



CRANE SAFETY

The photograph illustrates graphically what can happen when a mobile crane is used beyond its rated capacity.

In order to avoid accidents of this type it is vital that the operator of any mobile crane is fully conversant with the load chart, which is required by law, to be fitted in the control cabin of the crane.

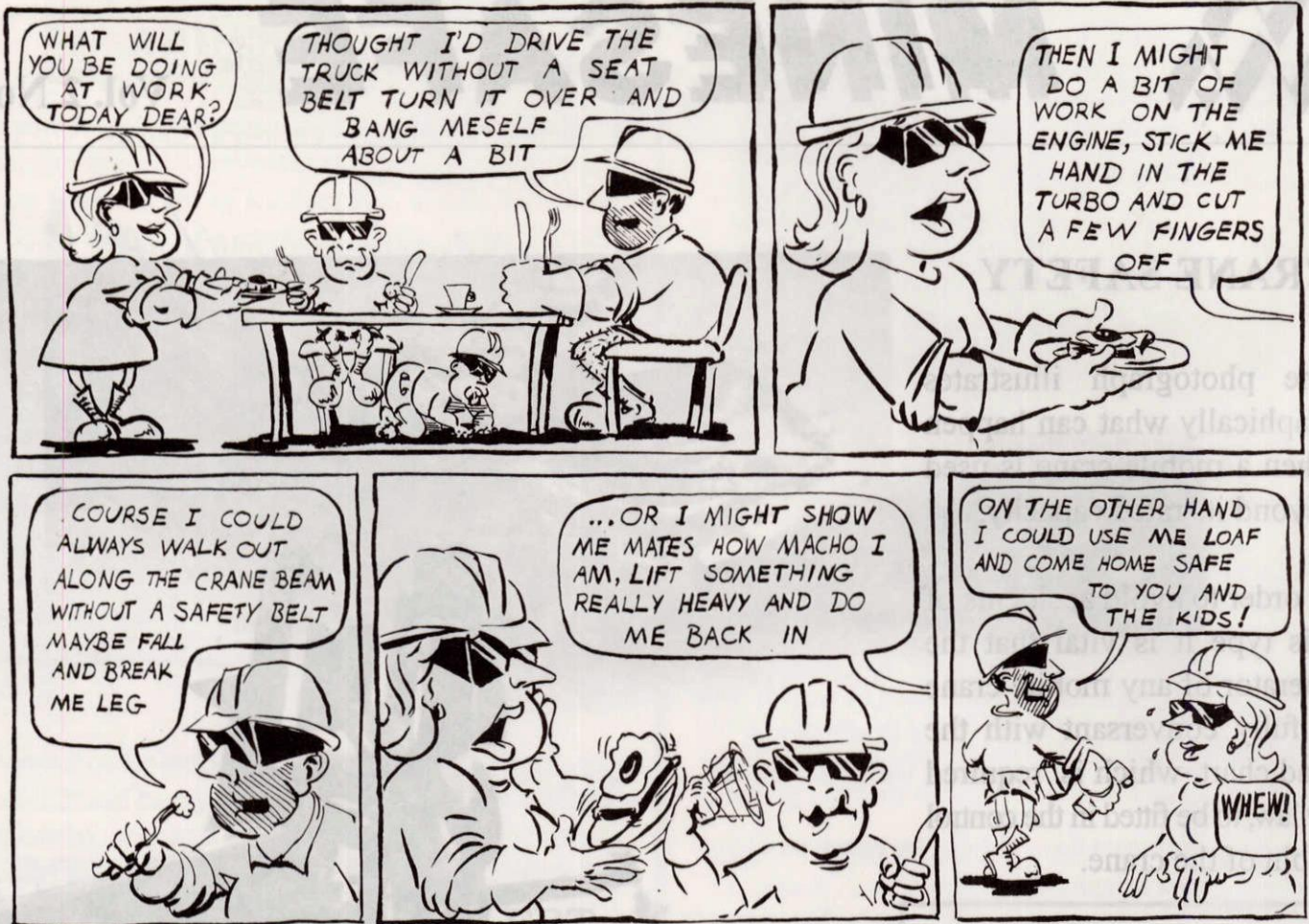
In addition, the crane operator must ascertain the weight of the load that is about to be lifted. If there are any doubts then the load should be verified before the lift is attempted. The weight of the load should be determined by consultation with a supervisor or by the use of a load indicator.

The rated capacity of mobile cranes is normally governed by the power required to complete the lift, and the stability of the crane at the lifting radii.

The maximum power available to lift remains fairly constant



on most cranes. However, the stability and the integrity of the crane structure, at various boom lengths is a major factor that needs to be considered when attempting a safe lift.



NOTICE TO REGISTERED MANAGERS

DUTY OF CARE - SPOTTERS

Are your minesite spotters at risk because of poor training?

This year there have been several accidents involving spotters who have been struck by loose rock falling from trays of heavy haulage vehicles.

Spotters are generally new employees who may not be familiar with the potential hazards involved in haulage operations.

HAVE YOU ADDRESSED THE FOLLOWING ???

- the cause and prevention principles associated with large vehicle hazards.
- the effects of the forces that a truck exerts on the edge of a dump.
- inclement weather, dust, noise, loose rock, poorly positioned and inadequate night lighting are all hazards for the spotter.
- backing of trucks over rough ground can dislodge rocks off the side of a load.
- boredom creates concentration

problems, so adequate supervision is needed.

- spotters should wear reflective tape vests so they can be easily seen at night.

Spotters need to be adequately trained before they are assigned to work in dumps, heavy haulage areas and should be closely monitored while they are familiarising themselves with the workplace.

Does your training programme for spotters meet the above criteria?

EDITORIAL

Lord Robens in his historic 1972 report "Safety and Health at Work" said:

Safety and health at work is a matter of efficient management. But it is not a management prerogative. Workpeople must be encouraged to participate fully in the making and monitoring of arrangements for safety and health at their place of work. There should be a general statutory obligation on employers to consult with their workpeople on measures for promoting safety and health.

This statement was prompted by his finding that UK industry generally at that time had an approach which tended to encourage people to think and behave as if safety and health at work were primarily a matter of detailed regulation by external agencies.

It is worth noting that the mining industry in Western Australia had recognised the need for involvement of the workforce in promoting safety in mines more than half a century before Robens made his report.

The Mines Regulation Act and the Coal Mines Regulation Act were amended in 1915 to provide for the election of Workmen's Inspectors of Mines, and over the years, these men have made an outstanding contribution to improving safety in mines.

The primary role of the Workmen's Inspector has been to relate closely with the mining workforce, to take notice of the concerns of the workforce regarding health and

safety, and to put into effect necessary remedial measures. There is adequate statutory authority to carry out this function.

Consistent with the Lord Robens report, the Mines Regulation Act has now been amended to introduce the system of health and safety representatives to our industry - to promote the active involvement of the mining workforce in health and safety programs. This does not replace or duplicate the work of the Workmen's Inspector, rather it enhances the role. The Workmen's Inspector has an obligation to liaise with health and safety representatives and by this process any concerns of the workforce can be relayed quickly and directly to the Inspectorate.

The historic and valuable role of the Workmen's Inspector in the cause of worker safety will now be enhanced by this new partnership with the health and safety representative.



Guest Editor - Dr Des Kelly
DIRECTOR GENERAL OF MINES

QUESTIONS & ANSWERS

I am aware that an Inspector of Mines has carried out an inspection of the mining operation where I work. How can I find out if he observed any defects?

Following an inspection, the Inspector must make an entry in the Mine Record Book. This Book is normally kept at the manager's office for safekeeping. Regulation 19 states that the record book be open for examination at any reasonable time by any worker employed in the mine.

Furthermore, it is a requirement under Regulation 2.1(3) that within 3 days of the entry being made the Manager must post a copy of the Inspector's entry on a notice board(s) so as to be easily accessible for perusal by all workers.

Refer to "Nugget" series pamphlet titled "Record Book".

Should a copy of the Mines Regulation Act Regulations be made available at every mine?

Yes. Regulation 1.8 stipulates that a printed copy of the regulations shall be posted in the office and a building or board in a conspicuous place, and each copy shall be maintained in a legible condition.

A person must not pull down, injure or deface any copy of the regulations posted on a mine.

EYE INJURIES AT THE MINESITE

It is 3 o'clock in the afternoon at a remote mining site. The sun is at it's hottest and the days work has been long and hard. Karl has just finished welding a bracket and taken due care by wearing his protective welding helmet and visor.

He taps the bracket with a hammer to check the quality of the weld. Sweat and dirt on his protective glasses make it impossible for him to see the fine detail. He removes his glasses, taps the weld again and feels a slight sting in the eye. He rubs the eye, but as vision is not affected he continues to work for the rest of the day.

The eye becomes increasingly sore and the next morning it is uncomfortable enough for him to go to the first aid station. He is given some antibiotic drops and is instructed to miss the days work. The next day the eye is still not comfortable and he is transferred to the nearest doctor's surgery.

An x-ray is arranged and this reveals a piece of metal lodged inside the back of the eye. He is flown to Perth and the following night, under general anaesthetic, a fragment of metal is removed from the eye using a giant magnet. The eye is comfortable but the piece of metal has passed through the lens, situated in the centre of the eye. It becomes cloudy over the next two weeks and another microsurgical eye operation is required to remove the cataract and replace it with a plastic intraocular lens.

Eight weeks later, Karl is still not back at work. He has a permanent visual loss in the eye of 20% and more importantly, has lost his ability to judge fine distance and depth, vital for the work he as been doing for the last 15 years.

The above incident was nobody's fault and was properly treated by the first aid station, the local doctor, and the operating eye

specialist, but the accident could have been prevented. The mine lost productive work time and most importantly Karl's future life and well being has been permanently affected.

The eyes account for less than 0.2% of the body area, but eye injuries still account for between 5 and 18% of injuries on all our mining projects in Western Australia. Better eye protective equipment and a positive attitude from management and employees, are helping to reduce the incidence of serious eye injuries and therefore work time lost. A new organisation, the Construction and Industrial Eye Foundation, has been formed with the support of unions, management and the Lions Eye Institute, to help push the eye safety record to new levels of achievement.

MINOR EYE INJURIES

Most eye injuries in the mining industry consist of surface abrasions, irritations, and infections caused particularly by dust blowing into the eye around the edge of protective glasses. An eye that feels scratchy, sore or waters should be checked out because you never know when serious damage can be done by such a trivial incident. A tiny particle such as iron filing or fragment of stone may imbed in the surface of the eye and require removal with a tiny needle under local anaesthetic.



Eye damage from foreign body

The foreign matter blown into the eye can lead to long term damage. A careful search of the surface of the sore eye by the first aid officer, then a washout with sterile salt solution (or tap water if none is available) and the use of antibiotic (chloromyxin) eye drops, is usually sufficient to make sure that no more than one working day is lost. The eye should always be checked to ensure vision is normal.

the eye during repairs, but does not penetrate it.

Blunt eye injuries may be of sufficient force to rupture the eyeball or actually cause a 'blow out' fracture of the orbit.

More frequently, they cause bleeding in the front of the eye which requires several days hospitalisation, or scarring or holes in the light sensitive retinal layer

stone, or by sharp objects which result in larger lacerations of the eye. Fragments may penetrate the eye while drilling, grinding, hammering or sawing. Not only the operator but any bystander may be struck. In all these situations spectacles are likely to protect the eye if shatter proof lenses are supplied.

These injuries are painful and cause immediate decrease in vision. If such serious eye injury

TAKE A LOOK IT COULD BE YOUR LAST!

MORE SERIOUS EYE INJURIES

Flash burns often occur when the worker is not wearing a welding helmet and is caught off guard by the accidental setting off of an electrode.

The surface burn on the cornea of the eye is very painful, but usually heals after 24 hours and does not lead to long term loss of vision. Sometimes the burns are so severe that hospitalisation and double eye patching is required.

Blunt force injuries to the eye can occur when high pressure liquids squirt the eye from a burst hydraulic or cleaning hose or a large instrument or object strikes

at the back of the eye. Any blunt injury that results in double vision or decreased sight, requires hospitalisation and detailed assessment by a specialist ophthalmologist.

Shatter proof safety glasses or goggles prevent most, but not all blunt eye injuries. It is still possible for liquids under pressure to come up under safety spectacles, but in general if the equipment is being worn, the injury will usually not be serious. Some blunt eye injuries on the worksite are difficult to eliminate.

PENETRATING EYE INJURIES

Penetrating eye injuries are caused by flying fragments of metal or

is suspected, the victim should have an eye patch placed on the eye and be transferred as soon as possible to the care of an eye specialist. There may be problems transporting such a victim at low pressure in an aeroplane and medical advice should be sought immediately.

CHEMICAL EYE INJURIES

Increasing numbers of potentially dangerous chemicals are used in the mining industry. Alkaline substances are particularly harmful and can cause serious burns and blindness.

CONTD PAGE 6

Concentrated chemicals may accidentally splash in the eyes if protective goggles are not worn. Explosions have the potential for serious damage to the eyes; for example, jumping car batteries. Many chemicals cause only minor damage because they are less irritating. Such substances may be present in the atmosphere in the workplace or contact the eye during painting, cleaning or transporting of materials. If liquid of any sort splashes in the eye and causes irritation, the eye should be washed out immediately with tap water and then with a sterile eye wash solution at the first aid stations. Possible damage should always be checked by a medical officer if vision is affected.

AWARENESS, CO-OPERATION AND PREVENTION

There has been a big improvement in the rate of eye injuries on our mining sites over the last few years. Further improvements depend on a responsible attitude on the part of the individual worker for his own safety as much as that of management.

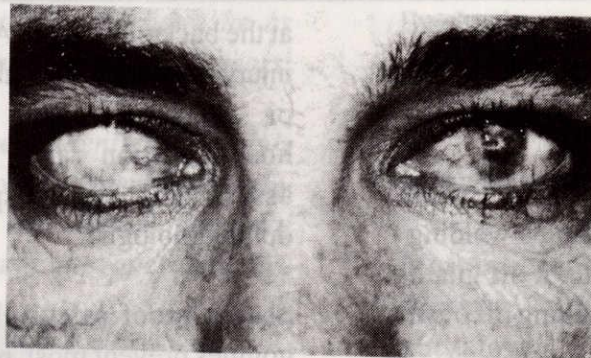
The Construction and Industrial Eye Foundation has been formed to provide expert advice, training, research and development of better protective measures for all work related eye injuries.

The new hotline installed at the Lions Eye Institute is the first step in this process.

A **HOTLINE** for instant advice on serious eye injuries has been set up on a toll free number (008) 016600, by the Construction and Industrial Eye Foundations at the Lions Eye Institute in Perth and expert advice is available 24 hours a day.

Ian Constable, Director Lions Eye Institute

HOTLINE FOR EYE INJURIES (008) 016600



The advice of a medical eye specialist can be obtained **URGENTLY** on this **toll free number** provided at the

LIONS EYE INSTITUTE, PERTH
by the
CONSTRUCTION AND INDUSTRIAL EYE FOUNDATION

24 hours a day, 7 days a week

DIESEL FUEL ADDITIVES THE PROS AND CONS

A recent technical data sheet issued by the Australian Institute of Petroleum Limited (Tech data #15) suggests that production quality of diesel fuel has been such that specification (e.g. contaminant) limits are being approached, increasing the likelihood of problems when used in marginal and exceptional applications. The Western Australian experience lends support to this conclusion as recent tests have indicated that the type of diesel fuel in common use in underground mines may be best categorised as "a commercial grade giving rise to high soot output".

In response to this situation, several companies have inquired into the possibility of using a fuel additive with their diesel fuel, to improve its quality. The potential

benefits of using a fuel additive include decreasing engine wear, decreasing the moisture content of the fuel and improving fuel consumption.

In the underground mining application there are also some potential drawbacks in using fuel additives. There are currently no regulations covering the use of diesel fuel additives. However, concern has been expressed that in the event of a fuel additive being used, a subsequent increase in horsepower of the engine may lead to a breach of the diesel permit. Furthermore, the potential exists for an increase in exhaust emissions, particularly in metallic contaminants such as manganese or copper.

In response to this issue, officers of the Mining Engineering

Division are co-operating with Western Mining Corporation and Kalgoorlie Consolidated Gold Mines in trials to evaluate the exhaust emissions of diesel equipment utilizing diesel fuel additives. It is hoped that the results of the trials will enable the Department to isolate those fuel additives that lead to an increase in exhaust emissions and make recommendations against their use.

At present it is recommended that diesel fuel additives should not be used in the underground mining situation, until the trials have been completed. No restrictions apply to open-cut operations.

For further information please contact Terry Fisher, on 222-3264.

SAFETY NOTE Leakages from Gas Cylinders

Recently there have been two instances of fires caused by leaking of acetylene gas from improperly maintained acetylene gas cylinders. Although no injuries occurred on these two occasions they have highlighted the potential hazards which can result from leaking cylinders containing flammable gases.

Personnel using flammable gas cylinders are urged to check for leakages particularly around the cylinder outlet connections and gauges in order to prevent accidental ignition.

H.I. PARABURDOO

At Hamersley Iron's Paraburadoo operation, a query about the number of Safety Officers the company employs will be answered with a prompt "746". Every employee is regarded as a Safety Officer, and that philosophy is the bedrock of Corporate Safety Management policy.

At Paraburadoo, where Occupational Health and Safety Manager John Erkins presides over a well equipped, and well resourced health and safety department, the management of the safety function, has a priority equal in status to the management of any other corporate function. The goal is to minimise the incidence of workplace risks through a process of recognising, evaluating and controlling potential occupational health problems. The lowered accident rate at Paraburadoo is evidence that the Policy is having effect.

John Erkins believes in providing every employee with as much information as possible.

He also believes in ensuring that the information is understood, and fed back to training supervisors through the assessment process.

As well as a comprehensive safety manual, Paraburadoo publishes individual departmental manuals which include checklists and questionnaires. Each employee goes through three phases of an induction process:

1. Induction of new starters at the training centre.



John Erkins is the Occupational Health and Safety Manager at Paraburadoo. He joined Hamersley Iron in 1986 after many years as both a practicing Chemist and Occupational Hygienist. He also lectured at Tertiary Institutions around Australia. He is a member of the Royal Australian Chemical Institute and a fellow of the Royal Australian Institute. He is also the first Australian to become a fellow of the Occupational Hygienists in Britain. He is currently a member of the Ventilation Board (WA) and the author of numerous papers and two books on Occupational Hygiene.

2. Induction into a specific department.
3. Induction into a work station.

Management, supervisors and safety committees are actively involved in safety management and because of this integrated approach, Paraburadoo has been extremely successful in reducing the risk associated with a common problem in the industry - use and misuse of chemicals.

A paper on the rationalisation of chemicals John Erkins presented

earlier this year is not only a blue print for the way things are done at Paraburadoo, but also contains some useful advice on handling the chemical hazard.

Paraburadoo has successfully halved the number of chemicals on site from around 400, and intends to bring the number down further. It is a four stage process:

First, a list is prepared of all chemicals and their uses, together with profiles of chemicals and the location of their use on site. It is important to ensure that listings include little used or forgotten items in cupboards and sub-stores.

Second, a list should be prepared for each Department based on chemical names, content, supplier and end use of the product. Hazardous Chemical Data Sheets (HCDS) should be obtained for each listed chemical and the contents checked against an original list so that products may each be identified. The Threshold Limit Values of each component should also be listed.

Third, rationalize the product lists. It is common practice for different Departments to use different products for the same purpose. At Paraburadoo for instance, this process revealed 4 different handcleaners and 5 degreasing solvents all doing the same jobs.

In many instances, the only difference between a group of products is the brand name. It is not unusual for particular chemical components to have several "aliases"

such as Methylene Chloride which can surface as Dichloromethane.

At Paraburdoo, specialist suppliers are often provided with a list quoting a group of chemicals and requested to come back with recommendations for a single product that can perform all the tasks the whole group performs. The system has successfully reduced a large number of materials.

The last stage of the management process is control on the purchase of new chemicals.

John Erkins says that all requisitions for new chemicals not listed come to the Occupational Health Department so that they can ensure HCDS are available and all necessary protective devices are on hand. Once it has been stamped "Approved" the requisition is then forwarded to purchasing. The system also ensures duplicate purchase of similar chemicals does not occur.

Additionally, all salesmen coming to site check in with the Occupational Health specialist, mainly to ensure that HCDS are available before any trials take place on site.

This automatically ensures that if an accident occurs, the necessary data is available, so quick action can be taken.

John says the system is working well, and stresses that Paraburdoo is not against new products as long as the materials they are replacing

are removed from site listings, and that new materials are not more hazardous than the ones they are replacing. Periodically, an inspection takes place and records are updated to ensure continued control.

As part of a large organisation like Hamersley Iron, Paraburdoo obviously has extensive resources available, but that is a bonus not a critical element in chemical hazard management. The Paraburdoo model is one that can easily be adopted by small operators committed to controlling this hazard. An immediate reduction in the

number of chemicals in use from handcleaners to process chemicals is desirable, and hazard data sheets, presented in a readable standard company format can also reduce the margin of error.

This program and other safety management initiatives at Paraburdoo are effective because team work is a priority. At this mine, every effort is made to ensure there are no pockets of "Safety Saboteurs" relying on lack of knowledge as an excuse for putting themselves and others at risk.

Material on Chemical Safety Management was extracted from a paper entitled "Rationalisation of Chemicals" by John Erkins, Occupational Health & Safety Manager, Paraburdoo Division, Hamersley Iron, May 1991.

AS 25

ADDITIONAL INFORMATION
 CYANIDES SODIUM AND POTASSIUM

DESCRIPTION AND TOXIC PROPERTIES
 When dry, sodium and potassium cyanides are odourless. They are moisture from air. When damp or in solution they slowly emit highly flammable hydrogen cyanide gas which smells like almonds. Contact with acid fumes rapidly accelerates the reaction. Cyanide poisoning can cause death in a few seconds. In cases of recovery follows rapidly on removal from the contaminated atmosphere by inhalation of amyl nitrite, and removal of contaminated material. In more severe cases, treatment is of utmost importance. In all cases, ensure that there is an adequate supply of amyl nitrite. Where facilities exist on the premises, ensure that there is an adequate supply of amyl nitrite. Material (e.g. KALOCYANOR) with ins material (dibutyl tetracarbonyl) with ins

STORAGE
 Transfer contents from corroded or damaged containers to labelled containers, wearing protective clothing. Store in labelled containers, wearing protective clothing. Store in labelled containers, where there are no acids or acid fumes, away from source pipes.

DISPOSAL OF SPILLAGE AND CONTAINERS
 Environmental hazard—contain spillage. Can be rendered harmless by adding an adequate quantity of water. Stir well and continue addition until production of the reaction product is harmless. Keep away from strong oxidising agents. Contaminated containers or after spillage by in hypochlorite solution above pH 11. The hypochlorite solution should be worn slowly at first. Protective clothing should be worn. Refer to the local waste disposal procedure.

FIRE
 See Side 1

RELEVANT REGULATIONS AND STANDARDS
 a
 b
 c

EMERGENCY

Organization Location

UN No Sodium Potassium 1689 1680
 HAZCHEM 4X

SAFE STORAGE AND HANDLING INFORMATION CARD
 AS 2508
 1.902
 Second edition Nov. 1985

CYANIDES
 SODIUM AND POTASSIUM

White crystals or beads.
 Soluble in water.

HAZARDS
 Fatal poison if swallowed.
 Can cause poisoning if inhaled or absorbed through skin.
 Severe exposure may be fatal. Contact with water or acid.
 Cyanide gas which has an almond-like odour.
 Environmental hazard—contain spillage.

SAFETY INFORMATION

STORAGE AND HANDLING
 Check that containers are clearly labelled.
 Keep containers securely sealed.
 Avoid contact with acids and fumes.
 Avoid contact with acids or acid fumes during storage and handling or in the event of spillage or fire.
 Wash hands thoroughly after handling.
 Wear protective rubber or plastic gloves and chemical goggles when risk of exposure occurs.

SPILLS AND LEAKS
 Environmental hazard—contain spillage.
 Avoid contact with skin and eyes.
 Avoid inhaling dust or fumes.
 Wear protective rubber or plastic gloves.
 Do not attempt to wash away with water.
 Sweep up dry spills and wash away with water.
 Wipe up spills and place in clean, labelled container for disposal. After cleaning up spills, wash and change.

THE ANTIDOTES MUST BE KEPT ON HAND
 Wear suitable respiratory protection.
Swallowed or inhaled: Remove patient to fresh air, lay down and rest. If patient is not breathing, apply artificial respiration. If breathing, break ampoule of amyl nitrite in intervals of 1 minute up to 5 times. Remove all contaminated clothing including footwear. Transport to hospital or doctor. Inform that suspected case of cyanide poisoning will be arriving.
Eyes: Immediately hold eyes open and wash continuously with water for at least 15 minutes. Transport to hospital or doctor.
Skin: Remove all contaminated clothing including footwear. Wash affected areas with water for 15 minutes. Do not wash material into eyes or mouth. Transport to hospital or doctor.
 Solid will not burn but heat produces highly toxic and flammable vapours. Move upwind. Warn others in vicinity. Alert Fire Brigade. Tell them location, material, UN number, and quantity. Wear self-contained breathing apparatus and full protective clothing including eye and acid extinguishers. Use dry chemical or vaporizing liquid extinguishers, wherever possible.

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*Include area code in brackets

READ OTHER SIDE

SWINGING INTO LADDER SAFETY

The potential safety hazard arising from vertical ladders is obvious to all. To prevent an injury occurring through falling from the top of a ladderway, access should be restricted by use of a chain or similar safety barrier. However, experience has shown that safety chains are often not replaced, and self closing safety barriers may hinder climbing on or off the ladderway.

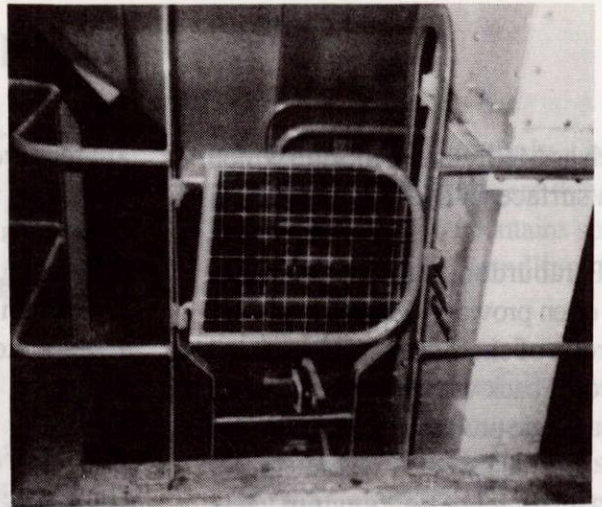
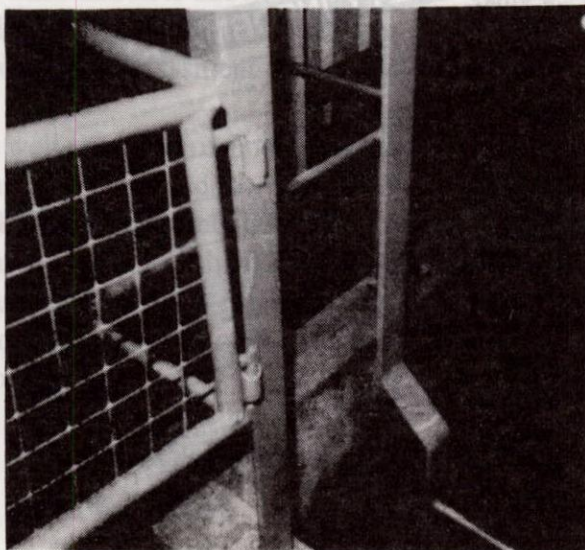
An innovative approach to this problem has been designed by Mr John Arlott, Construction Superintendent of Westralian Sands Limited. Mr Arlotts' design (pictured) incorporates a gate with eccentric hinges, that allows the gate to close under its' own weight. The gate opens towards the safe side of the access way, and forms an effective barrier whilst providing no hindrance to the user.

A number of the gates have been installed in Westralian Sands Limited heavy mineral processing plants in Capel. Indications are that all users and the on-site safety officials are impressed with the gates performance, and there are hopes to eventually fit them to all ladderways.

The gates cost approximately \$150.00 to fabricate and install.

Mr Arlott has applied for a patent to cover the design, however he is only too happy to give further information to interested parties.

Contact John Arlott (097) 271-400.



DRILLING BRANCH

During 1990/91 the Department, as a result of a direction from Government, changed from carrying out its own drilling operations to using contract operators. This allowed restructuring of the Drilling Branch of Mining Engineering Division to cover additional important work on safety and environmental control in exploration drilling. Details of the restructured Branch follow:

Title: Exploration Safety and Drilling Branch
Personnel: Don Macpherson - Assistant Director Drilling
Colin Davidson - Senior Drilling Supervisor - Contracts & Safety
Bill Sadler - Drilling Supervisor - Contracts & Safety
Neil Michelson - Drilling Supervisor - Contracts & Safety
Ian Macpherson - Drilling Supervisor - Contracts & Safety
Barbara Merton-Jones - Branch Secretary

Location: Carlisle Depot, 91 Briggs St,
WELSHPOOL 6106
Phone (09) 470-0300 Fax (09)362-5694

Duties: Administer/supervise Departmental contract drilling. Monitor and improve safety and environmental care in exploration drilling within the mining industry. Maintain overall technical performance of the Department's long range radio communication system. Maintain and develop (on-site) the Carlisle Depot as a multiuser Departmental facility.

Equipping and training for the new duty of safety and environmental care in exploration drilling safety has been in progress for some time. It is expected that introductory field work in this will commence within the next few weeks.

WHATS ON EXAMINATION DATES

W.A. Certificates of Competency (Metalliferous)

- * First Class Mine Managers
- * Quarry Managers
- * Underground Supervisors
- * Restricted Quarry Managers

Examination Date : 7 October 1991

CANDIDATES TO NOTE

1. Application fee is now \$60.00
2. Candidates will be advised by mail of their success or failure in the examination, however, the exact mark will not be released.
3. **Information will not be released over the telephone.**

WA Certificate of Competency (Coal)

Closing date for applications Friday 20th September at 1500 hours.

Examination Date : 28-30 October 1991

Locomotive Engine Drivers Certificate of Competency

Applications to sit the next examination in Karratha should be sent to Denis Brown, Mineral House, 100 Plain Street, East Perth WA 6004, by 31 October 1991.

Examination date : 29 November 1991

Ventilation Officer's Course

Surface Ventilation Officer's Course
17-18 October 1991

Interested companies should contact
Tania Piscicelli on (09) 222-3095

Course numbers are restricted to 20 places,
and an early response would be appreciated.

VENUE: Department of Mines
100 Plain Street,
EAST PERTH

COST: \$150 per person

STAFF CHANGES

Ian Ronald joined the Kalgoorlie Inspectorate as District Inspector of Mines in July.

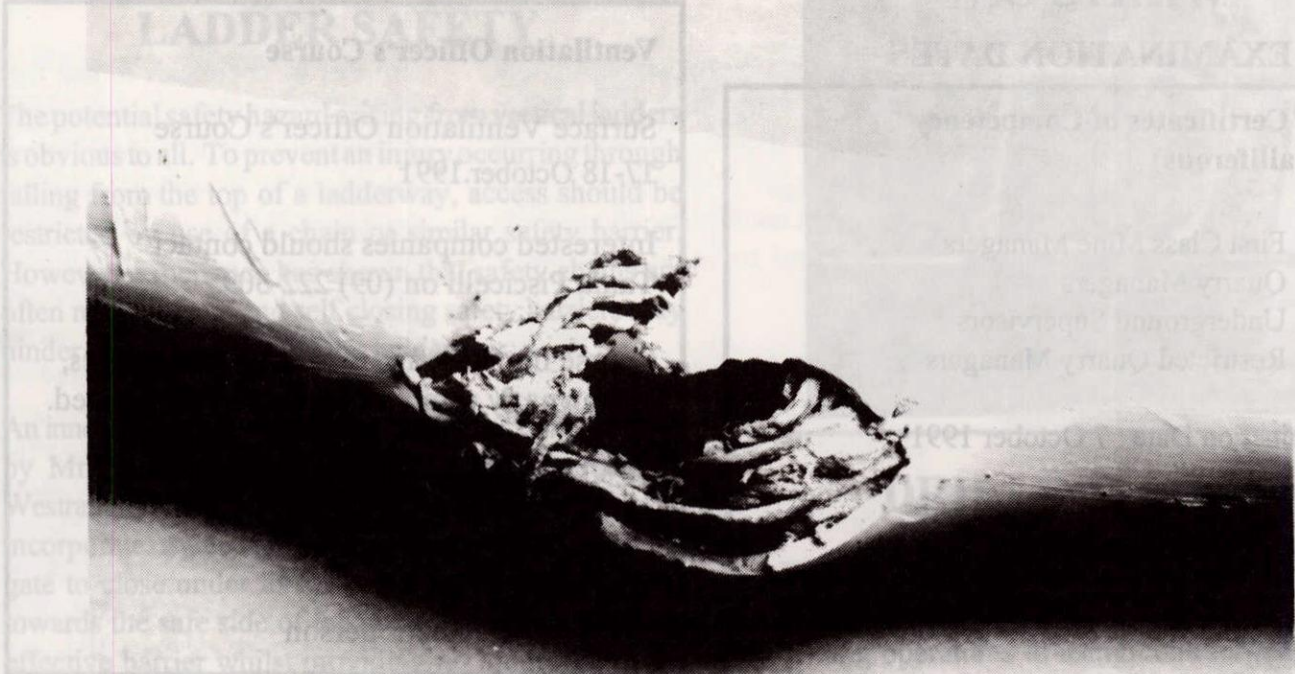
Adrian Lang is working in the Research & Technical Services Branch as a Geotechnical Engineer.

UPDATE OF PUBLISHED SIGNIFICANT INCIDENT REPORTS

23. Underground Fires
24. Crane Dogman Survives 'Shock' from 22kV Transformer.
25. Buried electric cable - fatal accident.

SAFETY BULLETIN

5. Annual Road Closures on Mining Tenements



ACCIDENT ALERT

A miner had a lucky escape from electrocution while drilling a blast hole in a rise face. His drill steel intersected a bore hole, which contained two live electric cables. The steel drilled through the centre of a 1,000 volt cable.

Fortunately, the miner received no electric shock, nor was he aware that the incident had occurred, apart from the fact that his fan had shut down. On checking the fan, it was found that there had been an extensive power failure. Further investigation, revealed the damaged cable in the bore hole.

As the cable had single wire armouring, (which was earthed) and was also earth leakage protected, the system failed to safety.

PREVENTION

It is imperative that routing of underground bore holes for electric cables be adequately planned. They should be clear of any development or production excavations and should be accurately surveyed and the details of the bore holes clearly depicted on mine plans.

As a precaution, underground power cables should have single wire armouring and an earth leakage protection system - it saved this man's life!

MINESAFE

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