

# > AUSTRALIAN MINERALS INDUSTRY SAFETY AND HEALTH

QUARTER

1

2004-2005

## SAFETY SURVEY REPORT

ISSUE 1 2005

FOR 1 JULY 2004 – 30 SEPTEMBER 2004

### SUMMARY

- > Three fatalities were recorded in the first quarter of the 2004-2005 reporting year. There was one fatality in the same reporting period last year.
- > One fatality occurred in each of the Northern Territory, Queensland and South Australia.
- > The indicative total industry Lost Time Injury Frequency Rate (LTIFR) for the quarter is estimated at four which is a significant reduction from that reported last quarter (six) and in the corresponding quarter last year (six).
- > A further improvement in the Total Recordable Injury Frequency Rate (TRIFR) – at 21 – is seen this quarter. This compares with the cumulative TRIFR for the 03-04 year of 25.

### SAFETY NEWS

#### Important role of safety and health showcased at Inaugural Global Sustainable Development Conference (Melbourne 26-28 October 2004)

The safety and health of the people who work in and with the minerals sector is integral to the industry's commitment to sustainable development.

While sustainable development requires integrating and balancing economic, social and environmental responsibilities, the industry is emphatically determined that there can be no trade-offs regarding the safety and health of its workforce.

For this reason safety and health featured as an important theme at this year's Inaugural Global Sustainable Development Conference, with presentations on safety culture and behaviour; work design, fatigue and sleep; recognising and sharing best practice through MINEX; and environmental, community and workplace health.

The overarching message conveyed at the conference was that significant progress had been made in defining the business case for sustainable development and its practical application.

The Conference profiled case studies and research on translating the principles of sustainable development into relevant and risk-based activities at the site level and promoting good practice in occupational health and safety.

Attracting more than 550 national and international delegates, the Conference represented a unique opportunity for participation and dialogue to inform the industry. Conference papers are now available on the MCA website.

Safety and health is expected to be a key component of the 2005 Sustainable Development Conference in Alice Springs from 31 October to 4 November 2005.

#### Qld S&H Performance Report 2003-04

The Queensland Mines and Quarries Safety Performance and Health Report 2003-204 has been released. The publication comprises a review of health and safety in the mine and quarry industry and contains extensive statistical information.

[www.nrm.qld.gov.au/mines/publications/safety\\_health/mqsafe04.html](http://www.nrm.qld.gov.au/mines/publications/safety_health/mqsafe04.html)

#### Qld - Tyre fitters workshop

Following recent fatal incidents in the USA, Canada and Australia involving tyre fitters, the Queensland Department of Natural Resources and Mines held a one-day workshop for tyre fitters in September to identify current and emerging issues with regards to tyre fitting of very large heavy earthmover tyres (57-inch and 63-inch rims). Minutes of the workshop and presentations made on the day, together with a summary of recommendations to Standards Australia on the AS4457 Committee can be found on the NRM website:

[www.nrm.qld.gov.au/mines/inspectorate/alerts/html](http://www.nrm.qld.gov.au/mines/inspectorate/alerts/html)

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



**New Australian Standard for Risk Management**

Standards Australia has published its latest version of AS/NZS 4360 Risk Management, as well as a new handbook to accompany the Standard. The revised publication offers some changes in emphasis as well as reinforcing the upside of risk and strengthening links between risk management and strategic planning.

[www.standards.com.au](http://www.standards.com.au)

**NSW Legislation Update – Use of Chemicals**

On 1 November 2004, provisions of the OH&S Regulation 2001 that relate to the use of hazardous substances will apply to all NSW mines. The exposure standards for atmospheric contaminants specified in the OHS Regulation will apply across the whole NSW mining industry. Employers will be required to ensure that employee exposure to a hazardous substance is not greater than the relevant exposure standard.

[www.minerals.nsw.gov.au/safety/legislation.htm](http://www.minerals.nsw.gov.au/safety/legislation.htm) and/or [www.workcover.nsw.gov.au/Publications/LawAndPolicy/CodesofPractice/controlhazsub.htm](http://www.workcover.nsw.gov.au/Publications/LawAndPolicy/CodesofPractice/controlhazsub.htm)

**Training video available for geotechnical hazard awareness**

Unearthing Black Gold is a training package for the surface coal mining industry comprising two CDs: a 42-minute training video, and comprehensive training and language support materials. The script is written for the layperson and uses high-quality video footage from mining operations to explain pit slope failure modes.

[www.acg.uwa.edu.au/pdf\\_file/Coal\\_vid.pdf](http://www.acg.uwa.edu.au/pdf_file/Coal_vid.pdf)

**Call for Papers – NSW S&H conference: 15–17 May 2005**

500-word abstracts are sought by the NSW Minerals Council for the NSW Safe Mining – Healthy Business: A New Direction Conference being held in the Blue Mountains from 15–17 May. Abstracts are due on 4 February 2005 for papers on the following topics:

- > behavioural safety and cultural improvement programs;
- > "step change" improvement strategies;
- > risk management initiatives/specific risks;
- > health and hygiene-related matters; and
- > leadership, recognition and promotion.

Contact [www.nswmin.com.au](http://www.nswmin.com.au) or [mwarren@nswmin.com.au](mailto:mwarren@nswmin.com.au) for further details.

**New research project in safety, health and environment**

Professor Neil Gunningham and Darren Sinclair of the Australian National University are the recipients of a grant, jointly funded by the Australian Research Council and the National Occupational Health and Safety Commission, to investigate "Beyond Compliance: Safety, Health and Environmental Management in the Australian Mining Industry".

The project seeks to gain a better understanding of variations in health and safety outcomes between different minesites. In particular, the aim is to identify the internal management behaviour that leads to excellence in health and safety outcomes, the internal and external drivers of such behaviour, and the opportunities or 'pressure points' within companies that can be exploited to yield improvements in health and safety practices and performance at individual mine sites. For comparative purposes, the project will also examine environmental management practices. The initial phase of the project will take an in-depth look at the internal safety and health processes and performance of similar mine-sites within a relatively small number of minerals companies. Fieldwork for the first phase has begun and will continue until mid-2005.

**Research – Movement of smoke in complex enclosed spaces**

The UK Health and Safety Executive (HSE) has published a new research report on the movement of smoke in enclosed spaces during fires. Entitled RR255: Evaluation of CFD to predict smoke movement in complex enclosed spaces, the report investigates the capability of a technique called computational fluid dynamics (CFD) to predict the movement of smoke in complex enclosed spaces, such as underground stations.

The publication identifies that CFD is being increasingly used as a predictive tool to demonstrate the effectiveness of modern building designs and emergency ventilation to control the movement of smoke in the event of a fire, despite a lack of validation for this application. To download an overview or read the report itself visit:

[www.hse.gov.uk](http://www.hse.gov.uk)

**MINEX Awards – key dates**

MINEX 2004 Case Study on AngloGold Ashanti's Sunrise Dam Gold Mine	January 2005
<i>What is MINEX?, How do I apply for MINEX? and How do I become a MINEX Evaluator?</i> available	February 2005
Deadline for MINEX Application Forms (2–pages)	15 April 2005
Deadline for MINEX Evaluator nominations	15 April 2005
Deadline for MINEX submissions	3 June 2005
Evaluator Training Workshop (1) – Canberra	21–22 June 2005
Evaluator Training Workshop (2) – Adelaide	20–21 July 2005
Site visits to applicant sites	8 – 19 August 2005
MINEX Awards presentation dinner	31 October or 1 November 2005

## DESCRIPTION OF MINERALS INDUSTRY FATALITIES

(1 JULY 2004 - 30 SEPTEMBER 2004 ONLY)

There have been three fatalities during this first quarter of the 2004-05 reporting year.

### Northern Territory

#### Smelting/refining

11 August 2004 – Mr Denis Boyd, a 48-year-old maintenance contractor was fatally crushed when a rotary air heater unexpectedly turned during maintenance on a power station boiler. Mr Boyd was undoing bolts to remove baskets from the rotary air heater when the mechanism to rotate and secure the rotor failed. As the rotor rotated, Mr Boyd fell into the void from a previously removed basket. He was trapped between the rotor and the outside casing and was crushed across the chest.

*Company report*

### Queensland

#### U/G Metalliferous

17 August 2004 – Mr Samuel Pugh, a 61-year-old miner, was fatally injured whilst working underground. Mr Pugh and his supervisor had been checking the ore in an open stope from the footwall access to determine the need for remote bogging.

When they were returning to their light vehicle to leave the area, some rocks fell from the stope into the access drive. The miner was struck by rock and received injuries from which he died despite attempts by fellow workers to revive him using CPR. *Old Dept of NRM&E*

### South Australia

#### Extractive

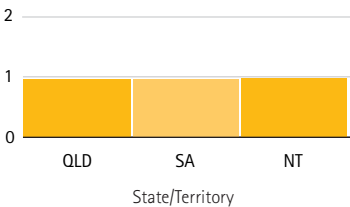
20 September 2004 – Mr Tom Kyrtzaliotis, a second-generation opal miner, aged 34, was crushed to death when the vertical face of a dozer cut collapsed alongside a hydraulic excavator he had been operating in a mine near Coober Pedy. *DAIS*

### Mining Related Fatalities

In addition, a mining-related fatality has been reported this quarter. The single-vehicle accident, involving a contractor's triple road train hauling coal from the mine to the wash plant, occurred between 11.00 and 11.15 pm. The driver was pronounced dead at the scene of the accident. As the incident involved a registered vehicle on a public road, initial investigations were conducted by the Queensland police.

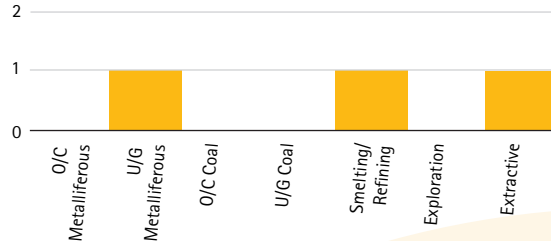
2004–2005 Fatalities by State

No. of fatalities



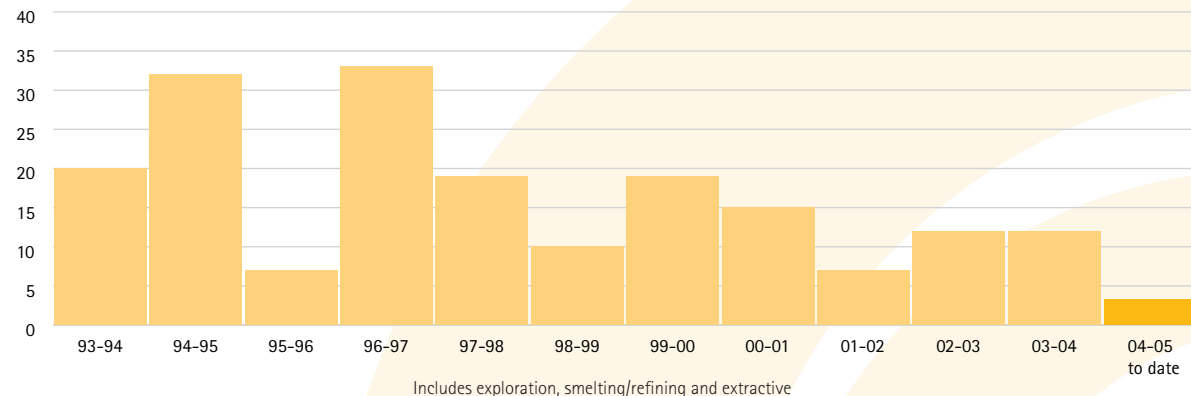
Fatalities by Sector 1 July 2004 - 30 September 2004

No. of fatalities



Fatalities 1993-94 to 30 September 2004

No. of fatalities



Includes exploration, smelting/refining and extractive

## INJURIES AND FREQUENCY RATES

The indicative total industry Lost Time Injury Frequency Rate (LTIFR) for the first quarter of the 2004-05 reporting year is estimated at four, a significant improvement on last year's indicative rate of six.

Compared with the same period last year, the LTIFR for all metalliferous sectors has halved this quarter: open-cut from four to two; underground from six to three and total metalliferous from four to two.

The LTIFR for open-cut coal remains stable at four when compared to the same period last year, but both underground coal and total coal show improvement from 18 to 14 and nine to seven respectively.

The smelting/refining sector's LTIFR has also reduced from four to two. With such improvements posted, it is no surprise that the total indicative industry LTIFR has declined to a rate of four from six last year.

### Most Severe Injuries

Thirty-one (31) severe injuries were reported in this first quarter.

Survey responses indicated that there were three losses of body parts reported (finger tips and an eye); no loss of body function; and 28 Other Severe Injuries which comprised:

- > fractures/breaks (11);
- > crush injuries (8);
- > burns (3);
- > lacerations (2); and
- > other (4) – multiple injuries (2), high pressure fluid injection, facial injuries.

### Medical Treatment Injuries

For the first quarter of the 2004-2005 reporting year, survey responses show a total of 467 Medical Treatment Injuries (447 – Q4; 613 – Q3; 483 – Q2; 599 – Q1).

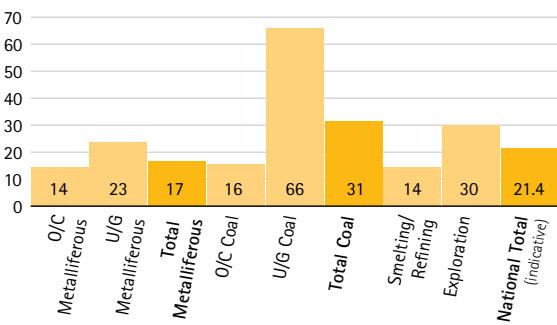
### Total Recordable Injuries

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 all injuries except first aid cases. Jurisdictions are encouraged to adopt this measure.

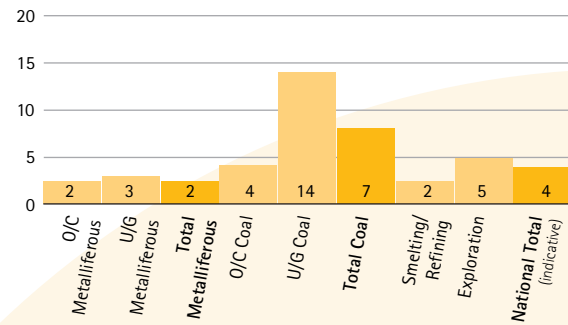
A total of 974 TRIs have been reported this quarter (950 – Q4, 1169 – Q3, 1131 – Q2, 1207 – Q1). This equates to an indicative TRIFR of 21 which represents a significant improvement on the first quarter last year but remains stable when compared to last quarter.

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

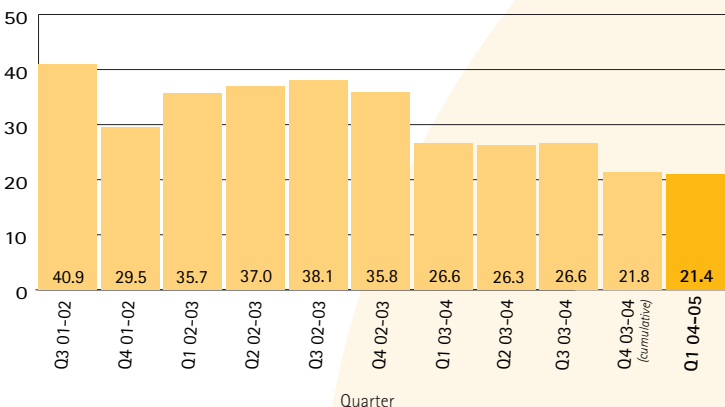
TRIFR by Sector 1 July 2004 – 30 September 2004



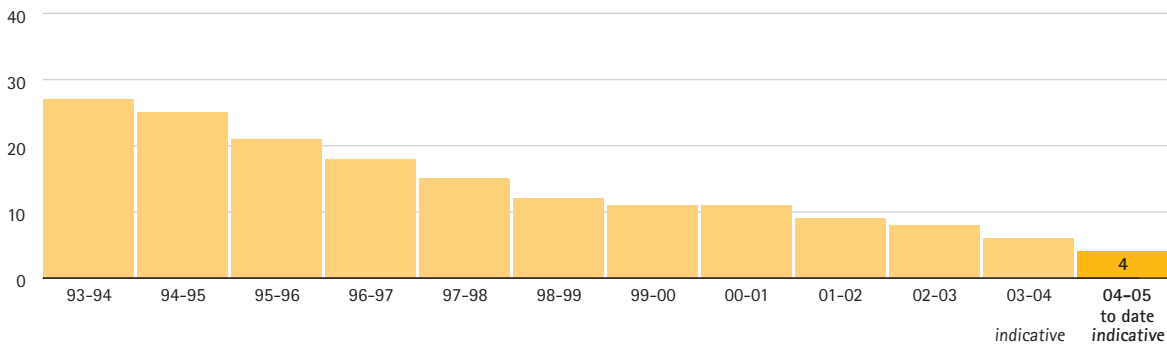
LTIFR by Sector 1 July 2004 – 30 September 2004



Total Recordable Injury Frequency Rate (TRIFR)



Total Lost Time Injury Frequency Rate 1993-94 – 30 September 2004



## SAFETY PROFILES

The Australian minerals industry does not accept that there is any inevitability of accidents or fatalities. Through its commitment to leadership, and recognising and sharing good practice, the MCA is a strong advocate of preventative risk management.

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 Pilbara Rail, recipient of a Highly Commended Award at the 2004 MINEX Awards presentation held in Queensland in August.

### HIGHLY COMMENDED – PILBARA RAIL (RIO TINTO)

#### Type of Operation

Pilbara Rail, formed in 2002 by the merger of Hamersley Iron and Robe River railways, employs a total of 450 personnel, spread throughout the Pilbara region of Western Australia. Pilbara Rail transports approximately 134 million tonnes of iron ore annually from seven mines to four unloading facilities for shipment: two at Dampier and two at Cape Lambert. The current schedule sees seven trains a day using an integrated rail system of 1184 kilometres of track.

#### Location

The railway operates in the Pilbara region of Western Australia.

#### Safety and Health Contact

Sherelle Howitt  
 Rail Safety Adviser  
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 Fax: 08 9143 6345  
 Email: [sherelle.howitt@hi.riotinto.com.au](mailto:sherelle.howitt@hi.riotinto.com.au)

#### Safety and Health Strengths

- > The senior leadership demonstrates commitment to safety and health: the chief operating officer (COO) rolls out business plans, and leaders are highly visible and participate in safety observations and audits.
- > The COO participates in the HiSafe Today induction by leading a discussion on safety values, expectations and outcomes in relation to individual participation.
- > An extensive road safety improvement program has benefited employees, the local community and local Indigenous communities, which has reduced access road incidents and led to closer relationships with Indigenous communities and local authorities.
- > Stop and Take 5, safety observations and Job Hazard Analysis (JHA) processes are entrenched as a daily routine as a result of training programs and reinforcement by the leadership team.
- > A leadership team culture, achieved through visible leadership, participation, support for improvement initiatives and recognition of achievements, encourages employees to be accountable for their own actions and to make the appropriate changes.

## SAFETY AND HEALTH CROSSWORD

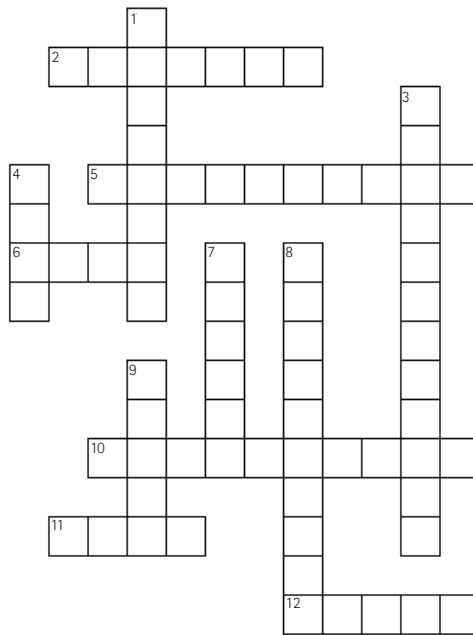
### ACROSS

- 2 Deadline for MINEX Application Forms in 2005
- 5 A prime component/driver of any improvement process
- 6 Q1 2004-05 LTIFR
- 10 State which held a tyre fitters workshop
- 11 MCA Vision – *An Australian minerals industry \_\_\_\_\_ of fatalities, injuries and diseases*
- 12 National minerals industry excellence awards for safety and health

### DOWN

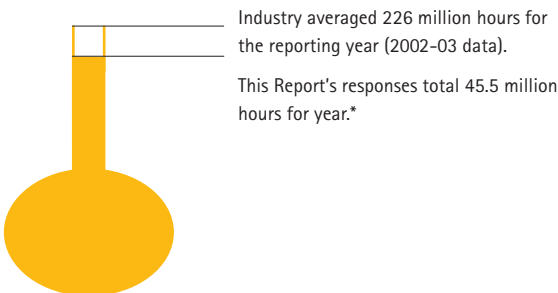
- 1 MCA offices located in which city?
- 3 Location of 2005 MCA Sustainable Development conference
- 4 With best wishes for a happy and \_\_\_\_\_ festive season!
- 7 Number of fatalities in 2003-04 year (Ausn minerals industry)
- 8 MINEX Award and trophy recipient in 2004
- 9 Deadline for MINEX Submissions in 2005

Solutions: see bottom of p5.



## METHODOLOGY OF QUARTERLY SURVEY

### Report coverage based on exposure hours



\* When the exposure hours for this reporting year (2002-03) are compared with official industry exposure hours for 2002-03, an indicative figure of 81% coverage in this Report is calculated. However, this figure may overestimate the Report's coverage.

The MCA acknowledges the limitations of the survey methodology, data consistency and reporting timeframe. Readers should note this Report is indicative only.

#### Minerals Council of Australia

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This document can be found on the MCA Website

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

The MCA would like to thank all reporting companies, 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 incident are unclear, including whether it is a workplace-related fatality. In these cases, the MCA is guided by the approach taken by the relevant State/Territory authority. Any revisions in fatalities will be included in future Reports as appropriate.

This document can be found on the web at:  
[www.minerals.org.au/safety](http://www.minerals.org.au/safety)

**NB:** From 1 July 2003, BHP Billiton changed their injury/illness definitions. This affects all BHP Billiton reporting data in 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.

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.

**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.

**Routine Functions** - The work activities that the employee regularly performs at least once per week.