

# “International Environmental Management System Standards”

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*Environmental management system standards are being developed nationally and internationally. The first national standard was a British Standard BS7750 - a specification for an environmental management system aimed at ensuring and demonstrating compliance with a company's own stated environmental policies and objectives. In 1991 ISO TC207 commenced development of an International Standard for environmental management systems ISO14001 and a series of related documents on environmental auditing, labelling, performance evaluation and life cycle analysis. ISO14001 is expected to be released in mid-1996. Because these standards provide a generic framework in which an organisation introduces its own objectives, policies, programs, measurement and assessment methodologies the standard is applicable to any organisation, independent of the legislative system in which the organisation operates.*

*The drivers for implementation of environmental management systems and certification to these standards are both market forces and regulatory. Currently the advantage of market differentiation provided by certification is the significant driver, however with the introduction of the European Eco-Management and Audit regulation and similar "quality assurance" approaches being adopted by Australian environmental authorities increasingly organisations are being required to demonstrate sound environmental performance to customers, regulatory bodies and the public.*

## Development Of Environmental Management System Standards

Whether they do so in the context of increasingly stringent legislation, motivated by profits or in search of improved public relations, organisations of all kinds are increasingly concerned to achieve and demonstrate sound environmental performance. Many organisations have undertaken environmental audits in order to assess their environmental performance but these audits are only a snapshot in time and cannot provide assurance that an organisation meets, and continues to meet, or go beyond legislative standards. To be effective audits need to be conducted within a structured management system.

### International Standards

International Standards activity on environmental management began in 1991 with the formation of the International Organisation for Standardisation (ISO), Strategic Advisory Group on the Environment (SAGE). This group was established to investigate the need for international environmental management standards. On SAGE's recommendation ISO Technical Committee TC207 was formed. TC207 has 46 member countries including Australia as well as liaisons with 15 organisations such as the International Chamber of commerce, European Chemical Industry Council, International Organisation of Consumer Unions, United Nations Environment Program and World Wide Fund for Nature. The committee first met in June 1993 and has established 6 subcommittees. These subcommittees are developing standards on auditing, labelling, life cycle analysis and performance evaluation. This set of standards will be known as the 150 1400 standards.

Each of the subcommittees has set itself an ambitious work program with deadlines which are very short by ISO standards. The speed of the work for environmental management system standards and associated documents is being driven to a large extent by the need to have Standards to support the European Eco Management and Audit Scheme (EMAS) Regulation which has been in force (although not in operation) since April 1995. The threat is that if international standards are not available then there will be European standards which could ultimately be different from ISO Standards - highly undesirable from an international trade point of view.

The most significant outcome of the June 1995 TC207 meeting in Oslo, Norway was that Subcommittee 1 approved the Committee Draft CD ISO14001 as a Draft International Standard (DIS) for environmental management systems. Of the member countries voting, 93% voted to accept the document as a DIS. There were, however, a significant number of comments.

The controversial comments were the same issues which have been controversial from the beginning of the process - continual improvement, environmental aspects, register of legislative requirements, prevention of pollution, environmental performance and communications. The Europeans wanted the document to be more specific in certain areas, to ensure minimum outcomes by companies implementing it, and to relate more clearly to environmental performance. In particular they wanted the inclusion of performance reporting as required by EMAS. The US, Japan and Canada wanted the document to be less specific and to very clearly relate to the

system. In particular, they wanted to avoid the suggestion that continual improvement should be focussed on continual reduction in performance numbers implying that the target is always zero emissions. The DIS will now be circulated for six months to all TC207 members. If two thirds of all members vote yes and not more than one quarter of all votes are negative then the document will be published. It is considered that there is a greater than 50% likelihood that the document will be accepted by the European Commission as meeting the environmental management system requirements of EMAS.

## **Australian Standards**

A joint Standards Australia Standards New Zealand Committee QR11 was formed in August 1992 to consider the need for an Australian/New Zealand environmental management system standard. The committee has focussed on providing input to the ISO process. Documents from SC1 and SC2 were released for comment in Australia and New Zealand when they were issued as committee drafts. These documents included an environmental management system specification and associated guidelines, and three auditing documents covering guiding principles, principles for environmental management system auditing and auditor qualifications.

QR11 has agreed, subject to Committee Ballot, to issue these documents as Interim Australian Standards following their issue as Draft International Standards.

In the meantime there are a number of National Standards and guides which are available. The most widely used is the British Standard BS7750-1994 - a specification for an environmental management system aimed at ensuring and demonstrating compliance with a company's own stated environmental policies and objectives.

## **Environmental Management System Standards**

These environmental management system standards provide a framework for companies to identify, evaluate and manage their environmental risks. The standards provide a generic framework in which companies introduce their own objectives, policies, programs measurement and assessment methodologies. This standard provides a model management system for all types of organisations wishing to take a systematic and integrated approach to environmental management. It provides a mechanism for meeting specified levels of performance and regulation and demonstrating conformance to both.

## **Environmental Performance**

The aim of having an environmental management system in place is to improve environmental performance. The standard does not set performance levels beyond compliance with legislation and a commitment to continual improvement and prevention of pollution. Objectives and targets are the evidence and measure of the company's commitment to continual improvement. Following an assessment of the direct and indirect effects of its operations, products and services on the environment the company determines how it will implement its policy of continual improvement and in which areas it is able to achieve improvement at particular times.

### **Definition of Environmental Performance;**

"The measurable outputs of the environmental management system relating to an organisation's control of the impact of its activities, products and services on the environment, based on its environmental policy, objectives and targets."

This definition has been included to make it very clear that the purpose of an environmental management system is to improve the environmental performance of a company and that environmental performance is the measurable output of the system.

Furthermore, this definition makes it clear that in order to be "continual improvement" any "improvement" in the system must result in a measurable improvement in the organisation's control of its impacts. Therefore if a company retypes its procedures onto matching letterhead and reissues the procedures to all staff this could be continual improvement because the improvement in the system could result in improved environmental performance. If staff could more easily identify the environmental procedures and the procedures are easier to read, the staff are then less likely to make errors that could impact on the environment. This improvement in performance could be measured by the reduction in the number of incidents.

If, however, the company already had their procedures in easily recognisable and understandable form this would not be continual improvement because the improvement of the system would be unlikely to result in improved environmental performance.

## Documented System

There is a perception that compliance with these standards entails a vast amount of unnecessary documentation and creates a bureaucratic nightmare. This is incorrect. The standard does require a documented system and the production and retention of relevant records. However, the elements of the management system consist of basic good management practices;

- \* Ensure that the organisation knows and understands what its expectations are, for example by considering environmental effects evaluation, legislation and views of interested parties.
- \* Processes need to be controlled to ensure that expectations are met.
- \* People in the organisation need to understand what is expected of them and the means to deliver to that expectation.
- \* These all need to be managed on a regular basis.

This is common sense.

The underlying documented management system ensures that improvements are locked into place. This prevents people drifting back into the old ways of doing things and all the hard work put into improvements being wasted.

## Drivers For EMS Implementation And Certification

In looking at the impact of these standards on Australia we need to look at the drivers. Drivers for the implementation ISO14001 may be market forces or regulatory.

### Market Forces

Currently the advantage of market differentiation provided by environmental management system certification is a significant driver. The use of a recognisable certification mark, such as Quality Assurance Services' green "five ticks" StandardsMark, is a powerful marketing tool.

However, it is anticipated that the drivers will soon change from market differentiation and market advantage to market demand and market access. Already companies recognising the benefits of environmental management systems are in turn encouraging and assisting (and in some cases, requiring) their suppliers and contractors to implement environmental management systems.

The Australian Government has a "Better Buying: Better World" Environmental Purchasing Policy which encourages buyers to "actively source environmentally sound products and services". However, at present, there are no formal requirements for companies tendering for government contracts to demonstrate implementation of an environmental management system.

The European Community's Environmental Management and Auditing Scheme (EMAS) Regulation establishes a voluntary auditing and reporting system. This, as previously mentioned, is one of the strongest drivers for the implementation of environmental management systems. Although companies outside Europe will not be able to participate in the Scheme and become registered, it is anticipated that increasingly European companies will require all subsidiaries and suppliers to meet the requirements of the Regulation in particular with regard to implementation and certification of environmental management systems.

These standards, like other international standards, are not intended to create non-tariff trade barriers.

## **Environmental Management Systems and Legislation**

Because environmental management system standards provide a generic framework into which a company introduces its own objectives, policies, programs, measurement and assessment methodologies the standard is applicable to any organisation independent of the legislative system in which the company operates.

Although not designed to be called up in legislation, the standard will assist companies to comply with regulatory requirements and assist in the demonstration of due diligence with respect to environmental practice. These standards do not confer immunity from prosecution for breaches of environmental laws or negate regulatory authorities' powers of inspection.

### **Due Diligence**

As penalties for environmental offences throughout Australia have risen substantially corporations and the directors of these corporations have become increasingly concerned to reduce their environmental risks. Although there are variations in the environmental controls and offences across the States the concept of due diligence is being adopted as the principal defence to environmental offences across Australia.

It is not possible to indicate with absolute certainty what types of environmental management systems will satisfy the requirements of due diligence under Australian law. This is because the concept of "due diligence" is not defined in Australian legislation and because the concept has been considered only to a limited extent by Australian courts.

It is considered that a documented management system which includes a policy, the identification of environmental effects including all legislative requirements, the allocation of resources and the definition of responsibilities and authorities, training, emergency plans, reviews of environmental performance including audits and records will go a long way to meeting the requirements of due diligence. Both BS7750 and ISO14001 describe the elements of such a comprehensive environmental management system.

Corporations are increasingly viewing environmental management systems established in accordance with these standards as carrying significant benefits as a risk management tool.

### **'Accredited Licensee System'**

Environmental authorities in Australia realising the advantages of a "quality assurance" approach to environment protection are developing voluntary schemes based on co-regulation and the implementation of environmental management systems. The Victorian Environment Protection Authority (EPA) has established the Accredited Licensee System which provides eligible companies with greater operational freedom and reduced fees and charges.

Dr Brian Robinson, Chairman of the Victorian EPA has said "There will be annual reporting and accreditation (certification) by an external body. It is thus a further extension of the ISO9000 and BS7750 approach. The aim is that once a corporation has been accredited we will trust it to get on with its own business and there will be no need for us to interfere."<sup>1</sup>

Three major prerequisites are required for participating companies - an environmental management system, an environmental audit program and an environmental improvement plan. These three cornerstones need to be of sufficient standard for an operator to merit inclusion in the system. It has been proposed that verification of the environmental management system be conducted by accredited certification bodies, such as Quality assurance Services, against either BS7750 or ISO14001 to reduce the need for EPA assessment.

## **Certification Of Environmental Management Systems**

Certification of environmental management systems is now available in Australia from third party certification bodies. It is intended that this is a long term project to assist Australian companies to introduce systems which will eventually satisfy the ISO specification, and also be compatible with EMAS regulations for companies supplying the European market. BS7750 has been chosen because of its compatibility with ISO9000 and because it is anticipated that systems implemented in accordance with BS7750 will not have any difficulty in meeting the requirements of the ISO specification. Many companies are beginning their training, implementation and their certification process well in advance of this document by using BS7750.

## Comparison Of BS7750 And ISO14001

The ISO draft is organised to reflect the Plan Do Check Review cycle and it contains far less detail than BS7750. Although BS7750 and the draft ISO14001 documents appear different there are many more similarities than differences. They are based on the collection and analysis of relevant information, decision making on the basis of that analysis and then documentation of intended actions, performance of the actions under controlled conditions, audit of the process and review of the outcomes.

Both documents describe a system leading with a public policy based on an assessment of environmental impacts over which an organisation has control, and backed up by documented plans for implementing the policy, controlling and measuring performance, auditing to ensure policy and procedures are implemented and regular review to ensure that the policy reflects changing circumstances. Both standards have a strong emphasis on training of staff and contractors.

The comparison of ISO9000 with BS7750 is equally applicable to ISO14001.

## Comparison Of BS7750 And IS9001

BS7750 (and the CD ISO14001) have included in the standard a matrix showing the relationship of each of its elements to ISO9001. However, some of the connections are considered somewhat contrived. It is more helpful in understanding the relationship between the two standards to consider the similarities and differences in philosophy and purpose rather than undertake a clause by clause examination of the standard.

### Similarities

#### Systems Approach.

Both standards use the systems approach of Plan Do Check Review. The system involves collection and analysis of information, decision making on the basis of that analysis and then documentation of consequent intended actions, performance of the actions under controlled conditions, audit of the process and review of the outcomes.

#### Family Relationship.

BS7750 is based on ISO9000 and its authors used the experience gained in implementing ISO9000 to attempt to improve the model. Hence, we see more detailed policy requirements and the introduction of stronger links between policy and operations through the requirement for objectives and targets and an environmental management plan. The principle of continual improvement, implicit in ISO9000, is an explicit requirement of BS7750.

#### Prevention Rather Than Cure.

Both standards are based on the principle that prevention is better than cure. ISO9000 emphasises quality assurance rather than quality control, and is based on the principle that it is not possible to inspect quality into a product. BS7750 reflects the move away from high cost, "end-of-pipe" solutions to environmental problems to the importance of planning for cleaner technologies, the more efficient use of resources and the prevention of accidents.

#### Tools For Culture Change

ISO9000 and the associated quality movement have assisted Australian businesses to change their culture. Similarly, BS7750 is not really about managing the environment but rather about managing people and organisations, about changing attitudes and guiding behaviour. Our industrial systems have been designed primarily for economic growth. The environment has been seen as having two main functions - providing raw materials and acting as a receptacle for wastes. Within this framework managers have often viewed the environment as a threat, associating it with legal obligations and increased costs to industry.

One of the main purposes of BS7750 is to change the way people think about the environment. By incorporating decisions about the environment into the everyday management of the business BS7750, attempts to show that companies can gain competitive advantage through better risk management, more efficient use of resources, and improved public image.

Companies which have been certified by Quality Assurance Services have documented cost savings through the realisation of previously unidentified opportunities for energy conservation and waste minimisation.

## **Differences**

### **Definition of Objectives.**

In ISO9000 the objectives are the achievement of product quality and customer satisfaction. The parameters are readily defined and their value agreed between the customer and supplier in the form of price.

In BS7750 the objectives are to achieve the company's environmental and financial goals and to support environmental protection and socioeconomic needs. The difficulty is that the value of the environment is a matter of political and social controversy. Societal goals are expressed in difficult to define terms such as sustainable development. Consequently the definition of the company's objectives becomes a more complex task than in ISO9000.

### **Stakeholders**

The major stakeholders in the quality contract are the supplier and the customer. The stakeholders in the environmental contract are much more diverse including regulators, investors, shareholders, insurers, directors, employees and the general public. Since the views of these stakeholders must be taken into account in setting environmental objectives BS7750 has more detailed communication requirements than ISO9000.

### **Legal Requirements**

Legal requirements are only briefly mentioned in ISO9000 as part of the design control process. In BS7750, however, they are covered by a specific clause. Companies are required to maintain a register of legislative and regulatory requirements.

The importance of this clause stems from the complexity of environmental legislation in many countries, the complexity of legal remedies involving large numbers of stakeholders and the severity of consequences of non-compliance for all stakeholders

Additionally, because of the sensitivity of environmental documents and records, the standard requires procedures defining the availability of records and documents both internal and external to the organisation.

### **Integration of Management Systems**

Some companies have one management system which already covers areas which are outside the requirements of ISO9000; for example environment, human resources and occupational health and safety. Other companies have separate systems, with a separate environment manager and separate manual and procedures. However, this separation is largely historical due to legislative requirements and many companies are planning to integrate their systems in the future.

It is accepted that companies which have an existing quality management system will readily be able to extend their management system in accordance with the requirements of an environmental management system standard. The system elements specified in the standard do not need to be established independently of existing management system elements, however implementation of all procedures must be demonstrated with regard to environmental management.

It can be seen from the outline of ISO14001 above that there are many similarities between the ISO9001 and ISO14001 requirements. Areas such as policy, structure and responsibility, training, documentation, document control, monitoring and measurement, non conformances and corrective and preventative actions, records, audits and reviews are common to both standards. Aspects of ISO14001 which are outside the scope of ISO9001 and which will require specific attention include environmental aspects, legal and other requirements, objectives and targets, management program, awareness training, emergency preparedness and communications.

It has been said by many in international circles that the ISO14000 standards will have a broader impact and scope of applicability than the ISO9000 standards. Only time will tell where this will lead and what will actually happen. One thing is clear, that environmental awareness and commitment combined with public and government pressure will continue to increase. The only question remaining is will your organisation be ahead of, or behind, ISO14000.

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