



DUMP PRECAUTIONS

A number of recent incidents (including a fatality) have involved haulage trucks falling over the edges of dumps or stockpiles, either while reversing to the tip position or while tipping.

Often, the main cause of such incidents is that the dumped material is not lying at a stable angle of repose, either due to slumping or because material has been removed by a loader from below (eg. crusher feed from an ore stockpile). The dump edge collapses when

subjected to load and the truck and operator fall or slide over the edge, possibly sustaining serious injury and equipment damage.

Recommendations:

1. That all personnel involved with or responsible for the tipping of rock (all material) on dumps and stockpiles are to be fully acquainted with Regulation 17(10).
2. That prior to dumping operations being commenced, a thorough inspection of the dump area including the face and the dump-

edge windrow (or backstop) be carried out by a competent person specifically delegated for this purpose; and that such inspections be carried out periodically throughout the shift by supervisors, haul-truck drivers and spotters (if posted).

3. That part of the stockpile area being worked from below by front-end loaders be closed to truck access, and not reopened until the natural angle of repose for the full dump face has been re-established

CONT'D ON PAGE 3



THE COLLIE TEAM

L-R: Trish Saunders, Typist; Rob Ferguson, Regional Mining Engineer; David Cameron, District Coal Mining Engineer.
Absent: John Allison, Workmen's Inspector of Mines.

COLLIE INSPECTORATE

In any assessment of the importance of various minerals to the economic well being of Western Australia, coal is one that is often overlooked. It is the "glamour twins" of the mining industry - gold and iron ore - that tend to attract all the glory.

Coal mining takes place near Collie: a town situated 50 kilometres inland from Bunbury.

There are two companies currently operating on the coalfields: Western Collieries, which owns two open cut and three underground mines; and Griffin Coal which owns two open cut mines. Between them, they supply most of the State's energy.

When Western Australian Mining Legislation was first drawn up at the end of the 19th century, it was quickly evident that the Metalliferous bias of the Act did not cater for the particular needs of coal mining. To overcome this, the Coal Mines Regulation Act was introduced, and effectively defined the Collie area as a distinct mining district, with its own Inspector of Mines. The current Regional Mining Engineer/Senior Inspector of Mines is Robert Ferguson, who has acted in that capacity for 25 years. He is assisted by District Mining Engineer, David Cameron, Workmen's Inspector John Allison, and Patricia Saunders, who provides important secretarial backup.

Like other Inspectorates, Collie is concerned not only with fulfilling the requirements of its governing legislation,

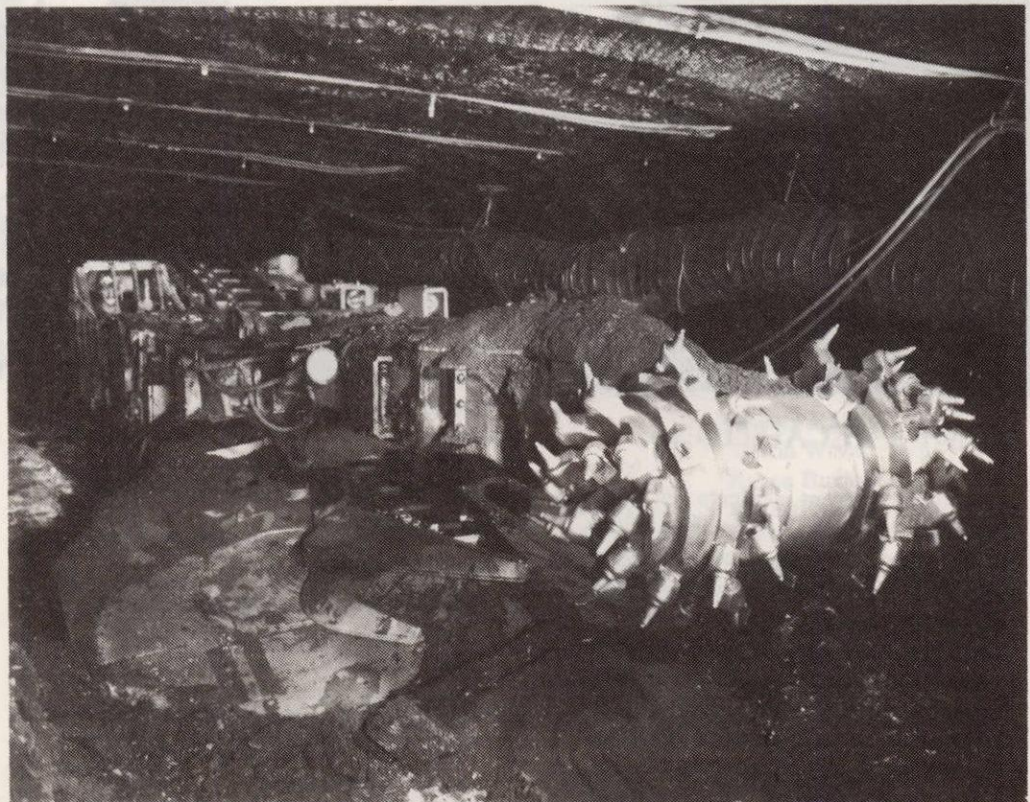
but also in promoting occupational health, safety and welfare in the work place. To achieve this aim, it prefers to place emphasis on maintaining good relations with industry, rather than being seen as a legislative watch-dog; for example, it is not unusual for the Inspectorate to provide the mining companies with professional advice. The "Professional Liaison Approach" is the term which Rob Ferguson likes to use to describe this relationship.

Tripartism also plays an important role in maintaining and advancing Standards. While the Mines Department may be responsible for drafting any coal mines legislation, there is also a set of special rules, which all three parties - government, management and workforce - help to draw up.

A Tripartite committee is currently involved in the production of a new Coal Mines Act. The new legislation should be completed in 1991 and will be the most modern in Australia.

Most coal seams are separated by water bearing strata, which means dewatering is a critical part of the operations. Coal extraction using continuous miners has been employed underground since the mid seventies. Trials involving depressurization of the water bearing strata overlying the coal seams enabled the introduction of a much higher extraction mining method in 1986. The wet atmosphere has also been a major factor in helping Collie miners avoid the coal miner's curse - pneumoconiosis - which is still found in some dry dusty mines around the world.

The combination of safety education, good working relationships with both management and workers, and favourable geological conditions, has helped the Collie Inspectorate to achieve an enviable safety record within the Australian coal mining industry.



Voest Alpine Continuous Miner in action underground at Western Collieries

MINES DRILLING BRANCH ABOLISHED

Few branches of a Government Department could claim to have had the impact that the Drilling Branch has had on the State of Western Australia over the past forty years.

The Branch evolved from a need to have thorough investigations of the Collie Coal basin carried out. Once that work was completed, the personnel and their equipment were asked to carry out other mineral investigations.

Foundation investigation drilling was added to the list, water investigation and some pastoral investigations followed, all of which helped to establish the Branch as a reference organisation for drilling investigations for Government in this State. The Branch also provided both an advisory and supervisory service to other Government Departments, both in WA and interstate, local government and industry.

The major achievement of the Branch has been the essential identification and evaluation drilling for assessment of the State's groundwater resources which gave a reasonable basis for Statewide water resource planning.

Sadly, budget constraints mean that the Drilling Branch will cease to exist as a drilling entity and personnel will be absorbed by other government departments.

Future water investigations will be contracted to private enterprise, and we can only hope that contractors can maintain the high technical standards set by the Branch.

As a tribute to the Branch, we list once more, the major contributions of this quiet achiever, and say goodbye and thank you.

GROUNDWATER WATER SUPPLIES

Perth, Albany, Esperance, Geraldton, Karratha/Dampier, Port Hedland, Central Australian Aboriginal Reserve, Broome, Horrocks Beach, Derby : State Resource Assessment : Perth Basin, Canning Basin, Robe & Fortescue Rivers, Collie Basin, Kalgoorlie.

TECHNICAL RESEARCH

Development of electronic/controlling/recording system for borehole pumping tests; Development of multipoint pollution monitoring bore system; Development of borehole T.V. scanning system.

CONSULTANCY

Supervision of drill rig construction for the Federal Government. Contract administration for State Government Departments.

ENGINEERING & FOUNDATION

Narrows Bridge, Fremantle Harbour, Bunbury Harbour, Port Hedland Harbour, Wyndham Harbour, Ord Dam, Bandicoot Dam, Canning Dam distribution tunnel.

COMMUNICATIONS

Department long range radio system, Satellite with facsimile facilities.

MISCELLANEOUS JOBS

Kimberley and Great Southern Drought Relief: Effects of bauxite mining and forest clearing on groundwater. Land salinisation investigation; Gold investigation; Main Roads construction water supply.

CONVEYOR BELT SAFETY

Reg. 6.8 (1)

When machinery is stopped for repair, maintenance, or cleaning purposes, it shall be isolated from the power source, and the isolating switch or device shall be tagged with a suitable prominent danger tag.

(2) Machinery shall not be restarted until the person who fixed the danger tag has ensured that it is safe to do so and has removed the tag.

Between July 1989 and June 1990 seven serious accidents involving conveyor belts occurred at minesites.

Many of the conveyors installed on mines are large and move at a relatively high speed. The inertia of the moving parts of conveyors prevent a short stopping distance. A typical 1.5 metre wide belt moving at 120 metres/minute requires a stopping distance in excess of 15 metres.

Stop buttons or lanyard pull wire systems are unlikely to prevent serious or fatal injuries to a person who becomes entangled in the conveyor idler or pulley system. They may prevent major damage to equipment.

Emergency stop systems such as lanyards should not be relied upon to protect against personal injury. If work is to be undertaken on or around moving parts of conveyors, the power source driving the conveyor must be isolated and tagged by personal danger tags. The effectiveness of the isolation must be proved.

Moving conveyors can be lethal if proper care is not exercised when maintenance or cleaning duties are to be carried out.

Accidents of this sort are predictable and avoidable. Taking a short cut to avoid shutting down risks life or limb.

IT IS NOT WORTH IT!

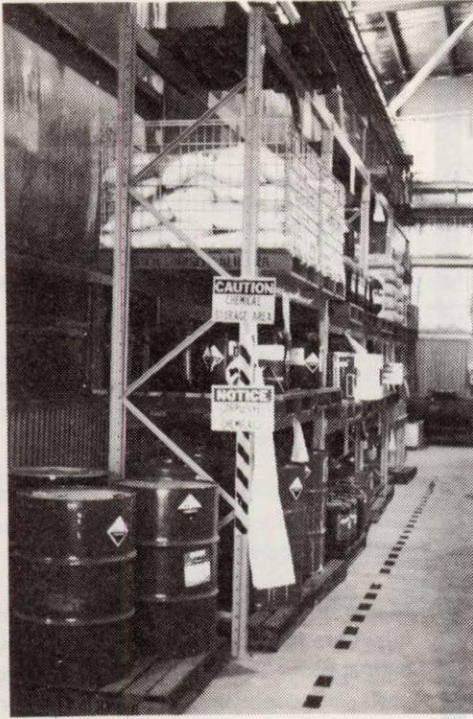
CONT'D FROM PAGE 1

by dozing. (Note : different materials may have different angles of repose and this angle may vary depending on whether the material is dry and loose or wet and compacted).

4. That the safe working/tipping areas on dumps and stockpiles be clearly marked out after they have been inspected and approved by the "delegated competent person".

5. That haul-truck drivers be instructed to treat dump-edge windrows as markers, rather than back-stops and to dump loads short or call for further instructions if in any doubt as to the integrity of the dump edge or windrow. (Particular care is necessary after rain or dewatering down which may lead to slumping at dump edges).

6. That the top surface of dumps and stockpiles be maintained at an uphill gradient towards the tipping edge.
7. That the wearing of seat belts while driving haul-trucks be made mandatory, as experience has shown that these reduce the seriousness of injury in the event of a truck falling over the edge.



Left: An example of good storage showing chemicals clearly labelled and separated with adequate safety signs.

PROCESS CHEMICAL SAFETY

A series of guidelines have been prepared by the Engineer Chemical/Metallurgical, T Robinson. These guidelines are intended to cover the expected requirements for the safe handling and storage of bulk chemicals used in the mineral processing industry of WA.

The guidelines outline the safe handling and storage of these chemicals, minimum safety equipment to be worn by the mixing/reagent operators, disposal of containers, and training of operators.



An example of poor storage showing incompatible corrosives being stored together. eg. acids and caustics

Chemicals covered by the guidelines are:

Cyanides, acids, caustic soda and lime, flotation chemicals, and heavy metals, e.g. lead salts, mercury, arsenic.

The thrust of the guidelines is summarised by the following three points:

1. Safety equipment includes the requirement for the wearing of mono-goggles as minimum eye protection by the reagents operator, when using corrosives and by the driver of bulk supply tankers.
2. Storage tanks are required to be banded to contain the tank contents.
3. Training involves the issue to operators of concise material safety data sheets (MSDS). Those supplied by manufacturers tend to be too detailed for quick reference.

Other guidelines will be issued in the future as required. An example is the current testing of hydrogen peroxide to enhance the leaching rate of gold in cyanide solution.

The guidelines will be posted to mining companies within the month.

Example 1

NaCN addition at one plant was found to be to the ballmill feedchute. The pH was controlled with caustic soda

added at the same point. However the probes measuring both pH and NaCN concentration were installed in the first leach tank, making it difficult to control both.

HCN gas levels were high at the mill discharge, cyclone classifiers, trash screens and above tanks. This exposed operators to an unnecessary hazard. Addition to a mill causes unnecessary breakdown of NaCN to HCN increasing consumption.

It was recommended that the addition point of caustic and NaCN be changed to the leach tank. This would eliminate high HCN levels around the mill circuit and above the tanks, and would mean a reduction in the regulatory frequency of HCN analysis.

Example 2

Safety showers have been found in exposed positions. Temperatures regularly exceed 40 degrees in summer. Water inside these showers has been found to be hot which if used in an emergency would scald the skin or eyes of an operator.

The requirement to lag those showers was made in the record book.

FIRE EXTINGUISHERS FOR UNDERGROUND

There is some confusion, about the use of BCF Fire Extinguishers underground. The Inspectorate confirm that BCF Fire Extinguishers manufactured to the requirements of Australian Standard 1848 and maintained in accordance with Australian Standard 1851.1 are suitable for underground use on diesel equipment, substations and fuel storage and service areas.

Fire extinguishers selected for use on underground vehicles, whether dry powder, carbon dioxide or BCF are required to comply with the following table as a condition of the diesel permit.

Engine Rating	Extinguisher Rating (min)	Approx Wt.
Less than 100 kW	30B (E)	2-3kg
101 Kw to 200 kW	60B (E)	4.5-8kg
More than 200 kW	80B (E)	6-11.5kg

Where a fixed fire suppression system is fitted and maintained on a vehicle, a portable extinguisher is still required but may be of a lesser rating than specified above.

EDITORIAL :

Wearing seat belts in vehicles has been compulsory since December 1971. In the two decades since, Western Australians have proved themselves to be amongst the most conscientious users with an average 92% belting up - a figure that is reflected in the decrease in road fatalities, particularly in the last ten years.

Unfortunately, the same rules are not currently enforceable on private roads, and mine operators and workers are paying an unacceptable price for taking advantage of a technicality.

All the evidence points to the use of seat belts preventing and reducing the likelihood of the two most common causes of death and injury on roads - ejection from, or coming in contact with, the interior of the vehicle. There is no evidence to support the theory that private roads are in any way safer, particularly on mines, where unique hazards can be present, and traffic patterns can be far more congested than surrounding public roads.

At the present time, no regulation exists that would make the use of seat belts compulsory. Nonetheless it remains a major safety issue and one that needs to be addressed by all sectors of the Industry.

STOP PRESS

ARC WELDING AND CONTACT LENSES

False information is circulating in the mining industry regarding the wearing of contact lenses and exposure to microwave radiation generated from arc welding.

The claim that exposure to arc welding may result in the fluid between the eyes and lens drying up, and subsequent removal of the lens may result in removing the cornea from the eye leaving the wearer blinded, is untrue.

An excerpt from a National Occupational Health and Safety Commission Publication entitled "Prevention of Eye Damage" December 1989, states :

OPEN LETTER TO INDUSTRY

In this Issue of Minesafe I would like to make a brief comment on the publication.

The publication is produced so that the Inspectorate can provide information to all sections of the Industry. I am pleased to say, that the response to its publication has been very positive. I also believe that Minesafe has a role to play in safety education, and every effort must be made by management to ensure the publication reaches everyone in the workplace where communication is a vital element of any effective safety program.

As more people become familiar with Minesafe, I hope they will respond to our request for articles and information for publication.

I would also like to wish everyone in the industry a happy and safe holiday season, and look forward to a continued dialogue in 1991.

J M Torlach
STATE MINING ENGINEER



The wearing of contact lenses in the workplace is satisfactory, provided that the appropriate eye protection is used in addition to the contact lenses. Contact lenses should not be regarded as a form of eye protection. Eye protection of welders with contact lenses is the same as that recommended for welders generally".

and,

"Contact lens wearers involved in welding should wear eye protection/welding goggles, helmet or handshield as is the normal practice.

They are at no greater risk than other persons incurring eye damage when welding".

Excerpt - Contact Lenses at Work.

NOISE REGULATIONS ON MINESITES

A draft proposal for noise regulations on minesites has been completed.

Essentially, the D.O.H.S.W.A. regulations, (now in force under a Instrument of Declaration), will apply. The necessary modifications have been made to these regulations so that the mines noise regulations will conform to the requirements for statutory responsibility and application.

An agreement on the draft proposal has been reached between representatives of employers, employees and the Government and the new regulations will be included in Part 9 of the M.R.A. Regulations.

The Parliamentary Council has been instructed to begin drafting of the amendments.

NOTICE TO ALL MINESITES

Occupational health and safety on minesites is the responsibility of the Department of Mines.

An Amendment Bill to incorporate Parts III and IV of the DOHSWA into the Mines Regulation Act is before the Legislative Council. Minesites will be informed when the amending legislation has passed through Parliament.

J M Torlach
STATE MINING ENGINEER

NEW PUBLICATIONS

1. Fatal and Lost Time Injuries - 1989/90 available December.
2. Guidelines for underground supervisors and miners (cage rising).
3. Interim guidelines on safety bund walls around abandoned pits.
4. National significant incident reporting system for Australian Mines.*
5. Stench gas emergency warning system.

* Published by Worksafe Australia

HEALTH & SAFETY REPRESENTATIVES IN THE MINING INDUSTRY

Back in 1975 when Bob Leggerini decided he would run for election as a Workmen's Inspector of Mines in the Kalgoorlie Inspectorate, he conned a fellow miner having a drink at the Victoria Tavern, in to going over to the Mines Department and giving him his vote. "I'll give you a vote 'Legger'", the mate replied loyally, and marched over to the polling booth.

Twelve months later when Legger met up with the same miner he confronted him with, "You never voted for me!". The mate retaliated, "How do you know?".

Legger explained, "There were only two votes in the box - one for me and one for another guy - and I know who I voted for!!!".

"Legger" won his election, and since 1975 has been one of five workmen's inspector's employed under provisions of the Regulation Act and Regulations.

Unlike District or Special Inspectors, the WIM's are elected by mine employees in their district, in formal elections held every three years. Carmen Vetrone has been in the job for 21 years; John Allison at Collie is the newest recruit and has been an Inspector since 1984.

The law requires that a Workmen's Inspector must have at least five years underground experience and hold a miner worker's health certificate as well as a Certificate of Competency as an Underground Supervisor, or in the coal mines - a 3rd Class (Deputies) Certificate of Competency.

Under the Mines Regulation Act, the WIM's powers include making inspections to see if the provisions of the Act are carried out. If he feels a mine is not safe, he can stop work in that mine and order the removal of any person until the provisions of the Act are complied with; he can enter and inspect at any time of the day or night; where a District Inspector is not available he can obtain written statements from witnesses and appear at inquiries with regard to accidents; he can report to a union on matters concerning safety and can even prosecute, but only with the authority of the State Mining Engineer or the State Coal Mining Engineer.

In addition to his inspection role the Workmen's Inspector is effectively a Health & Safety Representative and the 'go between' - for the workforce, management and the Department.

There's a lot more to the job than qualifications and experience, and to Carmen Vetrone, Bob Leggerini, Ron Strachan, Paul Brown and John Allison, it is now a way of life. For metalliferous inspectors, the job involves working away from home, long solitary hours spent on dusty dirt and gravel roads, and inspection time that can last from 0700 hours to seeing on the night shift. That translates into 30,000 kms a year for Paul Brown (Karratha) who shares one particular stretch of dirt road with 38 road trains over 250 km on a North West mine route.

A Workmen's Inspector is not at home in an office. His job means he visits all types and sizes of mines including the very small outfits. Talking to workers is an important part of the working day because there are many who are not familiar with the Act. Changing that situation is important because much can be learned, and accidents prevented if all workers knew more about the Act and Regulations.

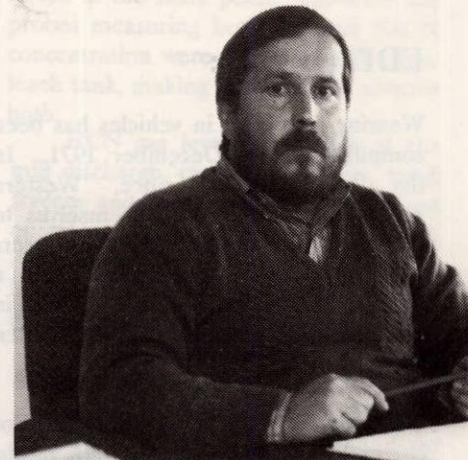
John Allison (Collie) does not have the vast distances to cover, but coal mining has its own particular hazards and like the others, John is deeply committed to his job, which most see as a long term career despite the drawbacks.

There's no overtime, too much time away from home, and plenty of criticism to deal with - but they'll stand again to stay in a job they love.

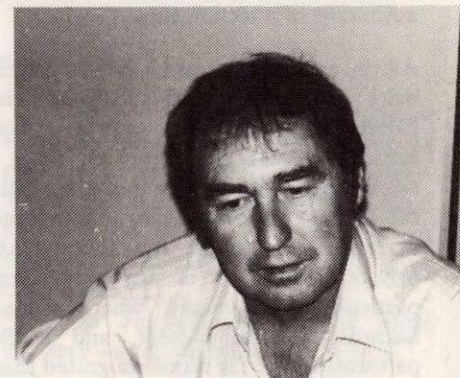
If you wish to contact any of the Workmen's Inspectors their phone numbers are :



Paul Brown
(Karratha Inspectorate) 091 868-243



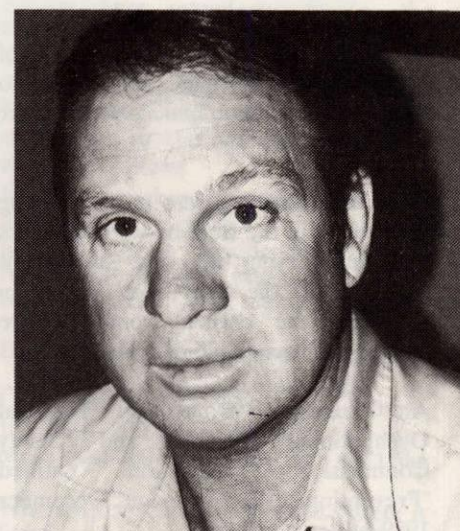
John Allison
(Collie Inspectorate) 097 341-222



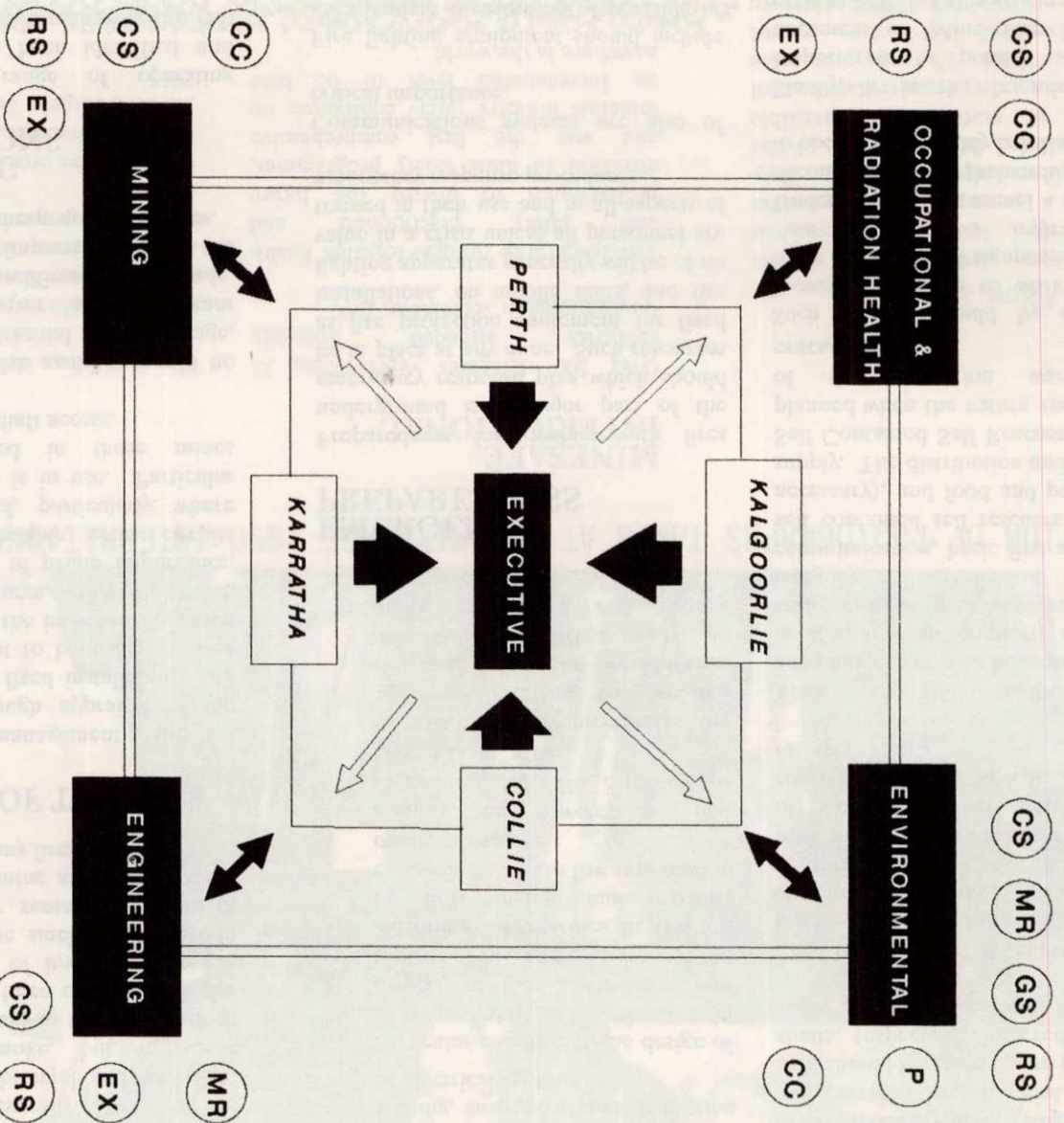
Ron Strachan
(Kalgoorlie Inspectorate) 090 213-066



Carmen Vetrone
(Perth Inspectorate) 09 222-3139



Bob Leggerini
(Kalgoorlie Inspectorate) 090 213-066



LEGEND	
CS	Corporate Services
RS	Royalties & Statistics
EX	Explosives & Dang. Goods
CC	Chemistry Centre
GS	Geological Survey
P	Petroleum
MR	Mining Registration

Information Exchange Between Mining Engineering and Other Divisions of the Department of Mines W.A.

MINE FIRES

WHILE THERE ARE COMBUSTIBLE MATERIALS PRESENT UNDERGROUND, THE RISK OF MINE FIRES REMAINS WITH US. NO HAZARD IS MORE TO BE FEARED.

The most critical hazard resulting from mine fires is not the direct impact of flame itself but the generation and spread of toxic gases resulting from combustion, asphyxiant fumes and gases which dilute oxygen levels in the atmosphere and the reduction in oxygen levels as a result of the combustion. The confined conditions underground, (enclosed atmosphere), raise the underground fire hazard far above that on surface. Generally there is an indication of fire by smell and the visible presence of smoke, but in some situations, especially in the aftermath of a fire which has been extinguished, the insidious danger of invisible toxic gas which can not be smelt, (e.g. Carbon Monoxide), may remain. Thorough checking of the mine atmosphere must therefore follow any fire outbreak.

ANALYSIS OF THE RISK

Sound risk management practice requires a thorough appraisal of the mine layout, the fixed installations and mobile equipment to be used, services distribution, and the intended or actual operating procedures. The ventilation system design is of prime importance, and wherever possible, series circuits must be avoided, particularly where diesel equipment is in use. Particular care is required in those mines dependent upon shaft access.

The process of risk analysis should be undertaken at the initial planning stage, and also whenever any significant installations or modifications are made. Risk analysis also impacts directly on the development of emergency procedures.

OPERATING PRECAUTIONS

An extensive range of operating precautions have been identified and developed to assist in managing fire risk underground. Some of the more obvious are :

- Minimising the use of combustible materials underground for construction and fixed installations and services. Polyurethane foams in particular should be avoided.

Examples include the use of brick and concrete in preference to timber.

- Prohibition of accumulation of combustible waste and daily removal of any unavoidable combustible rubbish. Provision of non-combustible containers with lids for temporary storage of discarded combustible waste in workshops etc.
- Careful design and strict operating procedures for storage, transport and transfer of fuels.
- Care in the location, design and protection of electrical installations, (substations, switchrooms etc). Care in the routing, suspension and protection of electrical cables.
- Particular attention to the design of underground diesel equipment in respect of the construction and routing of fuel and oil lines and the location of accessories in relation to hot engine and exhaust components. Auto fire suppression on diesel engines.
- Identification, protection and procedures for "No Smoking or Naked Light" areas.
- Adequate control procedures for "hot work" (cutting and welding etc), particularly in proximity to vulnerable installations, such as shafts, substations and battery charging areas.

EMERGENCY PREPAREDNESS

Preparedness for dealing with fires underground is a major part of the emergency response plan which should be in place at any mine. Such resources as fire protection equipment for fixed installations, on mobile units, and fire fighting apparatus generally will be of no value in a crisis unless all personnel are trained in their use and in all aspects of emergency response procedures.

Communications systems are also of critical importance.

Fire fighting equipment should include an adequate distribution of portable or trolley mounted extinguishers of various types, but too much reliance is often placed on these units. Their use is usually restricted to small outbreaks of fire which are attacked immediately; they are seldom adequate for any fire of significance.

For fires involving combustibles other than fuels and oils or electrical equipment, fire hose installations are very effective. Care must be taken to provide high integrity water supplies with adequate pressure and the correct type of connections where fire hoses are to be used. When there is a risk of fuel and oil fires underground (e.g. workshops and fuel and oil installations) then substantial fire hoses with foam adductors are essential. Expert advice should be sought on fire protection installations at any mine if it is not available in-house. It is essential to have very carefully planned procedures for emergency response and to ensure that all persons are fully trained and versed in the necessary drills. Regular updates and exercises are essential. Particular care should be given to fire protection in shafts, (especially timbered shafts), as many are part of the intake air system.

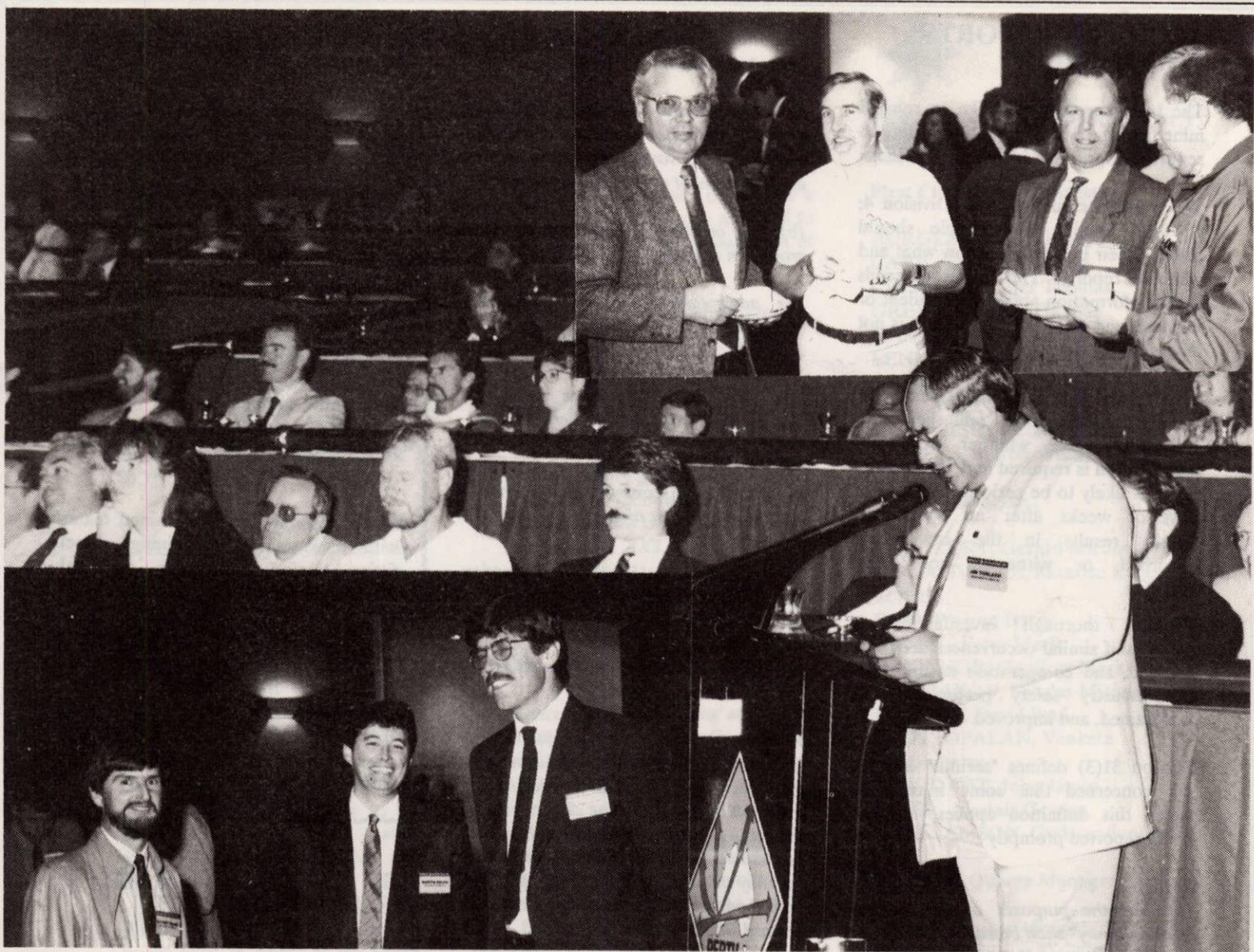
The Inspectorate is encouraging the installation of appropriately located and equipped fire refuges in underground operating areas. These may be built in rock with accessory brick or concrete or of steel or other non-combustible construction to a specified fire proof rating.

Their essential components are adequate capacity to house all personnel in the area in comfort, a dedicated compressed air ventilation supply of high integrity, reliable surface communication, basic first aid facilities, self contained self rescuers (if deemed necessary), and food and potable water supply. The distribution underground of Self Contained Self Rescuers should be planned when the nature and geography of the operation warrants this precaution.

Such refuges should be strategically located in relation to work areas and route marking and signposting must be clear and of a high standard. Underground personnel should be encouraged to visit their refuge regularly to become thoroughly familiar with it.

Finally, it is the intention of the Inspectorate to publish a guideline document on Mine Fire Precautions early in 1991, but this article may help to stimulate a higher level of awareness in the interim.

CONT'D ON PAGE 9



A SELECTION OF PHOTOGRAPHS TAKEN AT THE MINESAFE 1990 INTERNATIONAL CONFERENCE

MINESAFE INTERNATIONAL

Over 500 delegates representing 22 countries attended Minesafe International in September, 1990.

The conference brought together health and safety practitioners and professionals to discuss the future direction of mine safety programmes, and was the first comprehensive minerals industry safety conference on an International level to be held anywhere in the world.

Key speakers, including internationally recognised authorities, provided delegates with expertise on atmospheric contaminants, low level radiation, fires and explosions, international standard setting and general safety management.

Copies of the proceedings can be bought from the Chamber of Mines and Energy, 12 St George's Tce, PERTH (09)325-2955.

CONT'D FROM PAGE 8

These notes are by no means comprehensive, but are intended to serve as a prompt for all persons employed in underground mining. They are commended in particular to the attention of statutorily responsible persons, and safety representatives and safety committees. The papers on mine fires presented at the recent International Minesafe 1990 Conference should be distributed to these groups for study.

**THIS CRITICAL RISK
WARRANTS MAXIMUM
ATTENTION**

THE MINESAFE EDITORIAL COMMITTEE WOULD LIKE TO THANK EVERYONE WHO HAS CONTRIBUTED TO MINESAFE DURING 1990 AND WISHES ALL ITS READERS A HAPPY AND SAFE XMAS AND PROSPEROUS 1991

ACCIDENT REPORTS AND THE LAW

The Inspectorate would like to remind mine managers of their statutory duty to report accidents and incidents on mines.

The Mines Regulation Act (Division 4; SS31-35) applies, and people should make it their business to know what and when to report. The Inspector needs timely information about the accident or incident, and a few missing details is not an excuse for delay.

Prompt reporting of accidents/incidents, usually by telephone, will help the Inspector decide whether a formal investigation is required and whether the injury is likely to be serious. A delay of days or weeks after an occurrence usually results in the site being disturbed, or witnesses not being available.

Prompt, thorough investigation is essential if similar occurrences are to be avoided, and co-operation ensures that the industry safety performance is maintained, and improved.

Section 31(3) defines "serious" and we are concerned that some injuries to which this definition applies, are not being reported promptly:

S31(3)

(a) For the purposes of this section "serious injury" shall be such as results in the injured person being disabled from following his ordinary occupation and earning his usual rate of remuneration for a period of two weeks or more.

(b) Any case of unconsciousness arising from inhalation of fumes or poisonous gases shall be treated as serious.

(c) Any accident, including fuming, arising out of the use of explosives or blasting agents shall be treated as serious.

In most cases serious injuries, such as severe lacerations and fractures are obvious, and should be reported immediately.

The Inspectorate is also concerned that sometimes, no report is made when a fire occurs at a mine.

It is important to know that Section 31.5(b) of the Act requires that all mine fires be reported.

The manager shall, forthwith after the occurrence of

(a) *any extensive subsidence, settlement or fall of ground or any major collapse of any part of the workings of a mine, or any earth movement caused by seismic event;*

(b) *any outbreak of fire above or below ground in any mine;*

(c) *any breakage of a rope, cable, chain or other gear by which men are raised or lowered;*

(d) *any inrush of water from old underground workings or other source;*

(e) *any accidental ignition of dust below ground or the discovery or the presence of gas or an outburst of gas in any part of a mine;*

(f) *any accidental ignition or detonation of explosives, or any delayed or fast ignition of explosives; or*

(g) *any explosion or bursting of compressed air receivers,*

whether or not any bodily injury to any person or damage to property has resulted from such occurrence, give notice of it to a district inspector for the district wherein the mine is situated and give to him such particulars in respect of the occurrence as he may require and the manager shall record particulars of the occurrence in the Record Book.

This applies to any fire either underground or on the surface and regardless of whether it is considered large or small, serious or minor.

MINE RESCUE AT BLACK FLAG

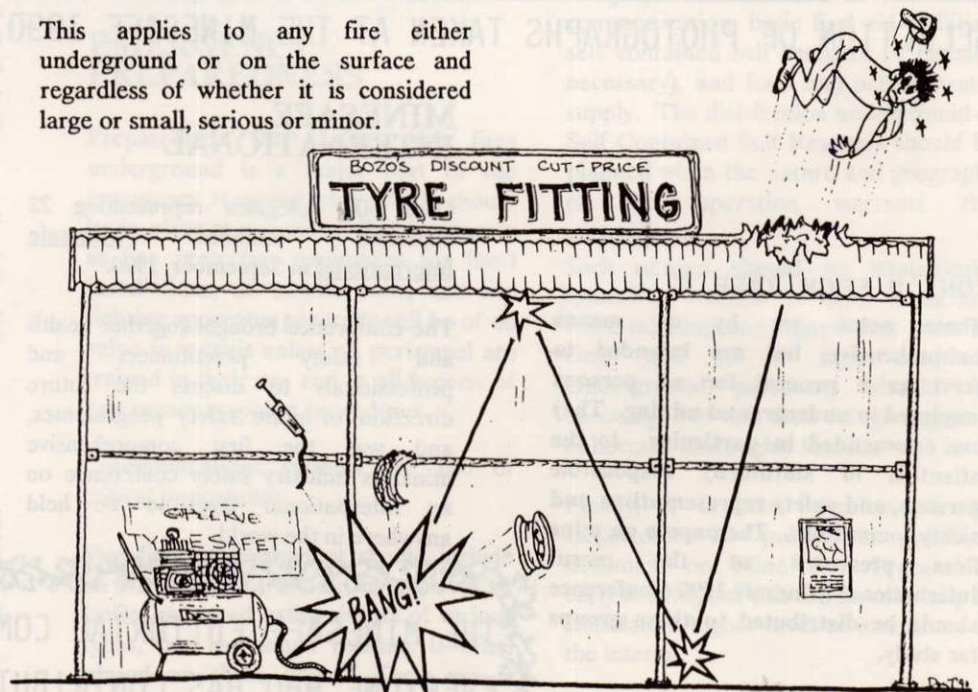
Three companies in the Black Flag area have joined forces to provide a mines rescue service in the Eastern Goldfields. Twelve volunteers went into an intensive training programme in May 1990 conducted by Fergus Campbell, Mines Rescue Co-ordinator for Kalgoorlie Consolidated Gold Mines.

The trainees from Lady Bountiful, Ellen and Mt Pleasant proved their dedication by putting in four hour training sessions after shift completion, and the first group of six completed their training in July, followed by the second group in August.

Black Flag now has two trained teams with backgrounds in mining, diesel fitting, mining engineering, electrical fitting and first aid.

The Black Flag Mines Rescue team is notable for being the first team assembled from three different companies; and it is believed to be the first team trained from a workforce that operates three shifts per day seventeen shifts per week.

"IF IN DOUBT, MAKE A TELEPHONE REPORT"



NEVER EXCEED THE MAXIMUM ALLOWABLE INFLATION PRESSURE

YOU WANTED TO KNOW....



QUESTIONS AND ANSWERS

Q. How do I obtain a Locomotive Driver's Certificate of Competency?

A. Application for a Locomotive Driver's Certificate of Competency can be made through Mr Denis Brown, Electrical Engineer of the Mining Engineering Division.

The Certificate is allocated for use on minesites only. (Regulation 20.7)

Once you have completed the application form and attached the necessary supporting documents, arrangements will be made for you to sit a three hour written examination at either our Perth or Karratha office.

For further information, please contact Denis Brown on : 09 222-3546.

Q. If you are unsure whether the noise in your workplace is likely to be above the action level, what method of noise assessment can you use as a guide?

A. If speech must be made at a "raised voice" level in order to be heard clearly at a distance of 1 metre from the speaker in the noisy area, then the noise is likely to be above 90 dB(A).

For further information contact the Department of Mines, Engineer - Noise, Jerry Wilczewski (09) 222-3128



RISK ANALYSIS AND SYSTEM SAFETY IN MINES

The WA School of Mines is marketing a 5.5 day workshop on mine safety, commencing on Monday 25 February 1991. The program will be presented by: George Sotirov (formerly of Mines Accident Prevention Association of Ontario, Canada) and Corrie Pitzer, Group Risk Management, South Africa.

Enquires should be directed to Professor Odwyn Jones, WASM on telephone (090)91-1400.

Q If a lost time injury occurs on a minesite, what notice is required to be submitted to the Department of Mines?

A *Legally, in accordance with Section 31 of the Mines Regulation Act, the manager is required to: -*

a) for serious accidents (2 weeks or more off work)

Notice shall be given as soon as possible (ie. facsimile or telephone). Notice shall be confirmed in writing (ie. standard AXTAT Mining Injury Report Forms) at the end of the calendar month in which the accident occurred.

b) for minor injuries

notice shall be in writing at the end of the calendar month (ie. standard AXTAT Mining Injury Report Forms).

It is a Departmental requirement that all AXTAT returns must be submitted no later than the end of the second week of the following month the accident occurred.

In the event of a recurrent injury occurring, a separate Mining Injury Report Form is required.

SAFETY PERFORMANCES

Congratulations to the Renison Goldfields Group for having reduced the frequency of lost time accidents throughout most of their sites during 1989/90.

- Narngulu Minerals of Geraldton recorded its 1000th day without a lost time accident.

- Renison Tin Division on the west coast of Tasmania, reduced its lost time accident frequency by 75%; from an average of 189 accidents per million man hours worked in the preceding three financial years to 48 in 1989/90.

CERTIFICATES OF COMPETENCY AWARDED

First Class Mine Managers

BURGESS, John Edward
CARR, Christopher John
CULLINAN, Peter Thomas
GREEN, Stephen Thomas
HAMPEL, Brett William
LENIGAS, David Anthony
LOERCH, Philip Mark
MITT, Peter Sulev
ROBERTSON, Charles Cameron
STAPLES, Martin William

Quarry Managers

DANCKERT, Gerard Michael
DESSAUVAGIE, Maurice Eugene Cornelis
FAIR, Warren Barry
HAMEL, Perry Mark
O'CONNOR, Geoffrey Mark
POZNIAKOV, Nicolas Michaelis
PURDEY, David Paul
RAJAGOPALAN, Venkata Subramanian
STODDART, John James
TIVER, Alastair George
*WILLIAMSON, Gudmundur Olafur

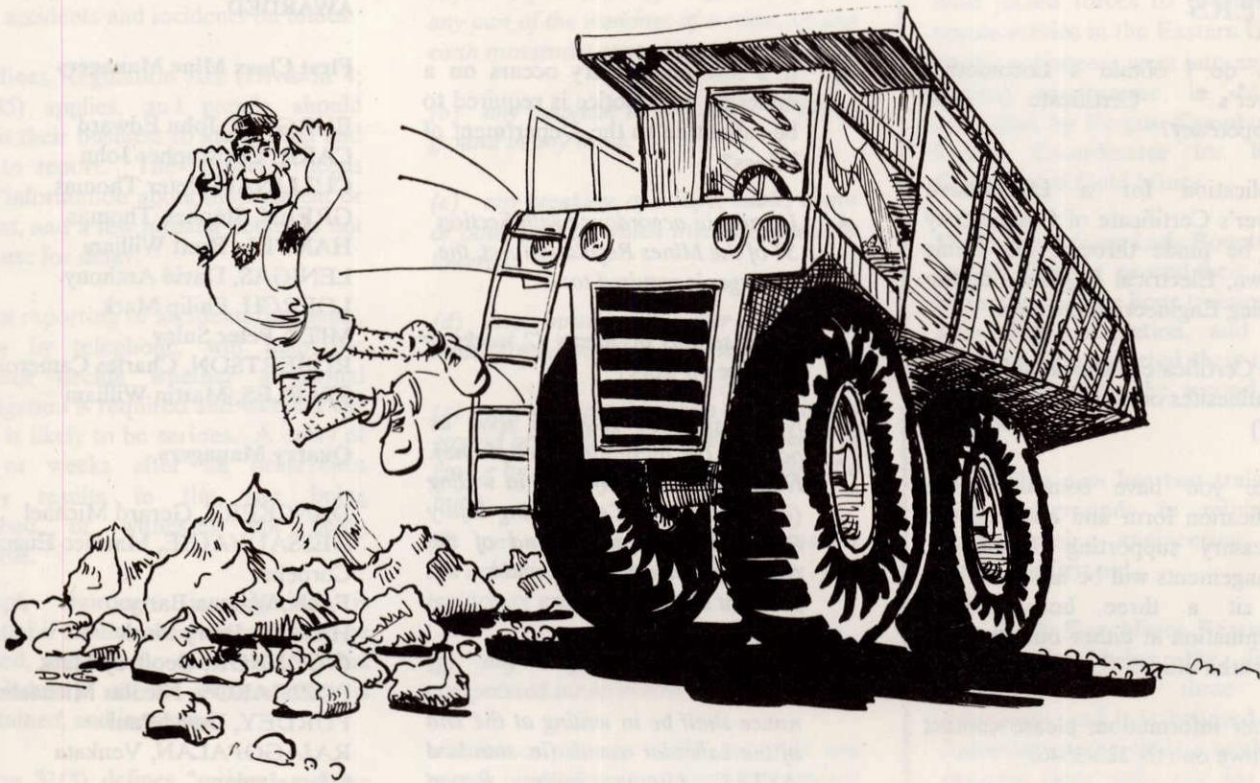
Restricted Quarry Managers

HYDE, Charles Alexander
MALUISH, Bruce Dennis Tilney
*SAMSON, Mark Walter
SPENCER, Michael John
*WILLIAMS, John Dennis

Underground Supervisors

DAWSON, Craig
DOWN, Matthew Bernard
GILLAM, Thomas Andrew
GORZALA, John Francis
HARTLEY, Robert Edward
KELLY, Raymond John
*KUBOSZEK, Stanislaw
LOW, Francis Cheng-Wai
MATHER, Robert Falcon
*PARR, Frederick Glenn
PEARSON, Christopher Leslie
PECKHAM, Michael John
PETHER, Stuart James
POTTS, Walter Freeman
RAYNER, Francis Joseph
RUSSELL, Donald Roderick
SOLDINI, Juan Raul
*YOUDE, Simon Peter Royale
*YOUNG, Darryl John

*Restricted Certificates



ACCIDENT ALERT :

People either driving or working on haulpaks and jumbo rigs have had serious accidents ascending or descending from the machinery.

Most of the injuries involve either the foot or lower leg and ankle, and result in sprains, abrasions or twisted ankles, and torn ligaments.

CAUSES :

1. Slipping on ladders or steps; tripping on uneven ground or loose rock/coal and falling after losing balance.
2. Poor heavy equipment access design.
3. Jumping from ladders.
4. Greasy steps and handrails.

PREVENTION :

BE ALERT. Climb or descend with care. Bring the problem to the attention of your supervisor and use your safety meeting to discuss ways to prevent these accidents.

STAFF CHANGES

Andrew Extract has joined the Division as a District Mining Engineer. He is based in the Kalgoorlie office.

Jenny Oosterhof has taken a quick promotion to the position of Scientific Officer, Occupational Hygiene. She is still to be based in the Perth office - Congratulations Jenny!

There have been five new Environmental Officers appointed to the Division :

Kim Anderson - Research & Technical Services;

Bob Dye - Perth Inspectorate;

Nic Dunlop & Charles Newland - Karratha Inspectorate;

John Robinson - Kalgoorlie Inspectorate.

Lal Mahajan, District Inspector in Kalgoorlie, has been transferred to the Perth office.

Jane Williamson is our new Data Entry Operator for the Axtat system.

MINESAFE

Published by the:
Mining Engineering Division
6th Floor, Mineral House
100 Plain Street
EAST PERTH WA 6004.

Editor: Catherine Stedman
Committee: Anna DeFilippi
Martin Ralph
Simon Wood
Karen Buxton

Graphics: Pieter Bakker
Typesetting: Sherry Fyfe
Photographics: Surveys & Mapping
Original Art

Work: Doug Blythe
Pieter Bakker

Proofing: Karen Buxton

