ISO 14001: More Pros than Cons

Though voluntary, compliance to ISO 14000 is expected to be market-driven and may become a defacto requirement for doing business in Europe and throughout the world.

A new series of international standards—ISO 14000—are on the horizon. While ISO 9000 standards deal with quality management systems, ISO 14000 covers environmental management systems (EMS), and addresses the need for one international environmental management standard. Though voluntary, compliance to ISO 14000 is expected to be market-driven and may become a defacto requirement for doing business in Europe and throughout the world.

ISO's 14000 EMS is different from environmental compliance systems, which are oriented towards discovering environmental noncompliance (such as pollution emissions beyond permitted allotments). An EMS, however, goes beyond mere discovery and correction of noncompliance. An EMS looks at the whole manufacturing process (not just distinct waste-stream media) and seeks to identify potential environmental impacts, and minimize the extent of these impacts in a cost-effective way. EMS considerations emphasize environmental improvements from all sectors of a company's activities (management, marketing, design, procurement, manufacturing, distribution, installation, servicing, etc.).

The specification standard—ISO 14001—describes the elements of an EMS. Participating organizations are required to:

- Identify all environmental aspects of its activities, products or services that it can control or influence.
- Establish environmental objectives at each level within its organization.
- Maintain programs for achieving objectives.
- Define management responsibilities for implementing an EMS program.
- Provide relevant employee training.
- Establish procedures for responding to emergencies that may impact the environment.
- Provide periodic ongoing internal audits of the EMS program.

ISO 14001 is not intended to establish requirements beyond commitment to the company's environmental policy, compliance with applicable legislation and regulations, and continual improvement. Thus, two organizations carrying out similar activities, but having different environmental performance, may both comply with ISO 14000 requirements. Essentially, ISO 14000 requires a company to state what it does regarding environmental management, and then do it.

ISO 14001 registration, according to section 3.12, can be undertaken by any "company, corporation, firm, enterprise or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration." Hence, registration can apply to a site, plant, portion of a site, or several sites that share the same EMS.

Conformance of a company's EMS to the requirements of the ISO 14001 standard can be evaluated by company management personnel through internal audits or reviews of the implementation of environmental-compliance criteria. To achieve recognition of such conformance by others, including contractors, purchasers or regulatory authorities, formal evaluation by independent third-party auditors (registrars) is required.

Registration refers to third-party certification of an assurance program. This registration only applies to a single manufacturing facility; audits need to be conducted at each facility to ascertain compliance with the stated requirements. A company with six manufacturing facilities would have to obtain six certificates to claim total compliance with the ISO 14000 standards.

Manufacturers planning to obtain ISO 9000 registration should seek registrars that offer a comprehensive audit for both the ISO 9001 and ISO 14001 standards. Based on the manufacturer's size and how developed its existing EMS system is, it is anticipated that ISO 14001 implementation can take six to 24 months. An accreditation body is forming in the U.S., and certification may be available from the American National Standards Institute (ANSI) and the Registrar Accreditation Board (RAB).

Why bother?

The reasons for pursuing ISO 14001 certification are many:

- *Global competitiveness.* Some international markets, such as the European Union, may require ISO 14001 certification as a prerequisite for doing business. Additionally, it is anticipated that meeting EMS standards will reduce the costs associated with site audits.
- *Reduced liability claims.* Existence of an EMS may minimize environmental liability claims by demonstrating "reasonable care" with documented proof of responsible environmental practices. Additionally, with an active EMS in place, self-disclosures may allow a company to obtain amnesty from state programs and reduced fines from environmental regulators if a noncompliance is promptly reported and corrected.
- *Lower compliance costs.* Since an EMS implies compliance with existing legislation, it may be easier to obtain emission permits and subsequent reauthorizations. Additionally, it is possible that regulatory paperwork requirements could be reduced since the EMS provides controlled documentation of policies and procedures.
- *Lower operating costs.* Certification is likely to lower operating costs as a result of creating a

(Continued on page 71)

Glenn C. Hourahan, *director of technology, at the Air-Conditioning and Refrigeration Institute (ARI) is responsible for providing guidance to public-sector researchers performing investigations related to air-conditioning and refrigeration (AC&R), and managing a number of materials-compatibility research projects for the Air-Conditioning and Refrigeration Technology Institute (ARTI). He has 15 years of experience in the AC&R industry and is involved with various technical committees of the American Society of Heating, Refrigerating, Air-Conditioning Engineers (ASHRAE), and with the U.S. National Team of the International Energy Agency.*