



## Regulation of mine safety in Western Australia

*At a time when the occupational safety and health performance of the mining industry is better than at any time in its long history, the mines inspectorate is to move from its traditional home to another ministerial portfolio. It is appropriate to question the justification for this precipitate action.*

We are told that, in the interests of improving safety and health in the industry, we need to ensure that we have the most efficient and effective regulator.

We are also told that there is no reason why we should not be world leaders in the management of occupational safety and health of the people who work in the industry.

Those of us with any recollection of the introduction of occupational safety and health legislation will remember the Robens principles on which it was based, namely:

- consultation and co-operation between employers and employees;
- the introduction of safety and health representatives;
- the provision of a skilled and impartial inspectorate; and most importantly
- self regulation by those who created the risks (employers) and those who worked with the risks (employees).

**Robens considered that the prime responsibility for improving safety and health rested on its regulation by those parties directly involved and not with external bodies.**

The mining industry took up the challenge well before it was required to do so by legislation.

It encouraged workplace election of safety and health representatives and commenced training of them, established representative safety and health committees and accepted absolute responsibility for self regulation.

In 1996, a comprehensive survey of all mining operations concluded, like Robens twenty years beforehand, that the prime objective of the inspectorate should be the prevention of accidents and ill health and the promotion of progressively better safety at work **through the provision of information and skilled advice to industry.**

The mines inspectorate has carried out this role with distinction.

So, how well has this self regulatory approach worked?

This leads us to the second justification for transferral of the inspectorate, the pursuit of world leadership in the safety and health of the workforce.

The overwhelming evidence from all available performance measures is that the mining industry in Western Australia is, and has been for some time, the world leader in safety and health. Full comparative performance details are provided on pages 7 and 8 of this issue.

It will be important that the proposed world class regulator does not derogate from the self regulatory system in place which has successfully taken the industry to world leadership.

It will be equally important that the status of safety and health in the mining industry at 30 June 2005 be clearly documented and constitute a baseline from which all future safety and health performance by the industry will be measured.

*MARCSTA and the International Society of Mine Safety Professionals will be responding to the recommendations of the Mine Safety Improvement Group and readers will be able to view these responses at [www.marcsta.com/html/news.shtm](http://www.marcsta.com/html/news.shtm).*

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# UK Working at Heights Regulations 2005

*New regulations which came into force in the United Kingdom in April are expected to increase the awareness of what is a major cause of death and injury in that country.*

## AUSTRALIAN STATISTICS

In Australia between 1989 and 1992, 214 workers died after falling from heights. Sixty percent of these falls were from less than 5 metres.



For further information refer to [www.safetyline.wa.gov.au](http://www.safetyline.wa.gov.au) or the Department of Industry and Resources WA document *Working at Height* [www.doir.wa.gov.au/documents/safetyhealthandenvironment/shed\\_safety\\_moshab\\_pamphlets\\_height.pdf](http://www.doir.wa.gov.au/documents/safetyhealthandenvironment/shed_safety_moshab_pamphlets_height.pdf)

The Head of the Health and Safety Executive's Injuries Reduction Program reported recently that in 2003-04 falls from heights accounted for 67 fatal accidents and nearly 4,000 major injuries.

Falls from heights were the single biggest cause of workplace deaths and one of the biggest causes of major injury.

It is essential for employers, the self-employed, and any person who controls the work of others (for example, managers or building owners who may contract others to work at heights) to be fully up-to-date with

**All industry sectors are exposed to the risks presented by working at heights although the level of incidence varies considerably.**

current WA regulations as prescribed under the *Occupational Safety and Health Act 1984 and Regulations 1996*. A *Code of Practice for Prevention of Falls at Workplaces* is available in hard copy or online at WorkSafe WA.

## ThinkSafe small business program

WorkSafe WA is to provide up to three hours of free safety and health advice to businesses with less than 20 employees in the following high-risk industry areas:

- Agriculture, Forestry and Fishing
- Construction
- Health and Community Services
- Manufacturing
- Retail and Wholesale
- Transport and Storage

*The consultant will visit you on site at your workplace within metropolitan or rural Western Australia.*

*For further information or to access this service visit [www.safetyline.wa.gov.au/pagebin/edcngen10110.htm](http://www.safetyline.wa.gov.au/pagebin/edcngen10110.htm).*

With the exception of Retail and Wholesale, all of those industry sectors have a higher injury incidence rate than mining.

The *ThinkSafe Small Business Assistance Program* is a confidential service and the consultant will not report back to WorkSafe on any aspect of your business.

The federal Department of Employment and Workplace Relations is going to provide a general occupational health and safety service to small business through a contractor.

## *Veteran miners to be used to improve safety performance in China's mines*

Under a new scheme to be implemented later this year by the State Administration of Work Safety and the All-China Federation of Trade Unions, about 100,000 senior coal miners will be designated as safety supervisors.

They will possess the power to down tools and leave the coal face if they feel that their, or their colleague's, lives are at risk.

They will help train, assist and produce China's one million miners.

With the first appointments to be made in June, the scheme is part of the central government's drive to improve workplace conditions in China's mines.

China Daily has reported that more than 1,100 miners lost their lives in the first three months of 2005, in scores of underground accidents.

# Editorial



Geoff Taylor

A front page attack in the *Kalgoorlie Miner* on the need for the MARCSTA mine safety induction system is a reminder that those who fail to learn the lessons of history are doomed to repeat it. Ten years ago contractors and subcontractors to the mining industry faced multiple inductions of varying quality every year, in terms of content, assessment and presentation. MARCSTA training now, by contrast, is based on nationally recognised competencies, is presented by an RTO or a trainer working under an RTO, is regularly audited and offers credit transfer nationally.

It has been one of the drivers of the mining industry's enhanced safety performance.

This brings us to the construction sector, where safety could still be better. The WorkSafe WA Commission has been examining compulsory induction in this industry for over two years. With the possible exception of those going into one story dwelling construction, the course must be a minimum of a day, should be based on the national construction package OHS module to ensure credit transfer, and candidates should be assessed. The course should be presented by an RTO or trainers working under an RTO. Startup seed money is available in the construction industry training fund derived from employer levies.

Setting that standard for the industry should result in the safety gains MARCSTA has been instrumental in achieving. It would also allow recognition of prior learning (RPL) for those moving from construction to mining. The MARCSTA induction is already an adequate basis for RPL for those moving from mining to construction. This contributes to labour mobility in Australia, a plus given the current skills shortage.

On a closing note, the health industry is starting to take on board error management, commencing with a recent seminar in Perth headed by Professors James Reason and Bob Helmreich. Their approach and ideas, especially the concept of skills, rules, or knowledge based errors, their relative frequency, and the different approaches to error reduction they require, have just as much application in mining.

## MARCSTA licensed providers

Mark Adam  
Graham Bailey  
Ron Baker  
Tom Bateman  
Carl Berglin  
Danny Bogнар  
Clive Brindley  
Dale Cocker (U) (S)  
Jim Dandie  
Geoff Day  
Peter Dowding  
Joe Duyvestyn  
Linda Elezovich  
Helen Fleming (S)  
Ashley Gilbert  
Ross Graham

Ray Hargreaves  
Jeffrey Hickin  
Ralph Keegan (S)  
Guy Le Noir  
Joe Maglizza  
Neil McMeekin  
Malcolm McFarland  
John Preston  
Graeme Richards  
Merryn Richards  
Jason Roberts  
Victor Roberts  
Des Shaw  
Brian Smith  
Peter Stoneman  
Wayne Sullivan (S)

Mitchell Talbot  
Marcus Taylor  
James Titmus  
Peter Tredgett  
Peter Tynan (U)  
Graham Williams  
Paul Willoughby  
Terry Young

The trainers listed above provide general inductions.

U denotes underground trainer as well.  
S denotes shiftwork lifestyle trainer as well.

This list is current at the time of going to press. See [www.marcsta.com](http://www.marcsta.com) for location of trainers.

# American heart study

The American Heart Association evaluated 18,000 cardiac arrests in hospitalised adults at 250 hospitals between January 2000 and June 2002.

Researchers divided the cardiac arrests into 3 groups: Day (7:00 am - pm), Evening (3:00 pm - 11:00 pm), and Night (11:00 pm - 7:00 am).

Patients who experienced cardiac arrest at night had a lower survival rate (41%) than those who experienced it during the day (49%) or evening (48%).

Though the cause is unclear, the suspect is night time staffing levels.

## Age at work

*Traditional age stereotypes are challenged by the UK Employers Forum on Age (EFA) in research that reveals unexpected new truths about every age group at work.*

It is a myth that age discrimination only affects the 50+ age group.

Ageism at work is a bigger problem for people in their late teens than in their 50's. Twenty five percent of school leavers have faced age discrimination compared to 21% of those over 50 and 18% of those over 60.

Young people are denied interesting and challenging jobs which is why they move so frequently.

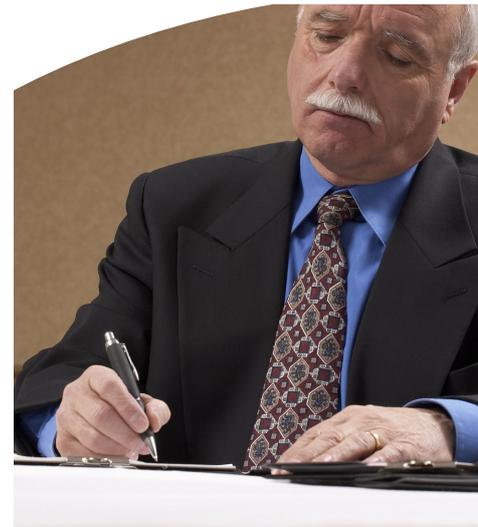
Women's promotion prospects suffer from their 20's onwards even before they have children.

People in their 50's and 60's aren't all rushing to retire. Thirty percent are happy to work until they are 70 and 13% dread retirement.

People are happier at work the older they get; 93% over 60 like work.

Although people in their 30's are at the peak of their career, they are under the most pressure at work and least want to be there. Just 54% are happy with their work-life balance and only 17% are happy to work until 70.

The over 50's are as keen to get to grips with new technology as teenagers.



For a copy of Age at Work visit [www.efa.org.uk](http://www.efa.org.uk)

## SAFETY REPRESENTATIVES

The Victorian Trades Hall Council has initiated a campaign to recruit 10,000 new safety representatives in the next two years.

The President, Michele O'Neil, says that health and safety representatives are the frontline in the battle against deaths and injuries. A new law in Victoria allows the election of deputy OHS reps and additional reps where they are needed. Visit [www.vthc.org.au](http://www.vthc.org.au) for further information.

## new publications

▶ GUIDELINES: VERTICAL OPENINGS SAFETY PRACTICE IN UNDERGROUND MINES, . . . . . DoIR

▶ BROCHURES: AMENDMENTS TO THE MSIA, PIN PROFORMA, NEW REPRESENTATIVES ELECTION FORMS . . . . . DoIR

▶ SAFETY PERFORMANCE IN THE WA MINERAL INDUSTRY, ACCIDENT AND INJURY STATISTICS 2003-04 . . . . . DoIR

▶ REVISED SAFETY AND HEALTH REPS HANDBOOK . . . . . WorkSafe



# news and views

INFORMATION ON GENERAL NEWS AND VIEWS WITHIN THE MINING INDUSTRY, BOTH NATIONAL AND INTERNATIONAL.

Silvester, Lowndes and Kingman in the December issue of *Mining Technology* discuss **ventilation in an underground crushing plant**.

*Australia's Longwalls* for March 2005 outlines NL Technologies' full **underground communications system**, which will soon be in place at four mines in Australia. It combines underground communication, cap lamp communication (which allows messaging, paging, tracking and emergency location), and ventilation on demand with potential energy savings. The system uses optic cable, and wireless modes. There is also an article on experience in Queensland with **cooling an underground mine**, and how administrative controls by contrast can produce stress due to hot/cold changes leading to frustration and lack of productivity. The same issue also notes that Aggreko offer an emergency planning guide.

In *World Mining Equipment* for March 2005, Mike Woof has **four useful reviews**, covering developments in crushing and screening, in lubrication, in dozers, and options for hydraulic breakers. He notes that ChTZ Uraltrac produce a diesel electric dozer.

*CIM Bulletin* for May 2005 has an article by Vanessa Anastasopoulos on **work-life balance**, the employee retention strategy of choice. She cites studies identifying improved recruitment, reduced absenteeism, reduced overheads, enhanced productivity, improved customer experiences, and a more satisfied motivated equitable workplace. She cautions against confusing productivity with hours at work. The same issue carries a report on **cooling of mines**. Two groups under Betournay and Delabbio report on research into **fuel-celled equipment** in mines.

*Australian Journal of Mining (AJM)* for March-April 2005 notes that obstructive sleep apnoea (OSA) affects 5% of Australians and is linked to **driver fatigue and increased risk of accidents**. The risk is double for male heavy snorers, triple for female, and 1.5 times for male OSA sufferers. Sleep disordered breathing (SDB) says Associate Professor Naughton of Monash University can lead to cv diseases, high blood pressure, heart failure, ischaemia, other heart diseases and stroke. The same issue has a striking photo showing 39 ore ships queued awaiting loading at Hay Point in Queensland. Also in that issue there is a note about GHD **sound attenuation treatment** of three off-highway trucks for the Mt Arthur coal mine in New South Wales. 20 of these at full power emit the same noise as one untreated truck.

The same issue of *AJM* also has an article by G. Lumley on optimising **dragline bucket performance**, and an announcement by Furmanite. Their system addresses **critical joint failure** in pressurised systems, which could cause shutdown, process effects or danger to personnel or equipment. At WMC Furmanite, after initial preparation, dismantled overhauled and reinstalled 970 critical flanges over 20 days, with zero leaks on startup.

## conferences and courses

China Coal and Mining Expo, Beijing, 25-28 October 2005. Phone: 852 2881 5889, fax 852 2890 2657, web: [www.together-expo.com](http://www.together-expo.com).



Australian Raise Drilling (ARD) is Australia's premier raise drilling contractor with a capability of drilling a complete range of shafts from box-holes or small diameter slot holes to large diameter ventilation or haulage shafts. The company is based in Adelaide with offices in Perth.

When it began operations, 17 years ago, ARD had a fleet of 5 rigs. This has now grown to a fleet of 11 rigs and ARD has completed more than 1,000 holes with a total of over 93 kilometres of raise drilling. ARD has specialised in drilling large diameter (3.5m or larger) shafts and has drilled more than 30 kilometres of such shafts up to 900m in depth and 5.8m in diameter.

ARD has worked for all of the major mining companies in Australia and can offer a full range of shaft sizes. It also has all of the associated equipment such as mud plants, forklifts and reaming heads that enable it to undertake any raise drilling project successfully. Safety has always been a key aspect of ARD operations and the company has been in the forefront of innovative developments such as the vertical Personnel Protection Shield which ensures that crews can work safely when required to undertake work on reaming heads during the drilling of a shaft.

ARD's current projects include:

- A program of large diameter (4.5m) deep ventilation shafts at WMC's Olympic Dam mine.
- An on-going program of slot hole drilling at the same site.
- The drilling of a ventilation shaft and an escape way shaft at the Sally Malay nickel mine.
- A program of raise drilling at Newmont's Jundee gold mine.
- An on-going program of box-holes and conventional holes at Broken Hill.



In conjunction with its associated company, Combined Resource Engineering Pty Ltd (CRE), ARD offers complete packages for shaft excavation, including pre-sinking, lining, stripping (either benching or Horidiam) and supply and installation of haulage and egress systems. CRE has also recently developed a highly innovative design for high pressure and high volume pumping, called the APEX pump.

## *MARCSTA members*

### FULL MEMBERS

Ausdrill Ltd  
 Australian Raise Drilling  
 Barminco Mining Contractors  
 BGC Contracting  
 Brambles Ltd  
 Charles Hull Contracting  
 Cooks Construction Ltd  
 Readymix Holdings Pty Ltd

GRD Minproc  
 Komatsu Pty Ltd  
 Macmahon Pty Ltd  
 Roche Mining  
 Roche Mining (JR) Pty Ltd  
 Skilled Group Ltd  
 Thiess Pty Ltd  
 Total Corrosion Control  
 Westrac Equipment Pty Ltd

### ASSOCIATE MEMBERS

AVELING  
 Mandurah Safety and Training Services

This list is current at the time of going to press. For further information contact the Secretariat (08) 9355 1400



## *Who's who?*

### Chief Executive Officer

Patrick Gilroy AM

### Chairperson

Joe Maglizza  
 Readymix Holdings

### Vice Chairperson

Ross Graham  
 Komatsu

### Committee of Management

Warren Claydon  
 Allaine Coleman  
 Terry Condipodero  
 Peter Luobikis  
 Arlene Roe

### MARCSTA Monitor Editor

Geoff Taylor

# PROVIDER PROFILE *Peter Dowding*

*Peter has been involved with MARCSTA from the days when it was first mooted by the safety managers from a group of contractors, and while he was a safety advisor for JR Engineering, now known as Roche Mining (JR). JR Engineering was a founding member of MARCSTA.*

After migrating from the UK at 17, Peter began working in the mining industry at 18, as an underground air leg miner on the Golden Mile (when men were men, he says). After three years working there, he went to work for WMC at Kambalda.

After 10 years of mining, he decided to study for an underground supervisor ticket as it was then called.

Shortly after passing the exam he began work as a underground supervisor. During this time he decided to pursue a career as a safety professional. So after joining JR Engineering, he began to study part time through Edith Cowan University for a Postgraduate Diploma in Health Science, completing it with a health and safety major.

Peter is also qualified as a trainer and assessor through Curtin University, and at present is completing a Diploma of Management.

When MARCSTA was established, JR Engineering adopted the general induction as the minimum requirement for all employees. All the existing employees were the first to be inducted, and then all subsequent employees were required to have a MARCSTA certificate to start employment. As a company provider, Peter then started to provide this safety training when required.

By working with a progressive organisation, he has been able to use his training, work skills and knowledge to assist in the development of safety management systems that have delivered positive results. After working for 38 years in the mining industry, 24 of those years in gold and nickel mines, the experience enables him to deliver training that is relevant.

Peter is currently safety and training manager at Roche Mining (JR).



Above: Peter Dowding

## *Safety performance figures*

### **Injury Frequency Rates by Sector 2002/03**

Manufacturing	22.7
Agriculture, Forestry, Fishing	22.3
Health and Community Services	19.7
Construction	18.9
Transport and Storage	17.2
Personal and Other Services	15.3
Cultural & Recreational Services	13.1
Accommodation, Cafes, Restaurants	12.7
Retail Trade	11.9
Wholesale Trade	10.2
<b>MINING</b>	<b>10.2</b>
Communication	8.7
Education	7.7
Government Administration	7.5
Property & Business Services	7.2
Electricity, Gas, Water	5.0
Finance & Insurance	2.9

Source: Workers' Compensation in WA Statistical Report 1999/00 - 2002/03

### **Safety and Health Performance of the Australian Minerals Industry 2002-03**

	<i>Lost Time Injuries</i>	<i>Workforce</i>	<i>Incidence</i>
<b>WA</b>	<b>388</b>	<b>43792</b>	<b>8.8</b>
QLD	362	25981	13.9
NSW	647	17505	36.9

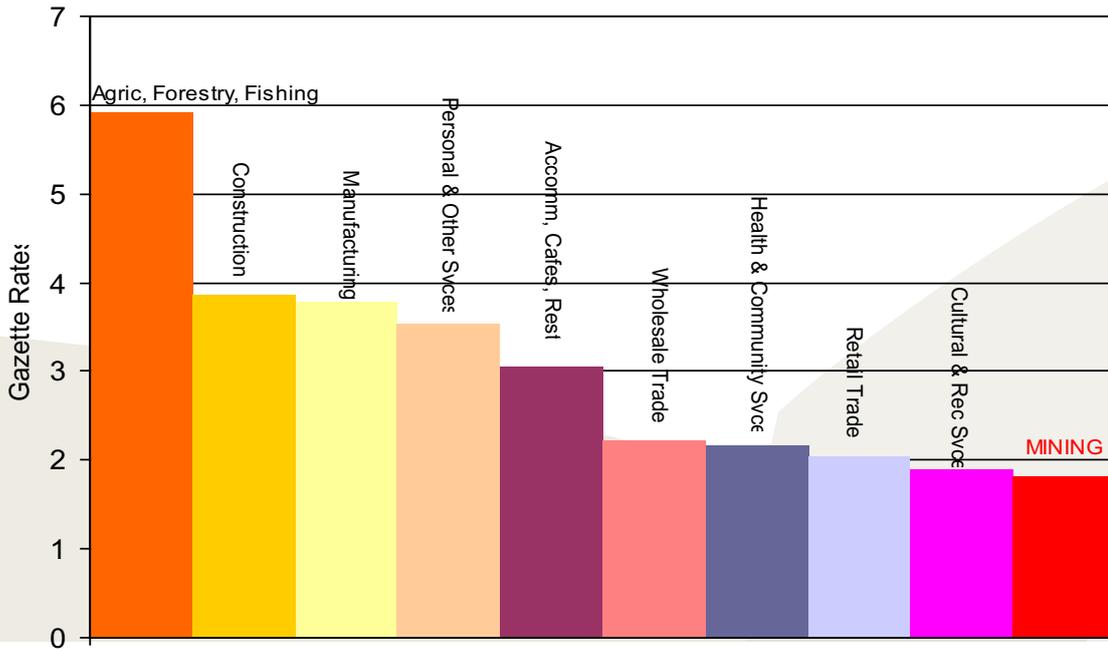
Source: Minerals Council of Australia

### **Training of Safety & Health Representatives 1996/97 - 2003/04**

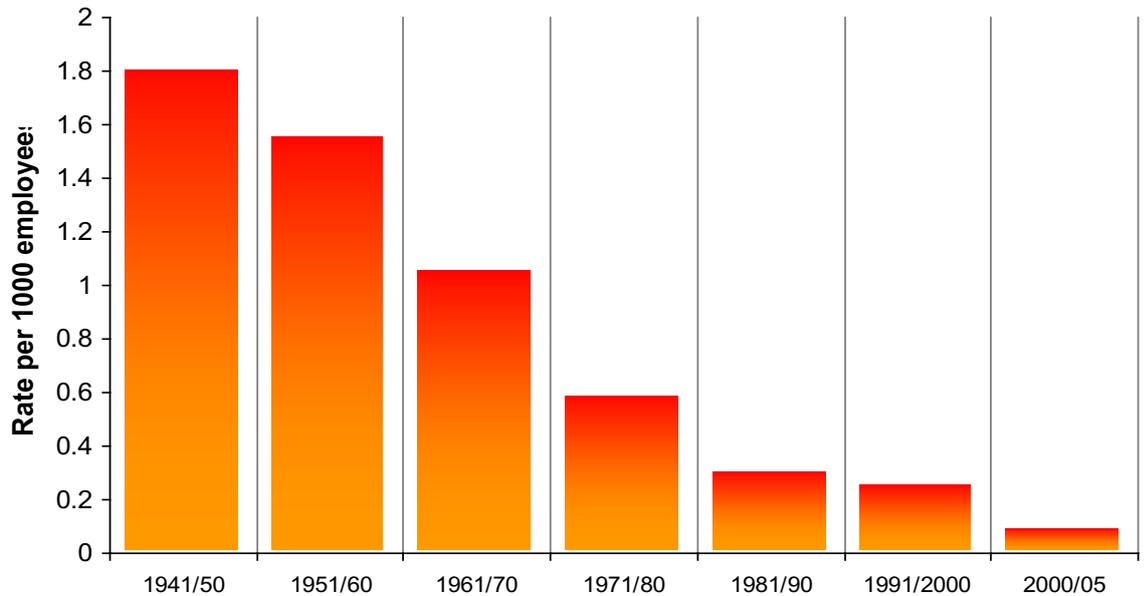
<i>Major Industry Sector</i>	
Transport & Storage	1055
Construction	1085
Manufacturing	1541
Health & Community Services	2735
<b>MINING</b>	<b>5275</b>

Note: Mining employs approximately 5% of the total workforce and trains about 30% of all SHR.

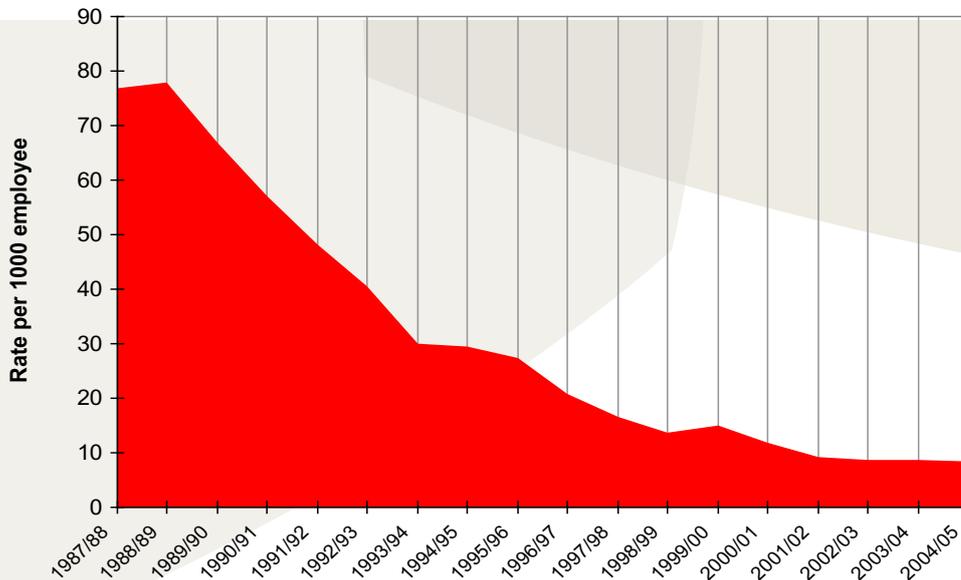
# OHS in the mining industry at June 2005



Workers' Compensation Premium Rates 2004-2005



WA Mines Incidence of Fatalities 1940 - 2005



WA Mines Incidence of Injury 1987 - 2005