



# MINE NEWS

## SAFETY

Department of Mineral Resources

www.minerals.nsw.gov.au

May 2000



From left: Mick Watson, CFMEU President NSW Northern District, Jim Comerford, well known coalfields identity and Eddie Obeid, NSW Minister for Mineral Resources inspecting the Memorial Wall named in Mr Comerford's honour

### NSW GOVERNMENT COMMITMENT TO MINE SAFETY

The Minister for Mineral Resources, Eddie Obeid reaffirmed the NSW Government's commitment to protecting the safety of mine workers, at a Memorial Day Ceremony for Northern District Coal Miners, held on Sunday 2 April, 2000.

Mr Obeid said the annual ceremony at Cessnock is a sombre reminder of the need for constant vigilance in mine safety.

The "ceremony commemorates 1,640 miners who have lost their lives in northern NSW coal mines and the tragic loss to their families and workmates", Mr Obeid said.

"Our community owes a great debt to our coal workers".

"Their efforts have made Australia a world leader in coal exports. More than 50 per cent of this export comes from NSW and much of this originates from here in the Hunter".

"The NSW Government is committed to protecting the safety of miners – and it's a commitment which has been recognised worldwide".

"The International Labour Organisation has recognised NSW coal mines as among the safest in the world".

"But we must never be complacent – each fatality, every injury is one too many," Mr Obeid said.

Mr Obeid said the Government in consultation with unions and industry continues to implement a wide range of safety reforms.

The latest safety initiative includes a review of the Coal Mines Regulation Act (1982) and focuses on improved safety systems through workplace consultation with workers, unions and the industry. ■■

### RISKS IN OPERATING REMOTE CONTROL MINING EQUIPMENT

A series of fatal accidents involving remote controlled continuous miners in NSW and the hazardous operating positions that miners were found to be putting themselves into, lead the Department of Mineral Resources to commission a study into the risk-taking behaviour of operators of such equipment and underground miners in general.

The findings of the report, entitled *A Study of the Risky Positioning Behaviour of Operators of Remote Control Mining Equipment*, have now been released by the Department. The study was carried out by Corrie Pitzer, Managing Director of SAFEmap.

Understanding what people do and why they do it are critical factors in developing safe

systems. Little is known about risk-taking behaviour in the context of mining, an environment in which risk-taking behaviour results in a significant increase in the potential for dangerous and fatal accidents.

The study offers significant opportunities for broadening our knowledge of the possible causes of risky positioning behaviour. It may provide assistance in the development of practical guidelines and protocols for future procedures and the training of operators of remote controlled mining equipment. However, Mr Pitzer emphasises that the findings in the study are the results of preliminary investigations and require further research and assessment.

Operators of remote controlled machinery are advised to position themselves in a "standing zone" as defined by MDG 5002.

However, the majority of employees questioned during the study indicated that they routinely enter dangerous work areas, such as under unsupported roof and other "no standing zones".

#### Study findings

The study sets out to measure the extent to which mining operators and personnel enter "no standing zones" and to assess the possible reasons why. Some of these are listed in the report as:

- to attain a better line of sight,
- for optimum comfort,
- out of habit, and
- the perception of the danger involved.

Rarely did the study find that the position of operators was selected as the "correct" (standing zone) position. ►

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*The Department of Mineral Resources is targeting a marked improvement in the safety record of all sectors of the mining industry in NSW.*

## Newsletter contacts

**Department of Mineral Resources**  
29-57 Christie Street  
PO Box 536  
St Leonards NSW Australia 1590

Editor: Gillian Macmillan  
Graphic Design: Cornelia Dumitrescu  
Photography: David Barnes unless acknowledged otherwise

To contact the Information Unit,  
Mine Safety and Environment:  
Phone (02) 9901 8437  
Fax (02) 9901 8584  
E-mail [macmillg@minerals.nsw.gov.au](mailto:macmillg@minerals.nsw.gov.au)

To obtain publications from the Department:  
Information Counter  
Phone (02) 9901 8269  
Fax (02) 9901 8247  
E-mail [maniakak@minerals.nsw.gov.au](mailto:maniakak@minerals.nsw.gov.au)



*The study offers significant opportunities to broaden our knowledge of the possible causes of risk taking behaviour.*

## Further research needed

However, Mr Pitzer suggests that the perception of risk and the acceptance of risk by underground workers needs to be the focus of further investigation.

“Working underground”, the study concludes, “and in confined and potentially explosive situations is obviously risky, but it is suspected that not enough is known about the psychology of people who are exposed so intensely and so continuously to severe risks”. The study states that these “risks have become ‘normal’ for these individuals, and no amount of procedures, shock tactics or enforcement will change that”.

The study suggests that there are significant gains to be made in understanding the behaviour of underground workers, introducing effective monitoring of behaviour and behaviour-change systems. However

difficult behaviour is to predict, monitor or change, “stating basic workplace rules can have a significant effect on the safe behaviour of employees, but only if the rules and procedures are seen as relevant and practical”.

Although the study was based on a sample of eight underground coal mines, the Department of Mineral Resources believes that the information on risky positioning behaviour contained in the report could be of assistance to all operators in underground mines when considering how to develop safe systems and safe working procedures.

The report is currently available as a downloadable document from the Department’s web site free of charge, and can be found at:

[www.minerals.nsw.gov.au/safety](http://www.minerals.nsw.gov.au/safety). ■■

## SAFETY ALERTS

No.	Date	Title
SA 00-01	23 December 1999	Serious injury involving stored energy
SA 00-02	11 January 2000	Oil injection to left thumb
SA 00-03	3 February 2000	Operator crushed by overturned forklift
SA 00-04	22 March 2000	Failure of pins on bulk coal winder
SA 00-05	24 March 2000	Fatality from hot work on diesel fuel tank
SA 00-06	24 March 2000	Fatal accident - employee hit by rock in gorge
SA 00-07	24 March 2000	Electric shock from mobile lighting plant #2
SA 00-08	31 March 2000	Electric shock from mobile lighting plant #1
SA 00-11	26 April 2000	Electric shock from longwall lighting system.

Copies of safety alerts can be downloaded from the Department’s web site at [www.minerals.nsw.gov.au](http://www.minerals.nsw.gov.au) under the Safety section.

Alternatively, please contact the Department’s Steve Stewart on:

Phone: (02) 9901 8413

Fax: (02) 9901 8584

Email: [stewarts@minerals.nsw.gov.au](mailto:stewarts@minerals.nsw.gov.au) ■■



## COAL MINING LEGISLATION REFORM ON THE WAY

The proposed reform of the Coal Mines Regulation Act 1982 aims to provide the most effective regulatory framework.

### Why the reform?

There are several concerns with the present legislation:

- It is inconsistent with the general duty of care expressed in the New South Wales umbrella Occupational Health and Safety Act 1983;
- It reinforces the concept of 'minimum standards' in how hazards are managed;
- It hinders improvement, and because it is very complex it confuses stakeholders and presents difficulties for all those who use it.

### The legislative framework

The present complex legislation contains many elements within which the industry, regulators and other stakeholders must operate. These elements include:

- the Coal Mines Regulation Act 1982 itself,
- Regulations,
- Exemptions,
- Rules, Schemes, and Systems,
- Guidelines,
- Australian Standards, and
- Gazette Notices.

The new legislative framework is planned to have a mix of the revised Act(s), regulations, codes of practice and guidelines. It is proposed that the coal mining industry will operate under safety management systems and major hazard management plans.

The Department proposes monitoring industry through inspections and audits, and investigations and reviews. To improve industry safety practice, the Department may issue reports, provide education, issue notices and, where appropriate, prosecute.

### Workforce involvement

The Department recognises that the workforce has a right to be involved in decisions which impact on its health and safety in the workplace. At present, the generally accepted ways through which the workforce plays a part in decision making are OH&S committees, Check Inspectors, and in some instances, consultation on the development of the systems under the new regulations.



*Chris Ellicott, Manager, Regulatory Development, Department of Mineral Resources*

Industry must recognise that workforce involvement needs to expand where decisions affecting health and safety are concerned.

### Key issues in developing the legislation

There are many aspects to be taken into account in developing effective legislation. An important consideration is its jurisdiction (that is, the type of mine or plant to which it will apply), and another is the relationship between the New South Wales Occupational Health & Safety Act 1983 and coal mining legislation.

The legislation will describe Inspectorate work, the involvement of the workforce, and competency in the workplace. It will also provide for occupational health matters, training, mine safety management plans and public risk in association with the industry.

International Labour Organisation (ILO) conventions will also be taken into account in the development of the legislation.

Further provision is being made for investigations and/or inquiries as a result of serious accident and incidents. Circumstances for review of decisions, offence description, and penalties for offences are also included.

Regulations to accompany the Act are being developed.

### Input into the new model

To ensure the best possible regulatory model, input is based on, and sought from, a wide collection of sources.

The 1997 Mine Safety Review has been the starting point for the direction of the changes being made. ILO conventions, National Competition Policy, the views of involved parties, the new Queensland coal mining legislation, and Departmental and government views are all providing input to what will be the final model.

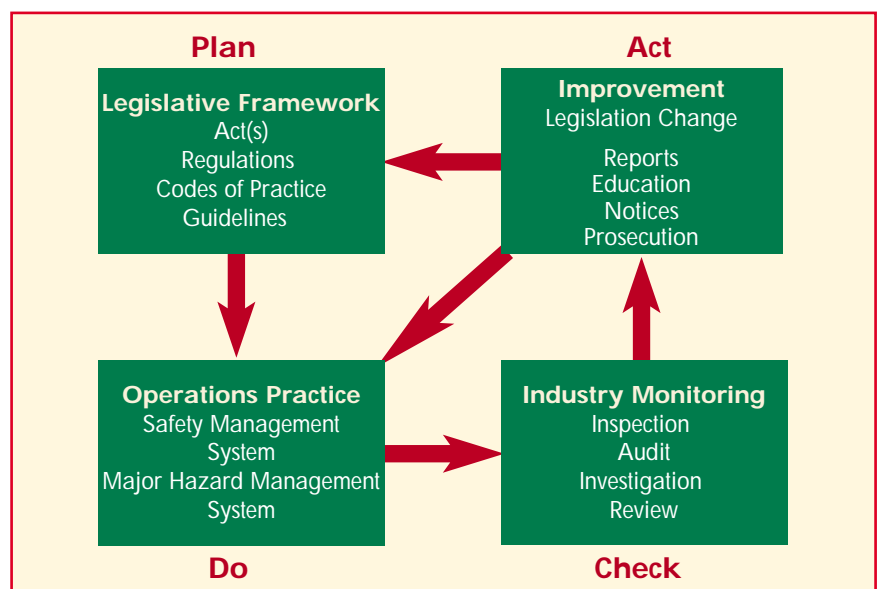
The proposed timetable involved in getting new legislation up and running will take approximately two years from the release of the Green Paper.

### What is a Green Paper, and how is the legislation developed?

A Green Paper follows established Parliamentary practice. It provides a vehicle for promoting discussion before the preparation of draft legislation.

Draft legislation takes into account comments on the Green Paper. It is also subject to extensive consultation before it is finalised and introduced to Parliament. This phase is often carried out through the preparation of a draft Exposure Bill which forms an important part of a White Paper. It gives a firm indication of the government's intentions, but is still not final.

For further information, please contact:  
Chris Ellicott, Manager Regulatory Development  
Department of Mineral Resources  
Ph: (02) 9901 8412  
Fax: (02) 9901 8584  
Email: [ellicotc@minerals.nsw.gov.au](mailto:ellicotc@minerals.nsw.gov.au) ■■■



## ELECTRICAL PROTECTION: A KEY ELEMENT FOR SAFETY

Electricity is widely used throughout the mining industry and when managed safely provides a convenient and safe source of power. There are no second chances when issues such as risk-taking, poor maintenance, misuse or lack of awareness become part of practices in working with electricity:

Electrical protection is designed to detect and disconnect faulted electrical circuits and as such, is a key element in providing a safe work environment. The design, installation and maintenance of electrical protection is complex and should only be carried out by competent electrical engineers.

Uncontrolled releases of electrical energy are often a result of electrical faults. Electrical protection is designed to detect electrical faults and disconnect the source of electricity from the fault.

Use of electricity at mines is increasing, particularly with regard to the size of electrically powered equipment. With the increase in power requirements, there is an increase in the energy available at the mine site and in mining operations.

### Electrical faults

Electrical circuits can fail in a number of ways. The most common failures are due to earth faults and short circuits. It is possible



*An 11,000 volt switch room destroyed by fire due to a short circuit.*

under short circuit conditions for currents of thousands of amperes to flow. If protection devices do not detect these fault conditions, cables can catch fire along their entire length and electrical enclosures can explode or melt. ▶

## LACK OF HIGH VOLTAGE AWARENESS WITHIN THE MINING INDUSTRY

The experience of Oceanic Coal (Teralba, NSW) with failures of High Voltage (HV) underground connectors, has led them to approach electricity generator Pacific Power, to investigate HV connectors used in underground mining.

The results of the initial investigations were considered of value to the mining industry as a whole and a research proposal was submitted to AMIRA for a grant to carry out a thorough investigation.

### AMIRA grants funds research

The study was conducted in two parts. Firstly, a survey was undertaken to gain feedback from the mining industry and to tap into the body of experience of the users. The second part involved a series of electrical tests that challenged the findings of the survey in an environment that would shed light on the most important aspects of the connector's design, assembly and use.



*66/11KV, 5MVA transformer exploded due to a short circuit.*

The survey showed that moisture in the form of relative humidity or free ground water strongly correlated with the failure of connectors. It also brought to light issues to do with:

- test equipment, techniques and training,
- standardisation of acceptable pass/fail criteria,
- lack of high voltage awareness within the mining industry,
- limited appreciation of Australian and International Standards for HV equipment and tests,
- an increased risk of failure associated with in-house cable termination.

### The testing procedure

An accelerated aging test was devised to simulate the conditions that the connectors would experience in underground operation and give them an electrical duty approximating 10 years of operating life within 3 months.

The first test was carried out on the adaptor components of the connector and the tests showed that these components on their own were not a likely source of failure. However, the test was repeated for a fully assembled connector and the results were not as reassuring.

The fully assembled connector became subject to a number of detrimental, partial discharge sources (similar to sparking) from within the connector.

### Findings and outcomes

Particular findings were made on the role of the: phase barrier, coupler, its shroud, pin and assembly, insert moulding and component fit, and plug cable entry area.

A number of design weaknesses were identified that led to the generation of partial discharges within the connector. Suggestions were made on how to overcome some of the weaknesses whilst others would require monitoring to ensure that the full working life of the connector is realised.

Difficulties in monitoring the condition of the connectors in a high relative humidity environment were discussed. These problems have such a profound bearing on the results obtained in underground environments that they need to be specifically addressed.

It is recommended that a set of guidelines be produced by the industry, to set out methods and criteria for testing to ensure that consistent acceptable standards are reached.

### Newly designed connector tested

During the course of the investigation, a substantially new design of connector was introduced to the market. This redesigned connector was also subjected to a similar accelerated aging test as the previous connectors.

The results were encouraging, although (as only one connector was tested) were not statistically significant. It is expected that over time, other manufacturers will also act to make this type of design the dominant model within the industry. ■■■



The consequences of this happening anywhere on a mine site are obvious, especially underground coal mines.

There are also less obvious hazards. Under earth faults (or certain types of short circuits), high currents can flow in the ground at locations well away from the faulted points. These high currents can cause voltage differences across the ground.

In addition, when an earth fault occurs, the outside of metal electrical equipment and other metallic objects can become live. It has been known that metallic pipes and fencing have become live over many kilometres.

If electrical protection does not detect and disconnect these faults, there is a high risk of people receiving electric shocks that may be fatal.

Mining situations often have additional hazards associated with equipment that is fed by flexible trailing cables. Generally, it is essential that there is a good earth connection between the electrical equipment and the point of electrical supply. If this earth connection is not good and an earth fault occurs on the electrical equipment, there is a possibility that a person touching the electrical equipment will receive an electric shock.

Common types of electrical protection include:

- instantaneous short circuit
- over-current
- earth fault
- earth leakage
- earth leakage –personnel protection
- earth continuity
- earth fault lockout, and
- overload.

### Electrical protection on all circuits

To adequately manage the risks presented by electricity, mines need to have electrical protection on all circuits. The electrical protection should detect and disconnect:

- short circuits between active conductors,
- short circuits between active conductors and earth,
- earth leakage faults,
- earth leakage faults on hand held tools (earth leakage should operate at 30 milliamperes),

- where electrical equipment is fed by flexible trailing cables, additional special protection should be provided that ensures the electrical equipment is effectively connected to earth. That is earth continuity protection, and
- where electrical equipment is fed by flexible trailing cables underground and in a hazardous zone, additional special protection should be provided that prevents the power being turned onto a cable that has a fault on it. That is earth fault lock out protection.

Another form of electrical protection is overload protection. This is not used to detect faulted electrical circuits. It is used to protect electrical circuits from overheating due to too much load, such as a conveyor with too much material on it.

When an overload occurs it is important that the power is turned off. If the power is not turned off, electric cables, motors and transformers can overheat to such an extent that they become permanently damaged.

### Design of electrical protection

Design of electrical protection is not a simple matter. A thorough mathematical analysis of the electrical system needs to be done. This should be carried out by a competent electrical engineer. In general, the electrical protection should operate in a reliable manner and disconnect only the faulted circuit. Where electrical protection disconnects non-faulted circuits, considerable disruption can occur to production and it can have adverse effects on safety (eg all the lights in a processing plant going out).

In general electrical protection should be designed to:

- clear the fault as quickly as possible,
- see and clear the first fault,
- disconnect the faulted circuit only,
- clear the fault before electrical equipment deteriorates due to electrical heating or arcing,
- disconnect overloaded circuits before electrical equipment deteriorates due to overheating,
- comply with legislation, and
- comply with relevant Australian Standards.



*An increase in power requirements at mine sites means an increase in energy available.*

### Maintenance of electrical protection

The main areas of concern are ensuring that electrical protection devices:

- are set correctly,
- operate to specification, and
- operate only when there is a fault.

Generally the settings of electrical protection should only be determined by a competent electrical engineer. The setting and/or adjustment of the electrical protection should be checked regularly by a competent electrical tradesperson or engineer.

Electrical protection devices should be periodically tested to ensure they operate within their specification. This is normally done by specialist electrical testing engineers, using what is commonly termed as injection test methods.

The Mine Safety and Environment Division recognises the importance of electrical protection and included it as a major topic in the 1999 Electrical Engineering Safety Seminar, held in November last year.

Further, Inspectors of Electrical Engineering plan to assess the electrical protection systems at ALL NSW underground coal mines in the year 2000.

For further information please contact:  
John Waudby, Senior Inspector of Electrical Engineering  
Department of Mineral Resources  
Ph: (02) 4942 2300  
Fax: (02) 4942 2323  
Email: waudbyj@minerals.nsw.gov.au ■■

## MECHANICAL ENGINEERS AIM AT IMPROVING SAFETY BEYOND Y2K

Mechanical engineers throughout the state converged on Penrith during 29th and 30th March this year, to take part in the 10th Mechanical Engineering Safety Seminar.

The theme of this year's seminar was Improving Safety for Y2K and Beyond and included sessions that covered mining legislation development and application and maintenance of continuous miners.

The seminar also featured special presentations on 1998's Esso Longford fatal gas explosion, by Mike Clarke, a member of the 1999 Esso Longford Royal Commission, and Corrie Pitzer on the positioning behaviour of operators in underground coal mines and the implications for the industry in general.

Both special presentations were very well received as they provided relevant and topical messages about safety from slightly different perspectives from the focus of mechanical engineering.

Over 150 personnel from throughout the industry attended the seminar, including contractors, suppliers, manufacturers, safety practitioners and Inspectors from the Department of Mineral Resources (DMR).

For the first time in its ten year history, two workshops were held in conjunction with the one day mechanical engineering safety seminar. The workshops, run concurrently on the 30th March, took up two important issues: competency standards and mine winder safety.

Approximately 75 people stayed on to attend the Competency Standards workshop and 50 for the Mine Winder Safety workshop. This was an excellent industry turn out, especially considering the difficult times presently being faced.

### Communication and safety: a strategic partnership

The Mechanical Engineering Safety Seminar has become an institution in the mining industry, providing an important communication channel for mine mechanical engineers, other mine workers, regulators, consultants, manufacturers and educators to learn from each other.

All presentations at the 10th Mechanical Engineering Safety Seminar, held at Penrith Panthers on 29th March, 2000, focussed on improving safety. One of the main points to

be raised during the day was the strategic role that communication plays in effective safety management. ►



Two Queenslanders providing valuable input to the NSW Mechanical Engineers safety Seminar: Alan Bruce (left), BHP Crinum Mine and David Alcock, Qld Department of Mines and Energy.



From left: Bob Gibbons, a consultant with the Joint Coal Board, Jeff Conlon, Inspector with the Department of Mineral Resources in Singleton, and Ron Stothard from the CFMEU, at the Mechanical Engineering Safety Seminar.

### Why did Kamikaze pilots wear helmets?

A very serious question posed during the Department of Mineral Resources 10th Mechanical Engineering Safety Seminar, by Corrie Pitzer, industrial psychologist and author of a study into *The Risky Positioning Behaviour of Operators of Remote Control Mining Equipment*.

What answers can you come up with?

Mr Pitzer suggested that possible answers may include ideas such as, it was an accepted practice, or it happened out of a sense of habit or tradition... 'but, we've always done it this way'!

What he really wants us to think about is mine safety and our attitudes towards it.

- How do you approach safety on your job?
- Do you simply act out of habit or do you think about why you do things at work?
- Do you think about the safety of your co-workers?
- Who is responsible for your safety at work?

If you haven't thought about these questions lately, take 2 minutes before the start of your next shift to come up with some answers.



## Quotable quotes on mine safety: from the 10th Mechanical Engineering Safety Seminar

- ✔ This was a seminar with great emphasis on safety. It finally appears that the Department and mines might take a pro-active approach to safety.
- ✔ This is a much needed common forum that is now needed more than ever.
- ✔ Comparing information gained at seminars (acts) as a 'quality' check/audit. Excellent forum for networking.
- ✔ Good representation of engineers and good networking. In general, papers are informative and information is important - further, the interaction with industry cross section is important.
- ✔ Challenge to our concepts for safety management - procedures may not be the answer; work with people.
- ✔ You gotta love a coal bin. ■■■

## NATIONAL AND NSW OH&S INNOVATION AWARDS

### Bayswater Colliery picks up national award

Congratulations to Bayswater Colliery Co. Pty Ltd for winning the annual Minerals Council of Australia National Mining Industry Health and Safety Innovation Awards, announced in Sydney on 4 April 2000. Bayswater won the award for the communication process adopted in the deployment of their core risk management plan, which was joint winner of the 1999 NSW Minerals Council Innovation Awards.

Based on the innovation awards run by the State Minerals Councils and Chambers, the national competition selects its winners from state award recipients.

Further details of all National Innovation Awards entrants will be available from the Minerals Council of Australia web site ([www.minerals.org.au](http://www.minerals.org.au)).

The NSW Minerals Council will again be holding the NSW Innovation Awards in 2000 in conjunction with the state's Mining Industry OHS Conference to be held in Terrigal during 31 July and 1 August.

For further information, including entry forms, contact NSW Minerals Council. ■■■



*John Gilmour, Mine Mechanical Engineer at Teralba Colliery and Leo Roberts, Manager Technical Services with the Department of Mineral Resources Head Office in St Leonards. Leo is the Mechanical Engineering Safety Seminar Coordinator and has been responsible for every one of the 10 seminars run to date.*

## OH&S CONFERENCE FOCUSES ON PRACTICAL INITIATIVES

### Safe Mining - Healthy Business

The Annual Occupational Health and Safety Conference for the NSW mining industry is to be held in Terrigal, on the NSW Central Coast, on 31 July and 1 August, 2000.

The Annual NSW Mining Industry OH&S Conference is hosted by the NSW Minerals Council and supported by the NSW Department of Mineral Resources.

The theme of this year's conference is "Safe Mining – Healthy Business". The two conference days and workshop sessions will use this focus to present information from industry personnel and service providers in reporting on practical initiatives or research projects undertaken at mines and quarries.

The Conference papers and workshop sessions provide an opportunity to learn about new and emerging issues affecting the industry's safety and health performance and to share experiences gained from practical workplace or industry programs and initiatives.

Over 350 delegates from all levels of the NSW mining industry, as well as suppliers of products and services and government representatives, industry groups and unions will be in attendance. Can you afford not to be there?

Further information, including registration forms, please contact:

Safe Mining – Healthy Business 2000 Secretariat  
 NSW Minerals Council  
 Phone: (02) 9267 6488  
 Fax: (02) 9264 1121  
 Email: [roberto@nswmin.com.au](mailto:roberto@nswmin.com.au)



## WHAT HAPPENS IF THERE IS AN ACCIDENT AT YOUR MINE SITE?

### Oral Notification Checklist

Mine Managers are required to notify a Department of Mineral Resources Inspector of a 'reportable mine event' under relevant sections of the Coal Mines Regulation Act (1982) and the general Rule of the Mines Inspection Act (1901)



*Stede Coundouris,  
Manager of the  
Department of Mineral  
Resources, Investigation  
Unit.*

Information required by the Department about accidents and incidents needs to be accurate and timely so that the appropriate resources can be organised by the Department to respond to site needs.

With this in mind, the Department's Investigation Unit has developed an Oral Notification Checklist, that contains questions about the person(s) injured, information about the accident site, some details about the event and particulars about the mine at which the event had occurred.

The form has been designed to provide consistent and accurate initial information about an incident, at a time that can be difficult and stressful.

The checklist can be completed by the Mine Manager on site and the information be provided orally by telephone to a Department Inspector, and can be easily sent by fax to the Inspectorate Office.

The Oral Notification Checklist should not be considered as a substitute for the Mine Manager giving oral notification. Rather, the form serves to act as a prompt for the type of

information that needs to be provided to the Department as soon as possible after a reportable mine event.

The information contained on the Oral Notification Checklist will also be used to inform senior officers of the Department and the Minister for Mineral Resources, for registering the mine event on the Department's information system COMET and for making releases to the media.

A copy of the Oral Notification Checklist is available from the Department's internet site at <www.minerals.nsw.gov.au>. The Department would appreciate any feedback on the Oral Notification Checklist form, or the process of notifying the Department of mine site accidents and incidents.

For further information, please contact your local Departmental Office (see listing on the back cover of this newsletter). ■■

## GOOD NEWS ON MINE SAFETY

This section of Mine Safety News is devoted to publicising industry initiatives in mine safety.

We can all do something about safety. In promoting sometimes simple, yet innovative ideas, we can all work on safety together and learn from one another to make our industry safer and more efficient.

If your company, or someone you know, has taken the initiative in introducing new safety ideas at your work, Mine Safety News would like to hear about it. Simply send or phone some details through to:

Gillian Macmillan  
Communication / Education Officer  
Mine Safety and Environment  
Department of Mineral Resources  
Ph: (02) 9901 8437  
Fax: (02) 9901 8584  
Email: macmillg@minerals.nsw.gov.au



### UMSS targets safety on pay day

Denis McMillan has been involved in the mining industry for over 30 years. The focus of his work during most of this time has been in providing training to the coal industry. Denis is currently working as Safety Advisor with United Mining Support Services (UMSS) from their Newcastle office.

UMSS has a very simple, yet effective method of conveying messages about mine safety to the approximate 400 staff spread throughout New South Wales and Queensland. Notes about incidents and accidents (in particular the Department of Mineral Resources Safety Alerts) are printed on the top of UMSS worker's pay dockets, or are copied in whole and included with each person's pay slip each fortnight.

UMSS believes that information provided about safety in this way gets into the home. "Often spouses will also read the messages and ask questions, which gets our blokes thinking a bit more". He suggests that it is a very effective method of communicating ideas on safety. "The message is clear" says Denis, "read it and act".

Congratulations, to UMSS and Denis McMillan, on implementing a straightforward yet very successful system for conveying messages about mine safety to the 'coal face'. ■■



## INJURY MANAGEMENT IN THE MINING INDUSTRY

With current cost pressures and downsizing in the mining industry, companies need to have the very best injury management programs in place. Effective injury management ensures that workers return to work safely as soon as possible after a work related injury or illness. This benefits both the injured worker and the business.

Over the next few months the WorkCover Authority of NSW will be conducting a campaign to highlight the benefits of injury management and provide information on how industry can implement improved injury management programs.

Because of the unique needs of the mining industry, mining specific injury management workshops will be held in Penrith, Wollongong, Newcastle, Muswellbrook, Lithgow and Dubbo during May and July 2000. The workshops will be offered free of charge.

Workshops have been designed by the mining industry reference group to provide:

- up to date information on relevant laws,
- case studies from the mining industry demonstrating the costs and benefits, and
- an opportunity to discuss the issues in your workplace with a panel of mining industry experts. ►



The workshops will be of interest to managers, rehabilitation/injury management coordinators, health care professionals and general practitioners, insurers, safety committee representatives, industry associations, unions and staff associations and rehabilitation providers in the coal, metalliferous and quarrying industries.

The workshops are supported by the Department of Mineral Resources, Joint Coal Board, WorkCover Authority of NSW, Coal Mines Insurance, GIO, Minerals Council of NSW, CFMEU, AWU, AMWU, ETU, ACSA and COA. ■■

#### More information

To obtain more information, please phone Peter Merrett, the convenor of the Mining Industry Reference Group, at WorkCover on (02) 9370 5752. To obtain a registration form, contact the WorkCover Administration Officer on (02) 9370 6188.

## THE INFORMATION UNIT

The Mine Safety and Environment Division set up the Information Unit to provide all stakeholders in the mining industry in New South Wales with accurate and timely information about safety issues. This was seen as important to support the change agenda which flowed from the implementation of the Mine Safety Review and the Greteley Report.

The Information Unit has been designed to improve the methods by which information is disseminated, and the types of safety material distributed to all stakeholders.

The Department believes that with stakeholder assistance and consultation we can work together to ensure that the mining industry eliminates unsafe work practices and achieves a safe working environment.

This will benefit the industry as a whole and we can move forward to a safer and more efficient mining industry in New South Wales.

### Who does what in the Information Unit?

#### Fran De Biasi

Fran De Biasi is the Communication/Education Specialist in the Information Unit of the Mine Safety and Environment Division of the Department. Her background is in communications, and she has worked for 15 years in both the private sector and in government as an editor of information

publications. Nine of these years were spent editing mining related publications, including the Department's quarterly magazine, *Minfo*.

She combines her publishing background with facilitation and dispute resolution experience, and has worked for many years in the fields of interpersonal and public policy disputes as well as community consultation.

Before moving into communications, Fran was an industrial engineer, specialising in materials handling systems.

Fran sees good communication as one of the key elements in developing a safety culture in the mining industry, and encourages opinion and constructive comment on the information being issued by the Division.

Please contact Fran for any further inquiries:

Phone: (02) 9901 8689

Fax: (02) 9901 8584

Email: [debiasif@minerals.nsw.gov.au](mailto:debiasif@minerals.nsw.gov.au)

#### Gillian Macmillan

Gillian Macmillan is the newest member of the Information Unit, having commenced as Communication/Education Officer with the Department in mid February this year. Gillian has qualifications in Public Relations / Research and worked with the coal mining industry in NSW for five years before moving to WA and promoting hard rock mining research for the past two years.

Gillian has a passionate interest in mine safety and the development of mine worker education and training programs to assist the industry to work safer and smarter. She believes that effective communication is an essential part of making this happen.

Gillian's role in the Information Unit includes coordination of every aspect of Mine Safety News, the Division's quarterly newsletter. She very much welcomes any feedback on the newsletter and, in particular, encourages all stakeholders to offer suggestions for improvement to the way the industry as a whole communicates messages about mine safety.

Please contact Gillian should you have any ideas for articles or have information on mine safety which you would like to promote.

Phone: (02) 9901 8437

Fax: (02) 9901 8584

Email: [macmillg@minerals.nsw.gov.au](mailto:macmillg@minerals.nsw.gov.au)

#### Steve Stewart

Steve Stewart, as a member of the Information Unit, is responsible for co-ordinating safety seminars and workshops on behalf of the Director Mine Safety & Environment. Steve also provides industry, unions and government with information on all safety publications and assists those bodies with general inquiries on safety related matters. He has worked for the Department of Mineral Resources for 25 years.

Steve can provide information about all safety-related publications and information sheets, including Safety Alerts.

Steve encourages you to contact him for any further information you may require:

Phone: (02) 9901 8413

Fax: (02) 9901 8584

Email: [stewarts@minerals.nsw.gov.au](mailto:stewarts@minerals.nsw.gov.au) ■■



*Gillian Macmillan, Communication/Education Officer; Steve Stewart, Administration Officer; and Fran De Biasi, Communication/Education Specialist.*

## MINE SITE INSPECTIONS: A PRIORITY ACTIVITY

The Department of Mineral Resources has made site inspections throughout the State a high priority over the course of the past year.

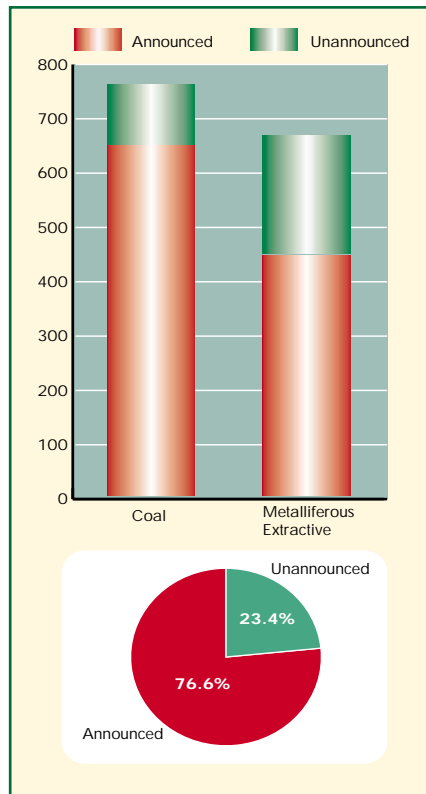
During the period 1 April 1999 to 31 March 2000 over 1,423 announced and unannounced site inspections were conducted by Department Inspectors and Mine Safety Officers (MSOs) - please refer to attached figure.

It is interesting to note that the annual target set by the Department for safety inspections was 800, a figure which has been exceeded by over 77%. This increase is partly attributed to the Department's employment of Mine Safety Officers, their approach to risk identification, and the pro-active move towards to the use of mine safety management systems.

### Why are site inspections important?

It is a specific aim of the Department that in conducting consistent inspections, the Department can provide appropriate

guidance and information to achieve best practice in mine safety and health through feedback, collaboration and information sharing.



Carrying out site inspections also serves to assess site Mine Safety Management Plans, incorporating Risk Identification Management Systems (RIMS), and examine a site's ability to manage hazards. The inspection serves as a verification that the mine's safety management systems are in place and understood by the employees.

The inspection also ensures that management and employees understand and embrace a performance based safety management system and acts to establish due diligence and duty of care.

Site inspections can be seen as an opportunity for industry to work together with the Department in a consultative fashion to address and develop site specific safety systems of optimum use and effect.

This pro-active approach in identifying risks and managing hazards has the specific aim of improving safety and health within the mining industry.

Should you have any questions with regard to either site inspections, Mine Safety Management Plans (MSMP), or Risk Identification Management Systems (RIMS) please contact your nearest Department of Mineral Resources office (see listing on page 12). ■■■



*Professor Dennis Else:  
Chairman of the Mine Safety  
Council*

## MINE SAFETY COUNCIL SETS THE AGENDA

The February meeting of the Mine Safety Council dealt with some of the Council's most important issues. These included safety issues around remote controlled mining equipment, enforcement matters, the development of the new regulatory model, training developments, provision of information to industry, and safety performance trends and measurement.

At its February 2000 meeting, the Mine Safety Council reviewed its role and direction. The review led to the Council re-organising its agenda for the meeting in line with its terms of reference, and to establishing a strategic agenda as a framework for future meetings.

### Mine Safety Council Terms of Reference:

- ✓ To report to the Minister on a quarterly basis on strategic direction, legislation, regulation, standards and broad industry matters of policy and performance measures.
- ✓ To encourage a move towards cross-industry and national standards.
- ✓ To oversee the completion of the implementation of the Mine Safety Review recommendations.
- ✓ To monitor and review safety performance of all mining industry sectors and to seek and provide advice to the three safety advisory committees. These committees report to the Minister through the Mine Safety Council.



## WHAT IS MINE SAFETY NEWS?

Mine Safety News is a quarterly newsletter produced by the New South Wales Department of Mineral Resources (DMR). The aim of Mine Safety News is to provide information to everyone who has an interest in safety and mining.



The Department aims to target mine safety and the production of Mine Safety News assists in getting messages out to achieve best practice in mine safety. Mine Safety News also provides an opportunity for communication of safety advances and innovations.

### Who receives Mine Safety News?

Mine Safety News is aimed at industry stakeholders in New South Wales, and is sent to: mine site personnel (management and technical), company corporate offices, committees and associations, other government agencies and interstate departments, union officers and check inspectors, manufacturers and equipment suppliers, DMR personnel and inspectors, training and education bodies, local councils and the resource media.

If you do not receive a copy of Mine Safety News, but would like to be included on the mailing list, please contact:

Steve Stewart  
 Phone: (02) 9901 8413  
 Fax: (02) 9901 8584  
 Email: [stewarts@minerals.nsw.gov.au](mailto:stewarts@minerals.nsw.gov.au)

### Feedback

Please contact the Editor, Gillian Macmillan, with any contributions or suggestions for inclusion in Mine Safety News.

Phone: (02) 9901 8437  
 Fax: (02) 9901 8584  
 Email: [macmillan@minerals.nsw.gov.au](mailto:macmillan@minerals.nsw.gov.au) ■■

## \$80,000 FINE FOR MINE OPERATOR ON FATAL ACCIDENT

In the second conviction since its enforcement policy was announced to industry, the Department of Mineral Resources has seen the imposition of an \$80,000 fine on a mining operator. A fatal accident on the mine site in 1997 led to the prosecution and fine.

The judge found that the employer did not ensure the health and safety of an employee because he did not provide and maintain safe mining plant namely a conveyor belt. The conveyor belt was found to have:

- nip points which were not guarded,
- drive belts and pulleys which were not guarded,
- no emergency stop button or lanyard,
- impact points under the bin were not guarded, and
- no acceptable access to observe the contents of a mixing tank.

A mine manager under the Mines Inspection Act 1901, must ensure that all equipment at the mine:

- is appropriately guarded and protected so that there is no opportunity for anyone to be harmed by its operation,
- is kept in a fit state and condition for work, and
- has adequate access facilities provided to all parts of the machinery and equipment.

More than two years before the fatal accident, an Inspector from the Department had written a letter to the mine manager that the nip points on the conveyors needed to be

guarded to prevent injury to personnel. Other equipment and two conveyor belts were then guarded, but the conveyor belt where the fatality occurred was not.

In his summing up, the judge commented that what had happened “amply demonstrates the risks to safety which are inherent in permitting the existence of unguarded machinery in a place where people are likely to be working.” He also said that this “is the very type of danger which has prompted persistent legislative attempts by governments to compel employers to correct such obvious and serious faults in the systems and plant... [used] as part of their operations.”

In setting the \$80,000 fine imposed on the mine operator, the judge took into account the seriousness of the offence and the added factor of leaving a perceived danger unchecked even after the Department of Mineral Resources had identified the danger and required it to be addressed.

NOTE: The Department’s prosecution of a coal mine in August 1999, saw the first conviction of a mining company. The company was fined \$50,000 and had to pay the Department’s legal costs following an explosion of methane gas in an area where leaking methane venting was supposed to be sealed. The explosion resulted in serious injuries.

The NSW Government implemented an enforcement policy on 1 January 1999. A copy of the policy ‘The Enforcement of Health and Safety Standards in Mines’ can be downloaded from the Safety page on the Department’s web site at [www.minerals.nsw.gov.au](http://www.minerals.nsw.gov.au). ■■



*The unguarded head drum and pulley of the conveyor involved in the mine site fatality (Photo courtesy of Bob Johnson, Mine Safety and Environment, Broken Hill).*

## MINING EVENTS JUNE – JULY 2000

### JUNE 6-8

#### **Pumps, Valves and Pipes**

Venue: Gauteng, South Africa  
 Contact: Exhibition Management Services  
 Ph: 27-11-783 7250  
 Email: exhibmsj@yebo.co.za

### JUNE 7

#### **2000 Minerals Industry Seminar**

Venue: Canberra, ACT  
 Contact: Minerals Council of Australia  
 Ph: (02) 6279 3634

### JUNE 14

#### **DMR Mine Safety and Environment Area Managers Meeting**

Venue: Safety Operations Orange Office, NSW  
 Contact: NSW Department of Mineral Resources  
 Ph: (02) 9901 8414

### JUNE 15

#### **Mine Closure for Decision Makers**

Venue: Perth, WA  
 Contact: Australian Centre for Geomechanics  
 Ph: (08) 9380 3300

### JUNE 15-16

#### **The 2nd Annual Open Cut Coal Operations Conference**

Venue: Mackay, Qld  
 Contact: AJM Conferences Pty Ltd  
 Ph: (02) 8235 5300

### JULY 12-14

#### **AusIMM Young Leaders Conference**

Venue: Sydney, NSW  
 Contact: AusIMM Events Department  
 Ph: (03) 9662 3166

### JULY 18-20

#### **International Mines Rescue Conference & Competition**

Las Vegas, Nevada  
 Contact Email: haycraft-hazel@msha.gov

### JULY 24-26

#### **Diggers and Dealers Forum 2000**

Venue: Kalgoorlie, WA  
 Contact: Suzanne Morrin  
 Ph: (08) 9021 5144

### JULY 25-27

#### **QLD Mining & Engineering Exhibition**

Venue: Mackay QLD  
 Contact: Reed Exhibition Companies  
 Ph: (02) 9422 2511

## SAFETY PUBLICATIONS

No.	Title	Issued	Cost
MDG 3003 SRA 98/99	Summary of reportable Accidents and Dangerous Occurrences for 1998/1999	2000	\$20.00
MDG 5004	A Study of the Risky Positioning Behaviour of Operators of Remote Control Mining Equipment	Feb 2000	Free*

\* The report will be provided free of charge on the Department's web site until 13 June 2000. After this period the report will only be available for sale at a cost of \$25.00 (plus postage).

Particular publications of the Department of Mineral Resources are offered free of charge. Where indicated, these publications can be downloaded from the Department's web site for free <[www.minerals.nsw.gov.au](http://www.minerals.nsw.gov.au)>.

To obtain copies of safety publications, contact the Department's Steve Stewart on:

Phone: (02) 9901 8413

Fax: (02) 9901 8584

Email: [stewarts@minerals.nsw.gov.au](mailto:stewarts@minerals.nsw.gov.au) ■■

## DEPARTMENTAL CONTACTS

### HEAD OFFICE

29-57 Christie Street  
 ST LEONARDS 2065  
 Ph: (02) 9901 8888  
 Fax: (02) 9901 8777  
[www.minerals.nsw.gov.au](http://www.minerals.nsw.gov.au)

### ARMIDALE

Ph: (02) 6770 2100  
 Fax: (02) 6770 2121

### BROKEN HILL

Ph: (08) 8080 0620  
 Fax: (08) 8087 8005

### COBAR

Ph: (02) 6836 4392  
 Fax: (02) 6836 4395

### GATESHEAD

Ph: (02) 4942 2300  
 Fax: (02) 4942 2323

### LIDCOMBE

Environmental Geochemistry, Lidcombe

Ph: (02) 9646 1344  
 Fax: (02) 9749 1405

### Mine Safety Technical Services

Assessment and Advice, Lidcombe

Ph: (02) 9646 1644  
 Fax: (02) 9646 3224

Specialist Services and  
 Applied Research, Lidcombe

Ph: (02) 9649 5266  
 Fax: (02) 9646 3224

Investigation Unit, Lidcombe

Ph: (02) 9649 8959  
 Fax: (02) 9649 5631

### LIGHTNING RIDGE

Ph: (02) 6829 0678  
 Fax: (02) 6829 0825

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Ph: (02) 6351 3052  
 Fax: (02) 6352 3876

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 Fax: (02) 6360 8344

### SINGLETON

(Inspectors)  
 (Geology)

Ph: (02) 6572 1899  
 Ph: (02) 6572 4200  
 Fax: (02) 6572 1201

### WAGGA WAGGA

Ph: (02) 6926 4513  
 Fax: (02) 6926 4515

### WOLLONGONG

Ph: (02) 4227 1699  
 Fax: (02) 4226 3851