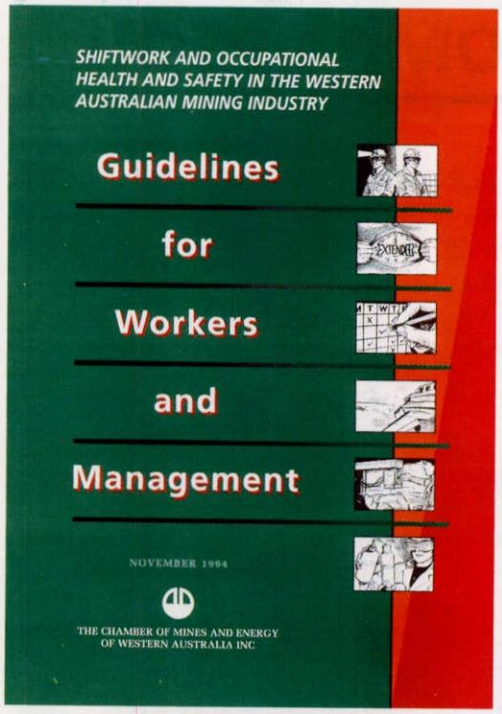
DEPARTMENT OF MINERALS AND ENERGY WESTERN AUSTRALIA

MINING OPERATIONS DIVISION

MINESAFE

ARE SHIFTWORK ISSUES ON YOUR PRIORITY LIST?



(Story on page 4)

MINESAFE IS PUBLISHED BY

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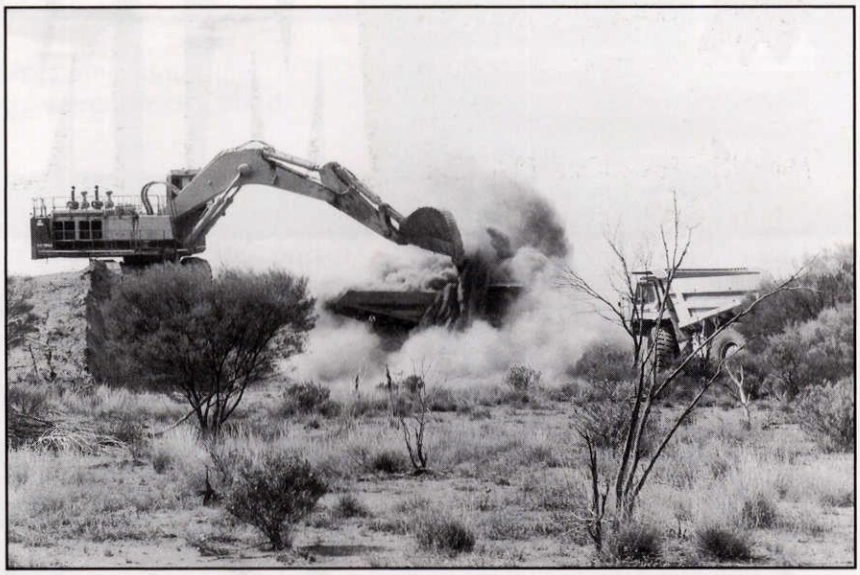
Inside .....

PAGES SPECIAL FEATURES:

REGULAR ARTICLES



DUST FROM TOPSOIL

The issue of dust was raised in the March 1997 issue of MINESAFE. The cover story showed a picture of topsoil being recovered from a stockpile for respreading. This raises a very difficult question, to ensure the viability and reduce the loss of soil properties, topsoil must be handled when dry. If handled when wet, the topsoil compacts, tends to crust over and generally increases the risk of failure for the emerging vegetation.

The following suggestions are put forward to help manage the situation to reduce the risk to operators from working in a dusty environment and maximise the value of the topsoil.

- Only handling dry topsoil when there is sufficient wind to clear the dust away from the site, avoiding still or very windy situations.
- Working to windward of the dust plume to ensure that no operators are obscured by the plume.
- Stripping with as much vegetation present as possible to help bind it together.
- Handling the topsoil as few times as possible, direct return being the optimum.
- Limiting the amount of trafficking over the surface. This will reduce the breakdown of soil structure.

For more information, contact the Environmental and Rehabilitation Officer in your regional office.

EDITORIAL

The definition of "mining operations" in the Mines Safety and Inspection Act now includes accommodation and recreation facilities where those facilities are located on a mining tenement and are used solely in connection with mining operations.

This inclusion was made to provide coverage of the legislation for those persons employed to work in and operate such facilities.

Experience shows that prudent management practice ensures employees working in these facilities are included in accident prevention programs (hazard identification and risk management) as there is an identified history of injury arising from a range of hazards, including kitchen systems, electric shock, back strain, and hazardous materials used for cleaning. To avoid fatigue and sleep deprivation, adequate staffing levels are essential where multi-shift continuous duty is required of service staff.

Mine managers and catering contractor managers should have due regard for the implications of Regulation 4.17(2)(e), where persons with responsibility for servicing accommodation and recreation facilities may be compromised in their duties by the inability to communicate or to read information critical to their safety.

Managers should also be aware that when language skills are a job requirement there is no conflict with EEO legislation, and you should contact that office to clarify your position.

CATHERINE STEDMAN
EDITOR

The Goodbye Tree - Palm Springs Gold Mine.

APOLOGY

It is MINESAFE policy to remove all identifying marks from front cover photos submitted for publication. Due to an oversight, the name of Leighton Contractors was not removed from the front cover photograph in the March 1997 issue of MINESAFE.

The photograph accompanied an article on dust exposure and was used to illustrate a common problem in handling top soil in the summer months, and was not meant to single out Leighton Contractors. MINESAFE apologises for the error and has taken steps to ensure the error is not repeated.

From Page 1

Where to from here?

Do people ever adapt to shift work or do they just learn to tolerate it? That question was on the table at the Seminar on Shiftwork and Occupational Health organised by the Chamber of Minerals and Energy on 16 May, 1997. Both the researchers and the past and present shiftworkers in the audience agreed that shiftwork was something you learned to tolerate.

The purpose of the seminar was to review the 1994 guidelines published by the Chamber, following the first seminar on shiftwork issues. For many in the 130 strong audience, it was more a case of being introduced to the guidelines, as it became very obvious that the 1994 edition had not received the mass circulation it deserved - a point that was made by State Mining Engineer, Jim Torlach.

The seminar was opened by Barry Cusack, Hamersley Iron, and President of the Chamber, who reminded participants of the part fatigue had played in some of the major disasters over the last decade. He also highlighted the fact that 1996 injury figures were the lowest recorded. Information from Mark Brown, AXTAT Manager (DME) confirmed that 12 hour shifts are now worked by at least part of the workforce on 95% of mine sites in the State.

Dr Anne Williamson (University of NSW) and Dr Meredith Wallace (Health and Work Behaviour Consultant), discussed adaptation and roster issues, as well as the effects on the individual: Sleep quality, diet, relationships and social issues were all canvassed, and while most were familiar with both the negative and positive effects of shiftwork, an opportunity to share experiences emphasised that the way you do it has an important bearing on how well you cope with it. Many had either worked the rosters or were still working the rosters being discussed, but too few of the people who devise and impose the rosters on the workforce were present. That was unfortunate, as roster design was identified as critical to the management of shiftwork for both company and worker.

Given the consequences for principal employers and employees, under Duty of Care legislation, discussed by both Jim Torlach and Les Buckbinder (Barrister and Solicitor), it is very clear that shiftwork issues should remain a priority. Practices like long distance commute workers returning to work and going straight on to a full night shift, the gap between the theory and practice of managing worker fatigue, and topics such as job rotation and exposure levels warrant immediate and close attention. There were repeated references to Alcohol and other Drugs which may indicate that there is a lot of attention paid to treating the symptoms of the problem rather than addressing underlying causes. Again, there are more questions than there are answers on this one, but Duty of Care obligations suggest we should be doing more about obtaining those answers.

Mining industry contractor employees make up almost 50% of the mining workforce, and the number is increasing. As Bob Halse from Monadelphous pointed out, while the contractor is an employer, the agenda (and so in effect the tender price) is determined by the client company in its tender specifications. That relationship is fundamental to the management of shiftwork issues and in practice, is a joint responsibility. In law the responsibility lies with the Principal Employer, and comment from the floor suggested that there is still work to be done on getting the relationship with the contractor right.

> One point that everyone agreed on was that the 12 hour shift was popular with most, and here to stay.

One of the difficulties in producing outcomes from seminars on this topic is simply a matter of geography. Geography has a big influence on attitudes, issues and solutions, and while the shiftwork issues are the same, the solutions for a community based mine in the south are very different from those needed for a remote mine on fly in/ fly out. Going home to the family at the end of shift is not the same as shutting the door on your donga, and relevance becomes an issue in itself.

One point that everyone agreed on was that the 12 hour shift was popular with most, and here to stay. A wide circulation and absorption of the material contained in the Guidelines can and will provide the prompters for identifying appropriate topics no matter where your mine is located. To get the benefit from the valuable information in the Guideline, one thing is certain - you have to read it first.

OCCUPATIONAL HEALTH FILE:

ANOTHER QUIET METHOD

It is pleasing to note that more and more minesites are replacing impact/rattle guns or flogging spanners with much safer to use hydraulic wrenches for tightening or undoing of bolted joints.

There is growing evidence of RSI type and permanent soft tissue injury associated with the long term use of impact guns. The high risk of injuries combined with unacceptable noise levels produced by impact guns has prompted many companies to invest in hydraulic wrenches. The lightweight construction and the simple push button operation of the wrenches is widely accepted by fitters, and contributed to improved torque control.

A mines inspector recently tested noise emissions from one of the convertible hydraulic wrenches and found its noise levels ranging between 81 and 83 dB(A) LAeq,T. These results would produce noise exposure values better than the mining legislation standard.

The noise generated by the hydraulic pump made the highest contribution to the overall noise emission. Lagging the offending pump with a high damping material (or its total enclosure) is probably the most practicable noise control measure, and can be achieved at relatively low cost.

The unit is totally portable and designed to be used in a single-handed operation. Each unit can be supplied with replaceable cassettes to accommodate a variety of drives for bolted joints including those where limited clearance and restricted access prevents the use of any other tools.

A hydraulic wrench in use.

If you need more information please contact Jerry Wilczewski, Tel: (08) 9222 3128.

EMISSIONS FROM U/G ENGINES

Most of the 70 underground mines in WA rely on high power output diesel engines in their operations.

In recent years the particles in the diesel emissions, known as diesel particulate matter (DPM) have become a health concern.

DPM consists of tiny particles which are small enough to be inhaled and retained in the lungs. These particles have hundreds of chemicals from the exhaust absorbed (attached) onto their surfaces.

One of the several practical means available to reduce exposure to diesel exhaust is the use of low sulphur automotive diesel fuel.

Australian Standard AS 3570 permits the oil companies to sell automotive diesel fuel with as much as 0.5% of sulphur. Eastern States refineries supply fuel with between 0.25% and 0.4% sulphur. However, the definition of low sulphur diesel fuel, as available in North America, has less than 0.05% sulphur. In Australia special orders need to be placed to obtain this product.

A low sulphur diesel fuel reduces the sulphate content of DPM emissions, reduces odours associated with diesel use and allows oxidation catalysts to perform properly. Further benefits are reduced engine wear and maintenance costs.

Combined with low emission diesel engines low sulphur fuel reduces the DPM emitted underground considerably.

Atmospheric contaminants, including DPM are required by legislation to be maintained below the exposure standard and as low as practicable. To achieve this, a duty of care onus is placed on both the supplier and the user of automotive diesel fuel.

A "Tool Box" document, "Practical Ways to Reduce Exposure to Diesel Exhaust in Mining" draft of March 1997 is available from the US Department of Labor, Mine Safety and Health Administration. This provides a comprehensive review of the issues and recommends approaches to deal with the problems.

THE DRILL RIG WE HAVE ALL BEEN WAITING FOR

A Kalgoorlie - based drilling company proprietor has taken delivery of a new reverse circulation drill rig he designed, which has features which will not only help to reduce the occurrences of accidents, but increase productivity and versatility.

The big difference between this drill rig and other rigs, is that this rig has been designed around the features that the driller wanted. In nearly all other rig designs the designers have built the features around the conventional rig design, ie. a drill mast, power pack, compressor, hydraulics, rod rack and everything else you could think of, mounted on the back of a flat bed truck.

This drill rig is radically different from most others in several aspects.

The innovative design of this rig has been examined closely and the Department believes that the risks associated with a number of readily identified hazards have been much reduced.

The following are some of the features which are believed to reduce accidents and improve productivity:

- The drill rig uses a dump truck chassis and running gear. This allows a robustly designed structure that readily accommodates the other components and systems used on the rig.
- The drill mast is offset to the left of the rig to allow a rod handling system to be used. The rod handling system consists of a magazine capable of holding 400 metres of drill rods. The magazine is positioned along side the drill mast in a convenient location by means of hydraulic rams similar to those for the mast itself. A small crane jib with a hoist installed on top of it are used to lift and lower drill rods as required. The crane jib can be raised or lowered and slewed left or right. These functions are all controlled by the driller at the main control panel. The system allows the driller to have constant visual contact with what is happening and the offsider stands along side the driller during the rod handling process, and does not have to carry out the hazardous job of "running with the rod".

Rear of rig with the rod handling system in use.

The drill rig from the lefthand side of the rig towards the rear.

- Manual rod handling on conventional drill rigs is inherently hazardous and this task results in a large proportion of injuries that occur at drilling operations. It is believed that the system used on the rig reduces the risks and hazards to the drill crew. The development of this type of system was recommended in the 1992 study on fatal accidents.
- Currently only the booster compressor is mounted on the drill rig. At a later date there will be a compressor package installed along side the booster. The high pressure air from the booster is hard plumbed on the drill rig structure. This means that currently, only the compressor delivery hose is run between the compressor package and the drill rig. This also reduces risks from hazards associated with high pressure air hoses.
- The cyclone and sample splitting system installed in the side of the drill rig is fitted with a knife valve to control the dumping of sample material through the splitter. The moving parts of the valve are hidden within the rig structure to keep them away from the drill crew to prevent injuries due to inadvertent contact. The cyclone is made from polyurethane which allows easier removal and cleaning of internal sample build up.
- The rig has a large water tank, installed with retractable water and air hosing to allow cleaning and maintenance of the cyclone or other parts of the rig as required.

  Because of the large rod carrying capacity, large water tank and a fuel tank with enough fuel to run the rig for 10 days, a support truck is not required to be present with the rig every day.

There have been a number of design and operational improvements made to rigs in recent years.

This rig incorporates many well designed improvements which are commended to the attention of the industry.

For more information, contact Brett Boneham on Tel: (08) 9021 9428

MINER'S TAG SAVES LIVES UNDERGROUND

In an underground mining emergency such as a rock fall, tracing miners trapped underground has, in the past, been achieved by counting those who emerge from the pit and subtracting them from the number of workers who went underground at the start of the shift. The obvious inadequacies of this method, highlighted by the coming and going of workers and supervisors underground, have led to the design of the first comprehensive tracking system for miners underground.

The Miners' Tracking Tag, less than 40 millimetres long, fits inside the casing of the battery pack of each miner's cap-lamp. Powered by the cap-lamp battery, the tag transmits its unique code, corresponding to a miner's lamp number and name, by radio at half second intervals to receivers attached to the backs of mine headings at strategic points. The receivers register the individual tag codes whenever a miner (or machine) is within range. This information is stored in the controller along with details such as the date and time it was recorded and the location of the reader itself. The data is then transmitted to the mine computer via controllers and processed, giving immediate reports of the location or identity of miners in particular areas. The features of this system become essential during blasting, as the tags are a much more effective mechanism for locating miners than a simple roll-call.

One feature of the tag is that it can operate on a charged battery for a period of more than 10 years. The tags themselves are tiny, with dimensions of 26mm x 38mm, with a range underground along line of sight of about 90 metres. The receivers are encased in a tough polycarbonate casing designed for maximum resistance to knocks, seeping water and extremes of temperature.

The product is a major breakthrough that will contribute significantly to the safety of thousands of miners.

For more information, contact on Chris Stubley on Tel: (08) 9222 3531.

HOW TO APPLY FOR AN AUTHORISED MINE SURVEYOR'S CERTIFICATE

This PRO FORMA for making application for a certificate has been included in MINESAFE at the suggestion of the MINES SURVEY BOARD to assist applicants and to reduce the incidence of incorrect, incomplete and inadequate applications. Such applications usually result in delays in certification and time wasted by the Board and the Secretary.

Requirements and Procedures to Apply

Regulation 3.47 (in Part 3 - Division 6 of the Mines Safety and Inspection Regulations) deals with the issue of an authorised mine surveyor's certificate.

The following is required of the applicant:

1. A formal application on the form for the purpose which is available from the Mining Operations Division by calling in person, or by writing or telephoning to the Secretary to the Board. (Address and contact numbers below).

2. Documentary evidence of formal qualifications comprising:

   2.1 A copy of the degree or diploma required under Regulation 3.47 (4), which may be any of the following:

   (a) degree or diploma in mine surveying technology from Curtin University WASM.

   (b) the 3 year diploma of mine surveying from TAFE.

   (c) surveying qualifications from any recognised tertiary authority which are deemed by the Board to be equivalent to (a) or (b).

   Note that where a qualification has been gained in another State, and in particular overseas, it is essential to correctly identify the qualification and the Institution which issued it, and to provide detail of the course content, preferably in the form of subjects completed and verified by the Institution.

   Failure to do this may result in delay in dealing with the application while the academic members on the Board assess the qualification.

   2.2 Documentary evidence of mining and geology units as required by Regulation 3.47 (5) (a) or (b):

   Grade 1 Certificate: 2 mining units and a geology unit.

   Grade 2 Certificate: one mining unit.

   Note:

   - *These units are incorporated in the Curtin University WASM qualification.*
   - The TAFE course has these units available for surveyors wishing to acquire an Authorised Mine Surveyor's Certificate.
   - *Qualifications acquired outside of Western Australia, (which are generally in engineering surveying), often do not incorporate the requisite mining (and geology) units, and applicants will therefore have to complete these units, unless documented evidence of qualifications which may be verified as equivalent is provided by the applicant.*

3. Documentary evidence of adequate practical experience; (in accordance with Regulation 3.47(3) (b) & (c).

   Grade 1 Certificate: underground surveyor for 24 months.

   Grade 2 Certificate: quarry operation surveyor for 12 months.

   Note that:

   - *The work must be of a nature and under supervision satisfactory to the Board.*
   - *For the Grade 2 Certificate the work must be in quarry operations (as defined in the Act, the quarry or open pit proper not just surface mining or engineering works).*
   - *In the case of the Grade 1 Certificate time spent on quarry operations is not included in the 24 months.*
   - *In order for the Board to make a proper assessment of the experience, a reasonable level of detail on the scope and variety of the survey work undertaken is required.*

   It is not sufficient to provide a short general statement. The experience must be given in reasonable detail in respect of the type or nature of the survey work and the amount of time (in weeks or months) over which these activities have been carried out.

Normally one or two typed pages are required to describe adequately a two year period of work.

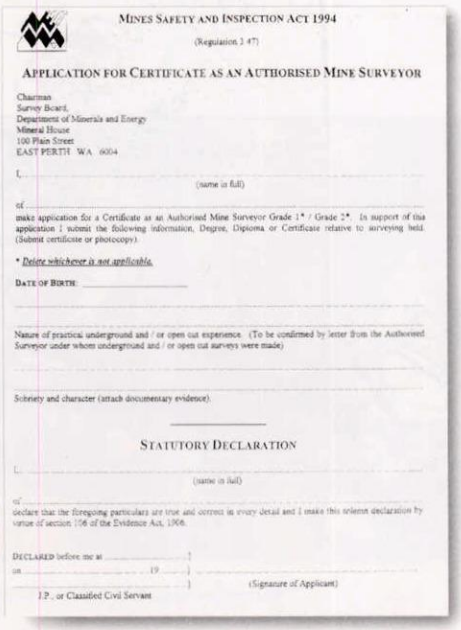
It is not sufficient for the individual applicant to assert that the work as listed has been done. Written verification from a person in charge of the work is required. Normally this will be the (Authorised) Chief Surveyor the Registered Manager, or the Underground Manager or Quarry Manager for the relevant mine or mines.

Surveyors in the course of gaining experience for certification should keep a general log of their work experience to enable them to present a sufficiently detailed resume for verification and inclusion in their application.

4. Finally a character reference should be supplied to the Board, in support of Regulation 3.47(3)(d). This is normally a general character reference which supports the diligence and competence of the applicant in his duties.

Any queries should be directed to:
The Secretary
Mines Survey Board
Mining Operations Division
Department of Minerals and Energy
100 Plain Street
East Perth WA 6004

Tel: (08) 9222 3683
Fax: (08) 9325 2280



MINES SAFETY AND INSPECTION ACT 1994

(Regulation 3.47)

APPLICATION FOR CERTIFICATE AS AN AUTHORISED MINE SURVEYOR

Chairman
Survey Board,
Department of Minerals and Energy
Mineral House
100 Plain Street
EAST PERTH WA 6004

I, ...
(name in full)

of .....
make application for a Certificate as an Authorised Mine Surveyor Grade 1* / Grade 2*. In support of this application I submit the following information, Degree, Diploma or Certificate relative to surveying held. (Submit certificate or photocopy).

* *Delete whichever is not applicable.*

DATE OF BIRTH: .....

.....

Nature of practical underground and / or open cut experience. (To be confirmed by letter from the Authorised Surveyor under whom underground and / or open cut surveys were made)

.....

Sobriety and character (attach documentary evidence).

STATUTORY DECLARATION

I, ...
(name in full)

of .....
declare that the foregoing particulars are true and correct in every detail and I make this solemn declaration by virtue of section 106 of the Evidence Act, 1906.

DECLARED before me at ..... }
on ..... 19 .... } .....
..... } (Signature of Applicant)
J.P., or Classified Civil Servant

BOARD OF EXAMINERS

The Board of Examiners decided at its latest meetings that applicants for certificates of competency who had been successful in the Practical examination would have a period of 5 years to fulfill the other requirements for their certificate, otherwise they would have to re-sit the Practical examination.

With regard to the Mining Law examinations, the Board determined that applicants who had successfully passed the examination under the Mines Regulation Act and Regulations must fulfill the requirements for their certificate before the transitional period of 2 years expires on 8 December 1997, otherwise they would be required to re-sit the examination under the Mines Safety and Inspection Act and Regulations.

MINES SURVEY BOARD

The Mines Survey Board determined that the transitional provisions of Regulation 3.48 would be extended to 31 December 1997. The Regulation will now be amended.

Transitional arrangements

3.48. (1) A person who immediately before the commencement day held an authorised mine surveyor's certificate is entitled, if the person applies to the Board, to be issued with an authorised mine surveyor's certificate (grade 1).

(2) The Board may issue an authorised mine surveyor's certificate (grade 2) to a person if the person applies to the Board and satisfies the Board that before the commencement day the person has had more than one years experience of having made surveys and drawn plans of quarry operations.

(3) The Board may issue an authorised mine surveyor's certificate of an appropriate grade to a licensed surveyor if the person applies to the Board and satisfies the Board that the person has mine surveying experience of a nature and duration acceptable to the Board.

ALCOHOL AND OTHER DRUGS

Most people are aware of the recent case of a mine worker who was dismissed by his employer following a conviction for possessing cannabis on company premises and having an illegal substance on a mining lease. Subsequently a single commissioner ordered the company to reinstate the employee, a decision that was overturned on appeal by the Full Bench of the WA Industrial Relations Commission.

An important component of the full bench decision was the recognition of the Duty of Care of both Employer and Employee under the Mines Safety and Inspection Act. While this should be brought to the attention of employees, it is also advisable for those mines which do not have a comprehensive alcohol and other drug policy and procedures to do something about that.

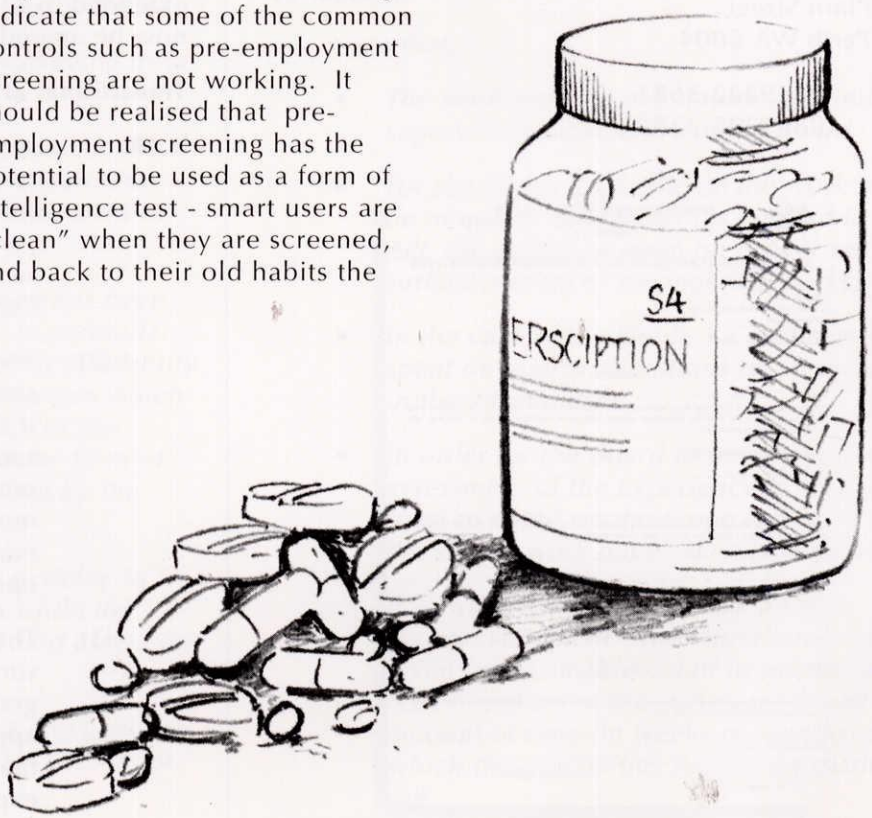
This particular decision related to the possession of an illegal substance, but many of the drugs that can impact on the Duty of Care of employers and employees are not only legal but also freely available over the counter. Some, such as alcohol and tobacco, are also addictive. It is winter, and employees will be suffering from colds and flu. Many will make a quick trip to the chemist, and for those who misuse over-the-counter medications, or react adversely (particularly when opiates are involved such as medications containing codeine) their ability to perform to standard may be compromised.

There are plenty of successful policies in the industry. Good policies focus on performance criteria, and the ability of an employee to perform to a standard. No matter what opinion anyone holds on the rights and wrongs of popular controls, taking action to ensure employees can perform to a standard is a principle that no one can argue against. That is why well devised policies based on that principle work most of the time.

Good policies focus on performance criteria, and the ability of an employee to perform to a standard.

The issues of substance abuse have been a concern for many years. They are still an issue which might indicate that some of the common controls such as pre-employment screening are not working. It should be realised that pre-employment screening has the potential to be used as a form of intelligence test - smart users are "clean" when they are screened, and back to their old habits the next day, and unless there is consistent effort to identify users in the workplace, it is a moot point whether there is much deterrent value, as the number of positive screenings seem to indicate. Where then is the long term outcome for a safe place of work?

Policy and procedures need to address legislation, workplace education, and performance standards. Mine employees are adults. Adults need to take responsibility for their actions and choices, and informed decision making is part of that. There aren't any simple answers, but a policy that sets out the standards is a good place to start, especially when it also recognises some of the work site issues and work systems that may be contributing to the problem in the first place.



PEOPLE AND PLACES

"We've got this one sussed!"
BHP Exploration tackle the legislation.

"What do mean you'd prefer a Mercedes"
Alan Chester (WMC - Kambalda) and Doris Tan (Christmas Island).

"The answers in here somewhere"
Safety Representitives in training (Wiggensville).

"6000 done 1000 to go"
L-R: Tania Narducci, Jo Duggan and Mark Whiteley (Mining Operations Division) organising the distribution of MINESAFE.

"That's another lot fed and watered"

GETTING TO GRIPS WITH CULTURAL CHANGE

WHAT DO YOU THINK IT MEANS?

When Dr Edward Jenner discovered his smallpox vaccine and rained on the parade of all those who had made a good living from selling "potions" as a cure, he probably upset not only those who he was about to put out of business, but also some of their patients who preferred to stick with what they knew. Things haven't changed all that much, and people continue to be wary of change that radically alters the way they do things.

The way people do things in the mining industry is referred to as the mining industry culture. Are we all talking about the same thing?

We can't assume that just because we think something is a good idea, others will too. If change is perceived to be at odds with self interest, then we can expect problems until people can match their feelings about the change with their actions. What exactly is it we want people to do, and how do we want them to do it?

Unlike sellers of medicinal compounds who may have been quite vocal about their resistance to change, a lack of enthusiasm for Enabling legislation may not be that obvious. The new legislation is changing the culture - How is it doing that?

What exactly is the mining industry "culture"? There have been numerous words written about mining culture, and cultural change, but can such a diverse industry have a culture, or do we mean individual organisational cultures? What exactly is it we are talking about? If people have to change, what are they changing from, and what are they changing to? How are they supposed to do it?

We can't assume that just because we think something is a good idea, others will too.

We'd like to publish your thoughts (short and to the point) on whether a mining industry culture exists, and if so how the culture is defined, and your opinions on preparing people for change. As well as individuals, we would be very interested to hear from Safety Committees.

Send your ideas to:
The Editor
MINESAFE
Mining Operations Division
Department of Minerals & Energy
100 Plain Street
EAST PERTH WA 6004
Fax (08) 9325 2280

STOP PRESS

MARCSTA UNDERGROUND INDUCTION

In response to industry requests, the MARCSTA Training Committee has started work on the Underground Induction, and would welcome input from underground mine operators and training personnel. If you would like to contribute to the development, have a point of view on content or can contribute to the research by making your underground induction notes available. please contact the

Training Sub-Committee Chairman, Vic Roberts on Tel: (08) 9472 2000 or Fax: (08) 9470 1971.

ELEVATED TO A HIGHER PLATFORM

KCGM Training Officer Rodney Goldsworthy recently became the first KCGM employee to receive an Australia wide qualification to train and assess people to operate Elevating Work Platforms.

After a training course in Kalgoorlie, Rodney spent two days at WorkSafe in Perth where he successfully completed a long interview process and examinations before he became a Nationally Registered Workplace Assessor for Elevating Work Platforms. This means Rodney can now train new KCGM employees and contractors in the use of the platforms and issue Certificates of Competency on behalf of WorkSafe Western Australia to operate Elevating Work Platforms. The certificates are recognised throughout Australia.

Elevating Work Platforms are used throughout the KCGM operations to carry out work on powerline poles, cableways, pipe traces, tanks and similar structures.

Having an assessor on site means the courses can be quickly organised and carried out without the time and cost constraints usually encountered when having to bring consultants to site to run the courses. It also means KCGM employees will have nationally recognised skills and qualifications.

KCGM's inhouse Elevating Work Platform Course - designed by the Training and Development Department - has been endorsed by the Chamber of Minerals and Energy and will soon be certificated by the Training and Accreditation Council. This means in addition to having an accredited trainer on site, KCGM will also have a course that is accredited and endorsed by the State Training Board.

This is part of the overall thrust of the Training and Development Department - to develop internal courses that meet recognised and statutory industry standards. This level of certification and endorsement by the State Training Board means this training is equivalent to training provided by external training bodies. It also means that a qualification gained via training courses within KCGM is valid outside the company.

Work is presently being done on a KCGM forklift operators' course to gain similar accreditation.

Rodney Goldsworthy (Right) training an employee to use an elevated work platform.

NEW PUBLICATIONS

- **Safety Bulletin No. 22:** Access Ladderways - September 1996.
- **Safety Bulletin No. 23:** Manual Metal Arc Welding (Electrical Safety) - March 1997.
- **Significant Incident Report 65:** Children Exposed to Hazards at Unattended Mine - July 1996.
- **Significant Incident Report 66:** Structural Failure of Bucketwheel Reclaimer (Fatal Accident) - August 1996.
- **Significant Incident Report 67:** High Voltage Circuit Switched to Earth - August 1996.
- **Significant Incident Report 68:** Electrical Test Instrument (Serious Accident) - September 1996.
- **Significant Incident Report 69:** Anfo Mixing Vehicle Fire - November 1996.
- **Significant Incident Report 70:** Thermal Lancing of Crusher Concaves (Serious Accident) - April 1997.
- **Significant Incident Report 71:** Sudden Collapse of Ground (Sinkhole Formation) - April 1997.

The following guidelines have been endorsed by MOSHAB and will be made available on the EXIS System.

- **Guidelines to Preparation of Radiation Management Plan - May 1996.**
- **Guidelines to Radiation Gauges Safety - August 1996.**
- **Guidelines to Noise Control in Mines - February 1997.**
- **Guidelines to Personal Noise Recordings - April 1997.**
- **Guidelines to Management and Prevention of Heat Stress - April 1997.**

ARE YOU CONNECTED TO EXIS

Just in case there are people who missed the article on the EXIS (External Information System) in a previous issue of MINESAFE, the system will enable you to access a multitude of data about safety held by the department and includes the Act, Regulations, Guidelines, journals, bulletins, Axtat reports, graphs and forms, bulletins and incident reports, and that's just the start!

A brochure and registration form can be obtained from the help desk at the Department by quoting EXIS (Tel: (08) 9222 3293). You will also need Lotus Notes 4.1 installed on your PC.

Lotus Notes Desktop Client costs approximately $155.00 and can be obtained from any Lotus Notes business partner or major computer retailer. You need to order a Lotus Notes Desktop Licence Kit (part number LON-DESKTOP-45).

This Kit includes:

- 1x Lotus Notes Desktop license
- 1x CDRom Media
- 1x Documentation set

The latest list of Lotus Notes Business Partners can be found on the Web http://www.lotus.com/australia.

WHAT'S ON

AUSTRALIAN CENTRE FOR GEOMECHANICS

ACG

AN INTRODUCTION TO ROCK MECHANICS
JULY 31 - AUGUST 1, 1997

A practical course designed to promote an understanding of the terminology and concepts of basic rock mechanics, the reasons behind particular rock mechanics design approaches and the impact of particular rock mechanics solutions to the design and cost of rock excavations.

MINE SLOPE STABILITY
AUGUST 27 - 29, 1997

The course addresses issues such as the recognition of slope instability, the mechanisms of slope failure, techniques for reducing the likelihood of failure, the data required to assess slope stability and slope design, and the various analytical and numerical methods available for stability analysis.

ROCK SLOPE DAMAGE CONTROL (BLASTING)
OCTOBER 2 - 4, 1997

This course examines the mechanisms of rock breakage that operate within a blast, considers means of minimising wall damage adjacent to the blast and imparts an understanding of the effects that blasting can have on the geological structure adjacent to the pit and hence on the stability of the final pit wall. The course is aimed at blast designers, planning engineers and those responsible for drilling and blasting operations in the field.

For further information please contact:
Christine Neskudla on
Tel: (08) 9380 3300
Fax: (08) 9380 1130

VENTILATION OFFICER'S COURSES

4 - 5 SEPTEMBER, 1997 — **SURFACE**
5 - 7 NOVEMBER, 1997 — **SURFACE/UNDERGROUND**

Venue: Department of Minerals and Energy
Level 9 Theatrette, 100 Plain Street
EAST PERTH WA 6004

Enquiries can be made to Jim Lawrence
Tel: (08) 9222 3095
Fax: (08) 9325 2280

CONFINED SPACES SEMINAR
"AN OVERVIEW OF SAFE WORKING PRACTICE"
JUNE 26, 1997

Venue: Lord Forest Hotel, Bunbury

For further information contact Lynette Peters
Tel: (08) 9325 2955
Fax: (08) 9221 3701

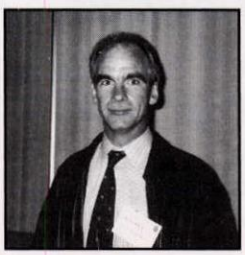
MINE VENTILATION PLANNING WITH VnetPC FOR WINDOWS
3 DAY SHORT COURSE

Course 1:
24 to 26 September, 1997
Central Metropolitan College of TAFE
25 Aberdeen Street, Perth

Course 2:
30 September to 2 October, 1997
Sydney Airport Hilton Hotel

For further details contact Emeritus Professor I. Odwyn Jones (Mining Industry Training Institute) on
Tel: (08) 9427 228/288 or Fax: (08) 9227 5943.

STAFF CHANGES



Torquil Briggs

The Karratha Inspectorate welcomes **Torquil Briggs** in the position of District Mining Engineer.

Farewell to **Peter Garland** (Regional Mining Engineer - Karratha) and **Terry Fisher** (Principal Mining Engineer - Perth) who have resigned to take up positions at the Queensland Department of Mines and Energy.

Resignations were also received from **Dawn Ennor** (Kalgoorlie), and **Pete Cowley** (District Mining Engineer - Kalgoorlie) who has accepted a position with WMC - Kalgoorlie Nickel Smelter.

INCIDENT ALERT

Incident

A driller's offsider was attempting to clean the inside of a sample cyclone which was fitted with a pneumatically operated knife valve.

The knife valve is used to retain sample material in the cyclone until it is released into a sample splitter by activating a control lever.

The offsider was attempting to clean the inside of the cyclone (from the bottom) with his hand, and accidentally knocked the control lever which activated the knife valve.

The offsider's thumb was severed.

In a similar accident, a driller had his arm broken carrying out the same task. The only significant difference was that in this case, an offsider activated the knife valve with the intention of opening the valve to allow the driller better access to the cyclone.

With these types of valves becoming more popular, the potential for other similar recurrences is increasing.

Comments

There are regulations pertaining to plant in general that are intended to prevent these types of accidents from occurring.

In both cases mentioned the regulations were not complied with.

These regulations are contained in Part 6 of the Mines Safety and Inspection Regulations 1995, and drill rigs are plant.

Designers, manufacturers and suppliers also have obligations under these regulations.

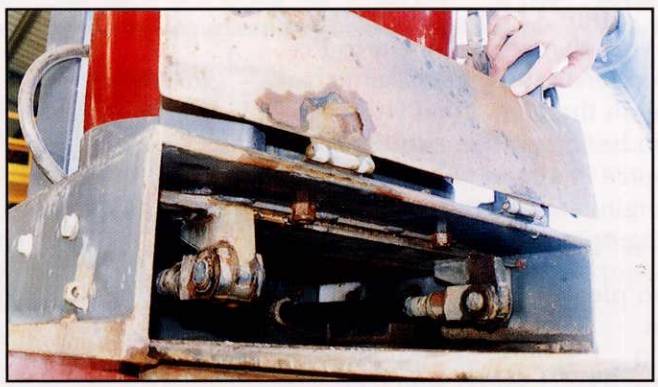
Preventative Action

The following should be done as a minimum to prevent similar recurrences:

- Guarding should be in place to prevent persons being injured through inadvertent contact.
- Signs should be in place to warn persons of hazards associated with these cyclones.
- Controls should be prominently labelled to identify each control function.

Control arrangements on cyclone.

- Isolation controls should be fitted and clearly labelled to identify their function.
- Isolation procedures and interlocking devices should be in place to ensure that the apparatus cannot be operated whilst there is a risk of injury to persons.
- Formal training in the use, cleaning and maintenance of these units must be given to persons required to work on them.



Area inside the bottom of the cyclone where the knife valve severed the victim's thumb.