

ISO 14000

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Introduction

Corporate, legal, and technical fields are buzzing over the release of a new set of international environmental standards. Called ISO 14000, these standards will revolutionize the way both corporations and governments approach environmental issues by providing a common language for environmental management, establishing a framework for third party registration of environmental management systems, and helping industry satisfy the demands of consumers and regulatory agencies for corporate environmental accountability. ISO 14000 follows in the footsteps of its cousin, ISO 9000, a set of international standards established in 1987 for quality systems management. If the worldwide success and acceptance of the ISO 9000 standards is any indicator, knowledge and adoption of ISO 14000 will fast become a reality for firms wishing to do business and maintain an edge in today's increasingly competitive global marketplace. The following pages will provide an introduction to the history and philosophy behind ISO 14000, summarize the basic requirements and guidelines laid down in the standards, and discuss issues that corporate, legal, and technical interests should be aware of in approaching these rapidly developing standards.

The International Standards Organization

ISO 14000 is being developed by the International Organization for Standardization, based in Geneva, Switzerland. Founded in 1946, the organization is composed of governmental and quasi-governmental member delegations representing over 100 countries. The United States is represented by the American National Standards Institute (ANSI). Although originally focused on the development of product technical standards, the organization shifted directions in 1979 and began work on a set of quality management standards that would later become known as ISO 9000. The ISO 9000 standards were designed to assure the quality of supplier products, free companies from duplicative quality assessments in different countries, assist companies in developing quality control systems, and provide certification for customers desiring error free products.

Since their introduction in 1987, the ISO 9000 standards have gained wide acceptance both in the U.S. and around the world. Although they were designed as a set of voluntary standards, ISO 9000 certification has become a de facto requirement for many companies doing business in the European Union and other regions, where it has been made a condition for the award of contracts and entrance into some regulated markets. Market access and regulatory demands are not the only reasons ISO 9000 has caught on, however. Companies certified under ISO 9000 have reported enhanced product credibility, improved marketability, and increases in efficiency as high as 30%. In addition, the widespread acceptance of ISO 9000 has freed many companies from the tangle of duplicative product quality assessments previously required by different customers and regulatory agencies. Such benefits to the bottom line have only accelerated the rate at which ISO 9000 has gained acceptance worldwide.

The Development of ISO 14000

In response to the growing number of environmental management standards being implemented worldwide and the striking success of the ISO 9000, calls began in the early 1990's for the development of a set of standards for Environmental Management Systems (EMSs). This movement prompted the International Organization for Standardization to begin investigating the feasibility of a separate set of environmental management standards in 1991. By 1992, a technical committee consisting of 43 active members and 15 observer members had been formed, and the development of what we have come to know as ISO 14000 was underway. In October of 1996, the first and most component of the ISO 14000 standards series was released.

ISO 14000 is a set of standards designed to help corporations establish and objectively evaluate environmental management systems. The standards are voluntary and will not be legally binding. Contrary to common perception, the standards do not establish a set of quantitative targets for environmental performance levels or specific methods for measuring environmental output. Instead, ISO 14000 focuses on organization by providing a process-driven set of standards and guidelines from which companies can build and maintain an EMS; ISO 14000 describes the type of management framework needed for an effective EMS and how to establish it. Under ISO 14000, companies are required to define environmental policy, set goals for implementing environmental management improvements, create a culture of preparedness and commitment to environmental performance, and conduct objective evaluations of progress or deficiencies in environmental management. The standards also establish a process for third-party auditing and certification of environmental management systems and guidance for product evaluation and labeling. All of the standards are short, simple documents and have been flexibly written to allow for implementation in facilities of different sizes and functions and in countries with varying regulatory structures and technological levels. As such, it is hoped that ISO 14000 will provide a universal framework for improved environmental performance.

An examination of the various components of ISO 14000 provides perhaps the best starting point from which to develop an understanding of the ISO 14000 process. The ISO 14000 technical committee is composed of six subcommittees and one working group, each dealing with different types of environment management issues. Three subcommittees have developed standards and guidelines relating to organizational issues and evaluation, including environmental management systems, environmental auditing, and environmental performance evaluation. Others are dealing with product and process evaluation issues such as environmental labeling, life cycle assessment (the evaluation of product life cycles from raw materials to disposal), and environmental aspects in product standards. One final subcommittee is working on terms and definitions. The purpose of all working groups within TC 207 is to provide voluntary, site-neutral guidelines through which organizations around the world can use to develop and maximize the potential of their environmental management systems.

Environmental Management Systems

Subcommittee 1 (SC1) has developed two standards for environmental management systems. The first, ISO 14001, is a specification standard which outlines the needed elements of an EMS. ISO 14001 is brief

document of under twenty pages. It requires that facilities define environmental policy, create and maintain procedures to assess environmental impacts, goals, and targets, and develop a commitment to environmental improvement and pollution prevention. ISO 14001 also requires that facilities comply with local laws and internal regulations and establish effective systems of environmental documentation. The requirements are flexibly written and thus applicable to organizations of different sizes and scope; the fundamental goal ingrained in the ISO 14001 specification standard is for facilities to develop and maintain a commitment to an environmental management system appropriate to their site specific legal and technological parameters.

Although companies could conduct internal evaluations and declare themselves in compliance with ISO 14001, the standard has been designed for use in a system of third-party registration. Under this system, an independent third-party would audit the environmental management system for a facility based on the criteria listed above. A certificate of registration would then be issued, demonstrating the facility's compliance with the ISO 14001 standard. Such certification would be presented to business or regulatory entities to demonstrate the depth and legitimacy of an facility's EMS.

The second document that has been developed under SC1 is ISO 14004. Unlike ISO 14001, which lays down specific requirements for an EMS, ISO 14004 is a guidance standard. In short, it provides information and techniques for establishing an EMS that will meet the requirements of ISO 14001. ISO 14004 is intended for use as an internal tool and will not be used in the audit process. With the exception of ISO 14001, this final characteristic is common to all of the standards in the ISO 14000 series.

Environmental Auditing and Performance Evaluation

The standards composed by Subcommittee 2 (SC2) are similar in purpose to ISO 14004. These standards outline the underlying foundations of effective environmental auditing, provide guidelines for conducting environmental audits, and establish qualification criteria for auditors. It is important to note that the auditing standard does not necessarily have to be used by a third-party evaluating the compliance of an EMS with ISO 14001. Although it could be applied in this way, the auditing standard is designed as a tool to help organizations establish effective auditing procedures rather than as a requirement of ISO 14001.

The final organizational management standard deals with the issue of maintaining a system of environmental performance evaluation. This type of evaluation is distinct from auditing in that it is a constant and ongoing process while audits only occur at measured intervals of time. Because one requirement of ISO 14001 is that organizations set environmental goals and continually measure progress towards such goals, the performance evaluation is an important element of the ISO 14000 process. The evaluation standard provides guidelines for collecting environmental data and determining which criteria are the most effective to use in measuring performance. As such, its most important use is as an internal management mechanism.

Product Related Standards

Two other committees and a workgroup of the ISO technical committee are developing guideline standards for environmental issues related to products and production processes. The first establishes guidelines for

evaluating the life cycle of a product. The idea behind this standard is that effective understanding of the environmental effects of a product requires an evaluation of its entire life cycle, from the collection and transport of raw materials to product disposal and waste management.

A second group of documents sets standards for product labeling and other environmental claims made by companies. While there are many reasons for standardizing environmental labeling, the main goal is to insure that environmental claims are truthful and non-deceptive. Despite the fact that the ISO labeling standards are not compulsory, it is likely that adherence to the standards will become accepted practice.

Benefits of Implementation

With October 1996 release of ISO 14001, voluntary assessment and implementation of ISO 14000 recommended practices will fast become reality for companies doing business in the global marketplace. Although ISO 14000 is a voluntary standard, as the experience of ISO 9000 has indicated, ISO 14000 registration will likely become a de facto requirement for firms bidding on contracts and maintaining market shares in the European Union and other parts of the world. ISO 14000 certification may also satisfy the requirements of EMS regulations already in place in the European Union. Finally, it is likely that the ISO 14000 standards will be adopted as national standards in other countries. Although this is unlikely in the United States, the implementation of an EMS along the lines of ISO 14000 may be required for contractors doing business with federal agencies such as the Department of Energy.

More powerful than the potential regulatory pressures for ISO 14000 will be demands coming from the marketplace. Foreign firms, for example, may require U.S. companies to be registered under 14001 as a prerequisite for doing business. This has occurred on a wide scale in the case of ISO 9000 and will likely be true of ISO 14000 also. In addition, as the controversies surrounding dolphin safe tuna production and McDonalds' use of Styrofoam containers have demonstrated, there is an increasing demand on the part of consumers and buyers for corporate environmental accountability in the 1990's. Companies registered under ISO 14000 may thus gain a competitive edge in marketing their products to an public increasingly conscious of environmental issues. Furthermore, ISO 14000 registration could be held up by a corporation as evidence of progressive environmental policy in the case of an environmental accident, limiting marketplace backlash or the legal liability of their organization; regulatory agencies and the public would likely be more forgiving of a company with an EMS in place.

Besides assuaging the fear of lost competitiveness, there are a number of additional financial benefits which will accompany ISO 14000 implementation. Like the quality control systems companies put in place under ISO 9000, the development of an effective EMS may have benefits for the bottom line. With an internationally recognized environmental risk management and auditing system in place, corporations will lower their liability exposure and the chances of a costly environmental accident. Environmental auditing can also improve efficiency by uncovering poor environmental practices in such areas as production and waste management. Finally, the adoption of a standardized, objectively verified EMS will save corporations time and money by lowering the number of duplicative environmental audits required by regulatory agencies or contractors and by easing permitting and licensing processes.

Conclusion

Rapidly developing and already on our doorstep, the ISO 14000 standards present industry and government with significant benefits and also some questions. As a voluntary and process-oriented set of guidelines, ISO 14000 provides a flexible but standardized framework for environmental management and registration. Companies implementing ISO 14000 will almost certainly see benefits in the areas of competitiveness, efficiency, and public relations; as the success of ISO 9000 suggests, companies cannot afford to ignore the new standards. Approaching ISO 14000, however, will require full knowledge of its intricacies and implications in order to ensure that adequate corporate protections are in place and the benefits of ISO implementation are maximized.