MINESAFE

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

This is a dangerous practice.The photograph shows how this crew removes drill rods from the drill string. "Offsider B" takes the lower end of the rod from "offsider A" and leaps into space hoping there is sufficient slack for him to make the side platform. Once committed, he is relying on his own agility, the judgement of the driller operating the winch, and luck - one will eventually let him down. For further comment, see excerpt from Fatal Accident Study 1980-1991 (Overleaf page 2).

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A BIG DAY FOR CONTRACTORS

Tuesday February 8th, 1994 - perhaps not a particularly notable day for most, but for the Western Australian contract mining industry a potentially important date.

On that day representatives of the major earthmoving contractors, who expressed interest in forming a Safety Association for contractors, met in the offices of Monadelphous.

The meeting agreed to form a Safety Association and, as a first project, look at ways of standardising induction across their organisation.

Contractor's employees tend to find themselves on an induction treadmill as they move from site to site and earthmover to earthmover and back again. The process is time consuming and expensive for both contractor and client.

The yet to be named Association has appointed an interim committee chaired by Greg Harris (Eltin), Bob Halse (Monadelphous)Vice chairman, and Arthur Baker (Roche) Secretary.

Kim Sutton (Brandrill) and John Lemon (Total Erosion Control) represented the drilling industry and contractors on the Kwinana strip at this meeting, and hopefully other contractors will join.

For further information call:

Greg Harris	(09) 334 8888
Bob Halse	(09) 316 1255
Arthur Baker	(09) 458 4177

INAUGURAL MEETING
West Australian mining contractor's and guests.

Front Row L-R: Bob Halse (Monadelphous), Catherine Stedman (DOMEWA), Sue Murphy (Clough), Greg Harris (ELTIN), Bruce Anderson (Henry and Walkers).
Back Row L-R: John Lemon (TEC), Ralph Hayes (Boral), Arthur Baker (Roche), Wally Gelok (Clough), Doug Rogers (AWP), Kim Sutton (Brandrill), Graham Harford (McMahon), Ivan Gurney (Thiess), Roger Hampson (DOMEWA), Terry Robinson (Charles Hull).
Absent: Terry Candiodero (JR Engineering), Kim Sweet (TAFE).

THE FATAL ACCIDENT STUDY 1980-1991

From page 1:

The Fatal Accident Study 1980-1991 contained a series of recommendations related to all areas of mining.

Handling drill rods was the subject of a recommendation and is quoted here in full:

"That the methods and mechanisms for handling drill rods on Drilling Rigs be reviewed by the Industry and Drilling Rig Manufacturers.

The work group discussed this issue at some length and sought advice on the methods currently used to handle drill rods. Some drill rigs, particularly larger ones, have automated systems installed. An engineering approach is required to reduce the level hazard to operators from swinging drill rods".

EDITORIAL

The belief that mining is inherently hazardous is as old as the mining process itself. A dangerous fallacy is the belief that because of the nature of mining, fatalities and serious injuries are inevitable. Those who maintain this fallacy cannot simultaneously claim to have an unwavering commitment to accident free workplaces.

Good safety systems cost money - not just dollars invested in hi-tech gadgetry and equipment, but dollars invested in people - aimed at minimising the potential for human error and dedicated to the education and training which is essential for both enlightened safety management, and effective performance throughout the enterprises.

Investing in attitude begins in the board-room, and requires a personal commitment from the Chief Executive Officer. It is not something that can be brought in and then cease to be a priority.

Neither can the responsibility for ensuring a safety system works be neatly packaged and handed over to line management or safety departments, without ensuring individuals are competent and have the confidence of the workforce. Any deficiency in commitment or resources will be reflected in both individual and collective attitudes, as well as foster a perception that senior management does not place a high priority on safety management other than as a convenient provider of scapegoats in case something goes wrong.

Good safety systems are not designed to be used as bargaining chips. Good safety systems are not designed to pay lip service to either legislation or corporate requirements - neither are they designed to frustrate the viability of an operation nor to ensure personnel are wrapped in cotton wool.

Good safety systems are designed to keep people alive and healthy, and shortcuts or cutbacks that compromise that purpose will destroy their integrity and possibly a human life.

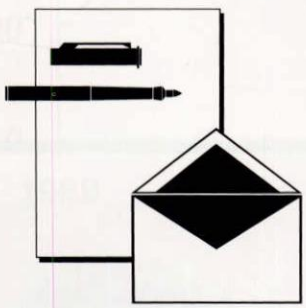
Poor attitudes to either safety philosophy or safety practice remain exclusively the property of ignorance, and ignorance kills.

Individuals at whatever level, will take their cues from what they see happening around them. Ensuring those cues are the right ones can only be effective if they start at the top. If a good attitude to safety does not pervade all levels of the organisation, then the fallacy that fatalities and serious injury are inevitable becomes a self fulfilling prophecy.

Catherine Stedman

CATHERINE STEDMAN

LETTERS TO THE EDITOR:



LENGTH OF SHIFT WORKED BY AIR-LEG MINERS

The Mines Regulation Amendment Act (No. 30 of 1993), which was proclaimed on December 24th, 1993, removed constraints on hours and days of work in the mining industry with two exceptions, to which I refer later.

Prior to this amendment some under-ground mines were operating on schedules of extended shifts of up to 12 hours, usually in conjunction with compressed work schedules, on both a long distance commute and a local residence basis.

In all of these cases the operations involved mechanised mining.

Throughout the period of operation on exemptions and the period of industry consultation leading up to the removal of constraints by the Amendment Act, the position taken by industry management has consistently been that no responsible mining company would contemplate introducing work schedules for air leg miners of more than 8 hours actual working time.

This view is fully supported by the Mining Inspectorate of the Department of Minerals and Energy, and is consistent with the duty of care for employers and employees required by the Mines Regulation Act.

It is therefore a matter of concern to myself and to all of the inspectorate that an advertise-ment appeared in the Kalgoolie Miner calling for air-leg miners to work 11 1/2 hour shifts on a two week on/one week off basis.

The regulations introduced with the proclamation of the Amendment Act include the restrictions on hours to be worked by winding engine drivers, which were previously in the Act.

In addition, a provision has been included in the Mines Regulation Act by the Amendment Act which provides power to make regulations restricting hours of work for air-leg miners.

The Inspectorate has the authority to intervene if unsafe systems of work come to its notice, and if necessary, will not hesitate to introduce regulations to prevent any introduc-tion of excessive shift lengths for air-leg miners, rather than deal with cases as they arise.

A prudent limit for full time air-leg work is considered to be eight hours effective working time.

This would not prevent the occasional or casual use of air-legs by persons on longer shifts for limited periods on service work, or placement of a few pins or rock bolts.

The intent of this letter is to ensure that there is clear and widespread understanding of the Inspectorate's views on this important issue.

G J Dodge
Acting State Mining Engineer

SAFETY LEGISLATION - UPDATE

There has been substantial progress since the advice on the legislation amendments and the formation of the Mines Occupational Health and Safety Advisory Board (MOHSAB) was provided in the September issue of MINESAFE 1993.

The repeal of Division 2A (Health) and Divisions 5 and 6 (hours and days of work) took effect on December 24, 1993.

The Inspectorate will continue to pay close attention to rosters of hours and days of work which are in operation in the industry.

MOHSAB was established in September 1993 and has met five times to date. The sub-committee structure has been streamlined, with the formation of two standing committees dealing with occupational health and general safety respectively.

A radiation safety sub-committee and a medical advisory panel are attached to the occupational health standing committee for specialist advice.

JimTorlach

The legislation development sub-committee has met eight times on the revision and consolidation of the Mines Regulation Act and the Coal Mines Regulation Act into a single Act. Special provisions for Coal will be required in the regulations.

Cabinet approval has been sought to draft the Bill and it is expected that the Bill will be introduced to Parliament during the autumn session.

Work is continuing on revision and updating the Regulations.

An important new development is the establishment of an updated mine employees' health surveillance system, the requirements for which will be incorporated with revised regulations.

Work is proceeding on the development of this system under the co-ordination of Dr Galton-Fenzi.

MINESAFE will continue to provide an update on these important developments during the year.

PROCLAIMED:

MINES REGULATION AMENDMENT ACT 1993 (NO. 30 OF 1993).

On December 24, 1993 amendments to the Mines Regulation Act and Regulations became law. The amendments, foreshadowed in August, 1993, repealed Divisions 2A (Health), Division 5 (Employment) and Division 6 (Sunday Labour Underground).

The provisions of the General Duty of Care in the Act require employers to provide safe systems of work, which include all aspects of the job structure, and place an onus on employers to implement standards which effectively make Divisions (5) and (6) redundant.

An updated system for medical surveillance is currently being developed by the Mines Occupational Health and Safety Advisory Board (MOHSAB), to replace the provisions previously existing under section 2A. As of December 24, 1993, Mine Workers Health Certificates ceased to be a requirement of the Act.

Consequential to the repeal of these divisions, the necessary amendments, deletions and insertions were made to the regulations.

All existing exemption orders relating to Division 5 and 6 have been revoked with the repeal.

For clarification or further details, please contact your local inspectorate.

Karratha (091) 868 243;
Kalgoorlie (090) 213 066;
Perth (09) 222 3132.

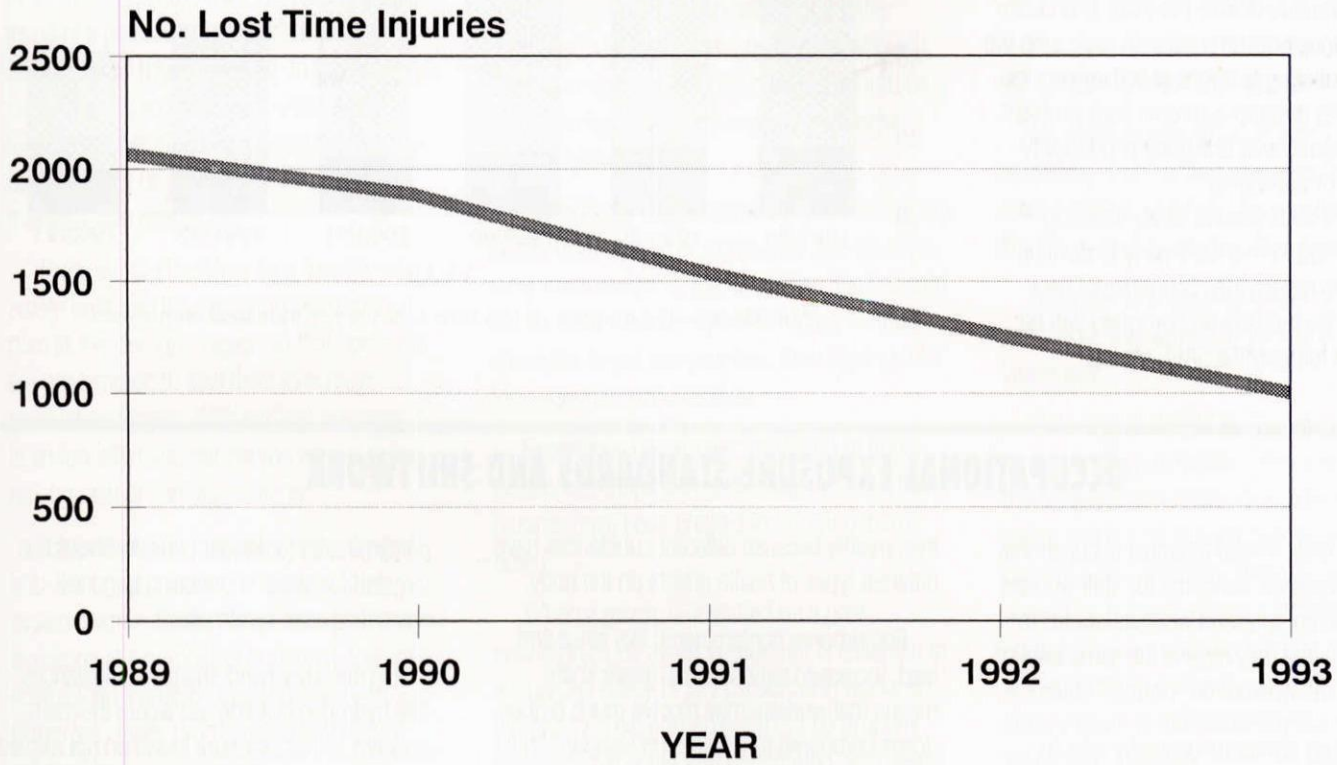
Geoff Dodge, Acting State Mining Engineer

AXTAT FLYER

FEBRUARY 1994

For the first time in AXTAT history the number of injuries for METALLIFEROUS mining in a calendar year has been LESS THAN 1000.
In 1989 there were 2064 injuries recorded compared with 996 for 1993.
This represents a 52 PERCENT IMPROVEMENT over four years, despite an 8 percent increase in the number of employees.
Further details of industry safety performance for the 1993 year will be published in March/April 1994.

NUMBER OF LOST TIME INJURIES FOR WESTERN AUSTRALIAN METALLIFEROUS MINES



FATAL ACCIDENT ADVICE

On late 1993 State Inspectorates agreed to notify other states immediately of fatalities in their states. A brief summary of any fatal accident advice will be published in MINESAFE beginning with this issue. The reports published here have a tragically familiar theme.

South Australia.

An employee was fatally injured when he was dragged into the unprotected end of a conveyor belt. He had apparently removed the guard, with the help of another worker, to remove buildup around the tail drum. The guard was not fitted with an electrical underlock to stop the conveyor. Also the conveyor had not been isolated before the guard was removed.

Victoria

A load-haul-dump operator died from injuries after his unit fell approximately 15 metres into a stope. The employee was backfilling the stope with waste rock at the time of the accident.

OCCUPATIONAL HEALTH FILE:

BACK INJURIES

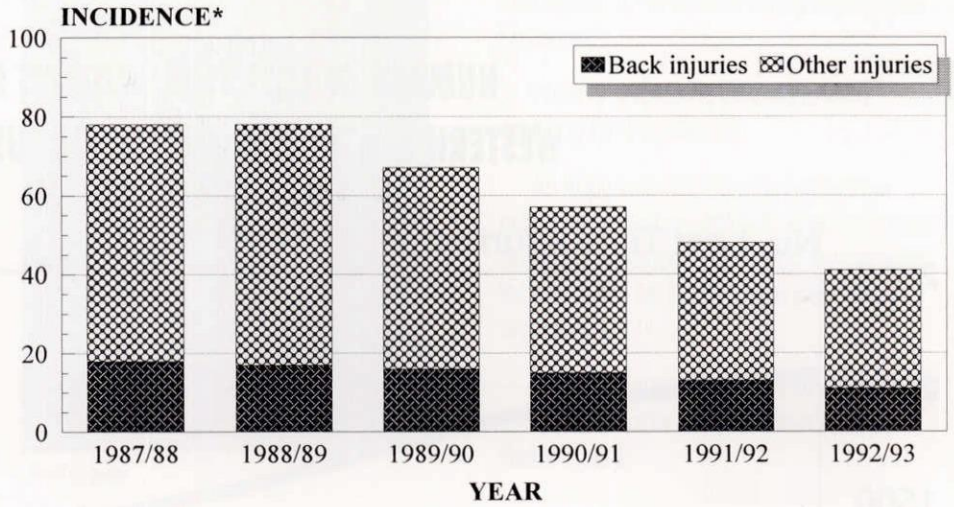
PROGRAMS ARE NEEDED TO REDUCE THE INCIDENCE OF BACK INJURIES.

This chart demonstrates that back injuries account for about 26% of total injuries, and that they are not decreasing at the same rate as injuries in general.

In 1992/93, the average number of work days lost per back injury was 14 days and in excess of 5,300 days were lost in the mining industry because of back injuries. Compensible back injuries cost the industry about one million dollars per year! This cost however, does not come close to assessing the personal suffering and loss of self-esteem for workers who develop a chronic back problem which interferes with both their productivity and sense of well-being.

The MOHSAB general safety standing committee will form a work party to develop strategies to reduce the occurrence of back injuries in the industry and progress will be reported in future MINESAFE issues.

BACK INJURIES SHOWN AS A PROPORTION OF THE INCIDENCE OF TOTAL INJURIES IN THE WA MINING INDUSTRY (COAL AND METALLIFEROUS)



*Incidence - the number of lost time injuries per thousand employees.

OCCUPATIONAL EXPOSURE STANDARDS AND SHIFTWORK

Is there a need to adjust occupational exposure standards for shift workers on compressed work schedules to ensure they receive the same level of protection as workers on "normal" shifts?

Exposure standards generally refer to average daily airborne concentrations of substances to which nearly all workers may be exposed repeatedly without adverse effects. They are based on an 8 hour day and 40 hour week, which is not typical of mines where longer hours are the norm. For example, some employees on fly in/fly out mines may work up to 12 hour shifts on a 6 on/1 off roster.

How should the industry deal with applying occupational exposure standards to shift hours at mines?

It might seem that a simple solution should be available - such as just lowering the standard by certain factors depending on the length of the shift. But it's not as easy as this, mainly because different substances have different types of health effects on the body.

For airborne contaminants like silica and lead, increased exposure on longer shifts means that workers may receive much higher doses compared to workers on standard shifts. The health effects are dependent on the total dose workers receive over their working lifetimes, as these substances tend to accumulate in the body and stay there for a long time. No sound scientific basis has yet been developed for establishing "corrected" exposure standards as lung clearance mechanisms for short repeated cycle versus long intermittent cycle exposure are not well understood.

It is therefore recommended that the ALARA (as low as reasonably achievable) principle is pursued and atmospheric contaminants reduced to the lowest practicable levels.

It is also recommended that workers, or groups of workers, who have potential for exposure to higher concentrations of contaminants for longer periods, should be targeted for closer monitoring to guard against adverse health effects.

On the other hand, there are substances like hydrogen cyanide gas where the main concern is that exposure levels do not exceed a certain level (i.e. 10ppm) at any time during a shift. For such substances, the exposure standard may not need to be adjusted, no matter how long the shift is, as the effect is not cumulative and chronic.

The Department has prepared a discussion paper on adjusting occupational exposure standards for unusual work shifts. Copies are available from Ms Jenny Oosterhof (Occupational Hygienist) on (09) 222 3091.

Comments and suggestions from all sectors of the industry are encouraged, as the Department, through MOHSAB (the Mines Occupational Health and Safety Advisory Board), will produce guidelines on the subject during the current year.

VERTICAL OPENING SAFETY PRACTICE

EXTRACT. Vertical openings within underground mines, or into underground mines from the surface, (particularly opencuts), present a range of extremely serious hazards.

A common error made with vertical openings is that design is dictated by operating convenience, and this may create situations where the most effective safety precautions can not be applied.

Moreover, many incidents and accidents which have occurred over the years were the result of a perceived time constraint on operations by those involved. In many situations the acceptance of some delays relating to operating procedures with vertical openings will be mandatory, in order to maintain safe operations.

There should therefore be a *'margin of safety'* built into the operating performance plan at the design stages so that operators are not tempted to take risks to achieve production targets. With vertical openings it is all too often another person who is put at risk by rash or careless actions.

It is particularly important in the case of sub-level open stopes, (or other stoping systems where there may be access to vertical openings at a number of horizons), that well established Vertical Opening Safety Procedures are clearly promulgated and rigidly adhered to.

OPERATION OF PASSES

Given that the ore pass system must be designed to suit the nature and scale of the mining method, it is essential that proper operating control is maintained on what is tipped into the pass. Excessive oversize creates hang ups, and bringing down of hung passes by blasting is in itself an additional introduced hazard, which should be minimised.

The addition of water to the top of passes to bring down hang ups can create an extremely hazardous situation. Lives have been lost as a result of "mud-rushes" from orepasses. Water should be applied only with the approval of, and under direction of, a supervisor. When water is applied, personnel at or near the extraction point or other horizons below must be warned and all necessary precautions taken.

When blasting is essential to bring down any pass, meticulous care must be taken after the hang up is accurately identified, to warn and protect all persons who may be working adjacent to the pass on any horizon to which it connects, and at the extraction point if the charge is to be fired from any horizon above it. The maximum size of such charges should be strictly limited, as determined by the Underground Manager.

When finger rises are used to provide tipping points from a number of levels or sub-levels to a common ore pass, the finger rise itself should not be filled. That is, if the main pass is filled above the finger rise junction, then tipping into the finger rise should cease.

Experience has shown that filling of finger passes is a major cause of hang-ups, and that hazards have been created in bringing them down.

When a grizzly is installed on a pass, provision of fall arrest equipment is essential to ensure the safety of any person who works on the grizzly. This equipment must be properly installed, inspected and maintained, and inertia reels should be regularly checked by a competent person.

When ore passes have a number of fingers, those not in use should be scaled down, blown off and bulkheaded off, and the fact that this has been done recorded.

When ore passes (or any vertical opening) are to be closed off, whether on a temporary or a permanent basis, details of the status of the pass or opening must be recorded on plans and written records.

LADDERWAYS

It is essential that all ladderways are constructed and maintained to a safe standard.

The top of a ladderway which is a regular travelling route between levels or part of the escape route, should be properly constructed and decked to prevent any material from being inadvertently dropped or dislodged into the ladderway.

Adequate clearance should be provided for persons using the ladderway from pipes, cables or other services which are installed in it. In particular any ladderway used for travelling, escape, or access to workplaces must have sufficient clearance to allow ready access by mine rescue teams equipped with self contained breathing apparatus.

No material should be dropped down any ladderway. Such action may directly injure other persons, and may damage the ladderway and create an unexpected hazard.

No material should be raised or lowered in any ladder way while any person is using the ladderway.

Both hands should be free when climbing or descending on ladders. Any load slung on the back and shoulders should be secured safely and not be of such bulk or weight as to present a risk of falling. Heavy or bulky loads should be hoisted. Where a ladderway is equipped with a slide for landing materials with a winch or by hand ropes, no person should travel in the ladderway during the haulage of material.

Every ladderway should afford a safe means of entering and leaving it at any sub level to which it gives access, as well as the top and bottom entry points. Access ladderways to stopes should have a safe means of entering and leaving the ladderway, and protection or covering, (which is readily removable to allow the transfer of equipment), to prevent persons from falling when crossing it while working in the stope.

This extract has been taken from a draft guideline prepared by Jim Torlach. It is expected that this guideline will be published later in 1994.

KANOWNA BELLE - PROGRAMS FOR PEOPLE

How do you integrate safety into the framework of an organisation so that it becomes part of the whole?

You could consider the innovative and breathtakingly simple programs being developed at the Kanowna Belle Gold Mine near Kalgoorlie.

At Kanowna Belle, safety culture is all about empowering people, and in every department employees are involved in researching, designing and delivering programs that bear the stamp of ownership. Not surprisingly, when employees are given the opportunity and support to develop their own initiatives they respond in a way that reflects their pride in achievement, their company and each other.

The Kanowna Belle Gold Mine philosophy is not confined to company employees but involves site contractors as well. It is not possible within the confines of this article to do more than give an insight into how it's done.

The contract security office includes the First Aid facilities and here employees have been responsible for developing over 150 separate policies and procedures establishing inspection check lists on all critical items within their areas of responsibility. These are incorporated into an inspection program which details formal recorded inspections everyday for the next five years.

This group has also created a health promotion and safety awareness program utilising information gathered from a number of sources which is disseminated at several strategic locations, and covers topics like skin cancer prevention, AIDS, alcohol and other drugs. The well-being of employees and their families is considered to be a critical issue at Kanowna Belle and the programs are designed to maintain a healthy workforce.

In the longer term, the Health and Safety Committee will become involved in identifying and implementing programs, but the shop floor involvement provides the commitment to ensure long term goals are met.

Manager, Paul Hallam, employees and representatives of site contractors at the weekly informative exchange.

Security Officer, Ron Miragliotta, ensures everyone who comes to site has information, and knows the rules.

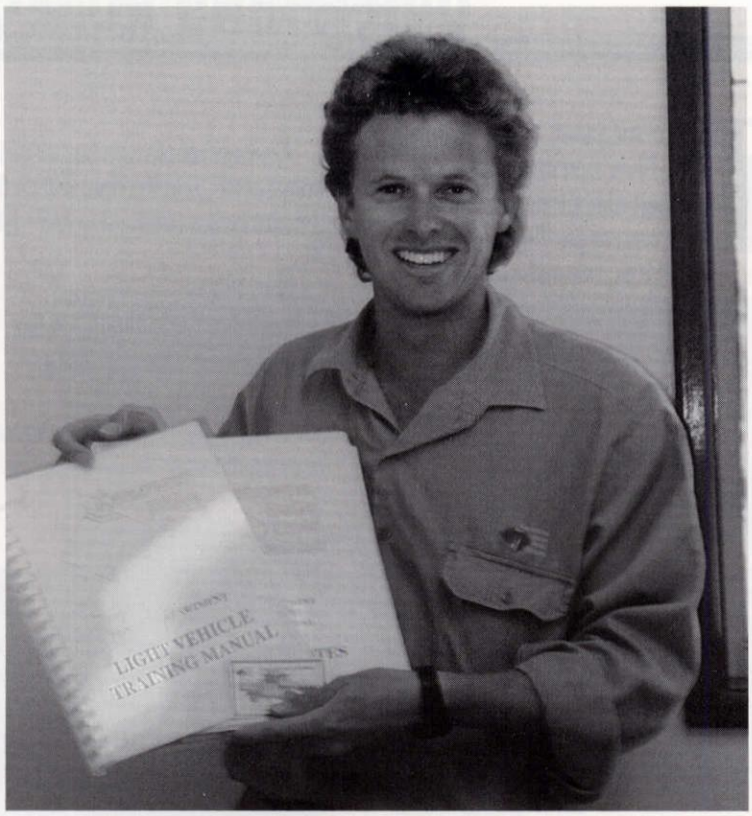
In Geology, Chief Geologist Peter Sage and his team are developing personal protective equipment programs. Each team operates in pairs and team 2, Damian Day (Pit Technician) and Fleur Dyer (Geologist), are responsible for developing the Eye Protection Program which involves researching the subject, producing a training manual and preparing any necessary visual aids.

The approach allows the team to work together to produce practical and effective Safety and Training awareness programs with specific objectives. By the end of 1994 each geology team member will have:

- been given the opportunity to develop ownership for an assigned task;
- developed training course objectives in behavioural terms;
- developed and implemented post session testing;
- selected, prepared and used appropriate training aids and methods that assist to improve the effectiveness of the instructor and;
- actually conducted a training session.

Company criteria assure quality, quantity and timing schedules are in place, and the safety adviser and senior management personnel are always available for advice and assistance.

The weekly meeting and Geologist, Peter Sage explains the whys and wherefores of geological happenings.



Andreas Okas, Survey Assistant, with his contribution to the team approach at Kanowna Belle.

In the Mining Department, Survey Assistant Andreas Okas, is justifiably proud of the light vehicle training manual and a comprehensive training course that he produced.

Maintenance personnel have planned preventative maintenance program which incorporate safety checks as a part of planned inspections, all of which are competently executed by the maintenance contractor, while the Metallurgical Department staff are developing tagging procedures checklists for each piece of equipment on site.

The benefits of employee commitment and awareness are obvious. Perhaps one of the most striking features of the Kanowna Belle strategy is that the program can be implemented by any organisation, large or small, rich or poor, because the issues are integrated into the normal daily routines of each employee.

According to Safety Adviser, Stephen Wood, there isn't one person at Kanowna Bell Gold Mine who hasn't got time to integrate a safety project into a daily project schedule. Individuals empowered to set their own work standards are usually harder on themselves than others would be, and therefore the standards are high. When you take a team approach and everyone is involved in doing a bit, it's surprising how much gets done.

Programs like this are not high cost items because the Safety and Training is part of each department's operating procedures. They are tangible, definitive and quantifiable and most importantly successful.

Kanowna Belle has in its short operating life produced two tonnes of gold and 385,000 LTI free hours. The success of the program is a credit to everyone. It is not a traditional approach to safety management but it's right for Kanowna Belle.

The basic simplicity of the strategy may make it attractive for many other organisations and the company is happy to provide information on the programs structure and implementation.

For information contact: Stephen Wood, Safety Adviser on (090) 914 922.

QUIETENING ROBE'S BIG FANS

The 105 megawatt power station at Robe River Iron Associates' Cape Lambert operation consists of three natural gas fired boilers operating at 6000 Kpa, supplying three 35 megawatt turbines.

Each boiler has a forced draft fan mounted at ground level alongside the stack. These Howden F.D. Fans are each powered by a 500 KW, 3300 volt motor, and have maximum capacity of 52 cubic metres per second.

Noise surveys have shown that each fan can generate a noise level output of up to 102.4 LAeq,T (dB(A) or 110.6 dB(lin) at two metres from the inlet.

In the past, sign posting and hearing protection were the methods used to protect employees working in this area.

In March 1992 Allan Herring of Herring - Storer Acoustics provided Robe with a conceptual design for a fan enclosure, fitted with FLAKT inlet attenuators. A contract was let locally to construct the first enclosure as a trial. The unroofed enclosure was built from hollow concrete blockwork with steel framings.

Sufficient room was allowed around the fan for any maintenance to be carried out, including motor change out.

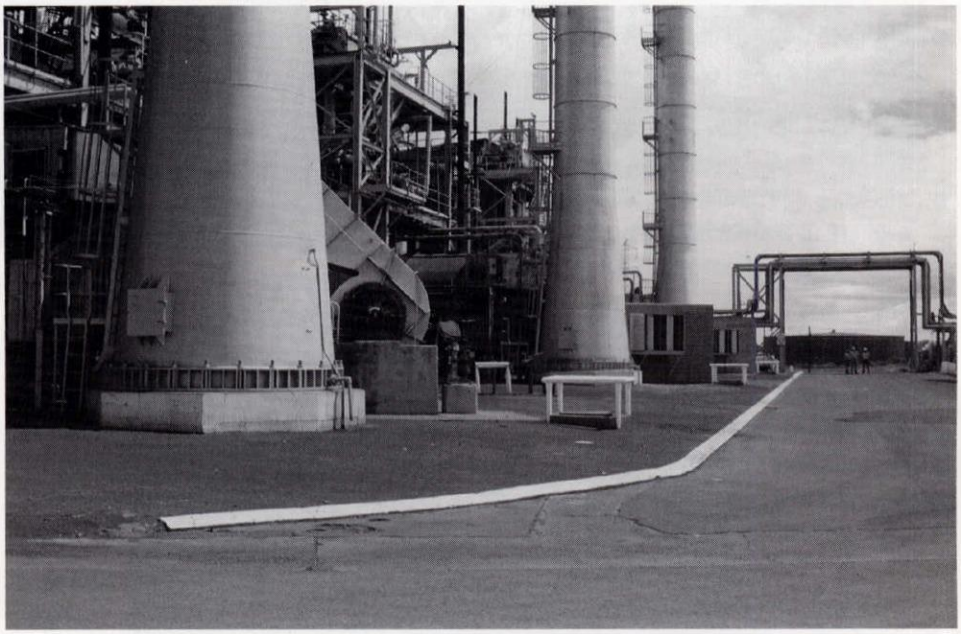
After constructing the enclosure, noise reduction was quite spectacular, with a maximum noise level of 84.5 LAeq,T [dB(A)] at two metres from the inlet. This represents a reduction of almost 18 LAeq,T (dB(A)].*

A second enclosure has since been constructed, and the final will be fitted during a major boiler overhaul in May 1994.

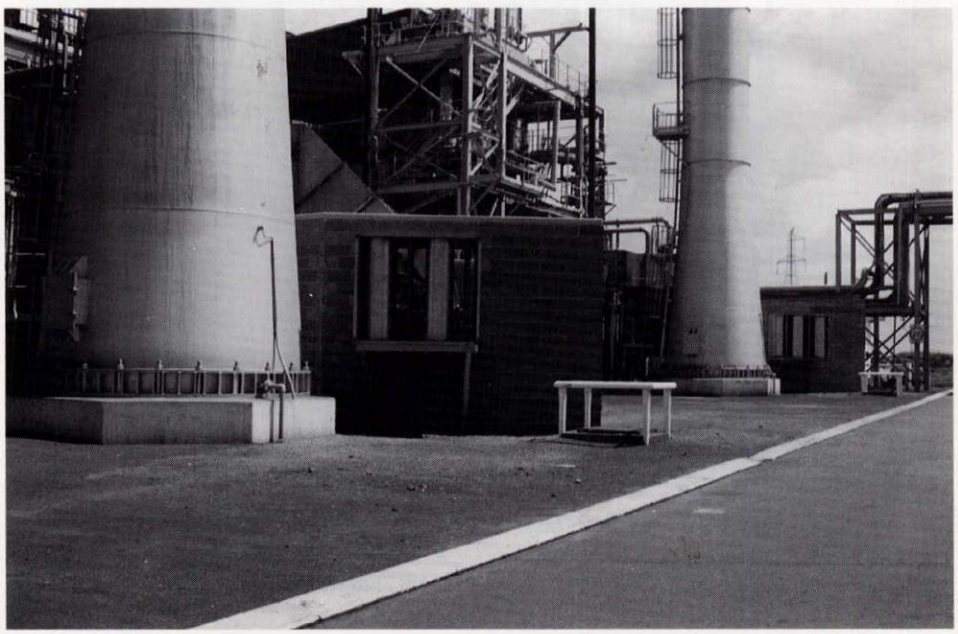
D.R. Button
Environmental Affairs Adviser
Robe River Iron Associates

**This represents more than a 30 fold reduction in noise intensity, below the action level. Ed*

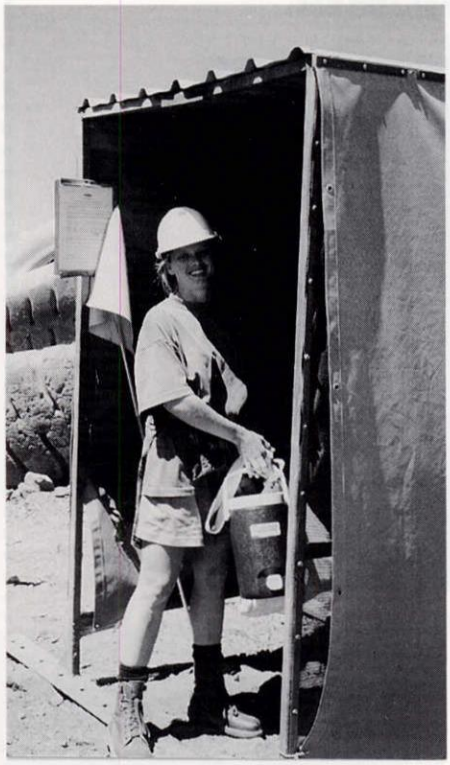
Before Enclosure



After Enclosure



PEOPLE AND PLACES



First day on the job -Miranda Cooke, spotter

Mid-afternoon - no cappuccino, only the meeting. Mick Crimmins and Frank Kilby at the big pit (Kalgoorlie)

ALCOA IMPROVES DOZER ACCESS

LTI's accessing mobile equipment in Western Australia

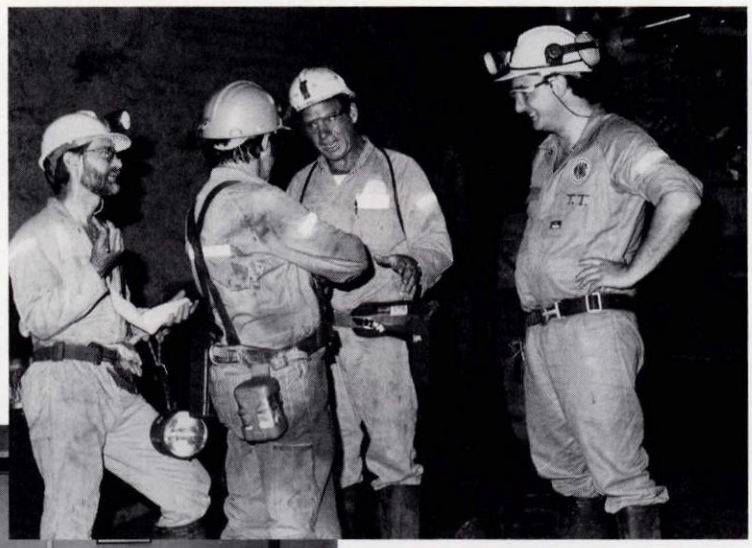
Access to the driver's cabin of Alcoa's D575A dozer at the Jarrahdale minesite has been significantly improved by installing a mobile access platform.

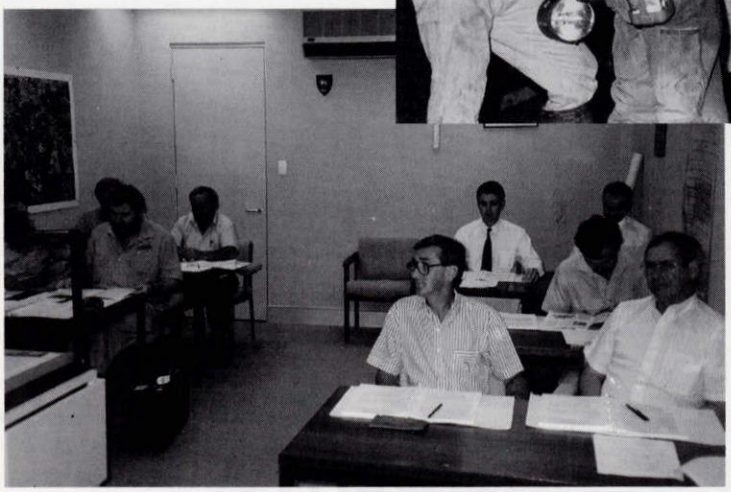
Hydraulic access system in use at Alcoa's Jarrahdale minesite. Manufactured by a Queensland company, the system operates hydraulically from a self contained power-pack powered from the dozer's main batteries. Operation of the system is controlled from push-buttons mounted on the platform and has been performing satisfactorily since it was commissioned in February 1993.

THE MINING OPERATIONS DIVISION AT WORK

FEATURED: HEAD OFFICE AND KALGOORLIE INSPECTORATE.

Victory Decline - St Ives Goldmines (WMC). District Inspector, Ian Ronald and WIM, Bob Leggerini confer with Terry Hall(foreman) and (r) Thomas Toth, underground manager.





Departmental inspectors attend an Acident/Incident Investigation Course.

KIM-LOUISE (KIM) WILLIAMS

For those out there in the industry who have not had the pleasure of meeting her, Kim Williams is the AXTAT/CONTAM data entry operator for the Mining Operations Division.

Kim is responsible for receiving and entering information contained on the various AXTAT and CONTAM forms sent in by mining operations throughout the state. This task also entails making many telephone calls, either chasing missing returns or clarifying entries. On top of these duties she also finds time to do all the MINESAFE, RESCUE NET and REHAB BLAB typing, including articles and mailing lists.

The second meeting of the working group to discuss amendments to part 17 of the Mines Regulations Act regulations.
L-R : Chris Stubley - Department of Minerals and Energy,
Graham Gangelar - Hamersley Iron Pty Ltd - Marandoo, Phil Curnow - Alcoa of Australia Ltd - Huntly,
Bob Hopkins - Departmental Co-ordinator (Chairman),
Steve Rodgers - Dominion Mining Ltd - Haveluck Mine,
Bruce Morrin - Department of Minerals and Energy, Lal Mahajan - Department of Minerals and Energy

TREATMENT PLANT HAZARDS

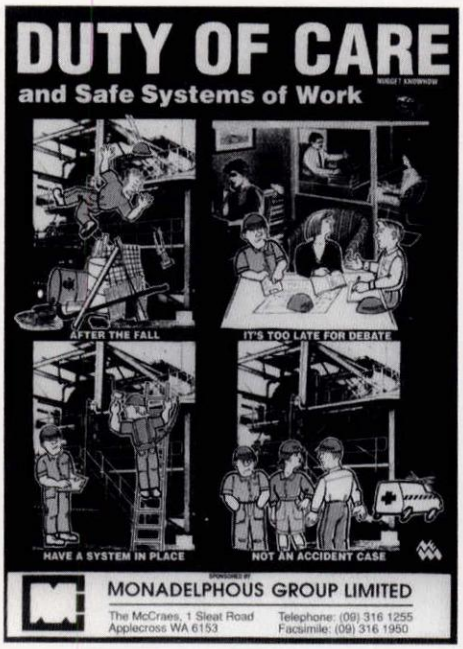
CHECKLIST

	YES	NO
■ Is the air dusty?	☐	☐
■ Are the water sprays operating?	☐	☐
■ Is there any unusual smell?	☐	☐
■ Is the dust/fume extraction system operating?	☐	☐
■ Is there proper ventilation?	☐	☐
■ Has the atmosphere been tested for gases?	☐	☐
■ Are respirators available, and are they clean?	☐	☐
■ Are workers wearing a hard hat and eye protection?	☐	☐
■ Are safety showers provided, accessible, operational and clean?	☐	☐
■ Are eyewashes provided, accessible, operational and clean?	☐	☐
■ Are there any trip hazards?	☐	☐
■ Are fire extinguishers charged?	☐	☐
■ Are guards and handrails in place?	☐	☐
■ Are there warning safety signs in place?	☐	☐
■ Is the area safe to work?	☐	☐
■ Have workers been inducted and trained?	☐	☐
■ Are material safety data sheets (MSDS) available?	☐	☐
■ Do workers understand the MSDS?	☐	☐
■ Are chemical tanks labelled?	☐	☐
■ Is lighting adequate?	☐	☐
■ Are noise control measures in place?	☐	☐

WHERE THERE IS DOUBT - FIND OUT

WHAT'S ON

AVAILABLE NOW!



For copies of this poster, please contact: Simon Wood,(09) 222 3532

NEW PUBLICATIONS

Interim Guidelines on Safe Design and Operating Standards for Tailings Storage - February 1994.

POSTERS
Eye Protection: sponsored by Thiess. Available mid -March, 1994

WA CERTIFICATES OF COMPETENCY EXAMINATIONS

- First Class Mine Manager's
- Quarry Manager's
- Underground Supervisor's
- Restricted Quarry Manager's

The examination date for the above Certificates is April 18th, 1994. Applications must be in by March 11th, 1994.
For further information:
Contact Melanie Calder on (09) 222 3269.

UNDERGROUND VENTILATION OFFICER'S COURSE
April 7th - 8th, 1994
Venue: Department of Minerals and Energy, Level 9 Theatrette, 100 Plain Street, East Perth.
Cost: $200.00
For further information:
Contact James Lawrence on (09) 222 3095

SECOND MINERALS INVESTMENT OPPORTUNITIES CONFERENCE: NEW SOUTH WALES, AUSTRALIA
May 19th, 1994, Sydney, Australia.
Contact: David Barnard
Development Officer
Department of Mineral Resources
P.O. Box 536
St Leonards NSW 2065
Telephone: (02) 901 8463
Fax: (02) 901 8468

INSTITUTE OF QUARRYING 38TH ANNUAL CONFERENCE, "QUARRYING - A CUSTOMER FOCUS", Hilton Hotel, Sydney, October 18th - 22nd, 1994.
Contact: Tim Fenton
Telephone: (02) 725 3088
Fax: (02) 725 3810

1994 AUSTRALIAN COAL CONFERENCE, May 8th-12th, Gold Coast, Qld, Australia.
Contact: Secretariat
GPO Box 908
Brisbane QLD 4001
Telephone: (07) 221 2240
Fax: (07) 229 7797

TRAINING RESOURCES APPLIED TO THE MINERALS AND PETROLEUM INDUSTRIES CONFERENCE AND EXHIBITION: TRAM '94.
Contact: Australian Mineral Foundation Inc
63 Conyngham Street
Glenside SA 5065
Telephone: (08) 379 0444
Fax: (08) 379 4634

ALCOHOL AND OTHER DRUG S 1 DAY SEMINARS
Proposed Dates for 1994:
Eneabba ..... Late March
Kalgoorlie ..... April/May
Meekatharra ..... May/June
These seminars are being held by request. If you would like to register your interest in the above, or would like to have a seminar organised in your area, please contact Catherine Stedman on (09) 222 3538.

WAMEX 1994
Burswood Superdome, Perth, May 18th -20th.
Contact: Debra Waghorn
Exhibition Co-ordinator
Thomson World Trade Exhibitions
Telephone: (09) 444 6299
Fax: (09) 444 9420

EXAMINATIONS

WA Certificates of Competency
First Class Mine Mangers
Underground Supervisor
Quarry Managers
Restricted Quarry Managers

The examinations for the above certificates will be held on Monday, 18 April 1994.
Nominations close on Friday, 11 March 1994.

Those who have missed the closing date of applications may apply for the next round of examinations, which are expected to be held sometime in September 1994.

MELANIE CALDER

Melanie Calder is the Secretary to the Boards of Examiners and is responsible for processing applications and organising examinations for First Class Mine Manager's, Underground Supervisor's, Quarry Manager's and Restricted Quarry Manager's Certificates of Competency. She also deals with Authorised Mine Surveyor Certificates.

Enquires can be made to Melanie on (09) 222 3269.

CONGRATULATIONS

To all those who have obtained Certificates of Competency since October 1993.

AUTHORISED MINE SURVEYOR'S

Atwood, Terrence Paul
Berry, Paul Andrew
Tapper, Peter John

FIRST CLASS MINE MANAGER'S

Ball, Patrick
Coad, Grant William
Donaldson, Scott David
Earl, Allan
Griffin, Paul Vincent
Lang, Adrian Maxwell Heath
Lee, David Maxwell
McKay, James Andrew
Neubourer, Michael Andrew
O'Loughlin, Peter Dominic
Quinn, Peter Michael
Scheepers, Renier Wilhelmus
Schlosser, Franz Charles

UNDERGROUND SUPERVISOR'S

Colling, Robert John
Conroy, Peter Wayne
Conway, Wayne Francis
Currie, John Charles Hamilton
Curtis, Raymond William
DeBeer, Johannes Lodewicus
Denton, Graeme Louis
Duncan, Blair Lawson
Elferink, Henri Bernard Stephen
Fasanini, Michael Andrew Robert
Green, Jamie Ray (Restricted to Development only)
Hart, Shane
Jeffrey, Stephen John
Jones, Clayton Ross
Lacey, Bernard Samuel John
Martin, Daniel Gerrard
McBean, Brian Edward
Miller, Glen Christopher
Moore, William John
Newton, James David
O'Leary Terence Michael
O'Toole, Peter Stephen
Papandrea, Richard Andrew
Stone, Christopher John
Teubert, Christopher Carl
Tomanek, Louis
Watson, David Gordon
Welburn, Terrence Albert (Restricted to Bounty Mines only)
Young, Baden Ross

QUARRY MANAGER'S

Bettens, Eric John
Erwin, Rohan Wesley
Horton, Ian John
Karunaratna, Kapila Ranjan
Pallott, David William
Parsons, Simon Robert
Wilson, Russel Dallas

RESTRICTED QUARRY MANAGER'S

Douglas, Noel Grant
Esplin, Aaron James
Ginnelly, James Patrick
Haddock, Peter Desmond
Harris, Glen Michael
Hobbs, Richard Colin
Larson, Terrill Richard
Major, Timothy David (Non Explosives)
McKay, Ian Lindsay
McLaughlin, John McEwan
Newport, Richard Charles
Sampson, Mark Walter
Stansbury, Michael Timothy
Stocker, Geoffrey Paul
Taylor, Leon Richard
Taylor, Peter Ronald
Thomas, Barry Henry
Ward, Christopher Leo
Williams, Michael Gerard
Wither, John Kerry (Non Explosives)

To some, the establishment of good first aid service and the provision of an ambulance, is of more importance than the erection of a fence at a cliff or the prevention of injuries.

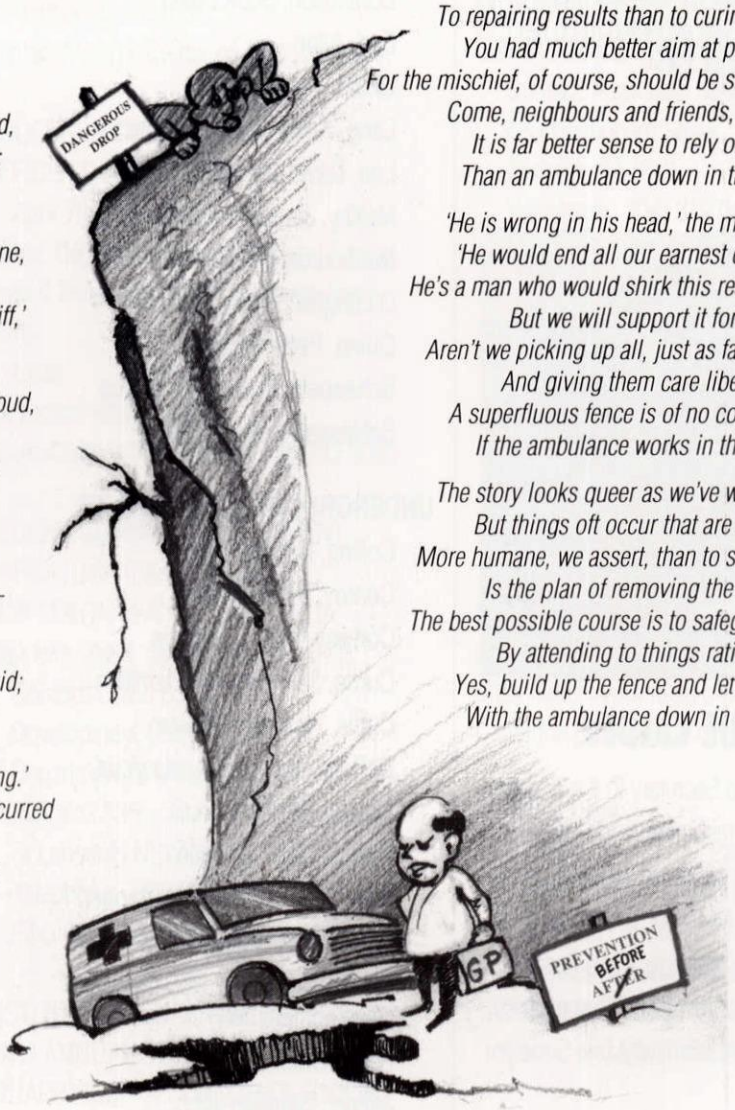
This attitude is clearly demonstrated in the following poem written by an unknown author. We reprint it here for either those who have heard about this saga, but never read it, or for those who'd like to read it again.

THE AMBULANCE DOWN IN THE VALLEY

'Twas a dangerous cliff, as they freely confessed,
Though to walk near its crest was so pleasant;
But over its terrible edge there had slipped
a Duke, and fully many a peasant.
The people said something would have to be done,
But their projects did not at all tally.
Some said 'Put a fence 'round the edge of the cliff,'
some, 'An ambulance down in the valley.'

The lament of the crowd was profound and was loud,
As their tears overflowed with their pity;
But the cry for the ambulance carried the day
As it spread through the neighbouring city.
A collection was made, to accumulate aid,
And the dwellers in highway and alley
Gave dollars or cents - not to furnish a fence -
But an ambulance down in the valley.

'For the cliff is all right if you're careful,' they said;
'And, if folks ever slip and are dropping,
It isn't the slipping that hurts them so much
As the shock down below - when they're stopping.'
So for years (we have heard), as these mishaps occurred
Quick forth would the rescuers sally,
To pick up the victims who fell from the cliff,
With the ambulance down in the valley.



Said one, in his pleas, 'It's a marvel to me
That you'd give so much greater attention
To repairing results than to curing the cause;
You had much better aim at prevention.
For the mischief, of course, should be stopped at its source;
Come, neighbours and friends, let us rally.
It is far better sense to rely on a fence
Than an ambulance down in the valley."

'He is wrong in his head,' the majority said;
'He would end all our earnest endeavour.
He's a man who would shirk this responsible work,
But we will support it forever.
Aren't we picking up all, just as fast as they fall,
And giving them care liberally?
A superfluous fence is of no consequence,
If the ambulance works in the valley.'

The story looks queer as we've written it here,
But things oft occur that are stranger.
More humane, we assert, than to succour the hurt
Is the plan of removing the danger.
The best possible course is to safeguard the source
By attending to things rationally.
Yes, build up the fence and let u dispense
With the ambulance down in the valley.