

# Australian Minerals Industry Safety & Health

## SAFETY SURVEY REPORT

FOR 1 JULY 2003 –  
30 SEPTEMBER 2003

### SUMMARY

- One (1) fatality was recorded in the first quarter of the 2003-2004 reporting year. In the same reporting period last year, there were two fatalities.
- The fatality occurred at an open-cut metalliferous mine in Western Australia.
- The indicative total industry Lost Time Injury Frequency Rate (LTIFR) for the year is estimated at six which is the same as that reported last quarter for the full year.
- The Total Recordable Injury Frequency Rate (TRIFR) shows a significant improvement from last quarter's 35.8 to 28.8.
- From this quarter, the TRIFR is now available by sector (see page 4).

### SAFETY NEWS

#### 2003 MINEX SAFETY AND HEALTH EXCELLENCE AWARDS

The 2003 MINEX Awards were presented at a Recognition Dinner on 13 October, in association with the Minesafe International Conference in Perth. The national minerals industry excellence award and trophy for safety and health was presented to Alcoa World Alumina Australia – WA Mining.

In total, five operations were recognised at this year's ceremony:

#### 2003 MINEX Awards and Trophy

##### Alcoa World Alumina Australia – WA Mining

For excellence in implementing and integrating comprehensive safety and health management systems, incorporating effective planning processes, innovative communication practices and highly-committed leadership embedded in a positive safety culture both on and off site.

#### Highly Commended

##### BHP Billiton Iron Ore – Mt Whaleback

In recognition of an outstanding safety and health performance as a result of commitment to continuous improvement processes, leadership-driven implementation of key safety and health programs and integration of comprehensive

safety and health systems across a large-scale mining operation.

#### Commended

##### Hatch Associates/Pacific Coal Hail Creek Project

In recognition by the minerals industry of the importance of the construction phase of a major minerals project, Hatch Associates was Commended for its impressive achievements in safety and health performance in the engineering and construction of the Hail Creek coal project.

#### Acknowledgment

##### Xstrata Copper – Ernest Henry Mine

In recognition of commitment to a consultative approach that encourages ownership and empowerment of the workforce to take an active role in safety and health issues. This approach has led to achievements in the area of safety and health training which is considered to be leading practice in the industry.

##### Port Waratah Coal Services

In recognition of a comprehensive safety and health management system and on-site leadership commitment and engagement, resulting in a significant improvement in safety performance.

*“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



ACN 008 455 141  
ABN 21 191 309 229

[www.minerals.org.au](http://www.minerals.org.au)

*continued on page 2*

**SAFETY NEWS (continued)**

All applicants have received their evaluation reports which highlight their safety and health strengths as well as opportunities for improvement.

The Minerals Council of Australia (MCA) would like to thank all involved in this year's MINEX Awards process – applicants, evaluators, mentors, trainers and judges – for their effort and commitment towards continuous improvement of the industry's safety and health performance.

**NATIONAL SAFETY & HEALTH INNOVATION AWARDS**

The 2003 National S&H Innovation Awards were also presented at the Recognition Dinner on 13 October in Perth.

Congratulations to Camberwell Coal for its hydraulic bleed manifold which reduces/eliminates serious injuries such as oil injection injuries, eye injuries and burns by testing for, and releasing, stored pressure in hydraulic systems.

Springvale Coal received a High Commendation for its post-grouted spinbolt leading to an integrated and proactive ground support/mining system. BMA Crinum Mine received a Commendation for its Burty-Weise Bar which significantly reduces injuries associated with hand-held bolters used in close proximity to the starter rope of the Huesker Mesh.

Details of the six safety and health innovations of national significance can be found in the [2003 S&H Innovation Profiles](#) booklets.

**MINEX IN 2004**

MINEX celebrates its 10th anniversary in 2004. Applications from mine sites nationwide – large and small – are keenly sought to underscore the industry's commitment to its vision of "an Australian minerals industry free of fatalities, injuries and diseases", and its commitment to excellence, identifying and sharing best practice and fostering continuous improvement.

The first publications for 2004 of the MINEX Information Kit are available for download:

- "Are you ready for MINEX?"
- "How do I become a MINEX Evaluator in 2004?"

Further publications, "What is MINEX?" and "How do I apply for MINEX?" will be available in January. Note that the documents currently on the MCA website relate to 2003 but may – with the exception of dates – be used as a guide for 2004.

The MINEX case study on the 2003 MINEX Award recipient, Alcoa World Alumina Australia – WA Mining will also be available in January.

A sample 'best practice' MINEX submission from 2003, courtesy of Alcoa – WA Mining, is already available from the MCA website. This will enable potential applicants to see the components of a well-written MINEX submission. It will also enable potential evaluators to understand what they will be asked to analyse and assess. [www.minerals.org.au/Alcoa\\_Minex\\_Submn03.pdf](http://www.minerals.org.au/Alcoa_Minex_Submn03.pdf)

**NATIONAL ROCKFALL MANAGEMENT GUIDELINE**

Rockfall is a major hazard in underground mining, with consequences ranging from insignificant to catastrophic (fatalities). The MCA has led the development of national rockfall management guidelines. With the assistance of the Australian Centre for Geomechanics, the *Industry Guideline for Rockfall Risks Management – Metalliferous Mines* has been published. The Guideline comprises two elements – a Guideline booklet which aims to standardise the processes supporting minesite specific systems and procedures for the management of rockfall risks, and a Reference Manual which is a collection of techniques and examples of good ground control practices.

The Guideline should serve as a valuable tool for all geotechnical personnel in the minerals industry. Already it has resulted in improved stakeholder and industry focus on the elimination of fatalities and in particular from rockfall. A similar guideline for the coal sector is also being progressed.

Order forms for the publication are available from the MCA website [www.minerals.org.au/safety\\_health](http://www.minerals.org.au/safety_health) (*Guidelines*)

**MINERALS INDUSTRY EDUCATION**

*Minerals Industry Risk Management – MMME7033*

This five-day workshop offers an opportunity to take what is normally a semester-long course in a compressed, intensive format. The short course is designed specifically for minerals industry professionals seeking to acquire recognition of the competency MNC.G3.A "Manage the risk control system". Contact: [a.lee@epsa.uq.edu.au](mailto:a.lee@epsa.uq.edu.au)

*Ground Support in Mining – 23-26 February, Perth*

This four-day seminar is designed to assist minerals personnel involved with the design and implementation of mine ground support. It has been developed to cover both the technical and practical aspects of ground support for underground metalliferous mines and open-pit/underground interaction. Participants can attend all four day, days 1 and 2 (technical aspects) or days 3 and 4 (practical aspects). Contact: [acg@acg.uwa.edu.au](mailto:acg@acg.uwa.edu.au)

*Video – the importance of safety and quarries*

Based on a real incident in November 2002, *Inglewood Quarry Incident* revisits the events which led to a boy suffering extensive injuries on site. The video's message is the importance of risk management at quarries. Copies of the video or CD are available from the Qld Mines Inspectorate on (07) 3238 3829.

**SAFETY NEWS (continued)**

*National Mine Safety Framework – Discussion Paper*

The Conference of Chief Inspectors of Mines (CCIM) invites comment on issues to be addressed in implementing the National Mine Safety Framework (NMSF). CCIM is particularly interested in quantifying, where possible, the impacts on individual mines, the workforce at mine sites, management practices and the local communities with regard to the operation of mine sites, employee practice, management practice and costs incurred as a result of NMSF implementation. In addition, CCIM supports the adoption of the safety intentions of the ILO Convention 176: Safety and Health in Mines as a minimum to underpin uniform State/Territory legislation for the minerals industry.

The NMSF contains seven key strategies:

1. establishing a national consistent legislative framework;
2. establishing competency support;
3. establishing compliance support;
4. developing a national protocol on enforcement;
5. establishing a consistent framework for data collection, storage, access, etc;
6. establishing a new consultative model; and
7. facilitating government-funded OHS research.

The MCA welcomes industry comment and input. To download the document visit: [www.ga.gov.au/ccim/](http://www.ga.gov.au/ccim/)

**DESCRIPTION OF MINERALS INDUSTRY FATALITIES (1 July – 30 September 2003)**

There has been one fatality during this first quarter of the 2003-04 reporting year.

*Western Australia – OPEN-CUT METALLIFEROUS*

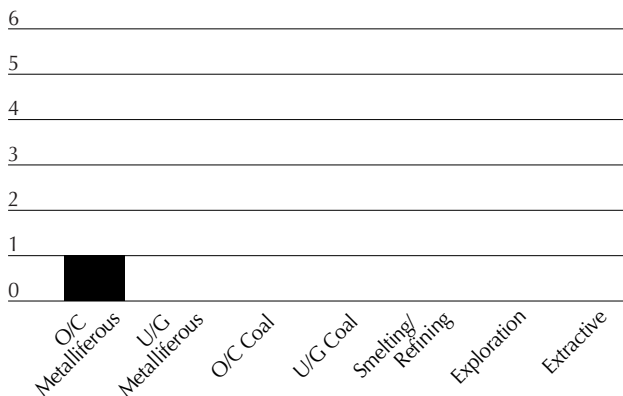
Mr Colin Reid, a 28 year old labourer employed by a demolition contractor, suffered severe injuries following an incident at the Pellet Plant demolition site at a large iron ore processing/port operation in the Pilbara region of Western Australia on 28 August 2003.

Mr Reid was engaged in cutting a conveyor at the Pellet Plant when he was struck by falling objects, believed to be pipework. Initial reports indicate that he fell approximately eight metres from the conveyor structure.

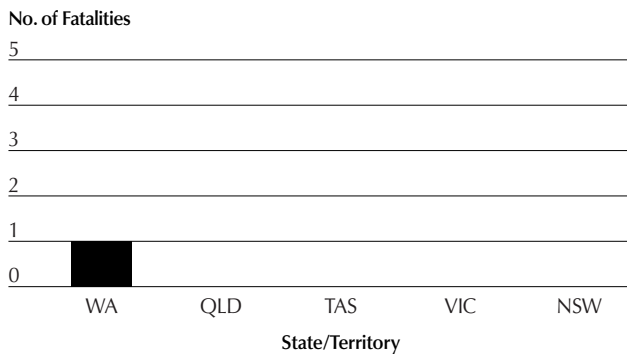
He was taken to the local hospital where he later died from his injuries. The fatality is under investigation by the Karratha mines safety inspectorate of the WA Department of Industry and Resources.

**FATALITY STATISTICS**

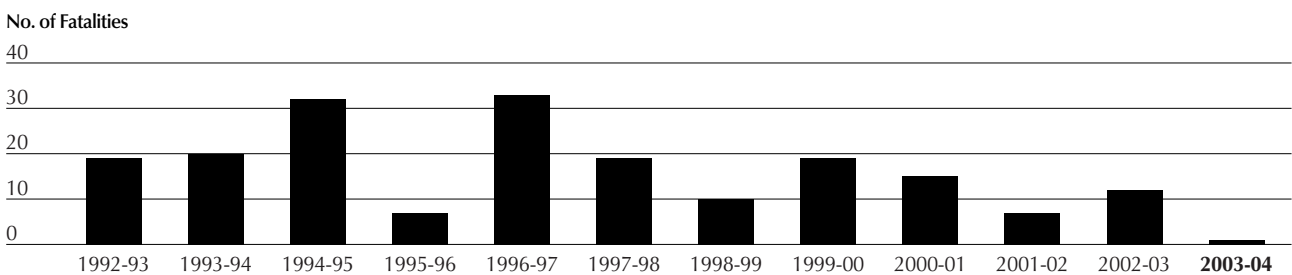
**Fatalities by sector 1 July 2003 – 30 September 2003**



**2003-04 Fatalities by State**



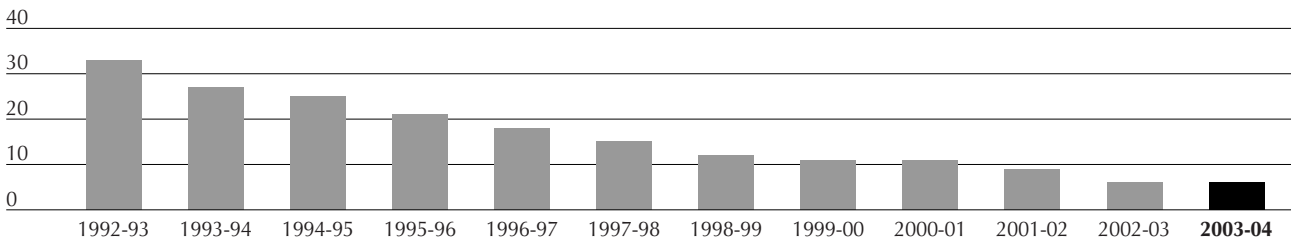
**Fatalities 1992-93 – 30 September 2003**



Includes exploration, smelting/refining and extractive

**LOST TIME INJURY FREQUENCY RATE**

**Total Lost Time Injury Frequency Rate 1992-93 – 30 September 2003**



The indicative total industry Lost Time Injury Frequency Rate (LTIFR) for the first quarter of 2003-04 is estimated at six. This equates to the same rate for the same reporting quarter of the previous year.

In comparison with the last full-year *Safety Survey Report*, most sectors have remained at or near the same rate this quarter. However, open-cut coal shows an improvement to a rate of four, from six, but underground coal shows a decline from 16 to 18. Total coal indicates a marginal improvement from ten to nine.

**MOST SEVERE INJURIES**

Thirty-five (35) severe injuries were reported for the first quarter. This is within the range of 28–35 reported over the past four quarters.

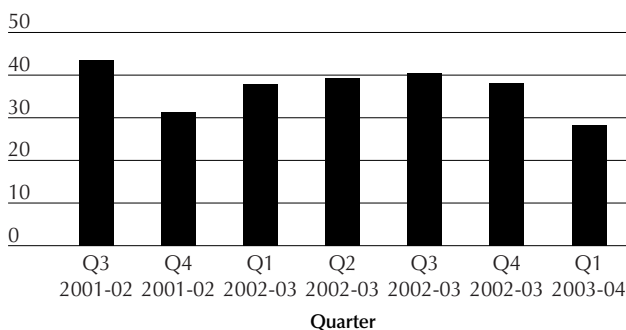
Survey responses indicated that there were six losses of body part (all fingertip amputations); no loss of body function; and 29 Other Severe Injuries which comprised:

- fractures/breaks (15);
- burns (5);
- crush injuries (7); and
- other (2) – knee dislocation, unknown

**MEDICAL TREATMENT INJURIES**

For the first quarter of the 2003-2004 reporting year, survey responses show a total of 599 medical treatment injuries. This was a significant improvement on the previous year which recorded MTIs of 791, 889, 1072 and 924 for each of the quarters.

**Total Recordable Injury Frequency Rate (TRIFR)**



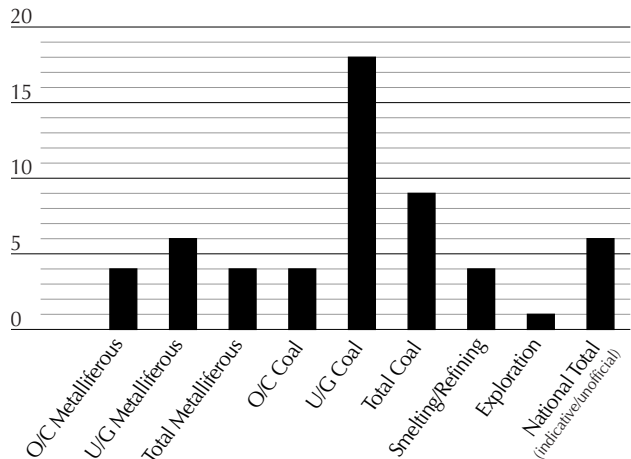
**TOTAL RECORDABLE INJURIES**

The industry is working in a voluntary and proactive way to improve safety and health performance by reporting broader outcomes measures and in particular Total Recordable Injuries (TRIs) which include fatalities, lost time injuries, restricted work cases and medical treatment cases.

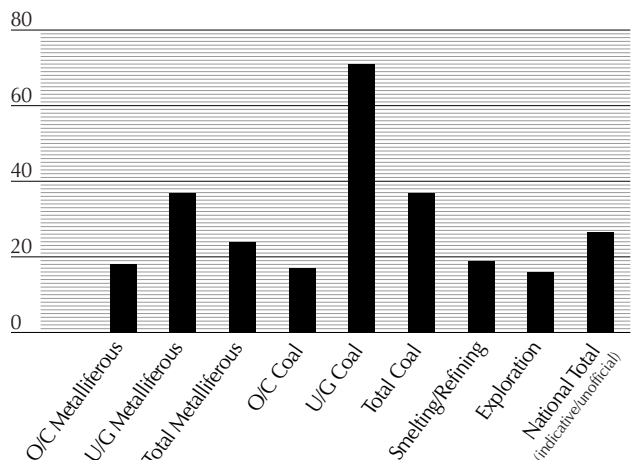
A total of 1207 TRIs (1536 last quarter) have been reported this quarter which equates to an indicative TRIFR of 26.6.

Companies may like to compare their TRIFR with this minerals industry indicative figure.

**LTIFR by Sector 1 July 2003 – 30 September 2003**



**TRIFR by Sector 1 July 2003 – 30 September 2003**



## SAFETY MILESTONES

The MCA recognises that, despite the continuation of fatalities and injuries in the industry, there are a number of safety success stories which provide significant opportunities for industry participants to benchmark their own operations and to exchange ideas and information on safety and health issues.

This report features Alcoa World Alumina Australia – WA Mining, recipient of the 2003 MINEX Award and Camberwell Coal's Hydraulic Bleed Manifold, winner of the National Safety & Health Innovation Award.

### ALCOA WORLD ALUMINA AUSTRALIA

#### WA MINING

##### Type of Operation

Alcoa World Alumina Australia's WA Mining operation includes two open-cut locations – Huntly and Willowdale mines – which currently supply 28 million tonnes of bauxite to three alumina refineries. Bauxite mined at Huntly is transported by conveyor to the Pinjarra refinery and the Kwinana railhead stockpile where it is railed to the Kwinana refinery. Bauxite from the Willowdale mine is conveyed to the Wagerup refinery. The two mines jointly employ 900 personnel.

##### Location

Huntly mine is located in the Darling Range approximately 100 km south of Perth, Western Australia, with Willowdale mine a further 65 km south.

##### Safety and Health Strengths

- CEO-initiated fatality prevention teams have a mandate for each business unit to identify its top 10 fatality potentials and develop subsequent action plans to eliminate or reduce the risk. This initiative resulted in a centralised fatality prevention database enabling all business units to share learnings regarding the risks.
- High profile community identities used to promote and introduce new safety and health systems and elevate the site and community culture.
- Recognition of employees demonstrating positive health and safety behaviour or initiatives. Under the MATE safety program, begun in January this year, employees nominate a workmate for recognition. One nominee is selected each month for recognition with both the nominee and nominator receiving a small gift and a local charity receiving a donation.
- Development of a best practice computer screen saver that is modified frequently to reflect changing safety and health topics.
- An increased focus on auditing resulted in the creation of an audit coordinator position to undertake formal tagging audits and informal audits by group leaders on a daily basis.

##### Safety & Health Contact

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### CAMBERWELL COAL

#### INNOVATION: HYDRAULIC BLEED MANIFOLD

##### The problem

The need to release pressure from mobile mining machines where work must be performed on hydraulic systems that contain and store pressure up to 5100 psi (35 Mpa/350 Bar) and at temperatures in excess of 100°C. Serious injuries such as oil injection injuries, eye injuries and burns result from the process of venting pressure from these systems.

##### The solution

The concept was initiated by workgroups tasked with the development of isolation procedures. Procedures were developed for all equipment using hydraulic systems requiring identification of stored energies on mobile equipment and the methods used to release this energy. Original equipment manufacturer personnel and literature were consulted to determine whether practice differed from recommendations. Subsequent testing indicated that certain practices were leaving as much as 1500 psi (10 Mpa or 100 Bar) in the system. In other circumstances, no facilities were available to maintenance personnel to test for stored pressure other than by removing lines or loosening fittings. It was these situations that led to the development and implementation of hydraulic bleed manifolds on excavators and front-end loaders on site.

##### Benefits/effects

- An effective innovation for the testing and release of stored pressures.
- Able to be installed on virtually any machine requiring the release of most mediums under pressure eg oils, gases, water, steam, compressed air.
- Eliminates the risk of oil injection injuries, eye injuries, burns from hot oil and environmental issues resulting from the release of pressurised hot oil to the atmosphere.
- A simple design requiring only minimal training and familiarisation to enable competent and confident operation. Stored pressures in hydraulic systems are safely and effectively released so hazard relating to the unforeseen movement of equipment due to the sudden release of pressure have also been eliminated.

##### Safety & Health Contact

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**METHODOLOGY OF QUARTERLY SURVEY**

NB: From 1 July 2003, BHP Billiton have changed their injury/illness definitions. This affects all their reporting sites henceforth for this Report.

**Lost Time Case**

A *Lost Time Case* is a work-related injury or illness resulting in the employee/contractor being unable to attend work on the next **calendar** day after the day of the injury.

[MCA emphasis.]

If a suitably qualified medical professional advises that the injured person is unable to attend work on the next **calendar** day after the injury, regardless of the injured person's next rostered shift, a lost time injury is deemed to have occurred.

[MCA emphasis.]

**Restricted Work Case**

A *Restricted Work Case* is a work related injury or illness which results in the employee being unable to perform one or more of their routine functions, or from working the full day on or after the next **calendar** day after the injury/illness. An injury is not regarded as a restricted work injury when the medically imposed restrictions limit activities other than their routine functions.

[MCA emphasis.]

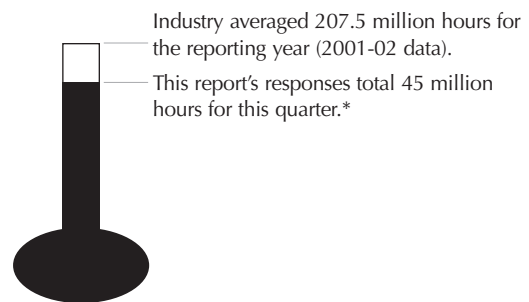
**Routine Functions**

The work activities that the employee regularly performs at least once per week.

The MCA would like to thank all reporting companies, State/Territory Minerals Councils/Chambers, Coal Services and the Australian Aluminium Council who supplied information for this report.

The MCA is aware that, for some fatalities, the circumstances at the time of the fatal incident are unclear, so that a decision cannot be made immediately as to whether the death is a workplace related fatality or is due to natural causes. In these cases, the MCA is guided by the approach taken by the relevant State Government authority. Any revisions in fatalities will be included in future reports as appropriate.

**Report Coverage based on exposure hours**



\* When the exposure hours for this reporting year (2002-03) are compared with official industry exposure hours for 2001-02, a figure of 87% coverage in this report is indicated. However, this figure may overestimate the report's coverage.

Recognising the limitations of the survey methodology, data consistency and reporting timeframe, the MCA would not wish to draw any conclusions based on this Report.

The MCA has moved to new premises:

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This document can be found on the MCA website: [www.minerals.org.au/safety\\_health](http://www.minerals.org.au/safety_health) (click on *Publications*)

**Note to readers:** If you would like future issues of this quarterly document emailed directly to you (as a PDF document), please contact Del Da Costa at the Minerals Council of Australia on 02 6233 0644, fax 02 6233 0699 or by email [d.dacosta@minerals.org.au](mailto:d.dacosta@minerals.org.au)