



# MINESAFE

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



## *When will it stop?*

## **MINESAFE IS PUBLISHED BY**

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## **MINES SAFETY AND INSPECTION ACT 1994**

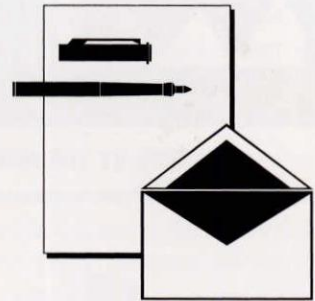
The Act has now been assented to, but can not be proclaimed until the Regulations have been finalised. The Act does not take effect until it has been proclaimed.

The Regulations are being drafted as this issue of MINESAFE is released, and the Draft Regulations will be circulated to industry for comment early in 1995.

Following amendments resulting from input during this further consultation process, the Regulations can be finalised and the Act brought into effect by proclamation.

The Government has determined that amendments to the MSI Act, which are consequential to changes in the Occupational Health Safety and Welfare Act, will be made before the Mines Safety and Inspection Act is proclaimed.

Work on preparation of a guideline to the Act and Regulations is continuing.



## **AND WHAT'S YOUR OPINION?**

The back page of the September 1994 MINESAFE had an article that has created considerable debate. In particular the final sentence which stated:

"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."

This statement is at variance with what has been common practice for many years; that is, for the first truck in the empty queue to manoeuvre into a position ready for reversing into the loading position.

The original article was a little brief in dealing with preventative action, and related to a particular job configuration. The main point was that there should be a clearly defined and enforced system of work in place that covers the rights of way, and maintenance of communication between the operators of mobile equipment and other persons present in the workplace.

Examples of such rules would be the absolute right of way for loaded trucks, separate haul routes for loaded and unloaded trucks and rules governing the parking of light vehicles. Communications would include a clear set of signals governing the movement of equipment in and around the immediate loading and unloading area.

A positive outcome of the lively debate that the article produced, was the fact that MINESAFE is indeed being read and that its content stimulated discussion on these important issues.

**S L J Ridge**  
District Mining Engineer

## **EMERGENCY EQUIPMENT . . .**

### **IS YOURS FULLY MAINTAINED AND READY FOR USE?**

The Work Cover Authority issued an alert in August 1994 after an ambulance officer received serious burns when an emergency resuscitation unit burst into flames. This incident was primarily caused by a lack of routine maintenance of the equipment.

**MAINTAIN ALL EMERGENCY EQUIPMENT.** Ensure it is ready for immediate use, and that staff are properly trained to operate the equipment.



*Recycle..revegetate..a Pannawonica solution*

# EDITORIAL

## REPORTING OF ACCIDENTS AT MINES

The mining safety legislation in WA has long contained an obligation on management to report to the Inspectorate accidents involving injury to persons, and also other specified accidents which have a high potential for serious consequences, even where no injury to persons in fact resulted from any particular event.

The purpose of these requirements is two-fold.

(1) To enable the Inspectorate to carry out an investigation in cases where it determines that the nature and circumstances warrant investigation.

(2) To enable the compilation of accurate records of accident experience across the industry, and the analysis of those records.

The analysis of this data provides information on causal factors and trends in injury causation and severity, aggregated across the industry.

This information is of value to both the industry and its employees, and to the Inspectorate, in hazard identification, risk analysis, and accident prevention.

It is therefore of the utmost importance that accidents resulting in injury to persons are accurately reported.

The legislation requires that an accident involving an injury causing one full day or more of lost work time must be reported, at the end of each calendar month.

Where any accident is considered to be serious, (likely to cause an absence from work of two weeks or more), it must be reported immediately.

The determining factor for absence from work is whether the person can resume their normal duties. That is the task or tasks that the person is employed to perform.

The accident data collected allows incidence rate and frequency of lost time injuries to be recorded and analysed, as well as duration rates (from length of time off) and finally, days lost per million man hours worked.

There are factors in industry operating practice which have potential to distort data gathered in the future, if account is not taken of them.

An obvious factor relates to long distance commute operations. An injury to a person from an accident at the end of a work cycle may result in no lost time injury being recorded, as the person recuperates during the off-work cycle, or in a reduction of duration of work time lost, for the same reason.

Some accounting can be made for these provided the accident is notified.

A less readily determined factor is the increasing tendency to bring people back to work earlier than would otherwise be the case on light duties or alternative work, or to provide alternative work on the day following the injury.

The effects of these actions is respectively to reduce the duration recorded for that injury, or to record no lost time injury.

To the extent that these actions are part of a genuine process of rehabilitation for injured persons, the intent and the effect on the well being of injured employees is highly commendable.

However the process should not be used only with the intent of improving the apparent injury statistics for the operation, and concealing the occurrence of injuries.

Every employee should ensure that the incidence of any injury is properly recorded so that irrespective of any record of accident data, eligibility for future workers' compensation is not lost, due to failure to report and record.

It is inevitable that the factors referred to above will have some effect on comparability of future data with that of the past, but with much reduced incidence rates of injury now evident, the problem of comparability is less critical.

The Inspectorate will continue to seek diligently to determine the real extent of injuries, as the consequences of accidents are important in allocating time to investigate, and to determine accident prevention priorities.

The practicability of collecting and analysing data on injuries from accidents, in addition to that related to lost work time, is being examined. This field includes medical treatments and referrals.

Keep the objective in mind, accident and injury prevention, with a genuine zero incidence rate as the ultimate goal.



*Catherine Stedman.*

## FAREWELL CATHERINE STEDMAN

(It's really au revoir)

After seven years, Mining Operations are to lose Catherine Stedman, and for all staff of the Division and many others in the Department, the loss will be deeply felt.

Catherine has made a major contribution to the success of the Division's program and activities, and to the staff well-being and morale, individually and collectively.

Although Catherine has perhaps become best known for her outstanding Editorship of MINESAFE, which has grown from a humble beginning in 1989 to the flagship of the Division, she has also been involved in a very wide spectrum of activities, not all of which may be known to persons in the industry.

Catherine's is a familiar face on most of the minesites in the State.

We will not lose contact completely as for the foreseeable future Catherine will continue to provide a service to MINESAFE, and she intends to provide an independent consultancy to the industry.

Thank you Catherine and all the best to you and Dick in your new venture.

From the Mining Operations Division Staff.

**J.M. Torlaci**  
**State Mining Engineer**

# MT NEWMAN . . .

## WORKING TOWARDS AN ACCIDENT FREE WORK PLACE



BHP Iron Ore Safety program team members (from left) Don MacIver, Lou Kennedy, Gordon Jefferies and Brad Fish, discuss the injury potential of a 240-tonne haul truck's steps, at Mt Whaleback mine.

## MAN CAGES .... DO YOU KNOW THE RULES.

Occasionally there is a requirement for work to be carried out by people standing in a man-cage that is suspended from the hook of a crane.

This situation is governed by Regulation 6.12 of the Mines Regulation Act Regulations 1976.

Regulation 6.12 incorporates certain regulations of the Occupational Health, Safety and Welfare Regulations 1988 into the Mines Regulation Act Regulations 1976.

One of the incorporated regulations is Regulation 513 "Riding in man-cage".

For work on a mine site to be carried out from a man-cage, you must comply with Regulation 513 of the OHSW Regulations.

Sections A to E of Regulation 513 set out the general conditions of use for a man-cage.

Section F of Regulation 513 requires that the employer provide the crane operator and the person who is to ride in the man cage with written instructions and conditions of use. These instructions and conditions are to be signed by the employer and countersigned by a Health and Safety Representative.

Mine site Health and Safety Representative's should make themselves aware of the requirements of Regulation 513 of the Occupational Health, Safety and Welfare Regulations 1988.

A reduction in mine site hazards and achieving a safer work place is the aim of a program at BHP Iron Ore's Mt Whaleback mine.

Launched in September, the initial program brings all levels of the workforce together in identifying and evaluating hazards, then finding possible solutions.

Acting General Manager Mining Brian Steane said the program is in keeping with BHP Mineral's global goal, to be the safest mining company in the world.

"We have a comparatively good safety record at Newman but any improvement to potential risk identification is to our benefit".

"A hazard has been classified as any situation or item that could cause injury or equipment damage."

"We have divided the mine site into four areas, with a team of personnel allocated to each".

"They are responsible for communicating with employees throughout the program, pursuing ideas and formulating effective, workable solutions," said Brian.

## HYDRAULIC TIMING VALVES

A Perth-based pump and irrigation supplier, has adapted the popular 'Rain Bird' range of solenoid valves to enable them to be used as hydrometers - hydraulic metering valves.

The majority of hydrometers on the market are volumetric i.e. the volume of water to be dispersed is dialled up on the valve, which shuts off the flow once the desired volume has passed through the valve.

The Hydraulic timing valve incorporates a mechanical timer in lieu of a volume scale so that the operator can dial up a time for which the valve is to be open, and the valve will then shut off when the elapsed time has passed.

A successful application for this type of valve has been in mine dust suppression systems.

For further information contact Mike Higgs on (09) 362 1288.

# DIESEL AND OIL STORAGE

Not all mine sites use cyanide or large quantities of corrosives, but virtually every mine site has bulk diesel or oil storage. The following guidelines answer some of the usual queries from mine sites concerning compliance with the Dangerous Goods Regulations (DGR), which in turn refer to Australian Standard 1940-1993: "The Storage and Handling of Flammable and Combustible Liquids".

## LABELLING/PLACARDING

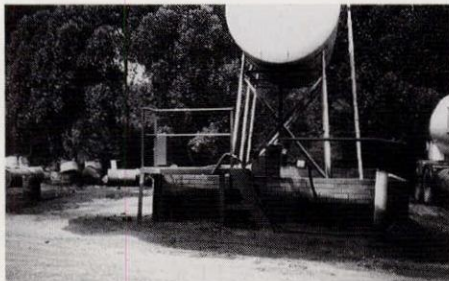
Diesel and oils are not flammable liquids, so the tanks and storage area DO NOT require placarding. Diesel tanks only require a "Diesel" label and numbering if there is more than one tank in the area. Oil tanks should be identified with the product name.

## BUNDING TANKS

Most diesel and oil tanks on mine sites require bunding. Such storage areas often show poor housekeeping, with evidence of fuel spillage. Even small tanks may require bunding if there are safety or environmental factors to be considered. Some of the factors which may determine whether the storage complies with the Regulations are:

- The ability of the bund to contain the full content of the dangerous goods stored in the tank, or tanks.
- The slope of the floor.
- The clearance between the bund wall and the tank(s).
- The ability of the bund to contain spillage in case of leaks.
- The separate distances from protected works.
- The maintenance of the bunds.
- The ready access to the bunds.

All new storage systems must comply fully with the bunding requirements of the DGR (Dangerous Goods Regulations).



A large diesel spill requiring major clean-up.

Special requirements apply to diesel storage and refuelling bays underground, and it is intended that guidelines will be published early in 1995.

## BUNDING OF DRUM STORAGE

Drums are not permitted to be stored in the same bund as tanks. Diesel and oil drums routinely require bunding if the volume stored exceeds 5000L (i.e. 25 drums).

Where individual intermediate bulk containers (IBC's) are banded around a treatment plant, a practical bund design has been approved to allow easy access for forklifts.

## FUEL DISPENSING

Fuel dispensers shall be protected from impact.

Delivery hoses are to be supported.

The dispensing area requires a "STOP ENGINE - NO SMOKING" sign.

Vehicles should not be unattended during refuelling.

## FIRE PROTECTION

The level of fire protection depends on the size of the installation. However diesel storage of less than 2000m<sup>3</sup> without

flammable liquids (i.e. petrol) will not require more than two 2A 60B(E) powder extinguishers, or a hose reel with a foam producing branch pipe.

## FURTHER INFORMATION

To obtain a copy of the information paper on the basic requirements of the Dangerous Goods Regulations, or for further information, contact

**Mike Rowe** (09) 222 3050

or **Trevor Robinson** (09) 222 3543.



Poor storage of oil drums.

# THE SITE OF A SERIOUS OR FATAL ACCIDENT

In a recent court case a mine official was severely criticised and found guilty of breaches of Sections 34 (1) and 55 of the Mines Regulations Act, 1946, and received a substantial fine.

Section 34 (1) is quite clear:-

"The place in which any serious accident has occurred shall not be interfered with, except with a view to saving life or preventing further injury, without the permission of the inspector or, where the accident has proved fatal, until the coroner has granted permission."

Where the place of a serious accident has been disturbed, vital evidence may be

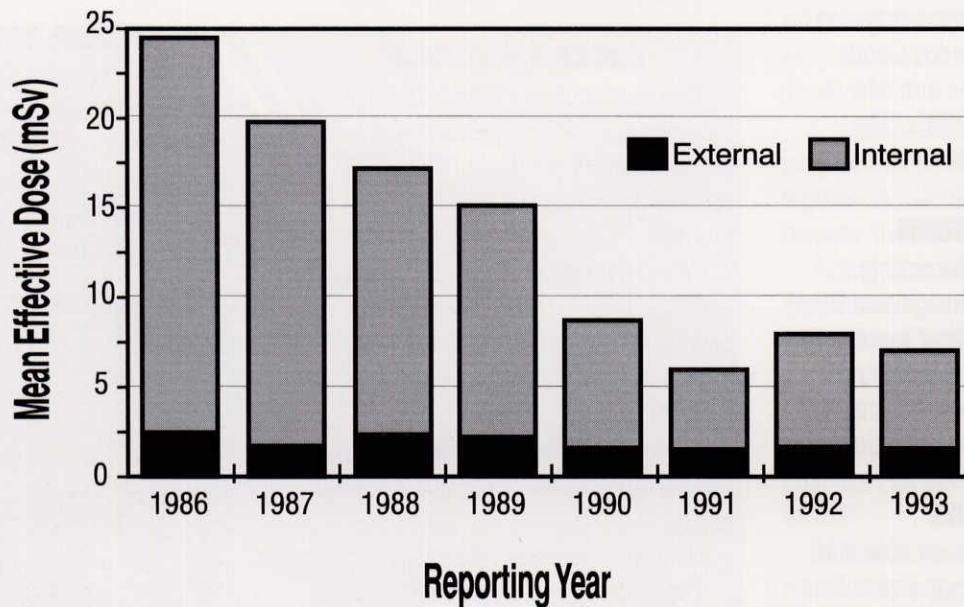
lost that would otherwise have been useful in determining the cause of the accident.

Where a serious accident has occurred, the injured person should be removed in such a way that the place is disturbed only so far as is necessary to prevent further injury to the injured person or injury to the persons carrying out the rescue operation. The place should then be barricaded until such time as the inspector gives permission for the place to be re-opened.

Where a fatal accident has occurred the inspector may only release the place after the coroner has authorised him to do so.

# OCCUPATIONAL HEALTH FILE:

## RADIATION SAFETY IMPROVEMENTS IN THE MINERAL SANDS INDUSTRY DESIGNATED EMPLOYEE MEAN DOSE



## ULTRAVIOLET RADIATION AND SKIN CANCER

### DID YOU KNOW:

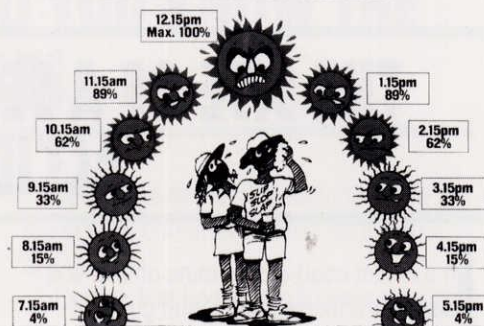
- Australia has the highest rate of skin cancer in the world!
  - 2 out of 3 Australians can expect to develop a skin cancer during their lifetime!
  - Within Australia, Western Australia has the second highest rate of skin cancer. Only Queensland has a higher rate of skin cancer.
  - Over 550 Western Australians develop melanoma each year!
- There are three types of skin cancer -
- Basal cell carcinoma (BCC)
  - Squamous cell carcinoma (SCC), and
  - Melanoma.

Last year there were 140,000 cases of BCC. BCC's occur mostly on the head, neck or upper trunk. They usually start as small round or flattened lumps which are red, pale or pearly in colour and may have blood vessels on the surface.

Squamous cell carcinomas are usually found on the head, neck, hands and forearms. SCC's often look like a red scaly spot, (usually thickened) and may bleed easily or ulcerate. In Australia a sore which

doesn't heal within 3 weeks should be investigated.

### PERCENTAGE OF ULTRA VIOLET RADIATION BY THE HOUR OF THE DAY



Source: Cancer Foundation of WA

Melanoma can occur anywhere on the body, not only in areas which are exposed to a lot of sun. The first sign of a melanoma is that it looks like an unusual freckle. A good check method is the three 'P's:

- uneven pigmentation;
- uneven perimeter; and
- uneven profile.

If you have a freckle or mole like this it should be investigated by your doctor.

To reduce the risk of cancer, it is important to remember the following points.

- Avoid exposure to the sun in the middle of the day (10am to 2pm).
  - Wear protective clothing e.g. a wide brimmed hat, sunglasses, a long sleeved shirt and long trousers.
  - Use a maximum protection sunscreen (SPF 15+) on exposed skin. REMEMBER! Sunscreen has a limited shelf life.
  - Use a 'broad spectrum' sunscreen as it will filter out both UVA and UVB.
  - Sunscreens should be applied to clean, dry skin 15 minutes before going out into the sun and 30 minutes before getting into the water.
  - Sunscreens can be easily washed, wiped or sweated off. It is therefore important to re-apply sunscreen every 2 hours.
  - Sunscreens should be stored properly, out of direct sunlight and at temperatures of less than 30° C.
  - Stay in the shade wherever possible.
- For further information contact the Cancer Foundation of Western Australia on (09) 381 4515

# BUILD UP AND WIND DOWN CHRISTMAS / NEW YEAR PERIOD

1. Statistically accident / incidents start to increase about mid-end November, peak over the Christmas / New Year week and taper off to the end of January. Last year, the increase started earlier and included six fatalities between November 1993 and February 1994. The total for the year was seven fatalities.

Consequently, we advise EVERYBODY to exercise particular care and vigilance over this holiday period.

2. From our experience we feel that this increase can be influenced by one or more of the following circumstances:

## LEAVE PREPARATION

- You are going on holiday,
- You are thinking of the list of items to be packed, instead of concentrating fully on your job.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

## THE BIG PAY

- You are trying to earn extra money before or after the Christmas / New Year expenses.
- You take a 'short cut' on your job.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

## CHRISTMAS / NEW YEAR FESTIVITIES

- You have been to one of the many parties around the festive season.
- You have overdone the 'cheer' intake and underdone the sleep.
- You are suffering some degree of dehydration from the alcohol, and your mental and physical reflexes are not quite one hundred percent.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

## RELIEF WORK

- Some of your workmates are on leave and you are asked to undertake some of their duties.
- Because you have done this job some time in the past, you don't 'fully' acquaint yourself on the present routine.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

## WEATHER

- It is building up to the hottest part of the year.
- You don't wear the proper protective gear or keep up your fluid intake.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

## RETURN FROM LEAVE

- You are relaxed and not used to work routine.
- You don't take the time to settle back into the daily tasks.

\*\*\*\*\* ACCIDENT \*\*\*\*\*

Please:

**THINK - CONCENTRATE - BE ALERT - TAKE CARE**

"SEASONS GREETINGS"

**Department of Minerals and Energy  
Kalgoorlie Inspectorate.**

## SAFE PRACTICE IN UNDERGROUND BLASTING

There is a history of deaths and serious injury in underground mining in Western Australia, involving explosives and blasting practice.

In the past decade or two, the incidence rate of mishaps has decreased.

In part this is due to improved explosives, improved initiation systems, and the phasing out to a great extent, of nitro-glycerine based explosives.

Most of the incidents over the past 20 years have been due to bad practice.

A problem with the greatest potential for catastrophic consequences is lack of adequate procedures for control of blasting, and lack of adequate training in and enforcement of those procedures.

The Regulations for the MSI Act underline the responsibility of the Manager and mine operating personnel to implement and enforce safe systems for blasting.

There have been several high potential incidents,

**ONE WARNING SHOULD BE MORE THAN ENOUGH**



*"But I thought the other driver would give way"...there were no radios in these vehicles.  
Assumptions can cost lives.*

# YARRIE - NEW DIRECTIONS

## Catherine Stedman reports:

The Goldsworthy Mine was the pioneer, Shay Gap the space age town, and now there is new age Yarrie - BHPIO (Goldsworthy) Pty Ltd's latest mine in the Western Pilbara.

The Yarrie mine is already a major player as a producer because of the high grades, and over the next seven years it will produce approximately 40 million tonnes of ore and move 100 million tonnes of waste, using an O&K RH200, a Caterpillar 994 and a fleet of Caterpillar 785 trucks. Nimmingarra, 40 kilometres away is a separate orebody run as part of the Yarrie Operation.



*"I'm only required to give my name, rank, and serial number." Rob Harrington*

resulted in over 540 ideas being generated as suggestions for improving performance and enhancing operational capability. At the initial "ideas draw", Rob Harrington at the workshop, earned himself an extra week of R&R with pay for participating in the program.

Another noteworthy feature of Yarrie is the village itself. Prior to finalising the contract BHPIO (Goldsworthy) decided to construct a village suitable for the needs of the 90's - one that would have an equal standard of rooms for everyone on site. A year ago, after commencement by Roche Bros, and despite the inconvenience of construction, the Yarrie village already had an air about it that said this village would be different - built up to a standard, not down to a price - and that promise has been realised. Roche Bros operate a village with larger than usual living units all of which have an ensuite. No 50 metre sprint to an ablution block here! Verandahs run the length of the units providing a pleasant place to sit and enjoy not only the scenery, but also the landscaping which is a feature of the village. Sporting facilities are extensive, and more importantly, they are used frequently; particularly the well equipped



*Another shift over. Amanda Williams relaxes "at home" in the Yarrie Village*

The system works well. Co-operation between the two companies has resulted in Roche Bros using a performance improvement program, successfully used at other BHP sites. One of the cornerstones of the program is employee involvement, input, and feedback which has

Two features of the mine make it different. Whilst BHP Iron Ore (Goldsworthy) Pty Ltd are the owners and managers of the mine at Yarrie, the contractor, Roche Bros Pty Ltd are the site managers, responsible for not only the mining but also for operating and maintaining the crusher and train loading. Roche Bros also manage the village, which includes responsibility for the water supply and airstrip used each Wednesday, when commuters boomerang to and from Perth.

BHP Iron Ore (Goldsworthy) Pty Ltd and Roche Bros share the main administration office complex on site with BHPIO (Goldsworthy) providing the mine plans, quality control, geological support and engineering backup for the Roche team, as well as coordinating the port and rail operations with other BHP sites.



*New employee? What do you expect with so many Geelong supporters about?*



gym and squash courts. At this time of the year, the kangaroos may be getting more use out of the brilliant green grass on the football oval, which is a pleasant scene for residents, if not for footie coaches!

Safety systems at the Yarrie mine are co-ordinated by Peter Shere who is also the site nurse. Mike Wheeler the Roche Bros State Training Co-ordinator provides backup for the site, and Divisional Safety Manager, Arthur Baker is a resource for the network of Roche sites in the State.

The Yarrie Health and Safety Committee meets once a month. The newly elected chairperson, Rick Farrell heads a group of people who take a keen interest in what is happening both at work and in the village. The committee is currently



*Safe healthy and sound proof "Wheelbarrow" covers all the bases before the blast.*



*Liz Coleman and Brad Reynolds check out the form at Nimingarra.*



*Smoko for the drill and blast crew. Terry Hicks Raoul Jackson, Jamie McKenna and Geoff Stocker wonder why the morning tea is taking so long.*



*David (cookie) Cook and Robert Dhu get in practice for the Pilbara access aerobics*



reviewing a draft company alcohol and other drug policy - a task they share with many committees at other mines around the State.

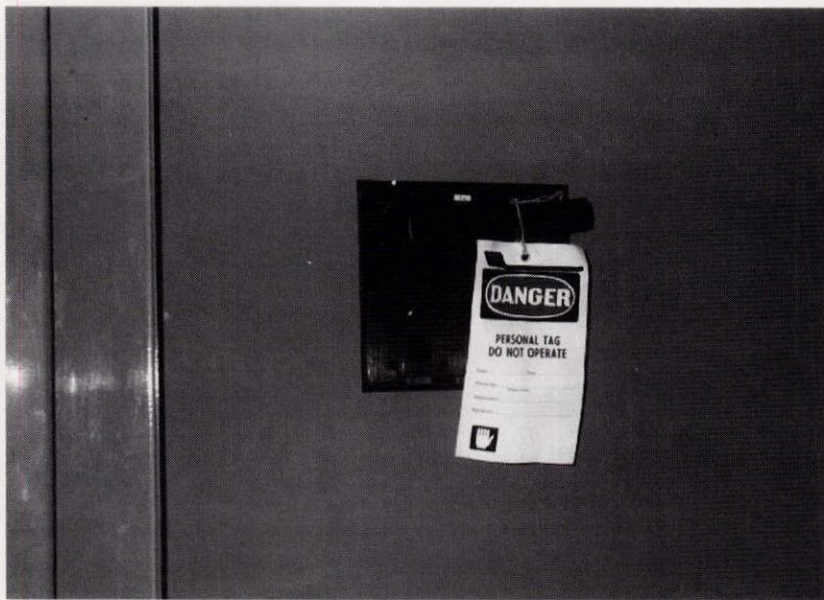
Yarrie has two mine rescue teams in training, both of which are keen to see a Pilbara based competition start so they can test their skills in the company of other teams spread across the Pilbara.

The 170 residents at Yarrie are bracing themselves for the Pilbara summer - their village will make that easier. At work, the challenges of project management are adding a new dimension to the organisation of work for both Roche Bros and their employees.

On site and in camp, Yarrie is breaking new ground. The trail blazers of 1994 are setting precedents that should be of interest to the whole industry.

# TAGGING PROCEDURES

## WHAT DO YOU KNOW?



*Who can remove this danger tag?*

Do you know who can remove a danger tag?

Do you know where to place your danger tag when working on equipment?

Do you know the difference between a danger tag and an out of service tag?

Do you know what happens to your danger tag when you go home?

These may seem like unnecessary questions, but they are questions that should be asked in every workplace. You may know the answers, but are you sure everyone you work with also knows?

Why not ask the questions at your next safety meeting? An effective system that is understood by everyone, is the best way to ensure your safety and the safety of others when working on equipment.

It is intended that a guideline for tagging procedures and systems will be produced early in 1995

## FAST REFUELLING SYSTEMS

The 'Fast Fuel' system, based on the concept of using a sealed vehicle tank allowing a small amount of back pressure to accumulate and automatically shut off the nozzle, is being used at a number of mines in the State. The system enables refuelling to be carried out without having to climb up onto a vehicle, eliminates foaming that can occur during the traditional 'splash-fill' method, and permits refuelling rates of approximately 300 l/min.

'Fast Fuel' systems should always be used, maintained and installed in strict accordance with the manufacturers recommendations:

- Socket and nipple assemblies must be kept clean.

- Assemblies should be examined for mechanical defects or damage before connection; and
- Periodic inspections must be made to detect deterioration of seals and hoses, and wear or damage to components such as the nipple hoses and socket or latch mechanism.

The vent in the vehicle's fuel tank should be installed in such a way that any fuel escaping from it will be prevented from contacting hot engine parts, or endangering persons who may be near the refuelling operations.

For further information on the Fast Fuel System contact Chris Stubbley on (09) 222 3531.

### NUGGET KNOWHOW



**Take care!**  
**Don't make the holiday season your silly season.**

# SAFETY INNOVATIONS

## SOLUTIONS THAT WORK

Inspectors on field trips often find that a particular site has found a solution to a problem or hazard.

An example of a solution to a perceived hazard was recently seen at BHP Iron Ore's Nelson Point port facility, where perspex guards have been installed on hydraulic presses to protect the operator and others from metal debris propelled from a manufacturing machine.

Hydraulic presses used to install or remove such things as shafts and bearings, occasionally malfunction, causing metal debris to be propelled with some force out of the machine. To protect the press operator and others in the vicinity, perspex guards have been installed on the presses at Nelson Point.

The guard is the result of consultation with the workforce. The hazard had been identified by workshop personnel and the solution, a prototype and the final product, was also their work.

The Cargill Salt operation in Port Hedland has also devised an alternative guarding system.

These examples demonstrate that effective communication and consultation make the shop floor a good place to look for practical solutions.



*Innovative guard for hydraulic press.*

## HYDRAULIC HOSES BITE BACK!

An operator sustained a lost time injury when he placed his hand directly over a hydraulic oil leak on an underground cablebolting machine.

The operator previously detected a malfunction of the machine and was searching for a leaking hydraulic hose. He instructed a second person to turn on the machine and put his hand amongst a bunch

of hoses whilst searching for the leak.

High pressure hydraulic fluid was subsequently injected into his middle finger which later required surgery to drain the fluid.

This accident has highlighted the need for personnel to be aware of the possibility of high pressure hydraulic fluid being injected through their skin.

- Persons should not use their hands to search for leaks in hydraulic hoses.
- Personal protective clothing, including safety glasses and gloves, should be worn by operators working in the vicinity of high pressure hydraulic equipment.
- Manufacturers' recommendations should be followed when searching for hydraulic fluid leaks.

# THE CHEMISTRY CENTRE - A NEW WAY OF BUSINESS

The Chemistry Centre, the largest Division within the Department of Minerals and Energy, became fully commercial on 1 July 1994. This means that the Chemistry Centre now charges for all work. While industry clients already pay for work done at the Chemistry Centre, Government clients will now have to pay for services.

Commercialisation also means a gradual restructuring of the Centre to make better use of staff expertise and extensive equipment facilities. Part of this change will be the relocation of the Mineral Processing Laboratory to new premises in the Mineral Research Centre next to Curtin University. The new facilities will enable the Mineral Processing Laboratory to provide an improved service to the mining industry. The Kalgoorlie metallurgical Laboratory will be transferred to the Western Australian School of Mines on 1 December 1994.

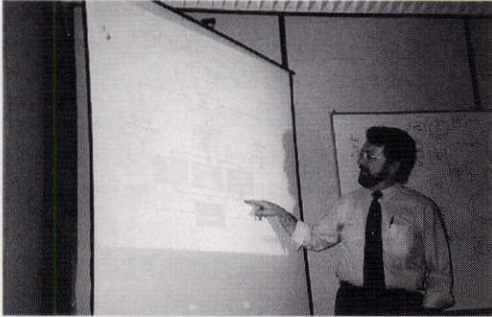
The Chemistry Centre undertakes a wide range of work for the Western Australian mining industry. The Mineral Processing Laboratory has extensive pyrometallurgical, hydrometallurgical and mineral dressing expertise and facilities. Other Laboratories of the Chemistry Centre continue to assist the mining industry with mineralogical expertise, mineral and mineral product analysis and characterisation, materials evaluation and failure analysis, and chemical assistance for occupational and environmental solutions. The Chemistry Centre's efforts in research and development work, scientific investigations and problem solving will be strengthened as a result of the restructure.

**Mike Rowe**  
**Principal Occupational Hygienist**



*The new look Mineral Processing Laboratory.*

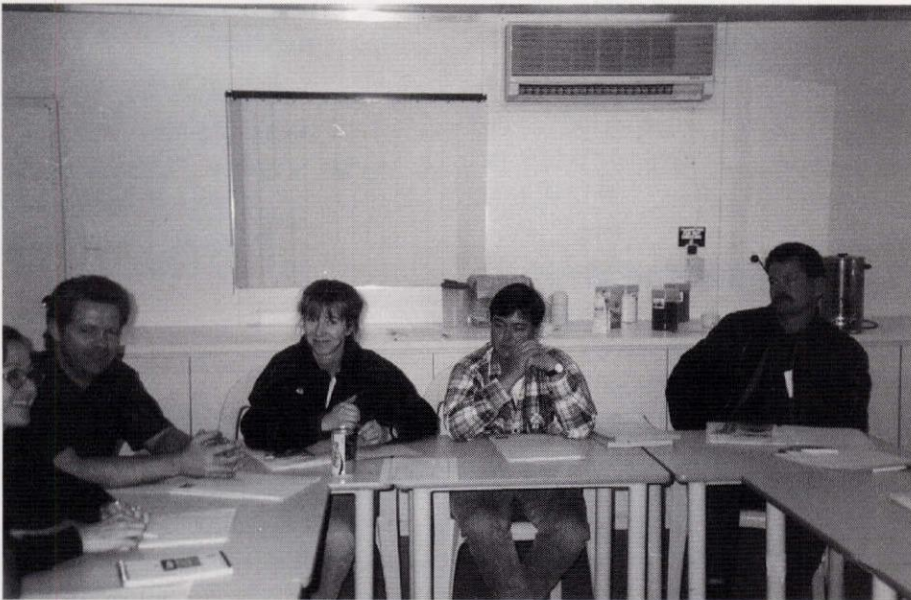
# PEOPLE AND PLACES



*Jim Joy takes Inspectorate staff through risk assessment methods.*



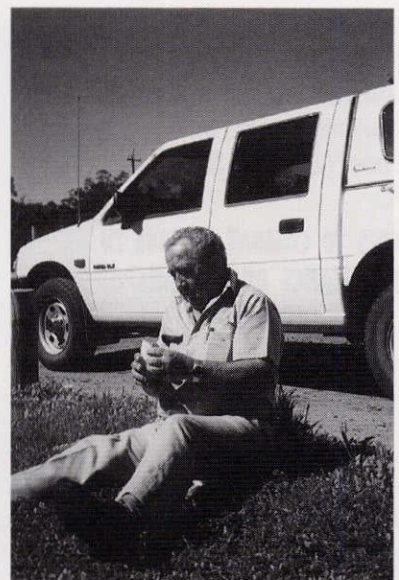
*Trying it on for size...Dust hazards...no way!*



*Getting the low down on Alcohol and other Drugs Policy at Outokumpu*



*Robe River, Pannawonica: Accident Prevention workshop in progress.*



*Even Workmen's Inspectors stop for lunch. (Carmen Vetrone)*

## ERGONOMICS FOR THE CONTROL OF SPRAINS AND STRAINS IN MINING

- Worksafe Australia.

A new handbook on ergonomics in mining has been jointly developed by the NSW Coal Association and Worksafe, and published by Worksafe Australia. It aims to help identify and manage risks associated with manual handling and rough rides in order to minimise back, neck, knee and ankle injuries. For a copy, contact Worksafe Australia on (02) 565 9555. The cost is around \$20.00.

### AXTAT 1993/94

The new AXTAT Summary 1993/94 poster is now available from the Mining Operations Division. For a copy, contact Mining Operations on (09) 222 3532.

### AS/NZS 4240 -1994:

Remote Controls for Mining Equipment  
This standard is intended for the guidance of manufacturers, users and regulating authorities concerned with the safe use of remote controlled mining equipment, and is applicable to both the coal and metalliferous mining industries. Available from Australian Standards on (09) 321 8797.

### AS 4242 -1994:

Earth moving machinery and ancillary equipment for use in mines - Electrical wiring systems at extra low voltage.  
Generally applicable to earth-moving machinery and ancillary equipment incorporating internal combustion engines, and relates to automotive type wiring systems. Available from Australian Standards on (09) 321 8797.

### STRATEGIES TO COMBAT FATIGUE IN THE LONG DISTANCE ROAD TRANSPORT INDUSTRY.

Stage 1: The industry perspective.  
Stage 2: Evaluation of alternative work practices.  
Available from Worksafe Australia.

How to make the most of shiftwork (brochure) available from Telecom  
- contact Stuart McHaffle (08) 230 6641

### MT KEITH CHALK UP 365 LTI FREE

The mining department of the Mt Keith Nickel Project have completed one year of operation without recording an LTI which translates into 299,711 man hours. Congratulations!!

## GRADUATE CERTIFICATE IN OCCUPATIONAL SAFETY AND HYGIENE.

The course has been developed in consultation with the Safety Institute of Australia to satisfy the needs of occupational safety and health practitioners, particularly in remote areas of W.A., and other states as a fully external course. The course caters for a wide range of practitioners such as safety officers, occupational health nurses, safety and training co-ordinators, risk managers, personnel officers and managers, ventilation engineers and others, who need to increase or update their knowledge and skills in occupational safety and health.

For further information contact  
Dr M. Nedved, F.S.I.A., tel: (09) 405 5672  
or Ms. S. Griggs tel: (09) 405 5448  
fax: (09) 405 5449



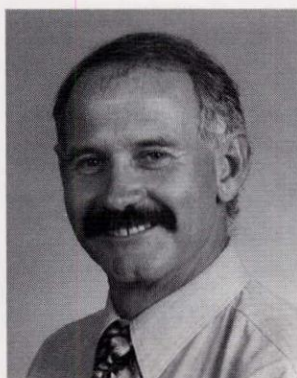
Your Minesafe Team: Chris Stublely, Anna De Filippi, Mark Butson, Catherine Stedman Murray Jones, Kim Williams. Have a good Christmas and a safe New Year.

# STAFF CHANGES

Chris Kirwin has transferred to the Kalgoorlie Office from the Karratha Office.

Dave Holly and Bruce Morrin have resigned from the Department of Minerals and Energy Office at Kalgoorlie, to take up management positions in the industry.

Allan Kimpton has joined the Department of Minerals and Energy at the Karratha Office as a Technical Officer (Occupational Health).



Allan Kimpton

## CONGRATULATIONS

..to everyone who has obtained certificates of competency since September 1994

### **AUTHORISED MINE SURVEYOR'S**

Williams, Glen Alexander

### **FIRST CLASS MINE MANAGER'S**

Fairfield, Peter John  
Woodward, Gavin Allan  
Power, Christopher John  
Murray, Gerard Raymond  
Hall, Gregory Campbell  
Humphryson, Robert James  
PrPic, Ivan Joseph

### **QUARRY MANAGER'S**

Bakalov, Alexander Traikov  
Powell, John Haydn  
Townsend, Darren Paul  
Russell, Michael  
Wallace, Stephen

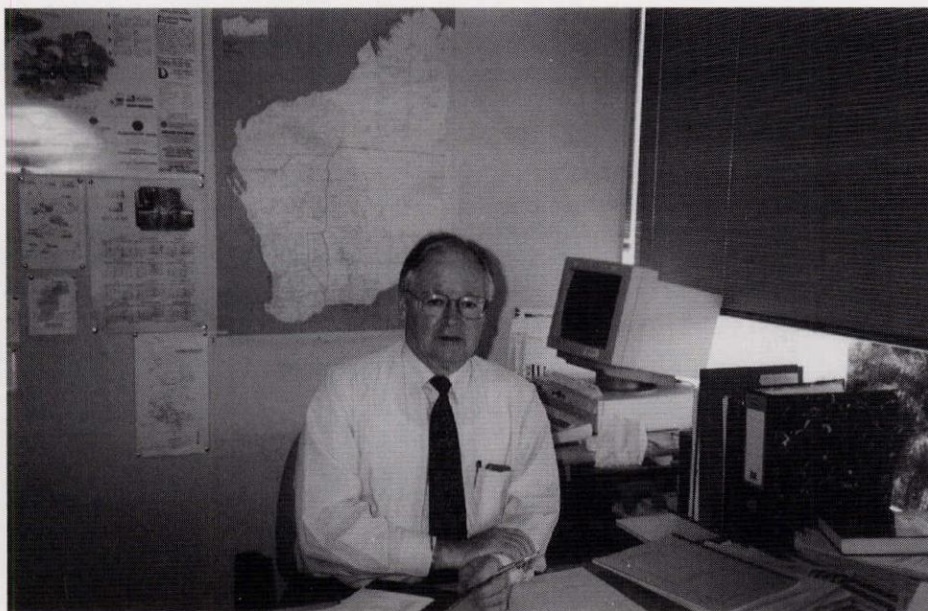
### **UNDERGROUND SUPERVISOR'S**

Symes, Robert Bruce  
Monaghan, Michael Patrick  
Reilly, Peter George  
Paulin, Rodney Bruce  
Rogers, Michael Peter  
Flynn, Errol Edward

Mitchell, Benjamin James  
Verelst, Rodney  
Lee, Peter Gregory  
Leathem, William John Angus  
Mewett, Malcolm John  
Kirkby, Lionel Kenneth  
Gajdowski, Marek  
Tegen, Peter  
Leeder, Justin Vivian  
Weaver, Ronald Seddon  
McWaters, Darryl John  
Smylie, Edward John  
Hendy, Roger Graham

### **RESTRICTED QUARRY MANAGER'S**

Digrandi, John Anthony  
Richards, Graeme Neil  
\* Panizza, Robert  
Parker, Jeffrey George  
Patterson, Haydn Trevor  
Fordham, Eric Michael  
Mott, Christopher John  
\* Jones, Thomas Rodney Percival  
Hayes, Frazer Kevin  
Koppman, Keith Douglas  
Wilson, Bryan Allen  
McKinnon, Alan  
Berry, Gregory Stuart  
Clancy, John Daly  
\* Restricted



Roger Hampson -  
Acting Senior Inspector of Mines  
for the State makes himself known  
to our readers.

# INCIDENT ALERT



## INCIDENT

The basket on a trailer mounted elevating work platform (cherry picker) was being lowered when the basket levelling linkage failed causing the basket to suddenly tilt forward.

## RESULT

The two workers in the basket were not wearing safety harnesses and were tipped out onto the ground. Fortunately the basket was only one metre above ground level and no serious injuries resulted.

## CAUSE

The basket levelling linkage failed due to poor maintenance and servicing by the owners of the machine, a plant hire company. This was compounded by unauthorised repairs in the field.

A previously welded repair to an eye - bolt in the linkage had failed and was re-welded by a boilermaker in the field. This work did not comply with the manufacturer's specifications. When fitting this repaired eye - bolt to the linkage, it was not realised that adjustment of the linkage was critical. Incorrect adjustment of the linkage caused another eye - bolt to fail.

## PREVENTATIVE ACTION.

- If a hired item of classified machinery is not supplied with a log book and / or inspection certificate and an operating manual, it should not be used until these items have been provided and examined.
- Items of classified machinery owned by the mine operator or a contractor should have detailed maintenance records and operating manuals, and be subject to regular inspection in compliance with the Mines Regulation Act.
- Any repairs must be in accordance with the manufacturer's specifications and follow good engineering practice.
- Operators must be properly trained to use Elevating Work Platforms including the use of appropriate personal safety equipment.
- Appropriate full arrest equipment (including a harness) should be worn at all times and securely anchored by an attachment rope of the correct length to a point fixed to the basket for that purpose.



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