Session 7

HEALTH & SAFETY ISSUES

MONDAY 14TH OCTOBER 1991

GLOBAL LOSS CONTROL STANDARDS

ROBERT MUDGE

PEDIGREE PETFOODS DIVISION OF MARS (GB) LTD.

MILL STREET, MELTON MOWBRAY, LEICS. LE13 1BB, ENGLAND

TEL: 0664-411111   FAX: 0664-416696

GLOBAL LOSS CONTROL STANDARDS

HEALTH & SAFETY ISSUES

INTRODUCTION

Mars Incorporated has long recognised the value of corporate standards in loss control of our physical assets. Recently we have recognised the value of a formalised global approach to Health and Safety standards. The paper will discuss the benefits of such a corporate approach as well as some of the challenges being faced in introducing global Health and Safety standards.

The relevance of risk management techniques to health and safety are discussed, as are the key elements of safety programme management. These concepts have formed the basis for development of our global standards.

The Corporation's manufacturing operations are based mainly in North America, Europe and Australia. The influences of different languages, cultures and legal systems will be discussed.

It should be emphasized that we are just starting on the process of creating the global standards and are relatively undeveloped compared with some other multinationals, especially those in the Chemical or Petrochemical Industries. It is hoped that sharing our experiences will be of special value to other organisations who find themselves considering a similar exercise.

A. WHY GLOBAL STANDARDS?

For many years Mars, Incorporated has applied global standards to the protection of its fixed assets. These have largely been developed with our Insurers and Loss Control Consultants, and have resulted in an Asset Conservation Manual which clearly defines the standard of protection to be applied to the buildings, plant and machinery. Our Insurer's Engineers provide help and advice and provide an audit service to ensure that standards are maintained. As a result of this focus all our facilities reach a similar standard and achieve highly protected risk status.

The Corporation has always placed a strong emphasis on the wellbeing of those we employ (our Associates), and this emphasis originates from the very top of the organisation. However, until recently Health & Safety standards were left to be established at local level within a framework of relevant local legislation and industry standards.

I believe that a similar situation exists in many International Corporations involved in Manufacturing activities. So why do we treat Health and Safety loss control differently to loss control of our physical assets?

One significant factor is that our property Insurers define standards of protection for us. This covers approval of equipment used, system design, the regular maintenance and checking of systems, and the training of emergency response teams. In contrast the carriers of Employers Liability or Workers Compensation insurance may offer advice and help, but are generally content to fix the insurance pr   )anies.

Another factor is a "low risk" mentality in many companies in relation to Health and Safety. We tend to look at Chemical and Petrochemical companies as "high risk" with recognised potential to kill large numbers of people. Indeed a number of Corporations in these high risk industries have pioneered the development of Corporate Standards and demonstrated significant benefits from them. In the food and other sectors of industry one often finds the view that a certain level of injury and illness is inevitable.

During the Spring of 1990 the Writer was asked to carry out a Safety Audit on the four European sites of one of our Companies. The audit revealed very wide differences in both the physical standards, and the stage of development of key elements of their safety programmes. As a result there was a wide variation in the degree of risk to Associates of that Company between the four sites.

The results of the audits gave rise to a programme of organisational and physical improvements on those sites, developed from the best practices identified.

It was clear from this exercise that delegation of health and safety standards as a mainly local issue would cause similar variations in standards between other sites owned by the Corporation. A decision was therefore taken to develop a series of Global Standards which would become mandatory for adoption by all Companies within Mars. A small team was established to achieve this consisting of a representative from each of North America, Australia and Europe reporting into the Corporate Staff Officer for Risk Management. The Writer is the European member of this team.

B. APPLICATION OF RISK MANAGEMENT TECHNIQUES

The risk management tools and techniques which we apply to our physical assets are equally applicable to the control of health and safety risk. The four steps in this process of risk management are outlined below, with comments on the benefits to the process of a Global approach.

1. Risk Identification

This step requires identification of all the loss exposures. As already stated, the food industry does not have the same degree of hazard as Chemical or other "high risk" industries. Nevertheless many significant risks are presented by the equipment and processes. Fork lift trucks are still widely used for transporting materials. Even where materials handling has been automated, hazards are often created by the automatic stop/start operations. Processes include mixing, heating, sterilising, packaging and palletising all of which present hazards. Substances used include cleaning chemicals, biocides, ammonia and many others which if not correctly stored, handled and disposed of can cause significant health hazards. Powders can cause respiratory problems as well as explosion and noise can lead to hearing loss. Other hazards are associated with electricity and with maintenance and installation work. In the last mentioned category, Contractors present an additional risk factor.

The broad Corporate base for risk identification helps in establishing risk exposures. We are able to draw on the knowledge and experience of Health and Safety specialists from all our companies to ensure that all loss exposures are identified.

2. Quantification and Analysis of Risk

The main method used here has been analysis of past incidents to establish basic causes and therefore elements needing to be controlled. The global or corporate approach again provides a wide base of data and has helped us to decide on those aspects of our business which are highest priorities for developing standards.

Some of our larger units are also using techniques such as Hazard & Operability Studies (HAZOP) and Quantified Risk Assessment to help identify and quantify the risks, particularly for new project activities or changes to processes.

3. Development and Implementation of Controls

As for our property risks there are a number of strategies for control:

- ## Risk Avoidance

This includes such measures as substituting non-hazardous materials for hazardous, pre-mixing materials to make them less hazardous, changing the process, moving the operator away from the hazard or in the ultimate a decision not to manufacture.

- ## Risk Transfer

We may choose to transfer high risk activities to someone better equipped to manage them. For example, powder blending may be subcontracted to specialist companies. There may be a moral dilemma here as we would not wish to transfer a high risk activity if this meant the same or greater risk to another group of people. The emphasis of risk transfer should be to transfer to specialists who know how to manage the risk.

Another way of transferring risk is through insurance. While we are all required to carry insurance for workers' compensation we cannot morally justify discharging our responsibilities by this means alone.

- Risk Retention

In our asset loss control strategy we may choose to retain certain risks, maybe for small predictable losses. Great care is needed in applying such a policy to our management of the health or wellbeing of people. Our safety programmes will be directed first to risks with the highest potential for serious injury, but we have moral and legal responsibilities to minimise the risks of all potential injuries whether great or small.

- Risk Reduction

Risks are reduced by means of such items as guards and interlocks, reduction of hazardous inventories, safe procedures, education and training. Most effectively this is achieved through proper consideration in project design.

The global standards which we have developed to date are mainly involved with risk avoidance and risk reduction strategies.

4. Monitoring and Review

Having implemented our global standards it is vital that we monitor them and provide a feedback loop. The principal methods for monitoring are audit and inspection, and the investigation of near misses and actual loss.

In our terminology inspection is the regular formal tours carried out by all levels of operational management within their areas of responsibility. Audit is an unbiased, probably external examination of the company's safety systems and procedures and its performance in complying with them (usually once a year). Audit and Inspection were seen to be such an important element of safety programme management that a standard for this was included in the first group of corporate standards which we have published.

Another important part of monitoring is the investigation and analysis of all accidents, including near miss or property damage ones. We define accidents as unplanned or uncontrolled events which led to or could have led to injury to people or damage to plant and equipment. As loss of control is implicit in this definition, it is important to determine the basic cause of every accident and to ensure that controls are put in place to prevent recurrence.

C. KEY ELEMENTS OF SAFETY PROGRAMME MANAGEMENT

Research studies into Companies with above average safety performance, or those which have shown a significant improvement over several years, have shown that a number of key elements always exist in their programmes. We recognise the following 10 key elements although other organisations may break them down further or combine them into a smaller number.

1. Safety Philosophy

    This needs to evolve from corporate commitment and is generally
    expressed in the form of a written health and safety policy, signed by the
    senior site manager and well communicated to all associates.

2. Management Commitment and Involvement

    For the programme to be fully effective, management needs to be actively
    involved in managing safety and not just committed to the principles.
    Recognition is required that safety is a line management responsibility and
    managers at all levels will be actively involved in the safety management
    process.

3. Effective Safety Organisation

    A successful safety programme benefits from the input of a qualified
    health and safety specialist. A structure is needed for managing safety
    and for consultation with associates on safety and occupational health
    issues. Best results are obtained from involvement of as many associates
    as possible in the organisation, and clear definition of responsibilities.

4. Safety Goals and Objectives

The overall effectiveness of the programme depends on how well it performs against established goals and objectives. Every individual in the organisation needs to be given written objectives. Objectives must be measurable, performance measures recorded, and achievement must form part of performance review.

5. Standards of Performance

The ultimate measure of effectiveness of a plant's safety programme is the number of injuries suffered by associates, visitors and contractors. A declining rate is clearly most desirable, though this becomes harder to achieve as the injury rate declines.

Written standards should be provided to cover high risk activities. Emergency procedures must be documented and well trained emergency teams maintained. Occupational health hazards must be identified and monitored.

6. Motivational Methods

While it should be possible to motivate associates to work safely by a concern for their own physical well being, this is not in fact so. Human beings are by nature risk takers, and motivational methods are needed to bring ive safety culture.

7.   <u>Effective Safety Communications</u>

While a number of communication media are of value; regular, formal communications of up to date information by managers through job involvement or communication meetings is one of the most effective. This method allows a forum for upward communication and interaction.

8.   <u>Incident Investigations</u>

An incident or accident is the result of failure of control, and the investigation of accidents is vital in understanding the mechanism of failure and ensuring that action is taken to prevent recurrence. Accident investigations should be a line management responsibility.

9.   <u>Effective Safety Education</u>

An effective programme of safety education is another key part of the overall safety programme. This must include general induction training, job specific training, and regular updating to maintain knowledge.

10.   <u>Effective Safety Audits</u>

Audit and inspection programmes have already been referred to and are one of the most important tools in managing a safety programme. For operational management they are a means to ensure standards are maintained, and for senior management a way to demonstrate commitment and set the standards. Use of occasional external audits provides a check and balance mechanism for maintaining the programme on course.

In terms of criticality, the most important element is management commitment and involvement. Without this the full potential of any programme will not be achieved. Safety specialists and others may work hard to achieve results, but operational managers will be driven by what they perceive top management believes important.

D.   <u>INFLUENCES ON GLOBAL STANDARDS</u>

1.   <u>Legislation and Industry Regulations</u>

There is a wide variation both in the way Health and Safety Legislation is framed and in the way the compliance authorities work. Much of the legislation and regulations framed by such bodies as OSHA in the USA or HSE in the UK set down quite detailed requirements while in other countries such as Holland the law provides a framework within which companies have more freedom to determine detail. Elsewhere, such as in Germany, Industry Groups determine the detailed regulations.

Another difference observed is the way in which responsibility is defined. In the USA, for example, control of hazardous energy requires every individual to personally lock out energy sources when he or she is working on equipment. In Europe the practice is more frequently to rely on trained authorised persons to carry out isolation and then issue a permit to those carrying out the work.

These differences in detail and responsibility do cause conflict in drafting global standards and in implementing them. The best approach I believe is to define the principles or ground rules, and to define a level of safety to be achieved, allowing some flexibility in the detail. The ideal standard is short and simple.

A great contrast exists between compliance authorities. In the UK the Health and Safety Executive are charged with inspection and enforcement. In continental Europe it is handled by a variety of government agencies and industry group insurers. However, European countries generally share the benefit of a relationship with the compliance authorities which is mutually helpful and beneficial. Most of our European plants welcome visits from the Compliance Officers for help and advice, though clearly the relationship will be less cordial with companies who pay little regard to Safety, or following a major accident where clear fault exists in the management of safety.

The situation is very different in the USA where OSHA is very clearly a regulation making and enforcement authority. I have not come across any company in the USA who have invited an OSHA officer to visit them, or sought their help on safety matters.

Both the fines imposed for citations in the USA and settlements for workers compensation determined by the Courts are set at punitive levels compared to those in Europe. Fines in Europe are arguably too low. Indeed the Chairman of the United Kingdom's Health and Safety Commission was recently quoted as saying that we have reached the situation where the law was specifying higher penalties for the death of bluebells than people.

2.   Industry and Consensus Standards

Legislation in most countries is backed up by Industry and Consensus Standards and Codes of Practice. Frequently these become quasi-legal when considering general duties of care. They derive from national standards institutions, professional engineering institutions and industry groupings.

There is a tendency for standards to converge as institutions glean best practice from their equivalents in other countries and like items often appear in a number of standards. An example is the anthropomorphic data used to design machine guarding. The same tables occur in British, DIN, North American and Australian standards.

The natural diffusion and sharing of information is being accelerated by formal co-operation between national standards institutions to derive international standards. For example common machinery safety standards are currently being produced in the EEC as a result of a community directive and these will be mandatory for suppliers of all machinery within the EEC.

Where recognised international standards exist there may be no justification for separate corporate standards. Where no such international standards exist, national industry or consensus standards can be a useful source of information in drafting corporate standards.

3. Cultural Differences

One of the most significant differences we meet is language, though the problem is mainly confined to Europe, where we have German, French, Dutch and Flemish speaking sites. The standard language for communication within the Corporation is English and most managers have a reasonable command of it. However, problems of interpretation still arise, and standards have to be understood by Technicians and Operators as well as Managers, so careful translation is needed to ensure correct interpretation. A further translation may be required to cater for ethnic minorities to ensure complete understanding.

Once standards need to become converted into working documents, a careful translation becomes essential so that all those covered by the requirements can clearly understand. A further translation may be required to cater for ethnic minorities to ensure complete understanding.

Another difference is between those nations who prefer to operate through written systems and documentation, and those who claim that it is not necessary to have written standards to control safety. This tends to reflect in the legislation as referred to earlier in the paper.

Even though the USA is a single nation wide cultural differences can still be seen, for example between east and west.

E.   <u>WORLDWIDE TRENDS AND COMPARISONS IN HEALTH AND SAFETY</u>

In all of the Countries where we have manufacturing facilities there is a significant trend towards more regulation. This frequently arises from industry's failure to exercise their general duty of care and implement risk management programmes. OSHA have been busy over the past 3 or 4 years with rule making, and it has also been a busy time in the UK and in the wider European Community. However, in most countries insufficient resources are available to the regulatory authorities for monitoring compliance, and many less scrupulous employers ignore the legislation until they are faced with enforcement orders.

As far as accident data is concerned, comparisons are masked by cultural differences and other factors. The protestant capitalist ethic in eastern parts of the USA tends to encourage people to return to work if at all possible, even if a period of alternative work is needed. On the other hand Europe suffers from a welfare mentality where even relatively trivial accidents are often seen as a reason for time off. Thus lost time injuries alone do not constitute a valid measure for comparison.

So far we have not attempted any objective measurement of effectiveness of the safety programmes of our sites to provide a comparison. Several sites have used external audits such as the International Safety Rating System and in time we may adopt a recognised system of audit or rating so that an objective comparison may be made.

F. BENEFITS OF THE GLOBAL APPROACH

While the differences in legislation , industry standards and cultures between our different regions, countries and states present some challenges to development of global standards, I hope that I have identified a number of benefits.

A great deal of knowledge and experience exists across the Corporation. This includes accident data and information which assists in identification and quantification of risk.

We have a considerable investment in safety systems and programmes from

which w

Solutions to problems can be shared so that we do not all have to invent the same solution. We can share knowledge and expertise of managers and safety professionals.

Above all the benefit of the global standards exercise is the demonstration of the Corporate commitment to Health and Safety which leading to a culture which encourages further improvement. Often people dwell on the cost of safety programme rather than the benefits. The principle benefit of a health and safety programme is the prevention of pain and suffering to our Associates and Contractors. We do believe that there is also a financial pay off for our activities. Accidents cost money in terms of loss of time of injured people and those who have to investigate and take corrective action. Workers compensation, legal fees and fines are an ever increasing cost. In addition, improved motivation of the workforce, improved performance of the plant and growth in reputation of the corporation as a caring employer are all benefits to be gained from an effective safety programme.