

"AN INTRODUCTION TO SAFETYMAP AND ITS USE"

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The development of a program like SafetyMAP is the culmination of a number of changes in the approach to health and safety by all the interested parties, governments, employers and employees.

In this paper I will:

- (a) provide some background to the development of SafetyMAP
- (b) outline the essential elements of SafetyMAP
- (c) give some examples of the use of SafetyMAP
- (d) make some observations about the relevance of SafetyMAP to the mining industry.

BACKGROUND TO SAFETY MAP: A SYSTEMS BASED APPROACH TO PREVENTION

The development of programs like SafetyMAP is based on a clear move to a systematic approach to managing health and safety.

That is a move away from looking at individual deficiencies or effects to looking at systems and causes. This has been most popularly communicated in the quality movement where poor quality is seen as a result of system causes rather than individual failures or deficiencies. The focus is on the management of the system and how processes can be controlled to maximise desired outputs and minimise failures.

In the context of OHS by a systems approach is meant a process of managing OHS in terms of systems of work rather than concentrating on individual deficiencies. It means an approach in which risks are assessed and controlled and there is an inbuilt system of maintenance and review. In other words the same management of process and outcome that is central to quality management systems.

I would like to briefly look at some areas where this shift to a systems approach is evident. The perspective is that from a regulatory agency but this reflects broader changes in workplaces.

LEGISLATION

'Old style' occupational health and safety legislation is typically prescriptive in character and intent. It is brimming with 'shalls' and 'shall nots', is extremely reactive and continually lags behind workplace technology and often behind modern work practices.

Regulations of this sort become part of the problem instead of the answer because they leave no room to manoeuvre or for initiative, innovation or improvement. With prescriptive regulation compliance 'to the letter' is the name of the game. The original intent of the regulation becomes lost in a maze of administration and interpretation and the focus moves away from resolution of the occupational health and safety problem to complying with the regulation.

Such prescription of detailed requirements by government encourages industry (and in fact everyone else) to regard health and safety as the responsibility of government. This is especially so when prescription has a heavy emphasis on government approvals and makes approvals conditional upon government inspections. Thus with a prescriptive approach, government traditionally assumed much of the responsibility for the management of occupational health and safety risks.

This often resulted in employers adopting a 'they will tell me if I do the wrong thing' attitude and employees a 'they will protect me' attitude. The main function of government became that of policing. All these factors combined to produce very poor OHS systems and retard initiative and progress. The first move away from this came with the development of Robens style legislation.

The Victorian OHS Act is based on the U.K. Robens Report and was the first of the new style OHS legislation to be implemented in Victoria.

The Act is enabling in character, providing clear objectives and establishing the general duties of workplace parties and others. Under the Act employers, employees and self-employed persons are the major workplace parties and others include designers, manufactures, importers and suppliers of workplace plant and substances.

The performance orientated philosophy of the Act provides employers with a flexibility which prescriptive legislation can never deliver. The future in occupational health and safety legislation will be performance based in preference to the old prescriptive style.

The practical framework which the Act provides, facilitates problem solving at workplace level without undue government intervention. This legislative approach creates general duties applicable across all industries, all plant and all processes. The OHS Act logically, and quite practically, places responsibility for occupational health and safety with those who have control over the hazards and risks.

The general duties set down are performance based, that is, they are in effect a statement of a legislative objective and this makes them outcomes oriented. The Act does not provide detailed prescriptive controls for specific hazards, it more sensibly establishes a framework for their control through regulation. The major emphasis of the Act is on protecting persons at work against risks to health or safety, and on control of those risks at the source.

Recent and proposed changes to subsidiary OHS legislation are significant because of their relevance to the evolution of occupational health and safety in Victoria.

The general thrust of these changes is to:

- minimise the legal requirements on business - without impacting negatively or reducing OHS;
- simplify administrative requirements; and
- provide employers with maximum flexibility in how they achieve compliance with OHS law.

This change is being reinforced by the Authority placing a great deal of emphasis on encouraging employers to implement a systematic approach to OHS. The basic message we are putting to industry is that good OHS is quite simply 'an integral part of good management'. OHS should be managed just the same way that production, human resources or quality control need to be planned for and directed.

Indicative of this change is the recent move away from government approvals.

An initiative instituted by the Government in the area of boilers and pressure vessels demonstrates this policy. In Victoria, low hazard boilers and pressure vessels are now exempted from approval, also interstate approvals and registrations are now accepted. This has resulted in a dramatic reduction in the volume of boilers and pressure vessels requiring registration and hence less 'red tape' and reduced costs to industry. Over 60% of all pressure vessels are now exempted from design, registration and modification requirements. 370,000 low-risk vessels have been exempted.

In a similar exercise, the Minister instituted exemptions in the registration of cranes in Victoria, resulting in a reduction of the number of cranes requiring notification to the Department from 2000 to about 50. There is a continuing move away from approval/registration systems for plant and substances that include statutory inspections as part of those approval/registration systems.

However, some registration systems will be prescribed for highly dangerous plant and substances. Where possible, the responsibility for the integrity of these designs and procedures will be with those seeking registration.

Victoria expects to introduce Plant Safety Regulations later this year based on the framework agreed at the national level. These new regulations will see 3 primary acts and 11 sets of regulations, all prescriptive in nature replaced by one performance based regulation. This constitutes one of the most significant regulatory reforms in OHS for 25 years.

The heart of these new regulations are the hazard identification, risk assessment and risk control processes that are central to a systems based approach to prevention. Many workplaces will need to actively manage their health and safety standards rather than relying on statutory inspections and government approvals.

ENFORCEMENT AND PROSECUTION

In line with the style of legislation Victoria has concentrated in the last 4 years on duty of care and systems of work in order to consolidate the prevention message it sends. Regulation breaches address individual deficiencies and do not encourage a systematic approach.

The impact of this shift can be seen in the type of investigation now required to achieve successful prosecutions of duties of care issues.

Achieving greater deterrence and awareness through a systems investigation is one of the objectives of the Authority. An increase in the level of fines suggests some success on this front.

PUBLICATIONS AND PROMOTION

One of the objectives of regulatory agencies is to provide intelligent guidance on OHS matters through publications. A combination of hazard and systems material is produced but much greater emphasis on the latter has been given recently. The SHARE series of 10 booklets is designed to enable a systematic approach.

Equally in the area of promotions the Authority has been marketing the link between improved health and safety and use of systems for the past 4 years.

TRAINING

Training of employees, supervisors and managers is a key aspect of any approach to health and safety.

Traditionally the emphasis has been on individual hazards and particularly to a lower order means of dealing with the hazard ie. PPE or training itself. This is being complemented by a broader identification, assess and control approach.

Equally emphasis has been placed on training to follow up individual failures rather than on monitoring the system and improving it.

There has and still is a tendency to try and train people in the legislation first without linking with clearly to the management of risk. Regulatory agencies have been particularly deficient in not making this link.

INSPECTION

One of the major issues following from the kinds of shifts already described for a regulatory agency is its methods of intervention. Inspection is the most common form of workplace intervention used by OHS agencies throughout the world. An increasing move to performance based legislation and OHS management systems raises the relative effectiveness of inspection and audit approaches.

It is useful to consider the relative applicability and effectiveness of the two approaches and the contention is that inspection is most effective in small and simple organisations and similarly is effective when applied with prescriptive legislation. By contrast audit is more applicable and effective in large and complex organisations and similarly is effective when applied with performance legislation.

While not being proposed as an empirical relationship it is my view that these combinations need to be included in the prevention strategy of a regulatory agency. Similarly industry in its approach needs to look at this balance for its in-house systems.

Before looking at how an increased role for audit might apply it is appropriate to note the effectiveness of systems approaches in successfully managing health and safety.

EVIDENCE OF EFFECTIVENESS

The range of published accounts by individual companies through the Worksafe Best Practice program and through the OSHA Prevention Award programs demonstrates the significant improvements achieved using a systems based approach.

The Authority's Risk Management Program which was run from 1989-1993 undertook a number of evaluations to identify performance of companies. The results of those evaluations and comparisons to control groups suggested an up to 10:1 claims cost reduction ratio in favour of those companies implementing systems.

An analysis of key success factors in the Risk Management program identified OHS Management, Communication and Consultation as the three most significant variables. This is the system "software" so crucial to management systems.

Other evidence of the effectiveness of a systems approach can be drawn from targeted industry programs run by the Authority. The implementation of the Manual Handling Regulations and Code of Practice was found to be most successful where workplaces had a systematic approach. It should be noted these Regulations are performance based.

In order to summarise the relevant aspects and provide a means of establishing where industry is now the chart titled Managing OHS provides a guide.

In this chart I have summarised three stages in a reasonably arbitrary manner but the point is to illustrate the differences in approach. This framework can be used to describe either individual enterprises or indeed regulatory agencies. The patterns shown in the chart are adopted from a similar exercise done for the quality control to T.Q.M. transition.

The traditional approach focuses on effects, by measuring failures and costing failures while a modern approach focuses on causes and the systems that produce them. Measures and costs are drawn from system effectiveness indicators.

Some specific examples are given to illustrate.

SAFETY MAP: ESSENTIAL ELEMENTS

It is in the context of the abovementioned changes that OHSA has developed SafetyMAP (Safety Management Achievement Program) to assist workplaces by offering a set of benchmarks and performance indicators that can be used to evaluate progress towards OHS best practice. The SafetyMAP program is consistent with the thrust of performance based legislation and quality management trends. It was developed to improve OHS management and is a preventive strategy for assisting organisations to develop, implement and maintain management systems that integrate occupational health and safety into all their operations. The program has 3 core components - ASSESSMENT, AUDIT and ACHIEVEMENT.

- ASSESSMENT involves organisations independently assessing "where they are" in OHS management - placing themselves on the SafetyMAP.
- AUDIT requires examination of the organisation's OHS management system, this verifies the system and provides feedback to enable the organisation to "step forward" on the SafetyMAP.
- ACHIEVEMENT requires an audit by the Occupational Health and Safety Authority in which the organisation must satisfy specific SafetyMAP criteria.

Gaining ACHIEVEMENT level in SafetyMAP demonstrates that the organisation is a leader in health and safety.

For the purpose of the SafetyMAP program, OHS management systems are broken down into 12 elements which are used to determine the status of OHS management within the organisation. SafetyMAP provides criteria for each of these elements against which organisations can audit their system and "benchmark" OHS performance.

MANAGING OHS

	TRADITIONAL	TRANSITIONAL	MODERN
PRIMARY CONCERN	Detection of hazards. Not getting caught by authorities.	Control of risks.	Co-ordination and control of processes to achieve outcomes.
EMPHASIS	Reducing individual deficiencies as they arise.	Reducing risks in a systematic way.	Managing and improving systems of work to achieve goals and minimise failures.
METHODS	Inspection - feedback on unsafe output.	Information and measurement to enable some control of inputs (control charts, statistical measures, monitoring).	Documentation and control of key processes and audit of such processes against benchmarks.
TYPICAL MEASURES	Lost time injury. Frequency rate. % budget to remedy hazards.	Trend analysis. Saving achieved through prevention.	Performance to standard or benchmark. Positive measures of health and safety, e.g. number of audits conducted, etc.).
RESPONSIBILITY FOR OHS	OHS officer, employees.	OHS officer, line managers, employees.	Everyone - with senior management taking a visible leadership role.

The SafetyMAP program is very "user friendly" and can be fully implemented, introduced in stages or only partially implemented in organisations. For workplaces just starting on the OHS system journey, the ASSESSMENT component is most significant, whereas organisations with highly developed management systems will be attracted to the AUDIT approach which provides feedback on how well their system operates. The ACHIEVEMENT level of SafetyMAP will be useful to organisations with existing comprehensive management systems, seeking to realise greater flexibility in the way in which particular risks are managed.

SafetyMAP offers organisations a way of moving at their own pace from the ASSESSMENT to the ACHIEVEMENT stage with the final goal of attaining a system which secures a safe and healthy workplace. The 12 system elements have specific sets of associated audit criteria which together enable a comprehensive assessment of an organisation's OHS management. The performance against criteria also provides direction for continued improvement of the system elements.

SafetyMAP elements and audit criteria are aligned with relevant sections of AS 3901 elements and many of the principles of Quality Assurance and Total Quality Management are already incorporated in SafetyMAP. The program can be used to benchmark OHS performance and measure ongoing improvement. SafetyMAP provides organisations with the tools to conduct their own safety audit program.

SafetyMAP presents the characteristics of safety management programs which are effective, comprehensive and cost efficient. It provides organisations with a way of improving OHS performance. SafetyMAP is also capable of growing with an organisation and ensuring that during its expansion the highest OHS standards are maintained.

SafetyMAP is based on 12 elements, these are as follows:

- Element 1 Building and sustaining commitment
- Element 2 Documenting strategy
- Element 3 Design and contract review
- Element 4 Document control
- Element 5 Purchasing
- Element 6 Working safely by system
- Element 7 Monitoring standards
- Element 8 Reporting and correcting deficiencies
- Element 9 Managing movement and materials
- Element 10 Collecting and using data
- Element 11 Reviewing management systems
- Element 12 Developing skills and competencies

An outline of each element is given with a suggested performance measure in order to highlight the new ways in which the positive management of safety can be used.

ELEMENT 1 - BUILDING AND SUSTAINING COMMITMENT

A dynamic health and safety culture requires organisation-wide commitment which demonstrates that the organisation actively manages its health and safety responsibilities.

Audit Criteria

- A published and endorsed OHS policy statement.
- Defined and communicated OHS responsibilities.
- Management accountability.
- Scheduled reviews of policies and operations.
- Active employee involvement and consultation.

Possible Measures

- % of job descriptions with OHS responsibilities defined.

ELEMENT 2 - DOCUMENTING STRATEGY

To attain high level achievement in health and safety, a management system must be established and documented. It must identify major hazards and outline specific strategies for managing them in manuals. Good manuals are clearly laid out and well structured, they invite involvement. They also provide forms and other proforma that can be used to record information, report hazards and manage specific activities. The better manuals are "living" documents and are regularly revised - having been assembled in a manner that enables easy additions and deletions.

Audit Criteria

- Identification of major hazards and risks.
- OHS strategy planning.
- Documentation and manuals.

Possible Measures

- Level of awareness and use of manuals.
- Duration between documentation updates.

ELEMENT 3 - DESIGN AND CONTRACT REVIEW

Outstanding health and safety performers view health and safety as being integral to all management activities. Such an approach encompasses the areas of design and contracting. When a process, product or workplace is designed and built with health and safety in mind, the number of reactive (add-on) procedures required to manage hazards will be minimised. If contracts are developed with due consideration of health and safety, organisations can maintain standards more easily.

Audit Criteria

- Incorporation of OHS at the contract stage.
- Incorporation of OHS in design.

Possible Measures

- \$ value of projects with OHS elements in contracts reviewed compared to all project value.

ELEMENT 4 - DOCUMENT CONTROL

Because health and safety documents set standards and regulate action, they must be authoritative. This means that they should be issued by a legitimate source, comprehensive and current. Out-of-date information - sometimes given "new life" through reprocessing - relays a negative message, i.e. health and safety is not important. Up-to-date information relays a positive message and encourages action.

Audit Criteria

- Systematic development and identification of documents.
- Systematic prompt distribution of documents.
- Systematic removal from circulation of obsolete documents.

Possible Measures

- % of obsolete procedures in all documentation.

ELEMENT 5 - PURCHASING

Through proper management of purchasing many potential health and safety problems can be avoided. Purchasing decisions must be co-ordinated and those responsible for selecting goods and services must be aware that senior management requires their consideration of health and safety issues. Preferred suppliers should be considered as a control mechanism. Auditing of suppliers is often more efficient than auditing the goods or services themselves.

Audit Criterion

- Incorporation of health and safety considerations into purchasing.

Possible Measures

- % of purchase orders with OHS requirement specified.

ELEMENT 6 - WORKING SAFELY BY SYSTEM

Health and safety in the workplace is achieved through management of the work process and must be integrated into the management of all work activities. Risks should be managed with appropriate control measures. Hazardous operations or locations should be strictly controlled and plant and equipment should be regularly inspected and serviced. System-based control methods which use standardised routines or physical barriers to prevent incident are superior to methods which rely on the judgement and co-operation of individuals.

Audit Criteria

- Workplace and work design that minimises risk.
- Hierarchical risk control.
- Effective work method control and supervision.
- Effective work method control for maintenance, cleaning, repair and inspection of plant and equipment.
- Emergency plans and procedures.

Possible Measures

- % of system controls to individual controls.

ELEMENT 7 - MONITORING STANDARDS

Information is the lynch-pin of sustained performance in health and safety. The workplace is never static - changing competitive conditions alter work routines, inputs and the composition of management and the workforce. Therefore, it is necessary to monitor the workplace and to gather information about potential hazards, lapses in procedures, and action that can be taken to improve control mechanisms. Surveying and inspecting must be carried out in a manner that encourages participation and open dialogue about problems to assist the gathering of data.

Audit Criteria

- Hazard inspections in the workplace.
- Appropriate environment monitoring.
- Appropriate personnel health monitoring.

Possible Measures

- % of OHS standards in conformance.

ELEMENT 8 - REPORTING AND CORRECTING DEFICIENCIES

Accidents and incidents can happen even with the most active health and safety management system. Where they occur it is crucial that a suitable investigation is carried out and that action is taken to ensure that they will not recur.

If the management system is at fault, reporting to the executive should indicate changes likely to eradicate the problem. Where other weaknesses are determined (e.g. inadequate protective equipment, poor written procedures, inadequate safety apparatus or deficient training) specific recommendations and a timetable for remedial action should be outlined.

Audit Criteria

- Accident and incidents reporting system.
- Accident and incident investigation procedures.
- Remedial action.

Possible Measures

- % "cases" where remedial action was taken within the defined time frame.

ELEMENT 9 - MANAGEMENT OF MOVEMENT AND MATERIALS

The storage, handling and movement of materials can give rise to a variety of hazards. These hazards need to be identified, the risks assessed and a program for the implementation of control solutions developed.

Audit Criteria

- Safe manual and mechanical handling of materials.
- Safe transport and storage of materials.
- Identification of materials (including hazardous substances).

Possible Measures

- Ratio of risk assessments to defined handling operations.

ELEMENT 10 - COLLECTING AND USING DATA

Information is crucial to the operation of an effective health and safety management system. Without high quality information, management activities lack direction. Information quality is assured by systematic collection of data and analysis. Health and safety records must also meet legal and legislative requirements, therefore information management systems must correspond with formal requirements in their structure, maintenance and preservation.

Audit Criteria

- Systematic data collection.
- Observation of legislative record-keeping requirements.
- Systematic data analysis.
- Publication of OHS performance reports.

Possible Measures

- Level of record keeping required by regulation against potential recorded events.

ELEMENT 11 - REVIEWING MANAGEMENT SYSTEMS

To ensure that the OHS management system is functioning effectively, regular reviews must occur. Auditing provides a systematic and structured framework for verifying that activities conform with planned arrangements.

Audit Criteria

- Auditing of the management system.
- Reporting of deficiencies.
- Review of suggested improvements.

Possible Measures

- Duration between reviews.

ELEMENT 12 - DEVELOPING SKILLS AND COMPETENCIES

The actions of the individual are central to the effective operation of a health and safety system. Programs of human resource development must be undertaken. The 3 main forms of development relevant to OHS are:

- specific instruction on defined operations;
- general instruction on safe work practices; and
- instruction on the management of emergencies.

Methods of instruction will vary from organisation to organisation, as will balances between formal "off-line" training and informal workplace-based instruction but the objective is the same - behaviour modification based on an understanding of hazards.

Audit Criteria

- Planning of OHS human resource development.
- Generalised and specialised OHS training.

Possible Measures

- % of staff assessed as conforming to skill standards.

So for each audit criteria a range of process measures can be developed to tell the organisation how well it is maintaining its chosen level of health and safety. It is very important that performance indicators relate to explicitly chosen levels, rather than simply reporting what has happened.

While it would be optimistic to think that all these positive process measures could become the dominant part of a "prevention culture" - it is a reasonable objective. Failure measures will still play a role but their usefulness in choosing levels of performance is dubious. As often said, setting targets for LTI's is a little like the football coach exhorting players to do their best and try to lose by only 10 goals this week.

USING SAFETYMAP: EXPERIENCE SO FAR

SafetyMAP was launched in March this year and most effort has gone into promotion and information sessions to make potential users aware of the concept.

The program has attracted national and international interest and the feedback about the approach and the way it is presented has been very positive.

The Authority will be using SafetyMAP and its elements as the core of its prevention program. Consequently where prevention projects are designed to address industry or hazard issues the elements of SafetyMAP will be used to guide activity.

For example audit programs have been developed for noise, manual handling and emergency preparedness that sit underneath the elements of SafetyMAP.

SafetyMAP elements have been used in an audit of the garbage/waste industry, the stevedoring industry and is used for an ongoing follow-up program where accidents or incidents have occurred. In the latter instead of just ensuring 'effects' are controlled the relevant system element is examined and workplaces are required if necessary to put systems in place.

From an industry take up level the response has been measured. That is, there is an appreciation that SafetyMAP is not a quick fix concept but is useful in guiding and assessing the building of management systems. As with quality this requires real effort and commitment at all levels. We have a range of companies using SafetyMAP as an independent measure of their progress. No company has formally applied to be assessed for the Achievement Certificate but a number have indicated this is their goal. Interestingly at least one industry group is using SafetyMAP in their industry but accept they will not be at the Achievement level for some time but will still be developing a benchmark for industry to focus its improvement on.

The most specific testing of SafetyMAP has been through the audit of self-insurers that OSHA participates in. Applicants for self-insurer status are measured against the SafetyMAP elements whilst current self-insurers are periodically audited against SafetyMAP elements.

I have reproduced an extract from an audit report (removing company names) to illustrate at a practical level what is done in the audit. (Appendix One). Normal audit protocols of entry and exit meetings are followed and the company receives a brief report in the format displayed below.

A more specific approach has been taken with elements of SafetyMAP and one area that has been used in our internal training program over the last 18 months is an audit of Emergency Preparedness. As part of preparing ourselves to undertake audits a 3 day training program is run (details attached as Appendix Two) and it concludes with an audit of emergency preparedness.

This is part of one element so the focus is very specific although auditors find themselves having to consider a broad range of matters in defining their plan and checklists.

A sample audit report has been developed based on an actual audit to demonstrate the approach OHSA uses. Extracts are reproduced as Appendix Three.

70 companies have gone through this element and without exception the process has been positive and instructive for both auditor and auditee.

For the company a structured up front audit against standard criteria of their own systems is helpful in testing its effectiveness. From OHSA's point of view improvements and changes are being made without the need to use compliance mechanisms. The authority is now running a similar audit program on emergency preparedness in sites where dangerous goods are stored.

In the coming year SafetyMAP will form the basis for much of the Authority's work. Where companies indicate an interest in using SafetyMAP staff will be made available to 'kick start' them. In terms of OHSA's targeted work SafetyMAP elements will be used in all prevention projects so that industry can expect a very consistent approach from OHSA.

POSSIBLE RELEVANCE OF SAFETYMAP TO THE MINING INDUSTRY

I would like to conclude with some brief observations on the likely implications of SafetyMAP or similar approaches to the Mining Industry. My organisation does not have jurisdiction over underground mining in Victoria and that sector itself is small in comparison to other states so my comments are necessarily general.

- (i) The mining industry in Victoria, and as I understand it in Queensland has been regulated with very prescriptive legislation. A process has begun in Queensland to move to a Robens style framework and consequently the role of inspection versus audit needs to be considered. My view would be that appropriate systems of work will need to be developed that can be documented and verified by audit methods. The role of government inspection should be truly third party and used primarily in circumstances where systems are absent.
- (ii) The second aspect of Mining legislation is a reliance on giving responsibilities to specific roles like Mine Managers through licensing requirements. This is out of step with the duty of care approach used in modern OHS legislation and encourages a culture of individual responsibility rather than systematic management.

If these sorts of licensed occupations are phased out then clear documentation of training, supervision and instruction of employees becomes a key aspect of the OHS system.

- (iii) Prescriptive regulation may have led to a minimum standards focus which may be out of touch with the performance orientation of competitive companies. Approaches like SafetyMAP allow companies to establish a level of performance and improve on it. It also encourages innovative ways of managing risks rather than being tied to potentially out of date methods of control.
- (iv) Use of a quality based program like SafetyMAP is based on a strong and clear commitment from management, relevant and thorough training in techniques related to developing systems and auditing, and a focus on improvement. These are all aspects related to the effective implementation of performance style legislation.
- (v) Finally I would see that in the mining industry there will be a place for what I call "top down" type initiatives like SafetyMAP where systems are developed and audited as well as "bottom up" inspection processes that do not stop at controlling immediate effects but seek out the causes of such accidents, incidents or near misses.

CONCLUSION

Management commitment to build and maintain a prevention OHS culture will partly depend on the measures available to employers and employees to show how they are improving. The positive measures that relate to the software and hardware should be the basis for having confidence that a systemic approach can "deliver the goods".

Implementing comprehensive programs such as SafetyMAP will assist workplaces to gauge their progress towards OHS best practice. In addition, the benchmarks and performance indicators in programs such as SafetyMAP could be linked to financial incentives since they provide a measure of how well an organisation is managing OHS rather than how badly (by using claims statistics).

Implementing best practice in OHS will help to minimise workplace death, injury and disease, and the considerable associated social costs. It will also assist to reduce the cost of doing business in Australia, reduce the costs of Australian products to consumers, and make our industry and agriculture more competitive in the international marketplace.

SELF INSURERS AUDIT REPORT

ORGANISATION:

DATE:

AUDIT CRITERIA	VERIFICATION/EVIDENCE	COMMENT/OBSERVATION
<p>2. Risk assessments consider factors including:</p> <ul style="list-style-type: none"> the groups of employees and other persons likely to be exposed to the risk 	<p>Risk assessments are conducted weekly/monthly.</p> <p>This verified, reports tabled and staff confirmed.</p> <p>Sighted Emergency Response Plan objective to 'minimise damage to environment</p> <p>Advised of community group meeting on 29 June 1993 regarding neighbour's issues.</p> <p>Underwent induction for contractors and visitors including procedural video, checklist and written testing procedure.</p> <p>Sighted 'Workplace Hazard Identification and Rectification' manual. This is issued to all contractors who will work onsite.</p> <p>Advised all contractors undergo a one-day induction program.</p>	<p>Risk assessment considers factors including the following audit criteria.</p> <p>Evidence indicates procedures are followed.</p>

SELF INSURERS AUDIT REPORT

ORGANISATION:

DATE:

AUDIT CRITERIA	VERIFICATION/EVIDENCE	COMMENT/OBSERVATION
<p>2. <i>Risk assessments consider factors</i> (contd)</p> <ul style="list-style-type: none"> • work organisation, working environment, equipment and substances used • the skill and competency of personnel • the level of supervision required to perform the job efficiently and without risks to health and safety 	<p>Relevant staff have job descriptions which confirm risk assessment responsibilities.</p> <p>Sighted supervisors documented responsibilities; 010-003 Emergency Response Plan.</p> <p>Sighted Critical Function Testing Manual regarding structured method to test all plant operations (170 critical shutdowns identified).</p> <p>Advised of developing industrial relations based system which will demonstrate competencies.</p> <p>Sighted current training programs. Hazard identification and risk assessment training courses for all employees currently being developed.</p> <p>Revision request form used to indicate problems throughout the plant.</p>	<ul style="list-style-type: none"> • Not all staff have seen of/knew of this forms' existence. Observation.

SELF INSURERS AUDIT REPORT

ORGANISATION:

DATE:

AUDIT CRITERIA	VERIFICATION/EVIDENCE	COMMENT/OBSERVATION
<p>3. Risk assessments consider the need to maintain records of:</p> <ul style="list-style-type: none">• employees undertaking particular high risk tasks• high risk products used by the organisation• high risk products supplied by the organisation		<p>Insufficient time to confirm with objective evidence.</p> <p>Suggest pursue during future audits.</p>

SELF INSURERS AUDIT REPORT

ORGANISATION:

DATE:

AUDIT CRITERIA	VERIFICATION/EVIDENCE	COMMENT/OBSERVATION
<p>4. Risk assessments are carried out at all stages of operation and activity including:</p> <ul style="list-style-type: none"> • tender 	<p>Risk assessment applies to purchasing etc and is conducted by Central Head Office. Not applicable.</p> <p>Permit system checked - all permits expire at 4:17 pm on each day.</p> <p>Office copy when viewed in some instances had not been reissued.</p> <p>It was noted that a new hazard identification system was being developed.</p> <p>Sighted Risk Assessments and Management Operations, OIMS guidelines.</p> <p>Development of these guidelines commenced 2 years ago in line with initiative.</p> <p>This system is planned to address our criteria and will lead to ongoing implementation of necessary changes to appropriate safe working procedures.</p> <p>Supervisor advised that Safety Induction (with Job Safety Analysis) occurs for all contractor tendering. Duration 1 full day.</p>	<p>Observation - company to consider ensuring that all copies of expired permits are endorsed prior to reissue.</p> <p>OIMS in developmental stage. Suggest follow its development and implementation on future audits.</p> <p>Other risk assessment procedures at various stages of operation include reference to audit criteria.</p> <p>Evidence indicates procedures are followed.</p>

SELF INSURERS AUDIT REPORT

ORGANISATION:

DATE:

AUDIT CRITERIA	VERIFICATION/EVIDENCE	COMMENT/OBSERVATION
<p>4. Risk assessments are carried out (contd)</p> <ul style="list-style-type: none"> • packaging, storage, transport/delivery • maintenance, servicing 	<p>Sighted LPG transport loading facility.</p> <p>Fenced, security system access only and isolated from production areas.</p> <p>Supervisor of electronically controlled truck tanker system to avoid overfilling.</p> <p>Confirmed with supervisor that job safety analysis is conducted before any maintenance job commences.</p> <p>The Emergency Response Plan makes provision for initiating procedural changes through the use of a document titled 'Revision Request'. This document could not be produced.</p>	<p>Apparently this document is not often raised. Personnel can apparently achieve the desired results verbally.</p>

AUDITOR SKILL TRAINING OHSA STRATEGY

Purpose: *To provide an overview of the OHSA Auditor Skills Training Program developed to enable selected OHSA staff to gain the knowledge and skills to perform effective system and compliance audits of client's OH&S Quality Management Systems.*

Background:

Evolving out of the successful experience of the Risk Management Program OHSA has developed an integrated assessment and audit program designed to assist workplaces to adopt a quality management system approach to improving their OHS performance. (See SafetyMAP document)

A critical task has been preparing selected staff and managers to have the confidence and competencies to apply the Safety Management Assessment/Audit/ Achievement Program to their operational responsibilities.

During 1992 a number of staff participated in Standards Australia's 3 and 5 day Assessor and Lead Assessor Training Courses. The absence of a contextual understanding of how audit principles, procedures and AS3901 Standards related to OHS field operations limited the value of these courses to participants.

Discussions with a number of providers of Auditor Training led to the engagement of AVTEQ Consulting Services who were able to develop a 3 day Auditor Training program that linked the OHSA draft OH&S Quality Management System to AS3901 product/system standards.

TRAINING DETAILS.

At the outset it was decided that for participants to gain the necessary understanding and skills to competently apply audit principles and procedures practice opportunities required to be structured into all phases of the training strategy.

Course Co-ordinators: Eric Mortimer,
Manager Risk Management Program.
(03)- 628 8250
Ray Davis,
Manager Organisational Development
(03)- 628 8100

Group size: 14 per series

Phase 1. 3 day Introductory seminar to Quality Audit Principles, Procedures and Standards.

Phase 2. 2 day workshop on OHSA Audit approach.

Phase 3. Practical Field Audit Exercise in pairs
Half day report back on Field Audit.

PHASE 1.- 3 day Seminar conducted by Stan Rodgers, Principal Consultant ,
AVTEQ Consulting Services,
(052) 61-4687

Preparatory Reading and Viewing

Read Stan Rodgers paper on Environment Management Systems, plus
OHS Systems Auditing - Information and Reference Materials (attached)

View Piper Alpha Disaster - Video, 45 minutes -OHS Library
A report style presentation identifying the systems failures associated with the
explosion and fire aboard this off-shore drilling platform.

PHASE 1 TRAINING OBJECTIVES:

On completion of this phase the participants should be able to:

- * *apply AS3901 Quality Systems principles and procedures to the conduct of OHS Management Systems Audits;*
- * *demonstrate an understanding of how quality policies, procedures, work instructions and records contribute to the planning, implementation and monitoring of OHS Quality Management Systems;*
- * *demonstrate the application of audit principles, procedures and protocols as outlined in AS3911.1 and AS 3911.3 ."Guidelines for auditing quality systems".*

DAY 1.

A.M. Welcome & overview of Audit Training phases /OHS context.

Introduction to Quality Systems.

- * Definitions/Quality Era's
- * Product/System Standards
- * Quality Assurance/Quality Control
- * Quality Policy
- * Syndicate Exercise on "Quality Policy"
- * AS3900 Series Standards

P.M. Implementing Quality Management Systems

- * Procedures and Work Instructions
- * Syndicate Exercise on "Procedures"
- * Quality Planning

DAY 2.

- A.M.** **Auditing**
* Definitions
* Application
* Methodology
- P.M.** **Checklist Preparation**

DAY 3.

- A.M.** **Audit Exercise**
* Audit of selected OHS Departments/Units (videoed)
- P.M.** * Review of Audit results

All participants receive a comprehensive set of notes and a copy of AS 3901.
A copy of the manual's Content Lists and samples from a couple of sections is attached.
Note AVTEQ has the copy write on this material.
In addition we have a class set of "Occupational Safety And Health Auditing" - Michael A.Coffman. Published by the USA Institute of Internal Auditors for loaning to staff.

PHASE 2. 2 Days conducted by Eric Mortimer/Ray Davis

PHASE 2 & 3 TRAINING OBJECTIVES;

At the completion of phases two and three participants are required to :

- * *visit a workplace and conduct an OHS Management System audit on an element of SafetyMAP;*
- * *present an evaluation report of audit activity conducted outlining procedures followed, results obtained, recommendations provided and proposed follow up plans;*
- * *apply audit approach to selected OHS prevention projects, programs and activities;*

DAY 1.

- A.M.** **Overview of OHS Audit approach**
- Recap on Auditing Techniques**
- OHS Management System- Elements and Audit Criteria**

P.M. OHSA Auditing Strategies (See notes"Applications of an Audit approach")

Using the OHS Management System to compile a Noise Audit Work sheet

Fork lift Audit Project Preparation

Practice Fork lift Audit (Videoed)

DAY 2.

A.M. Review of Fork lift Audit and Group Reports

P.M. Preparation for Field Audit on element "Emergency Preparedness" (in pairs)

PHASE 3.

Pairs negotiate entry and carry out audit on "Emergency Preparedness" element in selected workplace

P.M. Half day report back workshop - on field audit experience including details of corrective action report and proposed follow up action.

Expectation is that participants will seek to apply audit approach as part of their ongoing work program.

SUMMARY.

To date 90 managers and staff have undertaken the above 3 phases of Auditor Skills Training. A further 14 participants commence phase 1 this week. An evaluation of the effectiveness of Auditor Skills Training series is planned for January 1994.

SAMPLE ONLY of the preferred format, layout and style of comment relevant for audit documents

AUDIT REPORT

Organisation: Monty Python's P/L - (Wandin Valley)

Audit Element: SafetyMAP - 6. Working Safely by System

Date: Tuesday, 21st May 1994

Auditors: Steve Martin (OHSA)
Jean Kitson (OHSA)

Auditees: Eddie Murphy, National Operations Manager
Rob Sitch, Assistant Operations Manager
Andrew Denton, Technical Manager

	Audit Criteria	Page
6.7.1	Potential on-site emergency situations have been identified and emergency procedures have been developed and documented	2
6.7.2	Potential off-site emergency situations have been identified and emergency procedures have been developed and documented	3
6.7.3	Emergency procedures are regularly reviewed by competent personnel	4
6.7.4	Employees receive instruction and training in emergency procedures appropriate to the degree of risk	5
6.7.5	Specialised training is provided to particular individuals as required	6
6.7.6	Emergency instructions including phone numbers and contacts are prominently displayed at appropriate locations	7-8
6.7.7	Emergency equipment, alarm systems and fail-to-safety systems are inspected, tested and maintained at regular intervals	9-10
6.7.8	The suitability, location and accessibility of emergency equipment has been assessed by competent persons	11
6.7.9	The organisation has assessed its first aid requirements and has ensured that the first aid system in place meets, as a minimum, the current guidance of standards and codes of practice	12-13

Signature of auditors:

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This report has been prepared by the Victorian Occupational Health and Safety Authority as part of a co-operative training exercise, and we wish to acknowledge the assistance of the management of Monty Python's P/L at Wandin Valley and thank them for their contributions to this assessment. While every effort has been made to ensure the accuracy of this report, the Victorian Occupational Health and Safety Authority extends no warranties, makes no representations as to the accuracy or suitability of such information or for the consequences of its use.

Audit Sub-Element - 6.7 Special Processes (Emergency Preparedness & First Aid)

6.7.1 Potential on-site emergency situations have been identified and emergency procedures have been developed and documented

Sources of Information (Verification) discussion/document/observation	Comments/Considerations
<p>Discussion with Eddie Murphy, National Operations Manager, Rob Sitch, Assistant Operations Manager, Andrew Denton, Technical Manager.</p> <p>Brief discussion with Elle and Santo in the office and John Clarke in production.</p> <p>Documents sighted: Corporate draft "Safety Policy" "Standard Fire Orders" Evacuation diagram Fire extinguisher selection and use advisory sheet.</p>	<ul style="list-style-type: none"> ■ There were no policies or procedures sighted in relation to on-site emergency situations. (Any such policies or procedures must be appropriately authorised and dated and out of date procedures removed) <p>The draft corporate "Safety Policy" indicates in 3.1(d) that minimising "fire, poisoning and burning at the site" is the responsibility of management.</p> <ul style="list-style-type: none"> ■ A verbal list of potential emergency situations was provided, i.e. spills, fires, bomb threats. ■ There was to be a first "management review" held in the near future, including an agenda item on safety, but no written information was tabled in relation to this review. ■ The emergency "instructions" (fire & evacuation) had been prepared by Eddie Murphy in consultation with MFB and CFA. He stated that he had attended a course approx 4 years ago at the MFB training college. (No verification sighted) The instructions were not dated. <p>The effectiveness of the emergency instructions was tested at random in the form of evacuation drills. No records were kept and there was no planned schedule for these drills.</p> <p>Only a verbal list of floor/fire wardens was available. Neither Elle or Santo knew who their fire warden was, nor did they know the secondary assembly area.</p> <p>John Clarke did not know the secondary assembly area to be used in an evacuation.</p>

Audit Sub-Element - 6.7 Special Processes (Emergency Preparedness & First Aid)

6.7.2 Potential off-site emergencies have been identified and emergency procedures have been developed and documented.

Sources of Information (Verification) discussion/document/observation	Comments/Considerations
<p>Discussion with Eddie Murphy, Rob Sitch, Andrew Denton.</p> <p>Documents sighted: YYY Emergency Response Service Terms & Conditions</p> <p>After hours telephone listing of all Monty Python's P/L employees.</p> <p>Crisis Procedure (dated February 1993)</p> <p>Draft "Monty Python's External Incident Report"</p>	<ul style="list-style-type: none"> ■ No policies or procedures sighted in relation to off-site emergencies. ■ A verbal list of such situations was provided, namely spills and ingestion/poisoning. ■ No action had been taken in consideration of incidents occurring in or affecting neighbouring workplaces. <p>There was an emergency response service provided by YYY under contract which dealt with incidents involving Monty Python's P/L products.</p> <p>The crisis procedure displayed various telephone numbers but had not been revised since Feb 93. No information was ascertained as to the distribution of this document.</p> <p>It was believed that drivers had appropriate training to deal with chemical emergencies which arose during transport, and the vehicles were provided with appropriate equipment and information to assist. (No verification of this point)</p>

<p>Audit Sub-Element - 6.7 Special Processes (Emergency Preparedness & First Aid)</p>	
<p>6.7.3 Emergency procedures are regularly reviewed by competent personnel</p>	
<p>Sources of Information (Verification) discussion/document/observation</p>	<p>Comments/Considerations</p>
<p>Discussion with Eddie Murphy, Rob Sitch & Andrew Denton.</p> <p>Documents sighted: Wages/Attendance Record Book at Reception, Production and R & D locations.</p>	<ul style="list-style-type: none"> ■ No emergency procedures were in place. ■ No reviews were conducted. ■ Evacuation drills were conducted at intervals and the outcome of these drills generated some action. (No verification available) <p>Note: One of the means of identification of personnel on site during an emergency is the "attendance book" in each of five locations. It was noted that whilst the book at Reception appeared to be completed, the Production book did not allow for absences which occurred during the day.</p> <p>It was noted by Andrew Denton that at least one employee in R & D had failed to sign back in when that book was sighted.</p>

Audit Sub-Element - 6.7 Special Processes (Emergency Preparedness & First Aid)

6.7.4 Employees receive instruction and training in emergency procedures appropriate to the degree of risk.

Sources of Information (Verification) discussion/document/observation	Comments/Considerations
<p>Discussion with Eddie Murphy, Rob Sitch.</p> <p>Documents sighted: Draft "Factory Staff Training Manual" Computerised format for recording training; "operations training schedule" Fire fighting training participant list 92,93 Chemical handling training participant list 93</p>	<ul style="list-style-type: none"> ■ A verbal list of training was provided, namely; <ul style="list-style-type: none"> fire fighting; fork lift driving; bulk chemical licence; first aid; chemical handling ■ There was no formal assessment conducted of training needs. ■ A training consultant, John Cleese, was retained for various specialist training. Records indicated that staff had received fire fighting training in 1993. It was stated that this training was "voluntary". Staff in the production area had been provided with chemical handling training in 1993. ■ There was no training schedule. ■ There was no formal induction training. ■ Various records of training existed and it was proposed to maintain a computerised listing of training delivered to "operations" personnel only.

Audit Sub-Element - 6.7 Special Processes (Emergency Preparedness & First Aid)

6.7.5 Specialised training is provided to particular individuals as required.

Sources of Information (Verification) discussion/documentation/observation	Comments/Considerations
<p>Discussion with Eddie Murphy, Rob Sitch</p> <p>Documents provided: Certificates - bulk chemical transport</p>	<ul style="list-style-type: none"> ■ Verbal list only of necessary specialised training first aid bulk chemical transport <p>The first aid training was provided to interested parties, and the transport training to drivers. Both courses were externally provided by TAFE.</p> <ul style="list-style-type: none"> ■ No job description was sighted which identified the type of training required. ■ No formal evaluation of training was undertaken. ■ Copies of certificates relating to the transport training were retained. Not all were available. No records of first aid training were sighted. ■ Training was required to be updated at intervals determined by the legislation and certificate requirements. The individual concerned appeared to be the person responsible for maintaining currency of qualifications.