International environmental guidelines to emerge as the ISO 14000 series*

Guidelines will influence the way companies do business in the 21st century.

STANLEY RHODES

The International Organization for Standardization (ISO) has embarked on an effort to standardize the manner in which corporations and the products they produce are evaluated from an environmental perspective. The ISO 14000 series will complement the current ISO 9000 series, establishing guidelines by which companies can measure environmental performance internally, and communicate environmental information externally. The outcome of this international harmonization effort will have long-term implications for every industry sector, including the nonwovens industry. This paper briefly describes the work of the various subcommittees operating within the ISO Technical Committee (TC/207) which is developing the 14000 series, including specific issues of interest to the nonwovens sector.

Background

The 1990s mark a true watershed for business and the environment. Never before have companies been confronted with so many environmental regulations, or paid so much attention to the environmental costs of doing business. Rarely has the marketplace encountered so potent a force as the environment, leading to a record number of new products being introduced to meet specific environmental goals, and sending companies back to the drawing boards to redesign existing products to achieve better environmental performance.

The historic United Nations Conference on Environmental and Development (UNCED) held in June 1992 put the issues of environmentally sustainable development and corporate environmental accountability squarely on the map. It turned the spotlight onto an array of politically charged environmental issues, from global warming to deforestation. However, some of the most important developments of this decade—developments that will affect industry for years to come—are taking place out of the spotlight, under the slow, painstaking standardization process of the International Organization for Standardization (ISO).

The ISO Technical Committee on Environmental Management (ISO/TC 207) was officially created in January 1993. Just as the ISO Technical Committee on Quality Management and Quality Assurance (ISO/TC 176) generated the ISO 9000 series, which has become integrated into the business activities of the 1980s and 1990s, the ISO 14000 series to be developed by the ISO/TC 207 is expected to become a *de facto* requisite for doing business in the 21st century.

Technical committee structure

The ISO/TC 207 has been divided into six subcommittees and one working group, as follows:

- SC-1—Environmental management
- SC-2—Environmental auditing and related environmental investigations
- SC-3—Environmental labeling
- SC-4—Environmental performance evaluation
- SC-5—Life-cycle assessment
- SC-6—Terms and definitions
- WG-1—Environmental aspects in product standards.

Some of these committees are oriented toward *corporate*-level assessment, while others are more focused on the assessment of *products.* The last two subcommittees might be considered to be the glue which will bind the work of the other committees together, with Subcommittee 5 focusing on the standardization of life-cycle assessment methodology, and Subcommittee 6 ensuring that terminology is normalized throughout the 14000 document series.

The following is a summary of the work of the key subcommittees.

1. Environmental management

This subcommittee is concerned with the organizational framework within which corporations set environmental goals and

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implement environmental actions. Specifically, documents developed by the subcommittee will guide corporations in building appropriate staff and establishing record-keeping and tracking systems to monitor the degree to which goals are met.

Although the subcommittee is largely operating on the premise that corporations will establish their own environmental goals, these goals can in fact be dictated to a large degree by customer demands for environmental information, by government agencies, and by inter-governmental trade agreements.

2. Environmental auditing and related environmental investigations

While Subcommittee 1 establishes the organizational shell for corporate environmental accountability, actual auditing of environmental accomplishments will be governed by the guidelines developed under Subcommittee 2. Auditing procedures will be developed in a manner consistent with auditing protocols spelled out in the ISO 9000 series. For any given industry sector, the degree of auditing required is again likely to be heavily influenced by the demands of customers and the dictates of government regulation.

3. Environmental labeling

The role of this subcommittee is to establish principles and guidelines for environmental labeling of products in the marketplace. The subcommittee has identified three types of labeling approaches:

- Type I—"seals of approval"—issued to products based on a set of preselected criteria selected by a panel of "experts"
- Type II—"single attribute claims"—addressing particular attributes of a product
- Type III—"eco-profiles"—presenting a quantitative summation of the life-cycle of a particular product system.

While the goal of the subcommittee is to harmonize each of the approaches, the task is complicated by entrenched bureaucracies and special interests. The resulting guidelines may be so generalized that they do little to resolve concerns that some existing programs create trade barriers, use arbitrary criteria, and may preclude important environmental innovation. At the same time, such labeling programs could well become integrated into government procurement programs as governments seek to incorporate environmental principles into their own practices.

4. Environmental performance evaluation

Even more ambitious is the work of the environmental performance evaluation (EPE) subcommittee. This subcommittee is attempting to establish a system for ranking corporations on their overall environmental performance.

Such an evaluation would involve consideration of a wide array of factors, from the manner in which wastes are handled internally to the types of products produced. These varied considerations would then be weighed and factored into an overall assessment. Such an evaluation implies a relative ranking of the impacts of various corporate activities.

Some delegates are interested in moving beyond the development of generic guidelines, looking toward the additional step of defining precise environmental performance factors for certain industry sectors within the ISO guides themselves.

5. Life-cycle assessment

Although no one scientific methodology for assessing or evaluating environmental activities is endorsed by the Technical Committee, documents prepared by each of the subcommittees place strong emphasis on the need for a "cradle-to-grave" approach. As a result, an entire subcommittee has been designated to standardize the methodology known as "life-cycle assessment" (LCA).

In recent years, the Society for Environmental Toxicology and Chemistry (SETAC) has led standardization efforts in this arena, while government agencies such as the U.S. Environmental Protection Agency and the Canadian Standards Association have published guidelines of their own. The ISO subcommittee is examining each of these existing documents, and will attempt to tackle some of the difficult issues unresolved by other organizations, such as the assessment of environmental impacts associated with particular industrial systems.

Relevant issues

As the ISO/TC 207 progresses on each of these fronts, industry sectors which will be affected by the resulting guidelines should be fully apprised of the developments in key ISO subcommittees.

Some of the most important issues of interest to the nonwovens industry, and the pulp and paper industry as a whole, will be debated within SC-5, Life-Cycle Assessment. LCA will make it possible, for the first time, to integrate a diversity of considerations under one unified accounting system. Differences in manufacturing technologies, distinctions between virgin and recycled systems, the handling of renewable versus non-renewable resources, and variations in product performance are just a few of the factors which can be expected to affect the environmental performance of products, resulting in a wide range of potential performance within the product sector.

The manner in which the LCA methodology is standardized in each of these areas will, in turn, affect decisions made internally by companies to streamline their industrial processes, and in addition, will affect the manner in which vital environmental information is communicated to consumers and other industry customers. Of particular interest to the nonwovens industry will be the way in which these issues are integrated into the rankings and criteria emerging from SC-3, Environmental Labeling, and SC-4, Environmental Performance Evaluation.

Rhodes is president and CEO, Scientific Certification Systems, Inc., Oakland, CA 94612.