



ISO 14000 INTERNATIONAL ENVIRONMENTAL QUALITY MANAGEMENT STANDARDS

PURPOSE & OVERVIEW

ISO 14000 is currently in draft form. The first component to be released, a guideline on environmental management systems (EMSs), is expected to be available in early 1996. This fact sheet describes ISO and discusses the guidelines or standards that make up ISO 14000. Sources of additional information are also included.

WHAT ARE ISO, ISO 9000, ISO 14000, EMSs, & SCs?

ISO is the International Organization for Standardization. ISO is comprised of standards bodies from over 90 countries; the American National Standards Institute (ANSI) is the U.S. member body. The members of ISO form technical committees to address issues that impact the international exchange of goods and services. The results of ISO technical work are published as international standards or guidelines, of which ISO 9000 is the most well known.

ISO 9000 is actually a series of standards, the namesake of which prescribes internationally recognized and approved standards for corporate quality management and improvement systems.

To Obtain Copies of ISO
Draft/Final Standards,
Contact: ANSI

The American National
Standards Institute
11 West 42nd St., 13th Fl.
New York, NY 10036
(212) 642-4900

The ISO 9000 standards are not specific to any particular products; therefore, they can be used by manufacturing and service industries alike, and apply to companies of any size. Increasingly, demonstrated compliance of a corporation's quality management system with ISO 9000 is a requirement for sales to European and other international markets.

In recent years, an ISO technical committee has been working on standardizing environmental management principles within a series of draft standards called ISO 14000. ISO 14000 provides guidelines and standards that can be used by companies worldwide to establish or improve corporate EMSs.

Environmental management should be an integral part of a company's overall management system. An EMS provides order and consistency for organizational efforts to address environmental concerns through allocation of resources, assignment of responsibilities, and ongoing evaluations of practices, procedures and processes. Coordinating environmental policies and objectives into existing management areas, such as operations, finance, quality, and health and safety is often necessary to implement an EMS. Once implemented, an EMS can benefit a company similarly to how quality management systems have been shown to benefit companies; by reducing waste, energy and raw material use, and by limiting liability.

Under ISO 14000 an EMS can be assessed for completeness by an independent registrar or auditor. If the EMS passes the audit, then the company can be "certified" by the registrar/auditor as ISO 14000 compliant. Compliance with ISO 14000 standards may also become a requirement, or competitive advantage, for U.S. firms pursuing foreign markets.

Although ISO compliant companies still need to meet environmental regulations, the ISO 14000 standards and guidelines encourage these companies to go beyond traditional regulatory activities and be more proactive in the area of environmental management. To maintain competitiveness, small and large companies alike can benefit from developing EMSs, even if certification under ISO 14000 is not pursued.

Subcommittees (SCs) of the ISO technical committee on environmental management are working on such topics as environmental auditing, life cycle assessments, environmental labelling, etc. The work of these SCs is described in the following sections. The schedule for completion of this work is yet to be determined and many of the SCs will be working together for years to come in order to finalize their components of ISO 14000. However, SC1 is expected to produce a final EMS guideline in early 1996.

SC1: THE EMS GUIDELINE

Subcommittee 1 (SC1) is developing a guideline that will assist an organization in implementing or improving an EMS. EMS principles include identification of applicable regulatory requirements, and a commitment to continual improvement and to evaluating environmental performance on a regular basis.

SC1 is also writing a guideline that lists "core" requirements of an EMS for purposes of certification or registration by a third-party registrar or auditor. The specifications in this guideline are written in prescriptive language and contain only those EMS elements that can be objectively audited for certification and/or registration purposes. This standard can be used by an organization to improve its environmental performance by integrating the designated environmental management system specifications with existing management policies and procedures.

For Information about ISO Auditors, Contact:

The American Society of Quality Control (ASQC)
611 East Wisconsin Ave.
P.O. Box 3005
Milwaukee, WI 53201
Phone: (414) 272-8575

SC2: ENVIRONMENTAL AUDITING GUIDELINE

SC2 is writing a standard that provides definitions of environmental audits and related terms, and the general principles of environmental auditing. This standard also provides qualification criteria for environmental auditors. Standardization of audits is important because audits are often used as a means of measuring and demonstrating environmental responsibility.

SC3: ENVIRONMENTAL LABELLING GUIDELINE

SC3 is working on standardizing environmental labelling. This standard aims at meeting market-driven demand for environmentally friendly products by establishing a credible, multiple-criteria based environmental labelling program. The ISO standard will provide requirements for three types of labels:

- "Seal of Approval" for products that meet specified requirements within a product class.
- "Single-claim labels" for such things as recycled content, energy efficiency, etc.
- "Environmental Report Card" that uses a life-cycle approach and allows comparisons of the environmental effects of the manufacturing and use of products.

SC4: ENVIRONMENTAL PERFORMANCE EVALUATION GUIDELINE

SC4 is developing guidelines for performing Environmental Performance Evaluations (EPEs). An EPE can be used to measure, analyze, assess, and describe an organization's environmental performance against agreed upon criteria. The EPE process includes gathering data, sorting and grouping the data, assessing how well targets and objectives were met, and reporting the data to interested parties and stakeholders. EPE is one of many tools in an EMS and provides for measuring environmental impacts that can be controlled by a company.

SC5: LIFE CYCLE ASSESSMENT REQUIREMENTS GUIDELINE

This standard establishes general guidelines, principles and procedures for initiating, conducting and reporting life cycle assessment (LCA) studies in a responsible and consistent manner. An LCA can be used to evaluate the environmental attributes associated with a product, process, or service. An LCA includes impacts along the entire continuum of a product's life from raw material extraction, through manufacturing, distribution and transportation, use and recycle, to final disposal. LCA can be used as a tool in the development of EcoLabeling criteria. The end results of LCA identifies life cycle stages where the greatest impact occur.

SC6: TERMS AND DEFINITIONS

This standard delineates and defines the technical terms used throughout the entire 14000 series of environmental standards. The terms can be easily translated into many different languages. Clear and unambiguous definitions for each technical term are sought to ensure uniformity of understanding throughout the world.

SUMMARY

Although ISO 14000 is currently in draft form, portions of the standard will be finalized in early 1996; a schedule for finalization of all of the standards has not yet been determined. Companies that develop EMSs are establishing a framework to balance and integrate economic and environmental interests, which can result in a significant competitive advantage. An effective EMS can provide for improved quality of the environment and is essential to a company's ability to anticipate and meet growing environmental performance expectations and to ensure ongoing compliance with environmental regulatory requirements.

BENEFITS OF IMPLEMENTING AN EMS

The potential benefits of implementing an EMS in both financial and environmental terms are described below.

- improving cost control, and conserving materials and energy;
- preventing pollution and reducing waste disposal costs;
- meeting customer's environmental expectations and maintaining good public/community relations;
- satisfying investor criteria and improving access to capital;
- obtaining insurance at reasonable cost and limiting environmental liability;
- meeting vendor certification criteria and increasing market share;
- improving industry-government relations and receiving permits/authorizations more efficiently.

NEED MORE INFORMATION?

Contact one of the following organizations for more information:

- ✓The American National Standards Institute (ANSI) can provide you with copies of draft and final ISO standards. Call ANSI at 212/642-4900.
- ✓UW-Madison Department of Engineering Professional Development (EPD) provides short courses for professionals, including a course on ISO 14000. Call Pat Eagan: 608/263-7429.
- ✓UW-Stout Economic Development Administration - University Center (EDA-UC) provides small businesses with information and assistance in the area of ISO 9000 and 14000. Contact Nancy Jennejohn, Program Manager at: 715/232-5023.
- ✓The WI DNR assists businesses with coordinating ISO 14000 and regulatory issues. Contact Isabel Guittierez at 608/267-9564.
- ✓Federation of Environmental Technologists (FET) conducts one-day seminars on ISO 14000 and related topics. Call FET at: 414/251-8163

SHWEC Waste Education Series: ISO 14000

✓ Trade associations for your industry. Many trade associations are tracking ISO 14000 and can provide industry-specific interpretations of impact.

If you are "on-line," you can also find information about ISO 14000 at the following Web-sites:

- S.M. Stoller Corporation Homepage <<http://www.stoller.com/index.html>>
- ISO Online Homepage <<http://www.iso.ch/>>

- ISO Easy Homepage <<http://www.exit109.com/~leebee/>>

SOURCES

- ISO 14000 and EMS by David Kirkpatrick, Grant Thornton, LLP, 03/24/95
- "On-line" Web-sites listed above as information resources.

For More Information, Contact Your County Extension Agent or SHWEC

County Extension Information

SHWEC Offices

UW-Green Bay
University of Wisconsin
Environmental Science 317
2420 Nicolet Drive
Green Bay, WI 54311
414/465-2707
FAX 414/465-2143

UW-Madison
610 Langdon Street, Rm. 529
Madison, WI 53703
608/262-0385
FAX 608/262-6250

UW-Stevens Point
College of Natural Resources
University of Wisconsin
Stevens Point, WI 54481
715/346-2793
FAX 715/346-3624

Fact Sheet Prepared by Dan Boehm, Graduate Student Intern, under the supervision of Wayne Pferdehirt, Waste Reduction and Management Specialist. (12/95)

Collaborating UW Institutions: UW--Green Bay, UW--Madison, UW--Stevens Point