

THE IMPLEMENTATION OF COMMON HEALTH STANDARDS ACROSS MULTIPLE MINING OPERATIONS AND AN EXAMPLE OF PRACTICAL APPLICATION

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Abstract

Rio Tinto, one of the world's largest mining and mineral processing companies, has developed occupational health (OH) Standards as minimum requirements for all of its managed operations world wide. The OH Standards are a core element of the Rio Tinto occupational health strategy. They are due for adoption in 2003 and full implementation is expected by 2005. This means that we (Pacific Coal Pty Ltd) must have these standards fully implemented by the end of 2004, across all four operating sites (Blair Athol, Kestrel, Tarong, and Hail Creek).

This has raised a number of challenges for us, but already we have been able to demonstrate results at an operational level that translate into improved business performance.

This paper examines briefly what those challenges are and how we are going about ensuring successful implementation i.e. "successful" both in terms of

- meeting our compliance requirements, and
- ensuring that we will get, and continue to do so over time, real value from the exercise at each of our operations.

The paper includes some background to the OH standards, outlines the process we followed to ensure that they would be implemented as required, and identifies key learnings from the exercise – mistakes, critical factors, and those things done particularly well.

To demonstrate how these translate into results at an operational level, a case study that deals with the implementation of OH Standard B3 - "Manual Handling and Vibration" is reviewed:

- what is required to make it work, and
- the value we are beginning to get from it.

Introduction

We (Pacific Coal Pty Ltd) recognise that excellence in managing our health, safety and environmental responsibilities is essential to any long-term success. This is the basis on which our OH standards have been developed.

We believe that soundly based standards, with performance against them being verified by both the business operation and Rio Tinto corporate, will achieve a step change in occupational health awareness and performance. The Rio Tinto OH standards were developed to represent best international practice. The intent was to begin a process to improve our performance to that of the best industries, rather than the best in the mining industry.

The intent of the standards is that we can demonstrate that it:

- builds from compliance with applicable OH laws and regulations, to work in advance of routine industry standards, and
- takes reasonable and effective actions to reduce adverse exposures as scientific knowledge changes – and often in advance of legal requirements.

This latter is particularly important for diseases with long lag times of 10 to 30 years.

Challenges

There were a number of challenges for our business in implementing these standards.

Previous experience with implementation of Rio Tinto safety standards indicated that this exercise was going to require the allocation of significant resources – people, dollars and time.

- We wanted concise and precise auditable standards, but we also wanted guidance on how to meet the standards effectively and cost efficiently.
- We were concerned that the timeframe we had been set to have the standards implemented would necessitate a higher cost than had been planned for in resourcing the right skills, and enough manpower, to meet the deadlines set.
- We also needed to improve interchange of information and expertise between the health services of isolated sites.

- Previous implementation of the safety standards had been done on a site-by-site basis – we needed to eliminate the unnecessary duplication of work, but still meet the timeframe set, therefore necessitating parallel timeframes for work on the different sites.
- We needed to ensure that our line managers had ownership of these standards – this was a critical factor in determining whether or not we would see real benefits from this exercise. To ensure that they had a basic understanding of the standards and why they are important, we needed to make the standards relevant to their every day work.

Structure and Scope of the OH Standards

The Rio Tinto OH standards reflect common industry issues. They contain two sections:

Section A - management system standards:

- A1. General Health Systems
- A2. Risk Management
- A3. Workplace Monitoring
- A4. Medical and First Aid Treatment
- A5. Occupational Medical Surveillance
- A6. Records

Section B - performance standards:

- B1. Particulate and Gas Exposures
- B2. Hearing Conservation
- B3. Manual Handling and Vibration
- B4. Hazardous Substances
- B5. Radiation
- B6. Thermal Stress
- B7. Fitness for Work
- B8. Legionnaires Disease
- B9. Travel and Remote Site Health
- B10. Occupational Exposure Limits

The principles behind the management standards (Section A) are that each site must have a documented assessment of their health risks (qualitative in the first instance, and quantitative if deemed necessary); and systems or processes in place to:

- quantify, where necessary, exposures to a statistically valid degree;
- manage identified risks;
- be able to ensure workers are fit for their work;
- recognise any diseases that might develop; and

- maintain records of exposures and medical examinations.

Section B contains specific performance standards relating to prevention of diseases such as deafness, silicosis, musculo-skeletal harm, white finger and legionnaires. Generally, these standards are set at best international practice.

Development of OH Standards

Rio Tinto developed a common set of safety standards over a 2-year period between 1998 and 2000, and these were then implemented worldwide across the Rio Tinto businesses. The implementation of these standards has achieved a culture change across the Group.

Occupational health performance - measured in terms of reported numbers of new cases per 10,000 employees - had been reported annually since 1997. Measured performance did not show continuous improvement. Hence, the charge was to develop a similar set of standards for occupational health. Development of draft Rio Tinto OH standards commenced in early 2000.

The first draft of the OH standards caused considerable concern. It had been assumed that occupational health principles were universal and therefore, the initial text had been written by the corporate HSE group with no consultation. This initial draft had also tried to blend standards with guidance on how to achieve them. These were mistakes. Other concerns were the perceived resources required to implement them, particularly as the safety standards were consuming more resources than originally anticipated.

Recovery of the situation was by a series of regional workshops at which managing directors and sites' health professionals were invited to comment on the text. From these meetings a significantly different draft was developed, shorter and composed of precise, auditable standards. This step was essential to the long-term success of this exercise. It allowed the key stakeholders in the various Rio Tinto group businesses (managing directors and sites' health professionals) to develop a pre-requisite level of ownership and understanding of the OH standards, as well as an understanding of the types and level of resources that would need to be allocated.

Concerns for adequacy of resources for implementation was addressed by extending the timeframe available for implementation.

An additional action, which proved to be of real value, was that much of the material removed from the initial draft of the OH standards was used as the basis for occupational health information and guidelines (OHIGs). The draft standards and OHIGs were placed on the company intranet to improve interchange of information and expertise between the sites.

A final version of the OH standards - deemed auditable and credible by the businesses - was agreed by the end of 2002. Although group businesses formally began implementation of the OH standards from the beginning of 2003, in some businesses this process was already well underway (the work being based on the draft version of the final OH standards). Pacific Coal is one of those businesses.

Implementation of Standards

At a Rio Tinto level, a compliance assessment process for the OH standards has commenced (2nd quarter 2003), integrated with the current business and corporate HSE audit and review programmes.

All Rio Tinto managed businesses are required to be in full compliance with the OH standards by the end of 2004.

For Pacific Coal, implementation of these standards began way back in early 2001, when our managing director and site health professionals were invited to make comment on the original version of the standards. Our people had spent the time required up front to understand the potential impact (both in terms of “do nothing”, and the practical aspects of applying them in the workplace) and resource requirements of the proposed standards, as well as establishing where the benefits for our business lay. This allowed them to help drive the review process and influence the final outcome. There are two important results from this process:

- a high level of ownership and working knowledge of the standards, and
- a set of standards that are able to be applied at an operational level, without ridiculous restrictions that are the result of theoretically valid but highly impractical ‘rules’.

Implementation of the standards has begun in earnest at Pacific Coal. We have made a number of decisions that are assisting us in minimising the resources we need to allocate to this body of work, while still keeping to the timeframe allocated.

- We are combining the OH and S standards at a Pacific Coal level, to eliminate unnecessary duplication of common systems. (Section A of both the OH and safety standards are very closely aligned).
- Section A of the standards (management systems) is being implemented using a resource at corporate level, while Section B of the standards is being implemented at a site level, using common templates developed in conjunction with external OH consultants with the requisite specialist skills (e.g. SIMTARS).
- We have made a deliberate decision not to start with a blank sheet of paper – we are working very closely with the Rio Tinto HSE group, and other Australian Rio Tinto businesses, to ensure that where-ever possible and practical, we are using what others have developed as an initial draft in areas where we haven't done the work, and sharing what we have done in those areas we have.

A summary of the process we have used is as follows:

- Operational GM's are accountable for the standards being implemented at each of their sites
- Corporate OHS Manager accountable for managing the implementation project
- Baseline risk assessments for each of our sites
- Prioritising areas for action
- Developing action plans (at site and corporate level) and coordinating the sites efforts so that we do not duplicate the work
- Separating action plans for sections A and B of the standards
- Review our progress regularly
- Once initial actions have been completed, re-do risk assessment – document successes and areas for improvement
- Repeat the “plan – do – review” process

Absolutely critical to this process being successful is the “review our progress regularly”

– it ensures the input of sufficient levels of focus and effort. This takes the form of both internal progress reports, and a “verification audit” to be carried out by members of the Rio Tinto HSE team (the first having been scheduled for November this year).

So how does this translate into results at an operational level? A case study that deals with the implementation of OH Standard B3 – “Manual Handling and Vibration” is used to demonstrate the results we are seeing in our workplaces.

Musculo-skeletal disease (MSD) incorporates a group of conditions commonly reported within the mining industry. The decision was made that OH standard B3 needed to focus on the main causes of MSD within Rio Tinto: vibration and manual handling.

MSD has one of the highest incident rates of occupational disease within Rio Tinto, with musculo-skeletal incidence rates per 10,000 employees ranging from 20 to 80. This group of conditions varies from back pain, an increasing problem in heavy equipment operators as increasing age and body weight become issues, to the effects of repetitive movements from jobs as varied as secretary and maintenance fitter.

Translation into results at an operational level

We needed to ensure that our line managers had ownership of these standards – this was a critical factor in determining whether or not we would see real benefits from this exercise. To ensure that they had a basic understanding of the standards and why they are important, we needed to make the standards relevant to their every day work.

This case study helps to demonstrate how we are achieving this.

Manual Handling

Each of our operating sites has a requirement to reduce the number of Lost Time Injuries (LTI) incurred by 50% per annum, and combined LTI and Medical Treatment Cases (MTC) by 25% per annum.

At one of our sites, some basic analysis showed that 70% of the injuries incurred were sprains and strains. Turnover in the workforce is low, so it is ageing, and typically carrying old injuries. Hence conventional manual handling and ergonomics training was not being effective

The decision was made to put into place on site a Manual Handling programme, which was expected to have a significant positive impact on:

- soft tissue injury reoccurrence
- management of ‘old’ injuries
- workplace design improvements
- workforce knowledge base

The programme focus was at 3 levels: site, team, and individual.

At a site level the focus was on improving the site standard for manual handling and ergonomics. An Occupational Therapist was employed full-time on site (we recognised that we needed to allocate appropriate resource levels if we want positive, long term results in our health performance).

At team level, the focus was on implementing the programme based on a risk-based schedule – highest risk team first. The programme included:

- analysis of team statistics,
- observations in the workplace,
- training for the team,
- changes to the workplace, tooling and work practices, and
- detailed feedback to the teams.

The work for this programme was carried out over periods of weeks for each workplace. The occupational therapist was in the workplace everyday, taking photos, speaking with personnel, coaching and explaining. Changes were made in consultation with the personnel in the workplace. Success was measured by the adoption of healthier workplaces, work practices and tooling – not just in injury statistics. These factors were important in determining the programmes success.

At an individual level, the focus was to identify those that were most at risk (current or ‘old’ injuries, physical condition, work activities) and engage in personal coaching from the specialist Occupational Therapist e.g. exercise regimes. The results of this programme were measurable and notable. They are summarised as follows:

Year	LTI's due to sprains and strains
2000	9
2001	7
2002	3
2003 to date	1

Through the process we used to implement this programme, we were able to demonstrate to our people that there was real value in the practical application of 'better' manual handling and ergonomics – to the way in which they did their work, not just their health and safety performance statistics. The level of ownership for the changes made means that they are far more likely to be sustained over time, and therefore have ongoing benefits to both the individuals and Pacific Coal overall.

Summary

There is a requirement for Pacific Coal to implement the Rio Tinto OH standards by the end of 2004. These were developed over a 2-year period with significant input from site OHS professionals and senior line managers. The OH standards are a core element of Rio Tinto's occupational health strategy, and are designed to be ahead of industry and legislative requirements.

The challenge faced by PCPL is to successfully implement these standards at an operational level, and in the process ensuring that we get, and continue to do so over time, real value from the exercise at each of our operations. We have done this by being involved in development of the standards at the earliest opportunity, by planning not to duplicate any work unnecessarily, and by ensuring that we could demonstrate real benefits through practical application at an operational level early on. The case study presented shows that there are measurable benefits.