



MINESAFE

ISSUED BY THE MINING OPERATIONS DIVISION OF THE DEPARTMENT OF MINERALS AND ENERGY (WA)

THE CLOSING CHAPTER



After almost a century of providing coal for the State's energy needs, underground coal mines in the Collie basin have ceased operation. Few realise the enormous contribution these mines have made to the growth of the State, their closure ends a chapter in the history of Western Australia.

The considerable bank of underground mining skills developed by generations of Collie coal miners will not be entirely lost. Some have already begun retraining to adapt their skills to metalliferous mining, and further retraining programs are being developed.

MINESAFE takes this opportunity to acknowledge not only the present day underground coal miners of our State, but also the generations who went before them.

To the miners who helped to build Western Australia at Wallsend, Proprietary (Bullfinch), Moira, Scottish, Cardiff, Co-operative Westralian (old), Premier Neath, Stockton Westralian (new), Black Diamond, Ewington Griffin, Wyvern, Phoenix, Centaur, Hebe, Western No 1, Western No 2, Western No 4, Western No 6 and Western No 7, **thank you.**

MINESAFE IS PUBLISHED BY

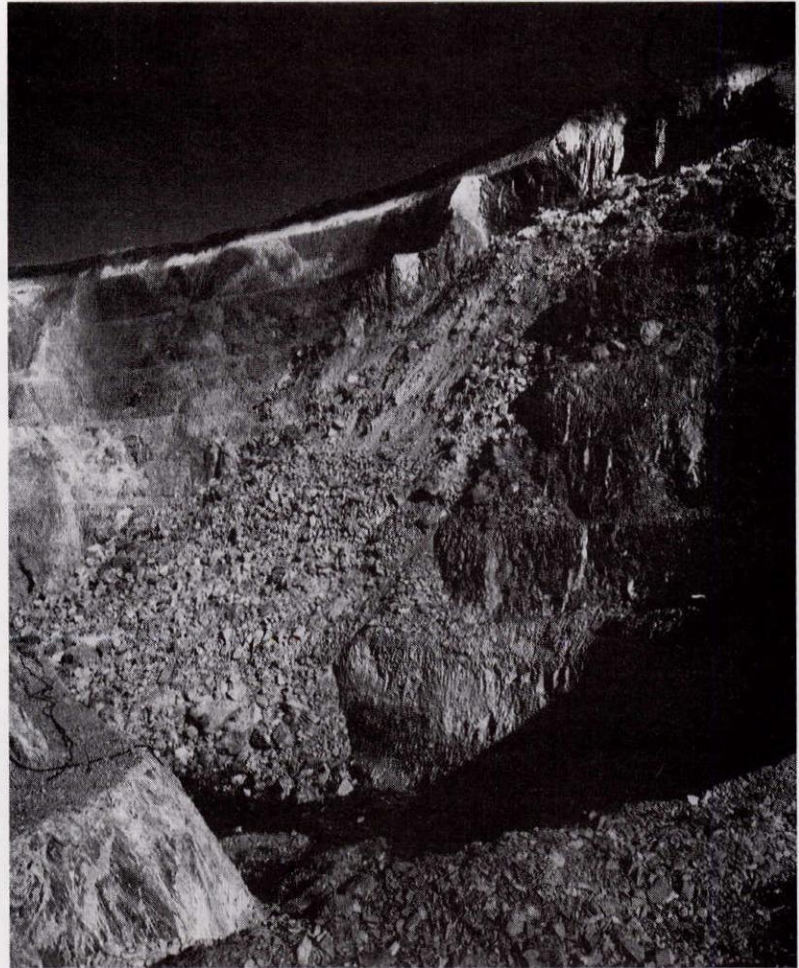
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WHY THE WALLS FALL DOWN



Open pit wall stability is difficult to predict with a high degree of certainty, due to the variability of ground conditions encountered. The economics of open pit mining are closely linked with the overall pit shape or geometry. The removal of the minimum amount of waste rock consistent with safe operating practice is an important part of an open pit design.

Obviously the use of steeper wall angles reduces the amount of waste rock to be mined, however steeper wall angles may result in an increased risk of wall failure. A number of wall failures have been experienced in open pit mines due to a range of factors including:

- weak soil and/or soft rock materials in the walls;
- long continuous joints dipping into the pit;
- soft clay-like materials in joints dipping into the pit;
- groundwater in the pit walls; and
- re-entrant corners or bullnoses in the pit walls.

Prudent open pit wall design requires that geotechnical

considerations are identified and accounted for in the pit design.

Experience has shown that open pit wall failures rarely occur without any warning, if we are alert for the warning signs. The SME Mining Engineering Handbook¹ provides some practical guidance as to the things that may be expected with the development of open pit wall failures, including:

1. Slope failures do not occur spontaneously.
2. Most slope failures tend toward equilibrium.
3. A slope failure does not occur without warning.

These important issues of slope stability management need to be recognised, understood and addressed by open pit mine operators and management.

Reference

- 1 Hartman, H.L. (ed.), 1992. *SME Mining Engineering Handbook*, 2nd Edition, Volume 1, p 893. Published by Society for Mining, Metallurgy, and Exploration Inc. Littleton, Colorado.

GUEST EDITORIAL

NOW HEAR THIS (IF YOU CAN)

Mining is an inherently noisy industry. Drilling rigs, load-haul-dump (LHD) units, crushing and screening equipment and other items of machinery used in mining and mineral processing generate high noise levels. Prolonged exposure to such noise levels will substantially increase the risk of noise induced hearing loss (deafness).

It is important to realise that a noise management program which is focussed almost exclusively on the use of hearing protection devices is unlikely to prevent noise induced hearing loss in all workers, as the protection afforded by muffs and plugs is very dependent on usage patterns and the care taken with fit. For these reasons the Department has been stressing to industry the need to develop formal noise control action plans, encompassing a "buy quiet" policy for new plant and equipment, and the establishment of a timeframe for the implementation of various engineering control measures, according to priority.

It is particularly important that new plant and equipment be purchased and installed with due regard to noise control.

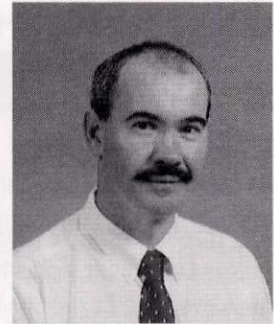
Lack of appreciation of best practicable technology is probably a reason why mine management has failed to fully embrace the application of engineering solutions to certain items of underground mining equipment. Engineering solutions are generally more readily effected for fixed plant and surface installations, but nevertheless solutions are available for underground mining equipment. It is critical that effort be applied to silencing such equipment because noise levels from drills and LHDs are well in excess of the action level. Some solutions have been highlighted in recent Minesafe articles and we intend continuing this practice. Readers are invited to submit their own noise control solutions for publication.

A primary reason for the relative neglect of noise as a hazard, is the widely held perception that progressive loss of hearing represents only a diminished social amenity. This perception is not true. In fact, elevated noise levels have an adverse effect on alertness and well being, and may often be an underlying factor contributing to accidents.

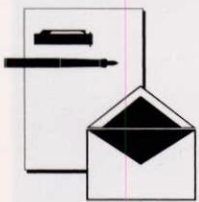
The effective management of noise in mining is a big challenge to the industry, but the rewards in terms of compensation savings and employee well-being are great.



Greg Hewson
Principal Scientific Officer
Occupational and Radiation Health



LETTERS TO THE EDITOR



In regards to your story on the truck accident in Vol 5, No 2 on page 5, I was the trainee driver mentioned and I suffered a lot of injuries, including ten broken ribs and two spinal breaks. I only had a few hours training, and although I don't remember the accident or what caused it, I owe my life to the rescue crew who came to my aid. It was their special care and understanding that saved my life and I am able to walk without aid. I am mending slowly and

although it's frustrating sometimes, at least I'm not in a wheel chair which I could have been if I'd been moved the wrong way. The medical officer and the rescue crew were wonderful and I can't stress enough the importance of training in rescues of this nature. Thank you guys.

Yours sincerely

D F Morgan

On Behalf of the
Department of Minerals
and Energy (W.A.) and all
Minesafe readers across the
country, we extend our
sympathy to the families of
the 11 miners who died in
the Moura disaster
7th August, 1994.

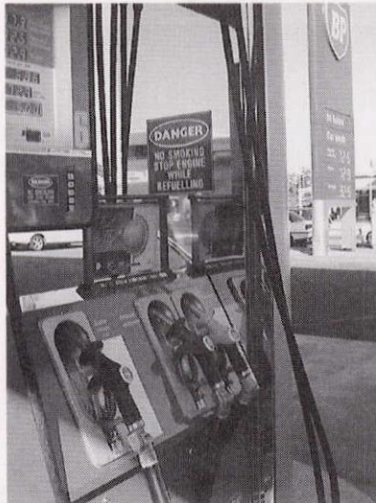
STOP ENGINE - NO SMOKING

Australian Standard 1940 - 1993 requires this sign to be prominently displayed on or near bowsers at all sites where flammable and combustible liquids are dispensed.

The Standard requires that:

- operating procedures shall take into account the need to stop a vehicle's engine when refuelling that vehicle, and
- the delivery nozzle for any flammable liquid intended for use by the customer, shall not be provided with a latching device. No item, e.g. fuel cap, keys or any other device, shall be used to hold open a customer operated nozzle.

Several accidents have occurred in the past involving the ignition of flammable and



YES !

combustible liquids being dispensed into or decanted near operating equipment. The hazardous zones associated with flammable



NO !

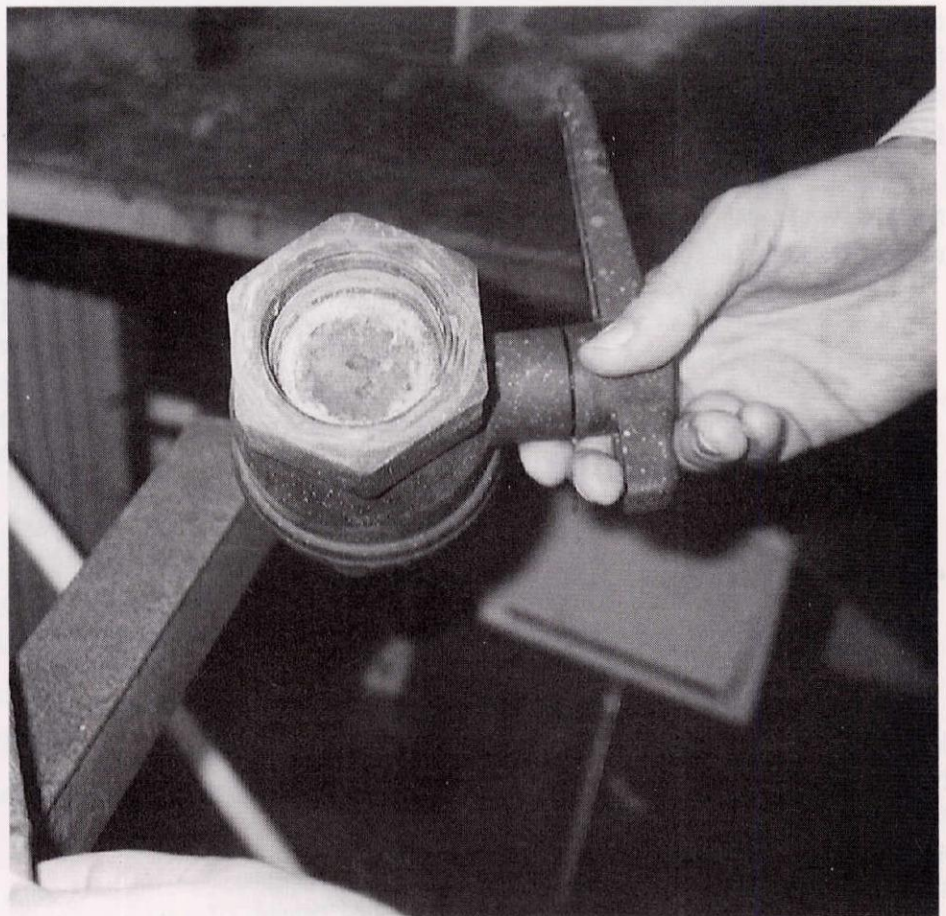
and combustible liquids leaves them continuously susceptible to any ignition sources in their vicinity.

ACID ATTACK

Earlier this year a worker was splashed with nitric acid when a gate valve fell off a pipe he was washing down. Clearly such valve failures may have very serious consequences. As part of the investigation by the Department, the valve was submitted for analysis, along with another valve removed from a hydrochloric acid line.

The finding was that both gate valves were degraded by acid attack. The nitric acid valve fell off because the threads were eaten away. Analysis showed that the plastics used in the valve construction were not suitable for the acids handled. Different engineering materials were recommended for components of the gate valves and also for some associated pipework.

All material considered for use in pipework or valving should be checked for suitability, particularly where aggressive solvents or corrosive chemicals are involved. Another factor to be considered is that pipework exposed to the sun can become very hot, which may accelerate any degradation caused by the chemicals carried. For further information contact Mike Rowe on (09) 222 3050.



*Thread damage - Talk to your friendly manufacturer - make sure you've used the right material **Before** you start!*

LEGISLATION UPDATE

MINES SAFETY AND INSPECTION ACT BILL - 1994

The Bill was introduced in Parliament in mid June 1994.

Copies are available from the Government Printer, and a period of some two months will elapse between its introduction and its progress through both Houses of Parliament, commencing in August.

This allows an opportunity for the wider community to examine the Bill before it is

subject to debate during its progress through Parliament.

The second draft of the regulations has been circulated for comment and it is expected that approval for drafting will be requested early in September.

Drafting of the regulations, and the final process of consultation and refinement is expected to be completed before the end of 1994, and subject to assent for enactment of the bill by Parliament by that time, the proclamation of the new Act should be

made no later than January 1995.

The Act does not come into effect until it is proclaimed.

There has been extensive consultation on the new legislation and support for it to date has been widespread.

A guideline to the new Act will be prepared, to be available when the Bill is proclaimed, and specific guidelines on particular elements of the Act and Regulations will also be produced, including the coverage of exploration operations.

THE GENERAL SAFETY STANDING COMMITTEE

In the 1993 September issue of MINESAFE, you were told of the formation of the interim Mines Occupational Health and Safety Advisory Board (MOHSAB) which has been established to advise the Minister for Mines on health and safety issues in the industry.

An update on MOHSAB was provided in the last issue of Minesafe and referred to the formation of two standing committees;

the General Safety Standing Committee (GSSC) and the Occupational Health Standing Committee (OHSC).

The GSSC was formed to investigate and report on safety matters in the mining industry, and has as members representatives from the Department of Minerals and Energy, the Chamber of Mines and Energy and the Trades and Labor Council.

Workmen's inspectors have ex-officio membership and are free to attend any meetings.

The GSSC has formed working parties consisting of Departmental officers and nominees (or representatives) from industry and manufacturers to investigate the following seven matters:

ITEM	STATUS
1. Access to Heavy Equipment	Guideline prepared
2. ROPS and FOPS Requirements for Mine Equipment	Draft Regulations forwarded to MOHSAB.
3. Design and Specification for Engine and Transmission Protection on Diesel Equipment to Minimise Fire Risks	Guidelines are being prepared.
4. Emergency Preparedness	Draft Guideline forwarded to MOHSAB and recommendations suggesting the preparation of enabling Regulations have been made.
5. The Use of Enclosed Cabins on Underground LHD Units	Recommendations on enclosed cabins have been formulated.
6. Safety Management Plans	A Guideline for a Proposed Mine Project is still being prepared.
7. Brake Specifications for Underground Mobile Equipment	Draft Regulations have been forwarded to MOHSAB.

OCCUPATIONAL HEALTH FILE:

IMPROVEMENTS IN SILICA EXPOSURE

The graph below highlights the substantial improvements made by the industry in reducing the average concentration of respirable silica in the workplace air over the period 1977 to 1993. In 1977 formal dust sampling requirements were placed on the mining industry and since that time many thousands of measurements have been made annually.

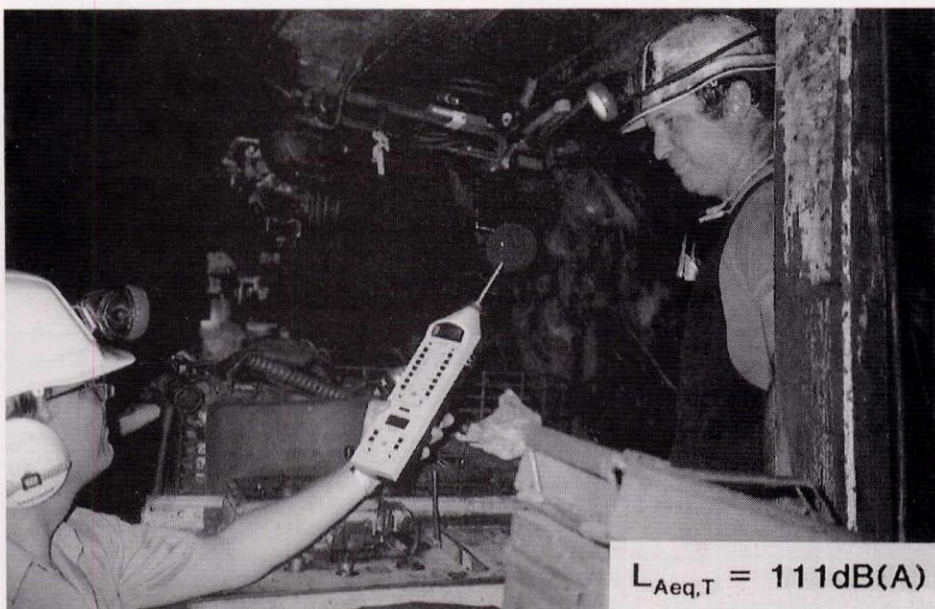
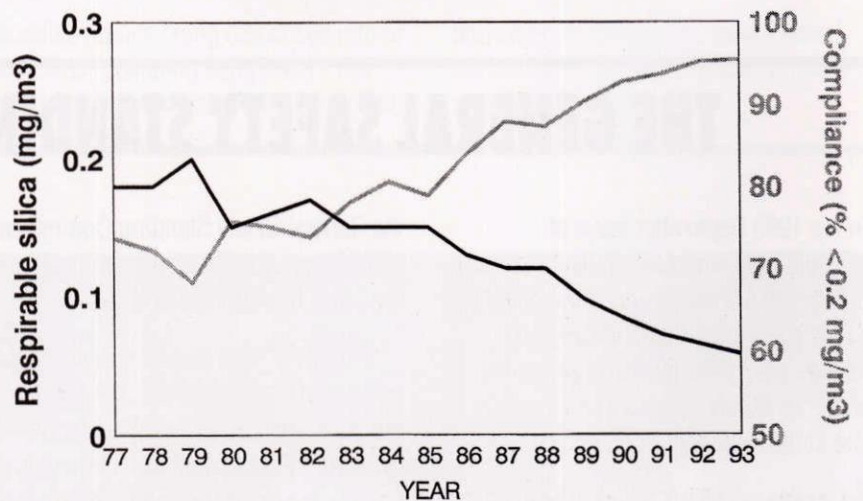
Why are measurements of respirable silica so important? The "respirable" fraction of dust is that dust which penetrates to the lower regions of the lungs where gas exchange takes place. When silica dust accumulates in the lungs, a fibrous tissue develops and grows around the particles and if the amount of silica dust in the lungs becomes excessive, the disease (silicosis) progresses. Silicosis inhibits the body's ability to get the oxygen it requires and in severe cases results in the miner becoming a respiratory cripple.

Compliance with the current exposure standard of 0.2 milligrams of silica per cubic metre of air (0.2 mg/m³), has been shown to effectively eliminate silicosis from the mining industry.

While the downward trend in respirable silica concentrations and the level of compliance (about 95%) is very encouraging, the mining industry cannot afford to be complacent. Certain categories of workers at some mining operations are still at risk of exposure in excess of the standard. The

categories (in order of priority) include; workers involved in sample preparation and assay laboratory work, drilling and blasting operations at surface mines, crushing and screening operations, and production and development miners in underground mines (usually working with hand held equipment). In order to obtain further substantial reduction in the average silica concentration, effort needs to be focussed on improving dust control and suppression for these work categories.

All Metalliferous Workplaces



$L_{Aeq,T} = 111\text{dB(A)}$

Operator comfort - measuring noise exposure

HAND-HELD ROCK DRILLS - DO THEY HAVE TO BE SO NOISY?

Rock drills are very noisy machines. Ask anyone about their experience, after watching an airleg miner in underground workings, their most lasting memory is likely to be the noise they were exposed to. Typically these drills are used in highly reverberant small cross sections of underground workings, producing noise levels close to 120 dB(A) at the operator's ear, with the corresponding noise exposure of 113 dB(A) over a representative working day.

With noise levels of that magnitude, any administration of time exposure limitations is

simply not feasible. For example, an airleg miner will have his daily noise dose accumulated within 29 seconds of drill operation!



Drill testing

Even with a combination of earmuffs and ear plugs it is difficult to attenuate noise levels at the driller's ear to 85 dB(A), engineering noise control solutions are the only remaining options. For some time, the dangers inherent to the drillers through continuous exposure to noise have been recognised and in response to this threat, two manufacturers of hand-held rock drills are now offering a 'silenced' version of their products. Mines Inspectors have recently tested such drills, and their noise emissions lived up to the manufacturers' claims. An overall noise reduction of 8 dB(A) was recorded while drilling into a rock at the supplier's premises. This noise reduction represents a six-fold decrease in noise energy at the driller's ear! Both units incorporate a silencer built into the main drill body and can achieve high drilling rates without the use of an external muffler with the corresponding reduction in performance levels. The new design contributes to a better working environment. The noise level is reduced to an extent that may enable personal protective equipment to be worn to reduce affective noise at the ear to below the action level.

For further information on these tests please contact Jerry Wilczewski (Senior Noise and Vibration Engineer) on (09) 222 3128.

UNDERGROUND VENTILATION OFFICERS

Recent checks by Departmental Inspectors have found that at some underground mining operations ventilation requirements and record keeping by Ventilation Officers, are not being taken seriously and are not up to standard. It is disappointing to find that this poor attitude remains at a few sites, as the majority of Underground Ventilation Officers do a good job and have developed some excellent management systems.

Persons appointed as the Underground Ventilation Officer should realise that the position is a statutory appointment with specific duties, as defined in Regulation 8.5.

Basically these duties require the Ventilation Officer to be responsible for ensuring the standard of ventilation throughout the mine is maintained and complies with the regulatory requirements. However, this does not remove any of the responsibility for ventilation from the Manager, Foreman, Shiftboss or any other individual involved in working underground.

The Underground Ventilation Officer within an organisation is the internal auditor of the mine ventilation system. This is achieved by ensuring regular measurements of air quantity and quality in the underground workings are taken and accurate records kept, including maintaining current ventilation plans.

It is important that the information gathered by the Ventilation Officer is readily available and provided to the appropriate persons, if the overall management of the mine ventilation system is to be effective. Operators at the face should also be involved in understanding and knowing what airflows are available in the workplace.

A useful management system used at some mines is to have a whiteboard at the shiftchange office where the airflow requirements for each diesel machine used underground and the airflow recorded in each working place is displayed. In this way there should be no confusion as to which

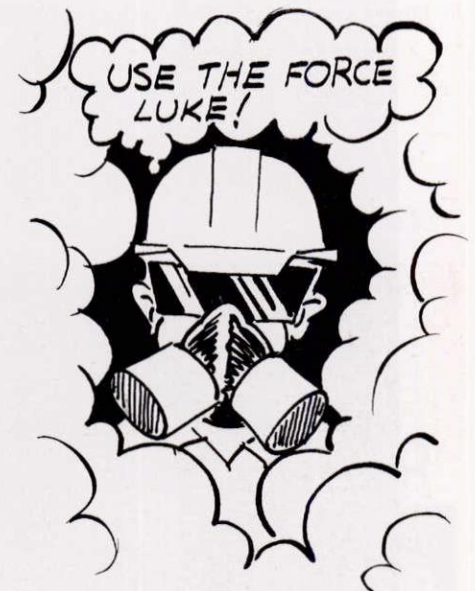
diesel units can be used in any specific area.

Good advice for Ventilation Officers is simply to:

- know and understand your responsibilities
- keep clear concise field notes
- maintain a site ventilation record book with details of your findings
- keep ventilation plans up to date
- notify the manager and any other persons necessary in writing of any ventilation defects you encounter
- record what action was taken to rectify any defects found

LES BERRYMAN

SPECIAL INSPECTOR OF MINES
VENTILATION



"RESCUE AT THE BLAIR"

Taking immediate action, and following emergency procedures to the letter, averted a potential underground fire disaster at the Blair Decline (Kambalda), earlier this year.

The emergency occurred when a truck fire quickly got out of control.

Personnel working below the fire immediately donned self rescuers and went to the refuges. The driver, who was above the fire, alerted the surface and emergency teams which immediately went into action.

The successful outcome was due to the

training, discipline and skills of both the underground miners and the rescue teams. Congratulations are extended to all concerned. A full account will be published in **Rescuenet**.

ROCK BURST

Two underground miners were lucky to escape with their lives following a small rock burst. When brittle rock becomes loaded beyond its ability to resist, it may suddenly fail, releasing rock fragments into the workplace with great violence, resembling an explosion.

The two men were standing on the operating platform of a drill jumbo when approximately 12-15 tonne of rock "exploded" from a meshed and rockbolted hangingwall shoulder section of a backfilled stope. The rock smashed into the front half of the jumbo, taking the protection canopy

with it. Much of the rock, and the canopy, finished on the footwall side. The photograph shows the result.

One of the miners was seriously injured whilst the other escaped with minor injuries.



CLASSIFIED MACHINERY

From the 1st July 1994 the requirements for Certificates of Competency for classified machinery have changed.

The following Worksafe Standards will now apply:

- NOHSC:1006 (1992) National Occupational Health and Safety Certification Standard for users and operators of industrial equipment.
- NOHSC:7019 (1992) National Guidelines for Occupational Health and Safety Competency Standards for the

operation of loadshifting equipment and other types of specified equipment.

The adoption of nationally uniform standards will mean that certification requirements will now be consistent across Australia.

Copies of the worksafe standards are available from the Commonwealth Government Bookshop, Albert Facey House, 469 Wellington Street, Perth. Tel: (09)322 4737.

Holders of the current W.A. Certificates of Competency who wish to convert to the national certificate can apply to the Department of Occupational Health, Safety and Welfare (DOHSWA).

For further information contact DOHSWA on (09) 327 8762.

MINING AND RESOURCE CONTRACTOR'S SAFETY AND TRAINING ASSOCIATION - UPDATE

The Association has methodically developed the topics list seen as appropriate for Mining Industry Inductions.

The list will be circulated to industry for comment prior to entering into discussions with T.A.F.E. on the further development and accreditation of the inductions. It must be stressed that this induction will not replace Skills Training in the included topics, but will allow a common standard to be set and also give site personnel (Managers and Safety Co-ordinators) the ability to audit Induction Standards of people working within the Industry, who are carrying out work on their sites.

Additionally, a further six, one hour Modules were seen to be needed, to allow more specific information to be provided, depending on where the worker was located within the site. These include; drill and blast, workshops, crushing/screening, mobile plant, underground and site specific.

The inductions would have a renewal period of two years, after which time a re-induction would be required, and provided

the site co-ordinator was accredited to deliver them, the modules could be conducted on site and the Workers Induction Log Book updated.

All inductions would require a written assessment which could also be used by site co-ordinators as a spot check of workers coming to site.

The association has asked for constructive criticism of the modules and concept, as this is a real opportunity to make our industry a leader in the management of safety and will enable the auditing of training quality to improve.

This standard setting will also have a cost saving effect, because constant re-induction will allow people to be processed on site quicker and will stop people switching off (mentally) by

continually being forced to sit through many inductions. Please contact the Association for a topic list and breakdown. If you would like to comment, or just keep up-to-date with the program development, please contact:

Greg Harris

- Eltin Ltd (09) 334 8888

Bob Halse

- Monadelphous Group (09) 316 1255

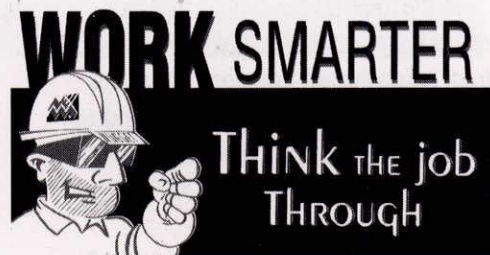
Arthur Baker

- Roche Bros. (09) 458 4177

CONGRATULATIONS POSITRON!

The 61 employees at Positron have something to be proud about - they have accumulated a total of almost 185,000 man hours without a lost time injury.

The achievement earmarks a commitment to safety as being a team effort.



SAFETY INNOVATIONS

SAFETY RESTRAINT MECHANISM

A potentially serious accident occurred recently at a Kambalda mine when a Toyota utility vehicle carrying five passengers, including three in the back seat, reversed rapidly into the wall of a decline. The three passengers in the back were thrown out of their seat, fortunately nobody was seriously injured.

After discussion with the workforce to avoid a recurrence, work was carried out to design a protective device.

After consultation with Charles Cullen (Mine Foreman), who suggested a removable bar across the back seat, Eric Donkin (Boilermaker/Welder) proposed a design which had all the practical and simple features necessary to solve the problem. Soon after, the first protective bar was installed and comments from employees were sought.

The device consists of an adjustable safety restraining bar fitted to the seating area on the back of the ute. The safety bar is attached by hinges to both sides of the passenger canopy and can be raised or lowered as required. The design of the catches and hinges ensures that the safety bar remains securely in place in the raised or lowered position.

In the lowered position the safety restraining bar will prevent passengers from being thrown from the back of the vehicle in the event of a collision, and will also provide a stable fixture for passengers to grasp.

Because of its simplicity and convenience, the safety restraining bar has been welcomed by personnel at the mine site as a safe practical means of passenger restraint, compared to the conventional seat belts.

When a ute accidentally reverses into a wall the bar will prevent persons seated in the back being thrown from the vehicle.

Should you have any queries please contact Eric Donkin on (090) 276534.



All aboard! - Preparing to enter the Haunted House at Sideshow Alley

A world wide patent for the device is seriously being considered by Eric.

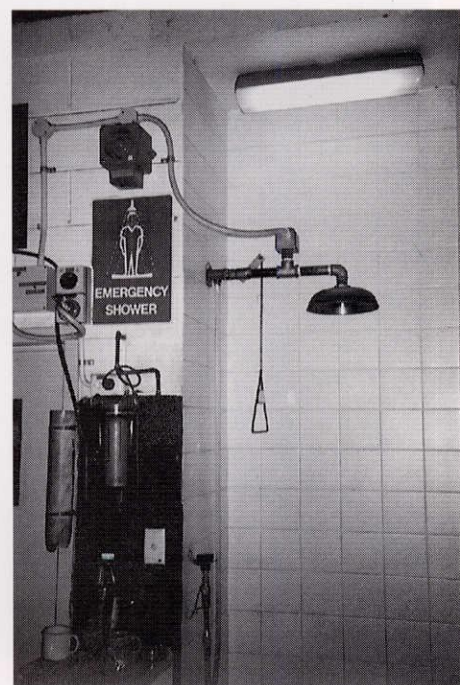
Kris Biegaj
UNDERGROUND MANAGER
OTTER/JUAN - KAMBALDA

A SAFETY ALARM SYSTEM THAT WORKS

Paul Burke (Health and Safety Representative at Australian Gold Refineries), has designed a solenoid actuated alarm system for safety showers. The previous systems failed because of the corrosive atmosphere or other problems. Electrician, Gilbert Morse, has put Paul Burke's design into practice.

When the shower is used, the solenoid operates which actuates the alarm. Fellow workers then attend to provide assistance. Each unit is tested weekly and dummy tests are also carried out.

For further details contact Jim Griffin (District Mining Engineer) on (09) 222 3260.



West Australian mine design

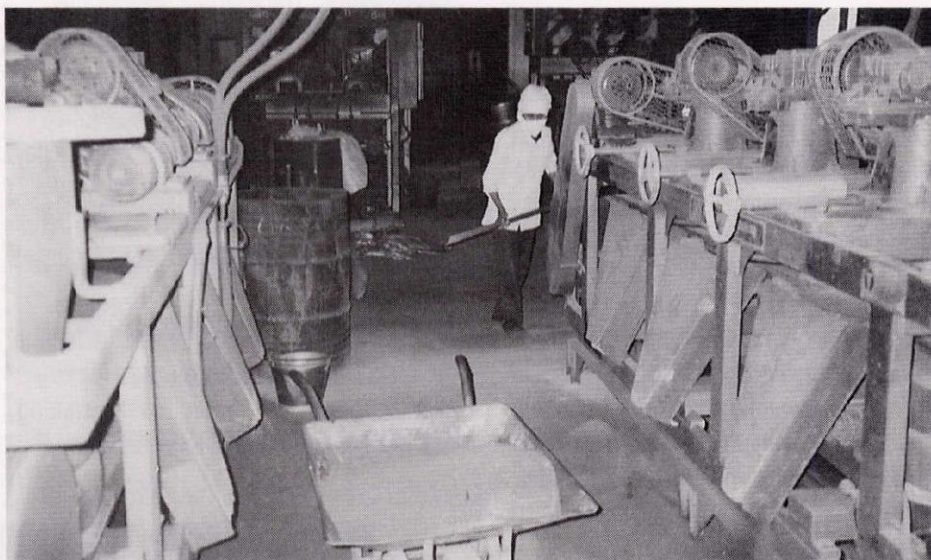
PEOPLE AND PLACES



*If I drink this, do you think I'll fail the test?
Peter Tink and Barry Smith (KCGM) at an alcohol and other drugs seminar - Kalgoorlie*

THE BAMBOO INSPECTOR

Our Principal Scientific Officer and Special Inspector of Mines, Mr Greg Hewson, recently returned to Malaysia to participate in a seminar titled "Radiological Hazards in Tin Mining and Heavy Mineral Processing". Greg's attendance was sponsored by the Federal Institute of Geosciences and Natural Resources (BGR) of the Federal Republic of Germany. The BGR is undertaking a project in Malaysia which had its genesis in recommendations made by Greg during a consultancy mission he undertook for the United Nations in late 1991. Greg's prior and recent involvement is recognition of the considerable improvements which have occurred in radiation safety in our Western Australian mineral sands industry. There is little doubt that the Western Australian industry is viewed as a trend setter in the assessment and control of hazards arising from radioactive minerals. Greg reports that the Malaysian tin mining and mineral sands industry is in serious decline and the mineral sands industry, in particular, is widely accepted as a "sunset" industry with little prospect for the future. It is most



Workers in South East Asian mineral sands plants are in close contact with radioactive minerals and airborne dust throughout their shift.

unlikely, therefore, that any serious attempt will be made to routinely assess and control radiation hazards in the industry, because of the high cost, which is likely to precipitate closure of the industry. Despite the state of the industry, two Malaysian Government officers will be visiting the Department of Minerals and Energy and some Western Australian mineral sands sites during August to receive training in radiation protection.

SAFETY REPRESENTATIVES TRAINING - ALCOA SUCCESS STORY

Over the past six years Alcoa has developed and presented a Safety Representatives Training course, that is an industry leader in both design and presentation. Information about the course is of interest to Minesafe readers.

History

The initial activity concerning the Safety Representative Training Course was taken in September 1988, when the WA Operation Safety and Health Executive requested that a committee be formed to develop the training course. This committee was formed as a response to two separate, but related issues:

- a) The identification of the impending legislation that would ensure all safety representatives received appropriate training.
- b) The practical realisation by Alcoa management that relevant training would assist safety representatives within their role.

In October 1988 the first meeting of the Safety Representative Training Committee was held. The committee consisted of representatives from both the AWU and Craft Unions within Alcoa, along with representatives from Alcoa Management and a number of professional specialists. The representatives of both the unions and Management were drawn from across the mining and refining locations which make up WA Operations, making the committee a multi-site bipartite group.

Over the next nine months, the committee designed the course and then ran a pilot course in June 1989. Alcoa ran 39 of these Safety Representative training courses between June 1989 and June 1993 and 779 employees attended them.

Target Audience

Although the primary audience for the Safety Representative Training Course was obviously the safety representatives themselves, it was identified that there were three "key players" involved in interactions

about safety in the work place. These players were:

- Safety Representative
- Foreman
- Shop Steward

Due to the responsibility that Shop Stewards had concerning their members, these individuals often became intimately involved in issues of safety.

While it is not always possible, it was encouraged that all three individuals, for any crew, attend the training workshop together.

Design

In order to work together participatively in any situation, it was recognised that skills in communication, negotiation, problem solving and conducting meetings would be essential. Consequently the course delivered skills and knowledge in these areas as a precursor to the standard safety topics. Once taught, these skills were practised consistently during the Safety Representative Course.

Duration: The Safety Representative Training Course took place over seven days made up of a three day and four day split. The first three days focussed on interpersonal skills and the last four days focussed on safety.

Attendance: The course was residential for all participants. This allowed for the workshop activities to run into the evening but more importantly, it extended the

opportunity for interactions between the participants, so improving the working relationships between them.

Learning Approach: The course utilised an adult learning style. This involved the participants working through a cycle of experiencing, applying, reflecting and generalising much of the material that was exposed to them. This approach encouraged participants to work together through many of the safety problems that they were currently experiencing and identifying actions to resolve or improve those issues. As a result of this learning approach, the workshops were highly interactive.

Presenters: The course was presented by a range of different personnel from within Alcoa and also external to the organisation. Typically any given course would utilise the following presenters:

- Safety Managers
- Industrial Hygienists
- Occupational Physicians
- Industrial Chaplains
- State Mining Engineer
- Wages Presenters on Legislation and Hazard Identification
- Wages Presenters on Communication, Negotiation and Meeting Skills
- Wages Person as "Course Manager"



Knowledge, Skills and Attitude-getting it together the Alcoa way

The unique element concerning the delivery of the training course was once again the participative approach that was taken. Management and Wages personnel worked closely together to present the course. While representatives from management attempted to be present for the entire duration of the course, it was the Wages presenters who were responsible for the management of the training course over the seven days that it ran.

Participants were also encouraged to invite their families to attend an evening session called Family Night that had been developed around safety in the home.

Another aspect of the course was "Managers Night". Managers from across all the locations who had subordinates attending the course, were encouraged to attend a designated evening and usually a guest speaker on some Occupational Health or Safety topic was scheduled.

In June 1993 COHSPA changed the accreditation criteria for introductory Safety Representative Training Courses. This change allowed for "Enterprise Training Courses" to be eligible for accreditation, providing they met the other accreditation criteria.

As a result a decision was made to design a Safety Representative Training Course that would meet the accreditation criteria and to submit this to COHSPA.

To meet the accreditation criteria, some changes had to be made to the design of the Mark1 Course, and because only elected Health and Safety Reps could attend the Mark2 Course, Alcoa lost its ability to jointly train the Safety Rep and the foreman on the same course.

The first Mark2 Safety Representative Training Course was run in April 1994, with subsequent courses run in May, June and July and further ones planned for September and November.

Alcoa now plans to run separate Safety Training Courses for its' Foremen and "other" employees in the near future as an interim measure, until the time when hopefully joint training and all its ensuing advantages will be part of an accredited Safety Training Course.

SAFETY MAKES SENSE

SO WATCH Yourself mate!



ELECTRICAL MAINTENANCE HAZARDS

CHECKLIST

	YES	NO
■ Are electrical cabinet doors/covers properly fastened?	<input type="checkbox"/>	<input type="checkbox"/>
■ Do some electrical cabinets require holes blanking?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are there any exposed wire ends or connections?	<input type="checkbox"/>	<input type="checkbox"/>
■ Is there any damaged equipment needing repair?	<input type="checkbox"/>	<input type="checkbox"/>
■ Do any cables require protecting from damage?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are all appliance plugs properly attached?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are portable appliances periodically inspected and tested?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are there any 'temporary' cables passing through doors or windows?	<input type="checkbox"/>	<input type="checkbox"/>
■ Is all electrical work done by electricians?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are there procedures to prevent digging into buried cables?	<input type="checkbox"/>	<input type="checkbox"/>
■ Do conveyor lanyards ever get tested?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are welding work-leads ever clamped to building structures?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are access permits used for high voltage work?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are safeguards in place to prevent machinery contacting powerlines?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are apprentices adequately supervised?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are fire extinguishers provided in substations?	<input type="checkbox"/>	<input type="checkbox"/>
■ Do employees know that lead-acid batteries can explode?	<input type="checkbox"/>	<input type="checkbox"/>
■ Is safe access provided to and around equipment?	<input type="checkbox"/>	<input type="checkbox"/>
■ Are non-conducting ladders used for electrical work?	<input type="checkbox"/>	<input type="checkbox"/>
■ Do personnel avoid hosing electrical motors and equipment?	<input type="checkbox"/>	<input type="checkbox"/>

WHERE THERE IS DOUBT - FIND OUT!

WHAT'S ON

SURFACE VENTILATION OFFICER'S COURSE

Late October

Venue:

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

Enquiries can be made to Jim Lawrence on
(09) 222 3095

WA INSTITUTE OF QUARRYING ANNUAL CONFERENCE

"Innovation - Friend or Foe" 25 October
1995

Venue:

Hyatt Regency
Adelaide Terrace
PERTH WA 6000

Please contact Ernie Armistead (Secretary)
on (097) 957 800 or Fax (097) 959 436.

LUDEP WORKSHOP

13 October 1994

Venue:

Department of Minerals and Energy
Mining Operations Division
6th Floor, 100 Plain Street
EAST PERTH WA 6004

Please contact Dr Keith Terry on
(09) 222 3377 or Fax (09) 325 2280

CLEAN AIR '94

12th INTERNATIONAL CONFERENCE

23-28 October 1994

Venue:

Burswood Convention Centre
PERTH WA 6000

Tel (09) 364 8311 Fax (09) 316 1453

CORRECTION

WORK PRACTICES SERIES PAMPHLET No 7 - CONFINED SPACES.

It has been drawn to our attention that in the CONFINED SPACES Pamphlet the reference to Australian Standard 2855 - 1986 is incorrect.

It should read 2865 - 1986.

Editor

MINE SAFETY INDUCTION VIDEO

MINESAFE is pleased to advise that a crushing and screening plant induction video is available from the WA Branch of the Institute of Quarrying.

This 16 minute video is WA made and totally funded by the Institute's education fund.

The video covers a number of important topics; duty of care, general hazards, back injuries, vehicle safety, conveyor hazards and danger tags, all of which must be known and understood by plant workers, and is suitable for all sections of the industry where crushing and screening is required.

Monies recovered from the sale of the video will be put back into the education fund and used for other educational projects associated with the quarrying industry.

Companies are advised that arrangements may be made through Elephant Productions, at 205 Park Street, Subiaco for their own names, logos, introductions etc. to be added to the video.

Copies of the standard version of the

video may be obtained by forwarding a cheque made payable to the Institute of Quarrying WA at \$100.00 per video to:

The Secretary
Institute of Quarrying
c/- Pioneer Concrete
PO Box 1108
BUNBURY WA 6230

or

The Librarian
Mining Operations Division
6th Floor, Mineral House
100 Plain Street
EAST PERTH WA 6004

Anyone wishing to view the video may do so at any one of the regional inspectorate offices at Kalgoorlie, Perth, Collie and Karratha.

The video has Nugget's full support.
Think safe and Stay safe

The Mining Operations Division has other videos covering a wide range of topics available for loan. For further information contact Kim Williams (Acting Librarian) on (09) 222 3532.

NOTICE TO ALL INTENDING APPLICANTS FOR CERTIFICATES OF COMPETENCY

FIRST CLASS, QUARRY MANAGERS,

RESTRICTED QUARRY MANAGERS,

UNDERGROUND SUPERVISORS

OPEN CUT MINE MANAGERS (COAL) AND

DEPUTY'S (OPEN CUT COAL)

Plans are well in hand for new Safety Legislation, to be known as the Mines Safety and Inspection Act, to replace the existing Mines Regulation Act 1946 and the Coal Mines Regulation Act 1946.

It is anticipated that this new Act will come into force early in 1995. Consequently, it has been decided to cancel the April 1995 examinations for Certificates of Competency for managers and supervisors. It is expected that the first examinations under the Mines Safety and Inspection Act

will be held in October or November 1995.

As usual, examinations under the existing Mines Regulation Act 1946 and Regulations and Coal Mines Regulation Act 1946 and Regulations will be held in September and October 1994 respectively.

All certificates issued under the existing Acts will be recognised as current and valid by the Mines Safety and Inspection Act, and transitional provisions are included in the MSIAT Bill for coal mining certificates.

STAFF CHANGES

Good luck and best wishes to **Guy Simpson** and **Nick Dunlop**, both of whom resigned their positions in the Mining Operations Division.

The MINE SAFE committee welcomes **Chris Stuble** and **Mark Butson** on board.

The Mining Operations Division would like to welcome two new staff members **Linda Cullen** and **Ngaire Kempton**. Linda has come from records and will be taking over the position of Data Entry Operator for AXTAT AND CONTAM. Ngaire has joined us from the Chemistry Centre and will be taking over the position of Finance and Purchasing officer as Tania Narducci has taken maternity leave.



*Ngaire Kempton
(pronounced NA-REE)*



Linda Cullen

NEW POSTERS

- **Drive to Conditions**
- Sponsored by Eltins
- **Line of Vision** - Sponsored by Roche.
- **Light Vehicle Maintenance**
- sponsored by Henry and Walker.

Publication

- Torlach, J.M. Mining Safety - Yesterday - Today - Tomorrow (1994) Department of Minerals and Energy (WA).

CONGRATULATIONS TO ALL THOSE WHO HAVE OBTAINED CERTIFICATES OF COMPETENCY SINCE FEBRUARY 1994

AUTHORISED MINE SURVEYOR'S

Bebbington, Colin Brian
Leipold, Stephen Eric
Gilbertson, Robert John
Scales, Mark William
Stephens, Lee Quentin
Kerr, Michael John Patrick
Don, Robert Nicolas
Bartle, Chuck Rothan
Arnold, Geoffrey Peter
McCormack, Brendon Ashley
Aldrick, Geoffrey George
O'Connor, Gerard

FIRST CLASS MINE MANAGER'S

Rodger, Michael Joseph
Mitchell, Barry Gordon
Torlach, James Milne
Jones, David Odwyn
Adams, Carl
Douglas, Bradley Donald
Stocks, Andrew James
Doherty, Daniel Anthony
Malaxos, Kevin John
Grindlay, Glen Dunbar
Lehany, Timothy James
Davidson, Geoffrey Edward
Suokas, Arto Juhani
Horton, Ian John

UNDERGROUND SUPERVISOR'S

Roderick, Mark Arthur
Woolford, Christopher Charles
Crooks, Peter Shane
Johnson, Graeme
Hammond, Kenneth Bruce
Pacey, Bruce
Welburn, Terrence Albert
Simard, Richard Norman Robert Lee
O'Boyle, Patrick Charles
Gianni, Michael John
Haywood, Grant William
Rontaunay, Grant Paul
Twiname, Kent Berwick

Janik, Jan (Decline Haulage)
Breau, Roger Ken

QUARRY MANAGER'S

Denison, Joseph Lionel
Sandy, David Alan
Parker, Terrance William Hamilton
Kelly, Patrick Gerard
Thompson, John David
Stevenson, Neil Robert
Knuckey, Andrew Stephen Robert
Mahon, Jeffrey
Bowater, Mark Douglas
Meldon, Jon Russell
Heu, Alan John
Smith, Warren Peter Alfred

RESTRICTED QUARRY MANAGER'S

* Neale, Ian James
Hill-Peters, Michael John
Palmer, Raymond John
Minge, Philip Andrew
Perawiti, Timothy
Kelty, Brian Thomas
*Radonjic, Andrija
*Algyire, John
*Barnett, Adrian James
*Benzie, Donald James
*McGillivray, William Duane
*Shaw, Phillip David
*Hale, Richard John
*Briston, William John
*Oberg, Michael Jeremy
Crowley, Joseph Patrick
Croft, Ross Frederick
Scouller, Ian Alexander
Hayes, David John
Winter, Adam Gordon
Mason, Kenneth George
Clape, Nicole Barbara
Reed, Grant Leigh
Hibben, Brian Kenneth
Bailey, Allen Michael
Dunbar, Christopher Thomas

* Restricted Certificates

INCIDENT ALERT

TRUCK - LIGHT VEHICLE COLLISION

INCIDENT

A fitter in a Toyota service utility entered a mining area and parked his vehicle between a loader and two dump trucks, one of which was facing away from the loader. The fitter had been directed to the site to attend to an oil leak on the loader.

The fitter did not acknowledge a call to wait until the two trucks were loaded but simply reversed his ute to a position at the side of the road but in the path of the reversed truck.

Upon instruction from the loader driver the truck driver reversed his vehicle towards the loader but did not see the light vehicle in his path. The loader operator also had not seen the light vehicle until just before the collision occurred. The collision resulted in major damage to the light vehicle but, fortunately, no injury to the fitter.

CAUSE

There was a lack of communication between the driver of the light vehicle and

the operators of the trucks and loader. The truck driver was parked in the reverse position 60 m from the loader and this did not give him full vision of the area between his truck and the loader.

PREVENTATIVE ACTION

This incident has demonstrated the importance of effective communication


between operators and drivers of all vehicles in a production environment, particularly where light vehicles are involved.


Each truck waiting to be loaded must face the loader so that full vision of the area between the loader and truck is available to the truck driver.





Love - 15. It can never be deuce.

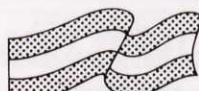
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