MANAGING HEALTH AND SAFETY IN MINES

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SUMMARY

Organisations which are successful in achieving high standards of health and safety have health and safety policies which contribute to their overall business performance, and are structured and operated so as to put their health and safety policies into effective practice. This is helped by the creation of a positive safety culture which secures involvement and participation at all levels. It is sustained by effective communications and the promotion of competence which enables all employees to make a responsible and informed contribution to the health and safety effort. The paper considers the steps necessary to meet these objectives and secure a safe and healthy working environment.

INTRODUCTION

The concept of Health and Safety Management is of course not new. The 1972 Robens Report[1], which was the catalyst for the enactment of the Health and Safety at Work etc Act 1974 in force in Great Britain, stimulated much discussion on the subject and contained many pertinent observations relating to health and safety management. The Report, which in many respects was far sighted, emphasised that the promotion of safety and health at work is an essential function of good management.

The positive attitudes of directors and managers are likely to be reflected in a remarkable degree of safety awareness at all levels throughout the firm. Conversely, if directors and senior managers do not make the time to take a positive interest in safety and health, it is unrealistic to expect that this will not adversely affect the attitudes of junior managers and employees.

If, as is often claimed, the greatest obstacles to better standards of safety and health at work are indifference and apathy, employers must first look at their own attitudes. Boardroom interest must be made effective. Good intentions at board level are useless if managers further down the chain remain preoccupied with production problems.

The promotion of safety and health is not only a function of good management but it is, or ought to be, a normal management function - just as production or marketing is a normal function. Too many firms still appear to regard accidents as matters of chance, unpredictable and therefore not susceptible to 'management'. Too few appear to have made serious efforts to assess the total problem, to identify the underlying causes, or to quantify the costs.

While the promotion of safety and health at work is first and foremost a matter of effective management, it is not, however, a management prerogative. Real progress is not possible without the full cooperation and commitment of all employees.

This fact has long been recognised in the mining industry in Great Britain where, since 1872, coal miners have had a statutory right to appoint representatives to carry out inspections of mines on their behalf. This facility was further extended by the Mines and Quarries Act 1954 to employees in all mines and quarries and has since been extended to employees in other industries by the Safety Representatives and Safety Committee Regulations 1977.

WHY MANAGE HEALTH AND SAFETY?

The answers to this question may appear self evident, but it is probably worth reflecting for a few moments on both the ethical and, indeed, commercial factors that a failure to successfully manage health and safety may raise. The figures that I shall quote clearly relate to experience in Great Britain, but I suspect the Australian experience will mirror the British with variation in scale.

Every working day in Great Britain, at least one person is killed and over 6,000 are injured at work. Every year, three-quarters of a million people take time off work because of what they regard as work-related illness. About 30 million work days are lost as a result.

Accidents and ill health are costly to workers and their families. They can also hurt companies because, in addition to the costs of personal injuries, they may incur far greater costs from

damage to property or equipment, and lost production.

With very few exceptions, employers have to have liability insurance cover for injuries and ill health to their employees. They will also have insurance for accidents involving vehicles and other equipment. The premiums for such insurance cover are obviously related to the health and safety record of firms. The poorer their record, the higher the premiums.

However, insurance policies only cover a small proportion of the costs of accidents. Other costs that may not be covered by insurance include:

- sick-pay;
- damage or loss of product;
- repairs to plant and equipment;

- overtime working and temporary labour;
- production delays;
- investigation time;
- fines.

Studies carried out by the Health and Safety Executive (HSE) have found that uninsured costs greatly outweigh those covered by insurance policies. In a wide range of business sizes and activities, the total uninsured losses from day-to-day accidents ranged from twice up to 36 times the total paid in insurance premiums in the same year; the average was around *ten* times the amount paid in premiums.

So in some cases, you could think of accident costs like an iceberg, with the majority of the losses uninsured and hidden below the water line (Figure 1).
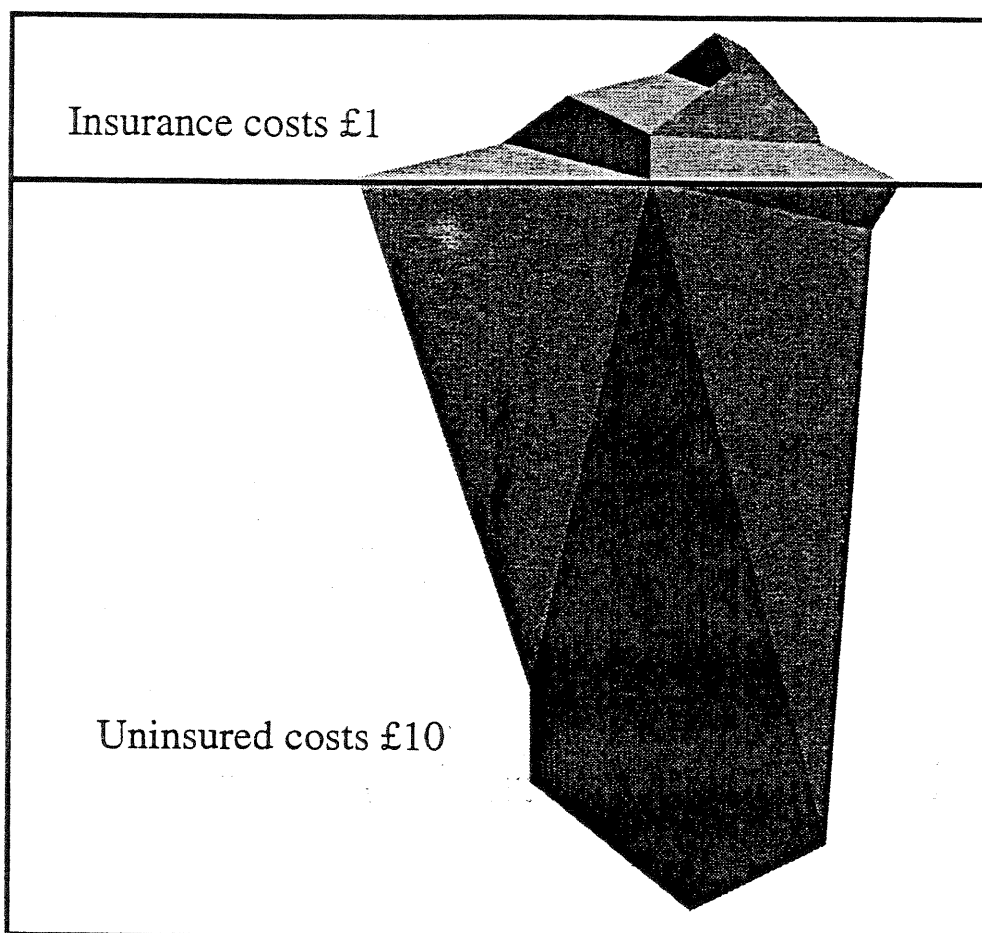

Figure 1 - Accident Costs

Directors and managers can be held personally responsible for failures to control health and safety. You may wish to ask yourself, 'Can you afford such failures?' Do *you* really *manage* health and safety?

SUCCESSFUL HEALTH AND SAFETY MANAGEMENT

The basic principles of good health and safety management apply worldwide and in all industries. That said, it would be presumptuous of me to stand in front of you today and tell you what you ought to do to effect good health and safety management in your mines or workplaces and I do not propose to do so. What I would like to do, however, is to highlight what I regard as the essential features required in an organisation to establish good health and safety practices. To do so, I will refer to a recent HSE publication entitled, 'Managing Health and Safety - Five steps to success'[2]. I will highlight these five steps, put questions to you on them and invite you to consider whether your mine or company follows such an approach.

I suggest that following the five steps will help you to keep your staff safe and healthy, reduce the cost of injuries and illness and minimise plant and equipment damage. You will have fewer stoppages and higher output.

Let us then consider the five steps to success, which are:

- Set your policy
- Organise your staff
- Plan and set standards
- Measure your performance
- Learn from experience - audit and review.

Step 1 : Set Your Policy

Organisations which are successful in achieving high standards of health and safety have health and safety policies which contribute to their business performance while meeting their responsibilities to people and the environment in a way which fulfils both the spirit and the letter of the law.

The obvious starting point is therefore the formulation of a health and safety policy. The same sorts of event that cause injuries and illness can also lead to equipment damage and interrupt production so you must aim to control *all* accidental loss. Identifying hazards and assessing risks, deciding what precautions are needed, putting them in place and checking they are used, protects people, improves quality, and safeguards plant and production.

Your health and safety policy should influence all your activities, including the selection of people, equipment and materials, the way work is done and how you assess and design such things as support systems etc. A written statement of your policy and the organisation and arrangements for implementing and monitoring it shows your staff, and anyone else, that hazards have been identified and risks assessed, eliminated or controlled.

You need to ask yourself:

- Do you have a clear policy for health and safety; is it written down?
- What did you achieve in health and safety last year?
- How much are you spending on health and safety and are you getting value for money?
- How much money are you losing by not managing health and safety?
- Does your policy prevent injuries, reduce losses and really affect the way you work?

These questions need to be answered honestly if improvements are to result.

Step 2 : Organise Your Staff

Organising for health and safety is the process of designing and establishing the responsibilities and relationships which form the social environment in which work takes place.

Having a positive health and safety culture is probably as important to the well being of a mine or any organisation as having a sound legislative framework.

A culture which promotes healthy and safe working is therefore crucial to the proper implementation and continued development of effective policies. Such cultures take time to mature but they are an essential means of influencing the behaviour of individuals.

To make your health and safety policy effective, you need to get your staff involved and committed. To not do so will inevitably result in failure.

A positive health and safety culture will have the following elements embedded in the organisation, often referred to as the four 'C's':

Competence: recruitment, training and advisory support.

Control: allocating responsibilities, securing commitment, instruction and supervision.
Co-operation: between *individuals and groups*.
Communication: spoken, written and visible.

Let us look at these four elements in a little more detail and consider the factors required to fulfil them:

Competence

Arrangements need to be made to ensure the competence of all employees (including managers) if they are to make the maximum contribution to health and safety.

Training makes an important contribution to the achievement of competence and forms an integral part of mining legislation. Experience of applying skills and knowledge is another important ingredient and proper supervision helps to ensure that the appropriate level of training is achieved.

You need to:

* Assess the skills needed to carry out all tasks safely.
* Provide the means to ensure that *all* employees, including managers, supervisors and temporary staff, are adequately instructed and trained.
* Ensure that people doing especially dangerous work have the necessary training, experience and other qualities to carry out the work safely.
* Arrange for access to sound advice and help.
* Carry out restructuring or re-organisation to ensure the competence of those taking on new health and safety responsibilities.

Control

In organisations achieving success in health and safety, control is achieved by securing the commitment of employees to clear health and safety objectives. Managers must provide clear direction and take responsibility for the working environment in which accidents, ill health and incidents could occur. This creates a positive atmosphere and encourages a creative and learning culture in which the emphasis is on a collective effort to develop and maintain systems of control before the event rather than on blaming individuals for failures afterwards.

To achieve effective control you should:

* Lead by example: managers should demonstrate their commitment and provide

clear direction - let everyone know health and safety is important.
* Identify people responsible for particular health and safety jobs - especially where special expertise is called for.
* Ensure that managers, supervisors and team leaders understand their responsibilities and have the time and resources to carry them out.
* Ensure everyone knows what they must do and how they will be held accountable - set objectives.

Cooperation

Participation, commitment and involvement in health and safety activities at all levels is essential, not only to fulfil legal obligations for consultation, but also to achieve effective risk controls. Pooling knowledge and experience is a key aspect of risk control. Health and safety really should become everybody's business.

Successful organisations should not be satisfied with mere legal compliance, but should actively encourage and support safety representatives in their role, recognising the valuable contribution they can make.

Organisations achieving success in health and safety should have employees at all levels involved in groups concerned with setting performance standards, devising operational systems, procedures and instructions for the control of risks.

Other approaches to promote involvement include the use of safety competitions, suggestion schemes, safety posters and circulars where safety problems are identified and solved. These help to develop enthusiasm, create a healthy competition between various work sectors, and enable useful expertise and knowledge to be drawn upon.

You should:

* Chair your health and safety committee - if you have one. Consult with staff and their representatives.
* Involve staff in planning and reviewing performance, writing procedures and solving problems.
* Co-ordinate and cooperate with those contractors who work on your premises.

Communication

Effective communication is essential. This involves information coming into the organisation,

flowing within the organisation and going out from the organisation.

Good sources of health and safety intelligence coming into the organisation are important for the development of health and safety policy. Such information is particularly necessary for those responsible for policy making, planning, setting performance standards, measuring, auditing and reviewing performance. Organisations successful in health and safety make full use of three inter-related methods: visible behaviour by managers and others; the written word; and face to face discussions.

Leading by example is essential in promoting a positive health and safety culture. The visible demonstration by managers, and particularly by senior managers, of the importance and significance of health and safety objectives, communicates powerful signals. Managers also need to be aware of the negative effect of behaviour which suggest insincerity, and effort needs to be put into maintaining consistency between what is said and what is done.

Written communication documents have to be tailored to the needs of each organisation, but generally the degree of detail should be in proportion to the level of complexity and risk.

In addition to permanent documents, organisations use notices, posters, handbills, and health and safety newsletters to inform employees about particular issues or about progress about achieving objectives.

Face to face discussions, with the open honest exchange of views, support other communication activities by enabling employees to ask questions and make a personal contribution.

Remember to:

- Provide information about hazards, risks and preventive measures to employees and contractors working on your premises.
- Discuss health and safety regularly.
- Be 'visible' on health and safety.

Ask yourself:

- Have you allocated responsibilities for health and safety to specific people - are they clear on what they have to do and are they held accountable?
- Do you consult and involve your staff and their representatives effectively?

- Do your staff have sufficient information about the risks they run and the preventive measures?
- Do you have the right levels of expertise? Are your people properly trained?
- Do you need specialist advice from outside and have you arranged to obtain it?

Step 3 : Plan and Set Standards

Planning is the key to ensuring that your health and safety efforts really work. Planning for health and safety involves setting objectives, identifying hazards, assessing risks, implementing standards of performance and developing a positive culture. It is often useful to record your plans in writing. Your planning should provide for:

- identifying hazards and assessing risks, and deciding how they can be eliminated or controlled;
- complying with the health and safety laws that apply to your mines;
- agreeing health and safety targets with managers and supervisors;
- a purchasing and supply policy which takes health and safety into account;
- design of tasks, processes, equipment, products and services, safe systems of work;
- procedures to deal with serious and imminent danger;
- cooperation with neighbours, and/or sub-contractors;
- setting standards against which performance can be measured.

Standards help to build a positive culture and control risks. They set out what people in your organisation will do to deliver your policy and control risk. They should identify who does what, when and with what result.

Standards must be:

- measurable;
- achievable;
- realistic.

Statements such as 'staff must be trained' are difficult to measure if you don't know exactly what 'trained' means and who is to do the work. 'All machines will be guarded' is difficult to achieve if there is no measure of the adequacy of the guarding. Many industry-based standards already exist and you can adopt them where applicable. In other cases, you will have to take advice and set your own. For example:

- completing risk assessments and implementing the controls required;
- specifying methods and frequency for checking guards on machines, ergonomic design criteria for tasks and workplaces, levels of training;
- arranging to consult staff or their representatives at set intervals;
- monitoring performance in particular ways at set times.

Ask yourself:

- Do you have a health and safety plan?
- Is health and safety always considered before any new work is started?
- Have you identified hazards and assessed risks to your own staff and the public, and set standards for premises, plant, procedures and people?
- Do you have a plan to deal with serious or imminent danger, eg. fires, explosions, etc?
- Are the standards put in place and risks effectively controlled?

Step 4 : Measure Your Performance

Just like finance, production or sales, you need to measure your health and safety performance to find out if you are being successful. You need to know:

- where you are;
- where you want to be;
- what is the difference - and why.

Active monitoring, before things go wrong, involves regular inspection and checking to ensure that your standards are being implemented and management controls are working. Reactive monitoring, after things go wrong, involves learning from your mistakes, whether they have resulted in injuries and illness, equipment damage or near misses.

There are two key components of monitoring systems

Active monitoring (before things go wrong). Are you achieving the objectives and standards you set yourself and are they effective?

Reactive monitoring (after things go wrong). Investigating injuries, cases of illness, equipment damage and near misses - identifying in each case *why* performance was substandard.

You need to ensure that information from active and reactive monitoring is used to identify situations that create risks, and do something about

them. Priority should be given where risks are greatest. Both require an understanding of the immediate and the underlying causes of events. Investigate and record what happened - find out why. Refer the information to the people with authority to take remedial action, including organisational and policy changes.

Ask yourself:

- Do you know how *well* you perform in health and safety?
- How do you know if you are meeting your own objectives and standards for health and safety? Are your controls for risks good enough?
- How do you know you are complying with the health and safety laws?
- Do your accident investigations get to *all* the underlying causes - or do they stop when you find the first person who has made a mistake?
- Do you have accurate records of injuries, ill health and accidental loss?

Step 5 : Learn From Experience - Audit and Review

Monitoring provides the information to let you review activities and decide how to improve performance. Audits, by your own staff or outsiders, complement monitoring activities by looking to see if your policy, organisation and systems are actually achieving the right results. They tell you about the reliability and effectiveness of your systems. Learn from your experiences. Combine the results from measuring performance with information from audits to improve your approach to health and safety management. Review the effectiveness of your health and safety policy, paying particular attention to:

- the degree of compliance with health and safety performance standards (including legislation);
- areas where standards are absent or inadequate;
- achievement of stated objectives within given time-scales;
- injury, illness and incident data - analyses of immediate and underlying causes, trends and common features.

These indicators will show you where you need to improve.

Ask yourself:

- How do you learn from your mistakes and your successes?
- Do you carry out health and safety audits?
- What action is taken on audit findings?

- Do the audits involve staff at all levels?
- When did you last review your policy and performance?

CONCLUSION

To conclude, it is true to say that this approach to managing health and safety is tried and tested. It has strong similarities to quality management systems used by many successful companies. It can help you protect people and control loss. All five steps are fundamental.

We, in Great Britain, like to think that our coal mining industry has a long tradition of high standards of safety and health and is recognised world-wide in this regard. While, like yours, much of the safety and health 'management' of the industry is enshrined in law which has been built up over the last century and a half, there is also a very positive safety culture which was nurtured by management and workmen in the nationalised industry and which has now passed to the private sector. Some would claim that this safety culture has contributed equally to the safety and health standards now obtaining. Doubtless, the combination of these factors has produced a safety régime which encompasses many of the factors described in this paper and I am sure that the British experience is mirrored, to no small degree, in the Australian mining industry also.

REFERENCES

(1)   Lord Robens, Chairman.   Report of the Committee 1970-72. HMSO
(2)   Managing health and safety - Five steps to success. HSE Books INDG275 5/98 C2000