

Australian Minerals Industry Safety & Health

SAFETY SURVEY REPORT

FOR 1 JULY 1998 –
30 JUNE 1999

SUMMARY

- In 1998-99 there were 10 fatalities in the Australian minerals industry. This figure is down from 19 the previous year and 33 in 1996-97.
- Of the ten fatalities, five occurred in underground metalliferous mines, two in underground coal mines, two in open cut metalliferous and one in open cut coal.
- Most mining deaths continue to be the result of underground rockfalls.
- The indicative total industry LTIFR for 1998-99 is estimated at 10 which is an improvement on last year's 15. However, this estimate is likely to change once official figures are reported and published in the Council's comprehensive *Safety and Health Performance Report for 1998-99*.
- The second CEO Safety and Health session was held in March 1999.
- The Council presented the Inaugural Safety and Health Innovation Award to a guarding and isolation/lockout system from CSR Construction Materials at the Council's annual seminar on 2 June 1999.
- The Council released the results of the Safety Culture Survey of the Australian Minerals Industry in July 1999.
- 14 evaluators assessed 13 applicants for the 1999 MINEX Awards.

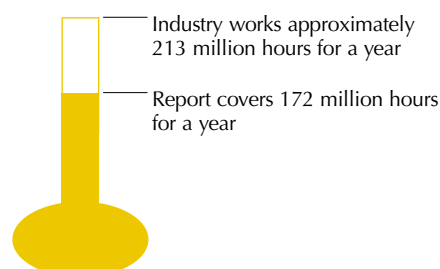
METHODOLOGY OF QUARTERLY SURVEY

The Minerals Council would like to thank the 29 companies, State/Territory Minerals Councils/Chambers, the Joint Coal Board, the Australian Aluminium Council and State/Territory mines departments who supplied information for this report. Given the short time-frame within which the data has been collected and collated, the data used is not necessarily reported on a consistent basis. While every effort has been made to obtain data from throughout the industry, the Council estimates (based on exposure hours) that this report covers 81 per cent of the Australian minerals industry and believes this report provides a reasonably good indication of the general safety performance trends in the industry.

The Council is also aware that, for some fatalities, the circumstances at the time of the

fatal incident are unclear so that a decision cannot be made immediately on whether the death is a workplace related fatality or is due to natural causes. In these cases, the Council is guided by the approach taken by the relevant State government authority. Any revisions in fatalities will be included in this report as appropriate.

Report Coverage based on Exposure Hours



*“The state
of mind
where we are
constantly
aware of the
possibility
of injury
and act
accordingly
at all times.”*

Minerals Council
of Australia
Safety Awareness



**MINERALS
COUNCIL**

OF AUSTRALIA

ACN 008 455 141

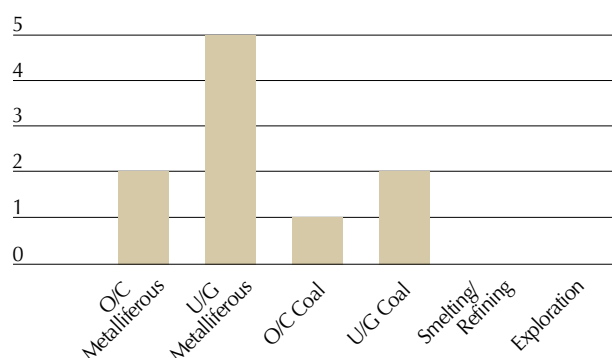
FATALITIES

In 1998-99 there were 10 fatalities in the Australian minerals industry. This figure is down from 19 the previous year and 33 in 1996-97.

Of the 10 fatalities, five occurred in underground metalliferous mines, two in underground coal mines, two in open cut metalliferous and one in open cut coal.

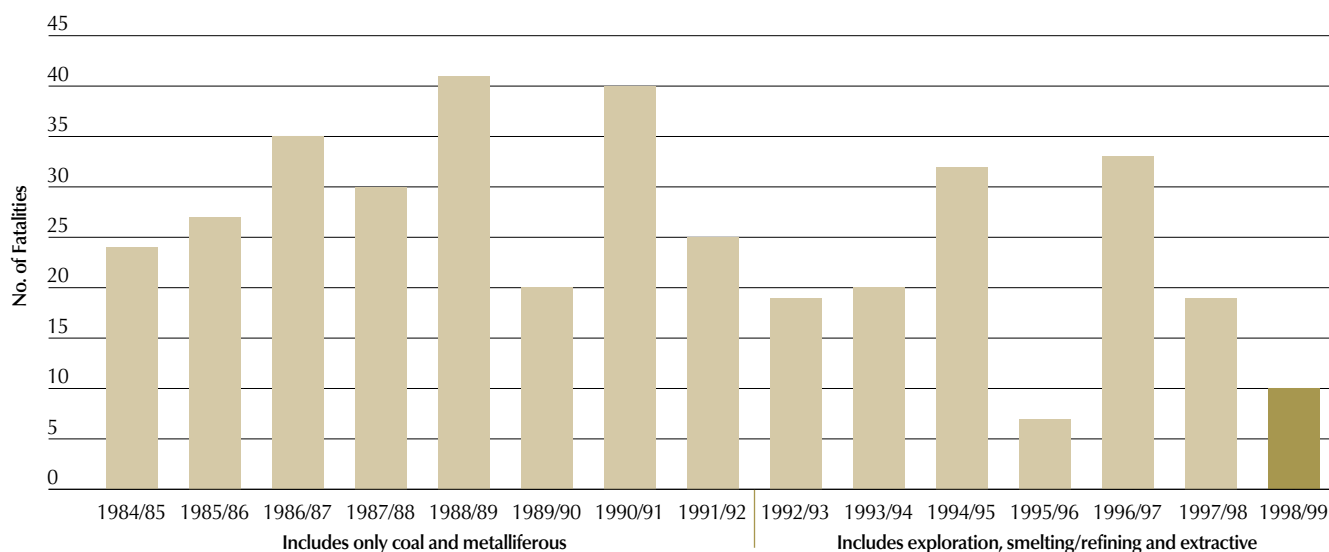
Since 1989-90 the industry has seen 225 deaths, an average of more than 22 deaths a year. There is no evidence of a sustained annual improvement in the number of fatalities.

Fatalities by Sector 1 July 1998 to 30 June 1999



Fatalities 1984 – 30 June 1999

Information contained in this chart prior to 1992 are estimations only



DESCRIPTION OF FATALITIES

New South Wales –

UNDERGROUND METALLIFEROUS

- Mr David Kittle, a rotary drill operator, was buried when rock fell from the lower portion of the side wall alongside the rotary drill rig. It appeared that Mr Kittle was washing cuttings away from the hole being drilled.

New South Wales –

OPEN CUT COAL

- Mr Ron Paine was driving his vehicle along an access road when his vision was obstructed by the sun which caused him to drive into the end of a partially open pipe gate. The pipe smashed through the windscreen of the truck cabin fatally striking him.

New South Wales –

UNDERGROUND COAL

- Mr Anthony Carroll received fatal injuries when the roof of the colliery collapsed while being supported.
- Mr Barry Edwards was fatally injured when a large piece of roof rock fell.

Western Australia –

UNDERGROUND METALLIFEROUS

- Mr Paul Fyfe received fatal injuries after falling down a rise while he was preparing to bore a new cut in a rock face.
- Mr Lee Irvin was killed when eight tonne of rock fell onto him as he and two other people were charging the face underground. The cage platform of a tool carrier being used to access higher levels of the face caught the end of a rock bolt and may have consequently contributed to the dislodging of the eight tonne slab.

DESCRIPTION OF FATALITIES continued

Western Australia –

OPEN CUT METALLIFEROUS

- Mr Frank Derchaw was fatally injured while driving a road grader northwards on an access road running parallel to the railway line. When the grader crossed the line at a designated crossing point it was struck by a rail maintenance vehicle (ballast regulator) which was also travelling northwards on the line.

Queensland –

UNDERGROUND METALLIFEROUS

- Mr Scott Johnston was fatally injured when he fell from the sinking stage in a shaft. At the time of the incident he was scaling down the shaft sidewall in preparation for concrete lining. He fell between the stage handrail and the shaft sidewall, first to the bench at shaft bottom, a distance of approximately 9 metres and then via a raise bored hole to the muckpile another 27 metres below.

Queensland –

OPEN CUT METALLIFEROUS

- Mr Sang Chul Kim received fatal injuries when he fell approximately 13m into a sulphuric acid tank which was being constructed. Mr Kim was involved in welding and metal plate preparation activities on the top of the tank at the time of the incident.

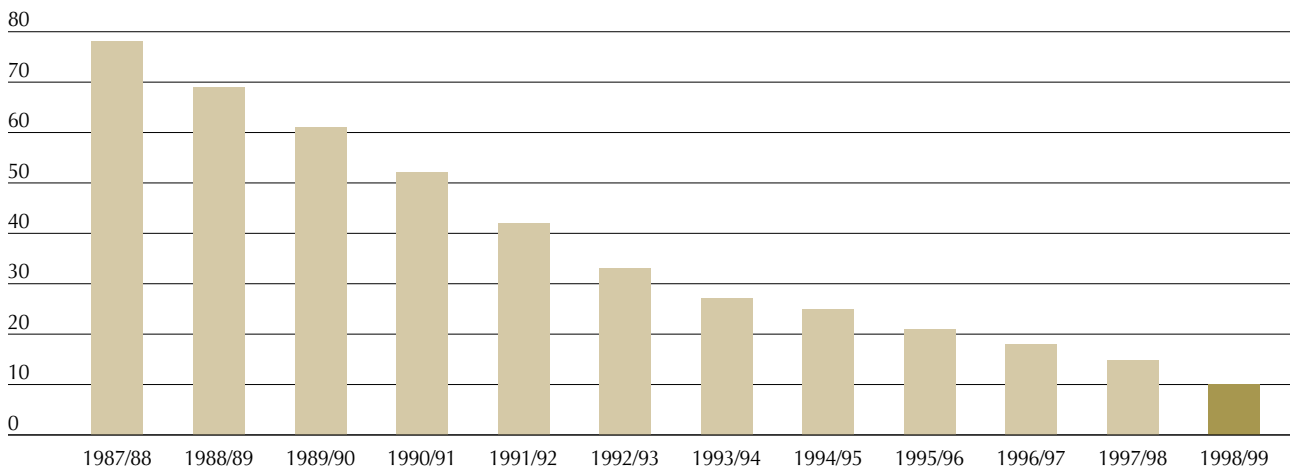
Tasmania –

UNDERGROUND METALLIFEROUS

- Mr Ray Bonney was driving a machine underground when it clipped a vertical roof support causing the horizontal roof support to collapse onto him.

LOST TIME INJURY FREQUENCY RATE

Total Lost Time Injury Frequency Rate 1987 – 30 June 1999



The indicative Lost Time Injury Frequency Rate (LTIFR) figure for the Australian minerals industry in 1998-99 is estimated at 10. This figure is an improvement on 1997-98 when the industry recorded a rate of 15. This figure is indicative only and is likely to change once official figures are reported and published in the Council's *Safety and Health Performance Report 1998-99*. This figure does, however, suggest an improvement.

Underground coal continues to have the highest LTIFR with a rate of 26. However this rate is considerably less than 57 which was reported for the 1997-98 year. Open cut coal continues to decrease, going from 15 to 13.

Open cut and underground metalliferous continues to perform well with rates of 8 and 9 respectively. The total for metalliferous has also decreased to a low of 8.

Smelting and refining dominates the sectors with a consistent rate of approximately 5.

The exploration sector continues to remain stable at a rate of 8.

Recognising the limitations of the survey methodology the Council would not wish to draw any findings based on this LTIFR data alone.

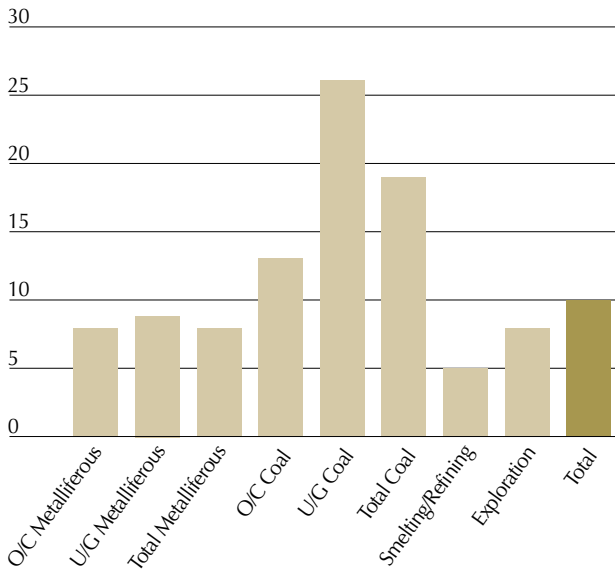
MOST SEVERE INJURIES

47 severe injuries were reported during the 1998-99 financial year. Survey responses indicated that there were 11 loss-of-body-part injuries, mainly due to the loss of fingers or part of finger. However two cases resulted in the amputation of legs. There were two loss-of-body-function

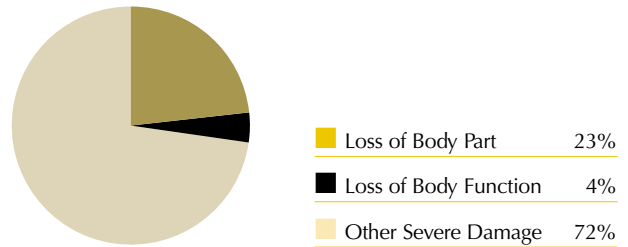
LOST TIME INJURY FREQUENCY RATE continued

injuries recorded for the period. Thirty-four cases of other severe damage were reported for the year. The major causes of these were third degree burns, sprains and strains.

LTIFR By Sector 1 July 1998 – 30 June 1999



Most Severe (Single Traumatic Event) Injuries



MEDICAL TREATMENT AND LOST TIME INJURIES GREATER THAN 10 DAYS

In the fourth quarter of 1998-99 a total of 314 medical treatment injuries and 24 LTI greater than 10 days were recorded. Please note that not all companies record MTI and LTI greater than 10 days.

SAFETY NEWS

Minerals Industry Safety Culture Survey

In July the Minerals Council released the first comprehensive survey of the Australian minerals industry's safety culture. The survey is an important step forward in the Council's drive to eliminate all industry fatalities, injuries and diseases. It identifies trends in employee perceptions on a wide range of organisational factors which are considered to influence behaviour. In its leadership capacity, the Council is utilising the survey results to develop strategies that address the weaknesses and foster the strengths in order to improve safety culture and therefore safety performance.

THE SURVEY

The survey was commissioned in late 1998 by the Minerals Council as part of its strategy to improve the minerals industry's safety and health performance. The project was awarded to SAFEmap, a national safety consultancy which specialises in the resources sector. The survey was completed during the first quarter of 1999.

The Sample

The sample consisted of 6718 people from 42 participating mines, plants and refineries. It was constructed in such a way as to be representative of the number of mine sites in each State and Territory, the commodities mined (coal or metalliferous), the mining method (underground or surface)

and the size of mine (based on the number of employees). It also proportionately represented different employee groups — upper and middle management, specialist staff, supervisors, operators and contractors.

The Methodology

The survey used a safety culture model which covers 41 factors identified by SAFEmap to examine safety culture (formal safety issues dealing with perceptions of the company, management, supervision and management systems) as well as safety climate (more intangible issues such as perception of safety systems, job factors, team factors and individual factors). Survey participants were asked to agree or disagree with statements about each of these factors. A positive and a negative statement were posed for each and the answers combined to provide an overall positive, negative or neutral response. An electronic survey method was used which provided true confidentiality and allowed respondents to participate regardless of their literacy skills.

THE RESULTS

The survey report provides analysis of the participants' actual responses as well as comparisons by State, commodity, mining method and size of mine. More advanced statistical analyses were also undertaken to determine what relationships, if any, exist between several variables.

SAFETY NEWS continued

The survey findings include the following:

- Employees were generally **most positive** about management's perceived commitment to safety and they were also most positive about their relationships with direct supervisors. Most of the **negative responses** were on issues such as Job Security, Risk Taking and Fatalism.
- Extremely positive responses to the safety culture factors in general were recorded at **Manager** levels. Responses were less positive, but still high, at **Supervisor** and **Specialist Staff** levels, but were considerably lower at **Operator** levels.
- The responses of **Middle Management** were unexpectedly and significantly lower than that of the Manager group.
- The responses of **Contractors** were significantly more positive when compared with **Operator** employees.
- The different employee groups in **WA** mines were consistently more positive than their counterparts in the other States.
- **Gold mine** employees were consistently more negative than employees on coal and other mines, except for the Operator/Contractor level, where gold mine employees were more positive as a result of the Contractor group's influence in the WA sample.
- There is little evidence to suggest that **underground** employees are proportionately more negative towards safety. Except for the Specialist Staff group, there was little difference between the two groups.
- Employees at all levels are dissatisfied with the quality of **Safety Management Systems** but show a high level of support for **safety practitioners**.
- **Smaller mines** consistently showed more positive responses in all the employee groups, although this difference was much less marked in the Supervisor group.
- There were consistently more **negative responses** among all employee groups in Queensland and the Other States (Vic, SA, Tas and NT).
- The **statistical analyses** found that more positive safety perceptions are achieved primarily through **Leadership**; secondarily through Processes, Team Factors and Safety Systems; and thirdly through Job Factors and Individual Factors.
- The statistical analyses also found that the more positive safety responses also showed a moderate to high correlation with higher scores on the **MINEX self-assessment scale**. This scale was based on the evaluation criteria developed for the Minerals Council's MINEX (mine safety and health excellence) Awards.
- A **team-based approach** to safety strategy also proved to have a significant correlation with positive safety responses.

MINERALS COUNCIL ACTION

The Minerals Council is undertaking a number of activities in relation to the safety culture survey.

- The Council has publicly released the survey report and made the document available on its web page at **www.minerals.org.au**
- The report has been distributed widely throughout the Australian minerals industry and has also been provided to key stakeholders.
- The Council's Safety & Health Committee has commenced an examination of the survey findings to determine priorities for action. This will result in the development of a safety culture action plan which will be implemented by the Council.

Further information: Sonia Lewis (02) 6279 3600

Operation/Contractor Safety and Health Management

At the Minerals Council's Executive Committee meeting held in June the Committee endorsed to a policy statement on operator/contractor safety and health management. The statement is as follows:

It is the policy of the Minerals Council of Australia that:

1. Operators have the responsibility to protect the safety and health of every person on site including contractors and their employees.
2. The relationship between the operator and contractor will include the agreement and implementation of a plan to effectively identify and manage safety and health issues.

1999 MINEX Safety and Health Excellence Awards

Judging for the 1999 MINEX Awards took place on 13 August in Sydney. This year's MINEX Awards judging panel was:

- Mr David Stewart, CEO and Managing Director
– Pasminco Limited
- Mr Hugh Morgan, Managing Director
– WMC Limited
- Mr Robert Humphris, Managing Director
– Peabody Resources Limited
- Mr Alan Rowe, CEO
– National Occupational Health and Safety Commission
- Mr Dick Wells, Executive Director
– Minerals Council of Australia

Presentation of the 1999 MINEX Awards will take place on the evening of 23 September at a dinner held in conjunction with the Tasmanian Minerals Council's OHS Conference in Launceston, Tasmania.

Further information: Sonia Lewis (02) 6279 3600

SAFETY MILESTONES

This quarter, we feature a safety tool which was highly commended at the Council's Inaugural National Safety and Health Innovation Awards – the Gas Cylinder Handle from Western Metals Resources Limited in Tasmania.

DESCRIPTION

A hinged clamp with an over centre latch and handles which can be clamped onto gas cylinders to provide a carry handle.

BENEFITS/EFFECTS

- The handle reduces the risk of back and shoulder strain.
- The risk of dropping a cylinder resulting in injury, property damage or an explosion is reduced.
- The clamp can be placed at any height on the cylinder and is therefore suitable for use by all personnel regardless of height.
- The handle allows the cylinder weight to be evenly distributed between lifting partners – also allowing them to walk in the same direction.

PRACTICALITY

- The handle is a simple device that can easily be manufactured.
- It is simple to use and is available to all personnel to utilise.
- It is small and light and can easily be stored.
- The device is user friendly, therefore encouraging personnel to utilise it when manually handling gas cylinders.
- The device makes the task easier and significantly safer without being cumbersome or time consuming.

INFORMATION EXCHANGE

This innovation is applicable to any site where gas cylinders are required to be handled.

INNOVATION AND ORIGINALITY

This is an innovative solution to a simple manual handling problem.

FURTHER INFORMATION

The above outline provides only a brief description of the innovation. For further information about the gas cylinder handle contact Ms Natalie Polson, OH&S Advisor, Western Metals Resources Limited, Phone: (03) 6439 2207 or Fax: (03) 6439 2228.

INNOVATION PROFILES BOOKLET

To further promote information sharing the Minerals Council of Australia has produced a book featuring all the 1999 nominated innovations. The booklet is available on the Council's web site at www.minerals.org.au

Note: The Joint Coal Board (JCB) advises that the data made available to the Minerals Council of Australia is not comprehensive and represents about 90 per cent of the total collection. The Minerals Council thanks the JCB for releasing this data and advises readers to take account of this factor when drawing any conclusions based on this data.

This document can be found on the Council's website: www.minerals.org.au



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