issued to mine operators and faulty equipment is either withdrawn from service, repaired or replaced.

NSW DPI has released three Safety Alerts this year dealing with electric shock issues – SA06-05 *Electric Shocks and Arcing*, SA06-08 – *Defective Back-To-Back Couplers* and SA06-09 *Electric Shock Results from Ineffective Earthing*.

In 2001 NSW DPI became concerned about the number of electric shocks in the NSW mining industry and implemented a program of mine site assessments to identify improvement opportunities for electrical installations.

Two temporary electrical engineering mine safety officers were employed to conduct the program, which concluded in 2002. It resulted in an approximate reduction of electric shock incidents in the Hunter Valley of 33 per cent over the next three years.

Electric shocks will be among many issues to be addressed at the annual Electrical Engineering Safety Seminar at Penrith Panthers on November 15 and 16, 2006.

To express an interest in registering for the seminar email your name and contact details to minesafety@dpi.nsw.gov.au



Occupational health and safety and mechanical engineering will be the focus of a NSW DPI safety seminar during August.

Understanding mechanical engineering in OHS

Mechanical Engineering in Occupational Health and Safety will be the focus of the 16th Mechanical Engineering Safety Seminar this year.

The seminar, conducted by the NSW Department of Primary Industries, will be held at Penrith Panthers on August 9 and 10.

Expert speakers from industry will be presenting papers aimed to assist mechanical engineering personnel keep abreast of technical, legislative and Australian Standards developments and occupational health and safety.

There is still an opportunity for additional speakers and NSW DPI is encouraging further industry participation. Information on presenting a seminar paper is available from Graham Johnston at the Wollongong NSW DPI office on 02 4222 8307.

The 16th Electrical Engineering Safety Seminar will also be held at Penrith Panthers on November 15 and 16 this year. The contact person is Paul de Gruchy at the Maitland NSW DPI office on 02 4931 6654.

To register an expression of interest in attending either the mechanical or electrical engineering safety seminars, email your contact details to minesafety@dpi.nsw.gov.au or telephone 4931 6447.

Industry will be advised of seminar agendas and papers when they become available through direct mail and on the NSW DPI website at www.minerals.nsw.gov.au/safety

Earthing integrity and associated protection

Two recent incidents, one involving electric shock and the other arcing in a hazardous zone, have identified issues on the provision of an effective and reliable cabled earth connection, the setting of parameters on protection devices and the method of earth fault limitation.

The NSW Department of Primary Industries has produced two papers, which discuss the engineering matters that need to be considered in controlling touch voltages and arcing in trailing cable circuits used in underground mines.

They are supporting information to Safety Alert SA06-05 – Electric Shocks and Arcing.

The papers - *Controlling Touch Voltages and Arcing in Trailing Cable Circuits* and *Earth Continuity of Restrained Plugs and Receptacles* - can be accessed at the NSW DPI website at www.minerals.nsw.gov.au/safety/Electrical_Engineering/guidance_material3

16th Annual NSW DPI

Mechanical Engineering Seminar

Panthers, Penrith 9 – 10 August 2006

For further information about the seminar contact:

Matt Willoughby on 02 6572 1899 or
Graham Johnston on 02 4222 8307

Registration of explosion-protected plant

Explosion-protected (Ex) electrical plant is a key risk control in preventing catastrophic gas and dust explosions.

Under NSW occupational health and safety legislation, employers' and manufacturers/suppliers' duties extend to providing Ex electrical plant for use in hazardous zones as a basis for preventing explosions.

Because the risk of explosions is so high, there must be a high degree of confidence in the Ex properties of plant throughout the life cycle of the plant. However, no matter how well a mine manages plant once it arrives at the mine, if it is not Ex and it is used in a hazardous zone, then the risk of explosion will be unacceptably high.

A process for this high degree of confidence that plant purchased is Ex is:

- to have the Ex design tested and assessed against set standards by an independent, competent and recognised body
- to have some form of certificate issued that states compliance to the set standards
- to have a quality management system for actually manufacturing the Ex plant.

Traditionally, the above process has been approval by the regulator; however, no regard was given to assessing quality manufacturing capabilities. In recent years approval of Ex plant has evolved into the acceptance of certified Ex plant as being considered approved, if specified conditions are met. These conditions encompass:

- acceptable certification schemes
- the provision of sufficient information to mine operators so that the plant can be maintained in an Ex condition through its life cycle

- risk management practices being implemented by the mine in relation to the Ex plant.

Proposed legislation, planned for 2006, requires certain high risk plant to be registered. This plant includes Ex plant in general (electrical and mechanical). Therefore Ex electrical plant will need to be registered.

The NSW Department of Primary Industries has prepared a discussion paper that proposes if electrical Ex plant is suitably certified then it is considered registered with no further registration activities imposed on the department, mines or manufacturers/suppliers of electrical Ex plant. This registration can be considered as completing the transition from regulatory approval to acceptance of certified equipment. It is worth noting that the latest certification schemes (ANZ Ex and IEC Ex) have ongoing quality manufacturing as part of certification requirements.

The completion of this transition also brings with it a different way the regulator overviews electrical Ex plant used in mines. The regulator will:

- increase participation in Ex scheme management bodies
- continue its high level of participation in standards development
- implement a focused and ongoing assessment of how mines manage electrical Ex plant
- review of Ex plant, either randomly or as part of an investigation.

If the prime duty holders (employers and manufacturer/suppliers) and other industry stakeholders require additional scrutiny of electrical Ex plant, then arrangements will need to be developed.

The discussion paper can be accessed at the NSW DPI website at www.minerals.nsw.gov.au/safety/Electrical_Engineering/news



Myles Huntley of Coal and Allied with the Stored Energy Assassin.

Stored Energy Assassin wins national award

The 'Stored Energy Assassin' has claimed a national award for innovation.

Designed by Myles Huntley, Bob Peake and David Park of Coal and Allied (Rio Tinto Coal Australia), the Grease Pressure Release Gun or 'Stored Energy Assassin' was awarded the BOC National Award for Safety and Health Innovation 2006 presented by the Minerals Council of Australia.

It's the second major award for the 'Stored Energy Assassin'. It was awarded the Gold Award at the OHS Innovation Awards at the 2005 NSW Mining Industry OHS Conference.

The Grease Pressure Release Gun measures and can reduce the level of stored energy in pressurised grease lubrication chambers.



NSW DPI has released a number of Safety Alerts during the past two years highlighting stored energy safety issues:

- SA05-15 Dangerous Uncontrolled Release of Hydraulic Energy
- SA05-13 Stored Energy
- SA04-26 Near Miss Fluid Injection
- SA04-14 Loss of Eye from Injection of Grease
- SA04-13 Injury from High-Pressure Fluid Injection

These and other Safety Alerts can be accessed at the DPI website at www.minerals.nsw.gov.au/safety/alerts

Mines have obligations when handling explosives

Mine operators have clear obligations to manage the handling and storage of explosives under new laws introduced last year.

The NSW Department of Primary Industries will actively ensure the mining industry fulfils its obligations under 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* which came into effect 1 September 2005. They replaced the repealed *Dangerous Goods Act 1975*.

Recent incidents have highlighted the need for the industry to be aware of the new legislation and how it relates to the way explosives are handled.

NSW DPI inspectorate officers discovered that a mine was not licenced to be in possession of explosives on its site. In another case, a mine was found to be inappropriately storing ammonium nitrate.

These and other breaches of the new laws will be investigated by NSW DPI and may result in prosecution.

From 1 January this year it became an offence to be in possession of concentrated ammonium nitrate without a valid licence. WorkCover NSW is the sole licence-issuing authority for the new system introduced for importers, manufacturers, transporters, suppliers, users and other classes of persons.

Licencees 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)'.

Supporting information can be found at the WorkCover website (www.workcover.nsw.gov.au) or via the WorkCover information line on 13 10 50.

Deadline looms for explosives licences

Current shotfirers should apply for a new Blasting Explosives Users Licence at least three months before the 1 September 2006 deadline.

A new licensing system has been introduced under fresh laws to control the way the mining industry handles explosives.

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 on 1 September 2005.

NSW Department of Primary Industries officers have been meeting with industry and conducting workshops about the 'Blasting Explosives Users Licence', 'Blasting Explosives Learners Licence' and 'Unsupervised Handling Licence'.

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, the sole licence-issuing authority. Additionally, people may only have unsupervised access to explosives and/or concentrated ammonium nitrate if they hold an Unsupervised Handling Licence.

Mining 'Blasting Explosives Users Licence' applicants will need to satisfy NSW 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 NSW DPI. Application forms and an applicant's guide for a NSW DPI reference to WorkCover NSW are available from the NSW DPI website at www.minerals.nsw.gov.au/safety/authorization

For specific information relating to the mining industry contact Graham Cowan on 6572 1899 or Keith Chilman on 4931 6650.

Colliery roadway dust samplers undertake training

The NSW Department of Primary Industries recently completed its 13th training course for colliery roadway dust samplers as part of a program, which started in 2001.

NSW Coal Mines Regulations 1999 clause 183 (2) requires mine managers to only appoint people to this role who have undergone instruction that satisfies the manager of their ability to perform duties.

The Mine Safety Technology Centre at Thornton in the Hunter Valley provided a very suitable venue for the first day of the two-day course. Attendees were able to inspect the world-class facilities that service the State's mining industry.

Day two featured an underground training component and was conducted at mine sites. NSW DPI gratefully acknowledges Beltana Highwall Colliery and Mandalong



Colliery for providing the facilities and assistance.

Attendees were able to exchange information with representations from NSW northern, southern and western districts, as well as Tasmania. Feedback from the course participants was positive with subsequent training courses arranged to meet industry demand.

Information about proposed courses can be obtained from Margaret Fletcher on 02 4931 6626 or email to margaret.fletcher@dpi.nsw.gov.au

Colliery roadway dust samplers at NSW and Tasmanian coal mines take part in a two-day training course in the Hunter Valley.

SA06-02: Working at heights – Prevention of falls and fall arrest

Vigilance is needed to supervise people to ensure harnesses and fall arrest devices are used correctly and safely. Prolonged suspension from fall arrest systems can cause orthostatic intolerance or suspension trauma which can quickly lead to death. Rescue must be carried out very carefully or it can also cause death. Always look to use methods where there is no suspension. If fall arrest devices are to be used, it is essential to ensure that anchorages, arrest devices and harnesses are fit for purpose and correctly attached, fitted and worn. People wearing harness should never be permitted to work alone.

SA06-03: Severe scald from radiator cap removal

An operator received extensive hot water burns to more than 20 per cent of his body when he removed the radiator cap of a water truck. The operator removed the radiator cap during a vehicle service by depressing the cap and turning it with his foot. The depressurised radiator caused the coolant to boil violently and erupt through the outlet of the radiator top tank. There was no legible signage to warn operators of the hazards of removing hot radiator caps. The truck was at normal operating temperature. Cooling system temperatures can rise considerably when equipment is shut down as no coolant is being circulated through the radiator for cooling. Mine managers must have mine rules in place which prevent anyone from taking off the radiator cap from any radiator, heat exchanger or cooling system where the temperature of the cooling fluid is higher than 55°C. They should also ensure mine personnel take any machine or combination of machines out of normal service where it is clear that they are likely to overheat during routine work.

SA06-04: Working at heights

A contractor fell to a concrete floor and fractured his pelvis from a height of approximately 4 metres while working on an earthmoving machine in the workshop of a mine. Working at heights often requires the need to wear harnesses and appropriately anchored lanyards. It may also require fit-for-purpose equipment, maintenance practices, and pre-work inspections of equipment. Structural failure of elevating work platforms can also occur – this can be minimised by compliance with Australian Standard AS1418.10-2004. The contractor did not have a platform from which to work nor was he wearing fall protection. The OH&S Regulation Chapter 4 Division 6 clause 56 (a) sets out a hierarchy of control measures to apply to safeguard persons working at height. All mines should ensure that appropriate risk management principles are in place, people are trained and competent at assessing the need for applying the hierarchy of controls for working at heights, risk assessments must be carried out on identified hazards and that people working at heights are wearing harnesses.



SA06-05: Electric shock and arcing results from ineffective earthing

Two incident investigations involving phase-to-earth faults on 1000 volt equipment in the hazardous zone at different underground mines have identified ineffective earth connections in Restrained Cable Plugs and Restrained Coupler Receptacles. In the first incident power supply to an electrically powered hydraulic pump tripped on earth leakage and an operator found the handle of a jacking screw on a Restrained Coupler Receptacle (Back to Back) 'tack' welded to steel rib support mesh. In the second incident power supply to a continuous miner tripped on earth leakage and a mine worker received a severe electric shock. Mines should immediately inspect equipment in service to confirm integrity of earth connections and ensure tripping times for earth leakage relays and earth continuity relays are set to minimum values to achieve adequate prospective touch voltage/operating time characteristics. Conduct routine testing and recording of earth continuity by competent people. Manufacturers should immediately investigate the effectiveness of earthing arrangements used on plug and receptacle products.

SA06-06: Diesel engine system running on atomised hydraulic oil

An explosion-protected diesel engine system (DES) in use at an underground coal mine was unable to be shut down after the diesel fuel was switched off. The interim emergency shutdown system, carbon dioxide (CO₂) extinguisher had to be operated to shutdown the diesel engine system. The operator noticed an oil mist coming from within the engine compartment area. The engine would not shut down when attempted, even when the diesel fuel was shut off. The diesel engine continued to run on atomised hydraulic oil or vaporized oil. An approximately 5mm hole in the steering pump output hose atomised the hydraulic oil creating a pressurised oil spray (mist). This incident highlights that apart from methane-enriched atmospheres other hydrocarbons when vaporized or atomized have the potential under certain circumstances to fuel a diesel engine and create a possible uncontrolled condition. For underground coal mines this incident highlights the need for all explosion-protected DES to be fitted with an emergency shutdown system. All mines should check the integrity of pressurised hydraulic and fuel lines in the vicinity of the engine compartment on a periodic basis.

Safety Alerts and Safety Bulletins

Safety Alerts are an important communication tool between the NSW Department of Primary Industries and the NSW mining industry, suppliers, unions and industry organisations.

NSW DPI issues Safety Alerts following the occurrence of an event such as a fatal accident, dangerous occurrence or incident which is considered to be of significance to the industry, with the aim of preventing a similar occurrence.

Safety Bulletins are also issued by NSW DPI. Like Safety Alerts, they contain information relating to safety issues but are not directly linked to a specific incident.

Safety Alerts and Safety Bulletins can be accessed on the NSW DPI website at minerals.nsw.gov.au/safety/alerts

If you would like to receive an email copy of Safety Alerts and Safety Bulletins, email your contact details to safetyalert@dpi.nsw.gov.au

SA06-07: Seatbelts must be worn

A number of incidents where seatbelts were not worn have occurred that have resulted in serious consequences, including a workplace fatality. All incidents involved mobile equipment in both above-ground and below-ground application. Circumstances have varied from the injured person being thrown out of the mobile equipment as a result of sudden impact, to people being injured as the result of equipment rollover. In all cases the injured people were not restrained within the operator's or passenger's compartments. All mines using mobile equipment should review mobile equipment operational risk assessments and safe work procedures to minimise risk in the workplace, ensure seatbelts or appropriate restraints are fitted to the mobile equipment, inform the workforce through tool box and safety meetings of the hazards associated with not wearing seatbelts and conduct regular workplace inspections and task observations to ensure compliance.



SA06-08: Defective restrained back-to-back couplers

An inspection of two Crouse Hinds – Macey 425A, 660/1100V back-to-back couplers at an approved cable repair workshop has identified two potentially dangerous situations. A plug with 425A sockets fitted into a 425A back to back receptacle with 300A pins increased the risk of a short circuit arcing fault to an unacceptable level. Jacking screws were not threaded directly into a receptacle casing presenting an unacceptable risk of compromising explosion protected properties and short circuit arcing faults. Mines using this type of product must immediately inspect all 300A and 425A back-to-back couplers of this make to ensure the correct pins are fitted and that the pins are in the correct orientation. Any back-to-back couplers with a bushed thread for the jacking screw should be immediately withdrawn from service and measures taken to ensure it will not be used again.

SA06-09: Electric shock results from ineffective earthing

An incident investigation involving a phase-to-earth fault on 1000 volt equipment in the hazardous zone at an underground mine identified ineffective earth connections in a restrained cable plug (SA06-05). Subsequent to this incident, the mine returned cables to an approved cable repair workshop. Eighteen plugs were inspected. Eight were found to have an extremely poor connection between the plug nose cone and the internal earthing ring. Nine were considered to have a poor connection. The scraping earth connection between plug earth sleeve and receptacle body was not continuously effective.

Mines need to immediately implement a program of returning cables with this product attached, to an approved cable repair facility and have defective earth termination rings and earth sleeves identified and replaced. Mines need to review the implementation of the recommendations contained in SA06-05.

SA06-10: Lucky escape from underwater truck

A truck driver sustained injuries to his forehead when the vehicle he was driving escaped his control and rolled over a highwall into a water reservoir. In light of a number of similar incidents, particularly SA05-10, all mines should immediately review their haulroad operating conditions, as well as previous recommendations, including fit-for-purpose barriers, such as bunding or windrows, are in place to prevent uncontrolled mobile plant going over embankments; haulroad design and maintenance is consistent with sound industry and engineering practices; mobile plant operators are regularly reminded of correct speeds, gear selection and braking procedures; and risk assessments and safe work procedures are reviewed.



SB06-01: Operator and passenger restraint and protection devices

An unacceptable number of incidents have raised concerns regarding the safe use of mobile equipment in the workplace. Workplace injuries result from people not wearing seatbelts, insufficient guarding and improper cabin protection. Investigations have shown the lack of fit-for-purpose mobile equipment, poor workplace practices and inappropriate management systems are contributing to incidents. As a matter of priority, all mine sites should ensure appropriate seatbelts or restraints are fitted, correct guarding to protect personnel is fitted and appropriate overhead protection is fitted depending on the assessed operational risks. Employers and suppliers should ensure they are aware of their obligations under the OHS Act with respect to supplying equipment and the safe use of that equipment on mine sites.

SB06-02: Hard hat expiry date

Safety helmets have a 'use by date' or a 'working life'. Section 3 of Australian Standard AS/NZ 1800:1998 code details the 'care and maintenance of occupational protective helmets', and Section 3.4 covers the 'working life'. A 3-year replacement date has been adopted as an Australian Standard. Each helmet, when manufactured, has a year and month of manufacture stamped onto the inside of the shell near the peak for easy reading. If the helmet has been used regularly it should be replaced after 3 years from the date of issue. The harness/headband has a life of 2 years and should be replaced

at an earlier date. Mines should develop a system to ensure that safety helmets and harnesses are replaced on a regular basis and that employees are aware of the need to protect safety helmets from sunlight, heat and chemicals.



SB06-03: Histoplasmosis exploration hazard

Two recent incidences of histoplasmosis have resulted in a serious illness and a death of mine personnel. Histoplasmosis is caused by *Histoplasma capsulatum*, a fungus. It is an infection that varies in symptoms and seriousness. It usually affects the lungs; however, it can lead to enlargement of the liver and spleen, and sores in the mouth. Disseminated histoplasmosis can be fatal. The fungal spore is present in soil, particularly soil with a high content of bat or bird droppings. If the soil containing the fungus is disturbed, the fungus spores become airborne and can be inhaled. Unless absolutely necessary, avoid entering any workings where bats or bird colonies are known to exist; ensure thorough risk assessments are conducted; avoid areas where the fungus might be growing; before stirring up the soil, spray the area with a mist of water; and when working in high-risk areas, wear disposable clothing and high-quality respiratory devices.

The full text of all Safety Alerts and Safety Bulletins can be accessed at the NSW DPI website at www.minerals.nsw.gov.au/safety/alerts



Kay and Ron Jenkins (Salvation Army) and John Maitland (CFMEU) pay their respects to miners killed at work at the memorial service.

(Photo: Kristen Wilkinson, Maitland Mercury)

Memorial service remembers fallen mineworkers

Miners and the broader community were encouraged to push for improved safety in the mining industry during the 11th memorial service for the United Mineworkers Federation at Cessnock in the Hunter Valley.

The annual service held during April commemorates the death or serious injury suffered by Hunter Valley mineworkers.

National secretary of the Construction Forestry Mining and Energy Union John Maitland said the service was one of the most important mining industry events held each year.

He said it focused attention on health and safety and the need for the mining industry to improve its safety performance.

The NSW Government has made a commitment to achieving zero deaths and serious injuries in the State's mining industries.

The implementation of recommendations from the Wran Mine Safety Review, including the Mine Safety Levy and a stronger Mine Safety Advisory Council, will help achieve this commitment.

Scientific testing and analysis for mining industry

The Mine Safety Technology Centre provides a range of scientific testing and analytical services to the NSW mining industry.

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 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 laboratory makes it possible to analyse samples directly from the engine and, if necessary, suggest adjustments and then retest the engine.

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 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.

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

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
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
Matt Willoughby, Mine Safety Officer DPI (02) 65 721899 or Graham Johnston, Mine Safety Officer, DPI (02) 4222 8307

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, 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
Paul DeGruchy, Senior Inspector Electrical Engineering, (02) 4931 6654

Remote Control Equipment Advisory Group meeting, Invite required, see contact for more details. Meets quarterly
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
Contact: Ron Rennex, Acting Secretary (02) 4938 0194

For more information go to: 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