Volume 26 Number 2

March / April 1999

CONSENSUS

Canada's Newsmagazine of Standardization

180 14000 takes off! 180 9000 flies high!

A fresh look at ISO's best-known standards



Standards Council of Canada

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Canada's Newsmagazine of Standardization

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The Standards Council is the federal Crown corporation with the mandate to promote efficient and effective voluntary standardization.

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ISSN 0380-1314





The Standards Council is the Canadian member of the International Organization for Standardization (ISO) and sponsor of the Canadian National Committee of the International Electrotechnical Commission (IEC)



Printed in Canada on recycled and recyclable paper





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Invisible chain gives companies strength





Big changes are in store for the world's







National Standards of Canada 26

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What is ISO 9000 all about?

can certify my product for u

[SO [4]000 takes off! [SO 9000 flies high!



A fresh look at ISO's best-known standards

Then information officers at the Standards Council of Canada get a question about "those ISO standards", the caller is usually not asking about standards for steel grading, citrus fruit storage or ski bindings. Although the International Organization for Standardization (ISO) has published nearly 12,000 different standards, for many people "ISO" means just one thing - the ISO 9000 series of quality management system standards.

Of all the standards ISO has published in its 50 years, none has received as much attention as ISO 9000. As of last December, there were about 32,000 quality systems registered to an ISO 9000 standard in North America alone.

"ISO" and "ISO 9000" may not be synonymous for long, however. ISO 14000, a closelyrelated series of standards on environmental management, is growing in influence and may someday equal ISO 9000 in recognition and acceptance.

Several factors account for the two series' unprecedented popularity. Both are intended to be used by any organization, of any size and in any industry. That gives them a broad range of possible users, more so than most of ISO's other, more specialized standards.

In an era of increasing globalization, ISO 9000 and ISO 14000 provide the confidence that is crucial when supplier and customer are half a world apart.

Perhaps the most important factor, however, is that they work. Study after study has shown that a properly implemented management system really does help an organization to perform more consistently and efficiently.

In this issue, we look at some of the most important aspects of ISO 9000 and ISO 14000. including:

- · the "confidence chain" that links suppliers, registrars, accreditation bodies and customers;
- · the blossoming of ISO 14000;
- · international agreements that make your ISO 9000 registration a passport to the global
- the growth of specialized ISO 9000 applications such as TL 9000 and QS 9000; and
- · what you'll find in the year 2000 editions of

Our special coverage starts on the next page.

Confidence Chain

Invisible chain gives registered companies strength in global markets

our company has just obtained its ISO 9000 or ISO 14000 registration. The board of directors is duly impressed. The CEO is smiling. The organization has a renewed sense of purpose. And the much-anticipated benefits of your new management system are already beginning to materialize.

But there is still one more test - and it's a critical one. Will your registration win favor with your customers, partners, creditors and regulators? Will it have the same credibility as registrations obtained by the big competition in New York, London or Tokyo? In short, will it be a marketing success or just another plaque on the wall?

Standards, by their very nature, level the playing field, giving small companies the same credentials as large ones. But your registration has more going for it than your own claims or even the claims of the registrar that helped you obtain it. An invisible confidence chain links it to some of the most respected standards institutions, documents and management systems experts in the world. This confidence chain is what gives your registration real strength in the global marketplace, whether

you're doing business around the corner or around the world.

An international who's who

At the top of this chain is the International Organization for Standardization (ISO), one of the world's foremost standardization bodies. Experts from some 125 member countries come together in ISO committees to develop standards for a broad range of products, services and systems. The standards you applied in order to get your registration were developed by ISO Technical Committee 176 (for the ISO 9000 series) or ISO Technical Committee 207 (for the ISO 14000 series). The membership of these committees reads like an international Who's Who of quality and environmental management. Standardization has allowed you to indirectly make these individuals part of your management systems team.

Canada has positioned itself as a leader in this effort. The Standards Council of Canada, which oversees Canada's National Standards System, is responsible for maintaining the international secretariats of TC 176 and TC 207. The day-to-day operation of these secretariats is provided by CSA International, a prominent participant in the National Standards System. Almost 170 experts committed to the principles of ISO 9000 and ISO 14000 help the Standards Council influence the direction of these standards so that they meet the needs of Canadian companies.

Judging the judges

In addition to developing standards, ISO also develops guides that support consistent evaluation of ISO 9000 and ISO 14000 standards worldwide. The guides, developed by

The Standards Council represents Canadian concerns within CASCO and uses CASCO guides as the basis for national accreditation programs. To date, the Standards Council has accredited 15 ISO 9000 registrars on the basis of ISO Guide 62, General Requirements for Bodies Operating Assessment and Certification/Registration of Quality Systems. The Standards Council has also accredited five ISO 14000 registrars against existing national requirements (ISO's Guide 66, General Requirements for Bodies Operating Assessment and Certification/Registration of Environmental Management Systems, is expected to be published in May). In addition to registrars, the Standards Council also accredits organizations that certify and provide training to auditors that take part in the registration processes. These professionals play a crit-



Auditors a vital link in the chain

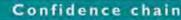
The Standards Council now accredits the organizations that certify and provide training to the auditors responsible for assessing a company's compliance with ISO 9000 and ISO 14000 requirements. Accreditation ensures that auditor credentials are beyond reproach and that training specifications, instructors and course materials are appropriate and of high quality.

In the fall of 1998, Accademia Qualitas (http://www.accademia.com), of Ville Saint-Laurent, Québec, became the first Standards Council-accredited training course provider for quality management systems auditors. Accademia Qualitas provides auditors with a five-day training course that they can use as the basis for certification. There are as yet no organizations accredited to provide training courses to environmental management systems auditors.

The National Quality Institute (http://www.nqi.ca), and the Canadian Environmental Auditing Association (http://mgmt14k.com/ceaa/) are both in the process of becoming accredited as auditor certifiers. The National Quality Institute has been certifying quality management auditors since 1997. The

Canadian For commental Auditing Association has been operating an environmental management auditor certification program since 1996.

Auditors with impeccable credentials are one more link in the confidence chain supporting your registration.



ical role in your registration and their credentials are an important part of the confidence chain (please see "Auditors a vital link in the chain" on p. 6).

While all of this activity is enough to build a high degree of confidence for your registration, the Standards Council and its counterpart accrediting bodies in other parts of the world are working to provide still further strength to the confidence chain through the negotiation of mutual and multilateral recognition agreements. These agreements provide formal acknowledgement that the Standards Council's accreditation programs are equivalent to accreditation programs in other countries. In the unlikely event that your registration is ever challenged in a foreign market, you can use these agreements to satisfy any doubts (please see "ISO to go" on p. 23).

Canada ranks high

Canada's National Standards System is the envy of the world because of its high degree of organization and collaboration. The Standards Council relies on an extensive advisory committee structure to draw upon the technical expertise of Canadians from all sectors of the economy. The organization's governing Council includes representation from industry, government and non-governmental organizations. Other countries like to collaborate on standardization initiatives with Canada because they are confident that the Standards Council speaks for the country's standards system – from the standards developers to the registrars to the auditors.

The confidence chain extends to your company through the Standards Council and the organizations it has accredited. With all of these organizations, agreements, guides and documents standing behind registrations like yours, it is little wonder that these registrations enjoy such widespread acceptance and credibility. In an ISO survey published in 1997, very few respondents reported problems in conducting international trade as a result of ISO 9000 registrations not being accepted by customers or potential customers. It's all thanks to the confidence chain.

A full directory of accredited registrars is available on p. 10 and by visiting the Standards Council's World Wide Web site at http://www.scc.ca. The Web site also contains information on various aspects of the confidence chain.

The right stuff



Just what does it take for a registrar, certification organization or laboratory to make the grade with ISO? Find out in the ISO/IEC Guides Compendium on Conformity Assessment. The fourth edition of this publication will be available shortly. To order, contact Global Info Centre Canada, the official distributor of ISO and IEC publications for the Standards Council, at 1-888-782-6327, or on the World Wide Web at http://global.ihs.com.



Public Works and Government Services

Travaux publics et Services gouvernementaux Canada

CGSB accreditation pending

The Canadian General Standards Board (CGSB) of Public Works and Government Services Canada is pleased to announce that its accreditation as an ISO 14001 registrar with the Standards Council of Canada is pending.

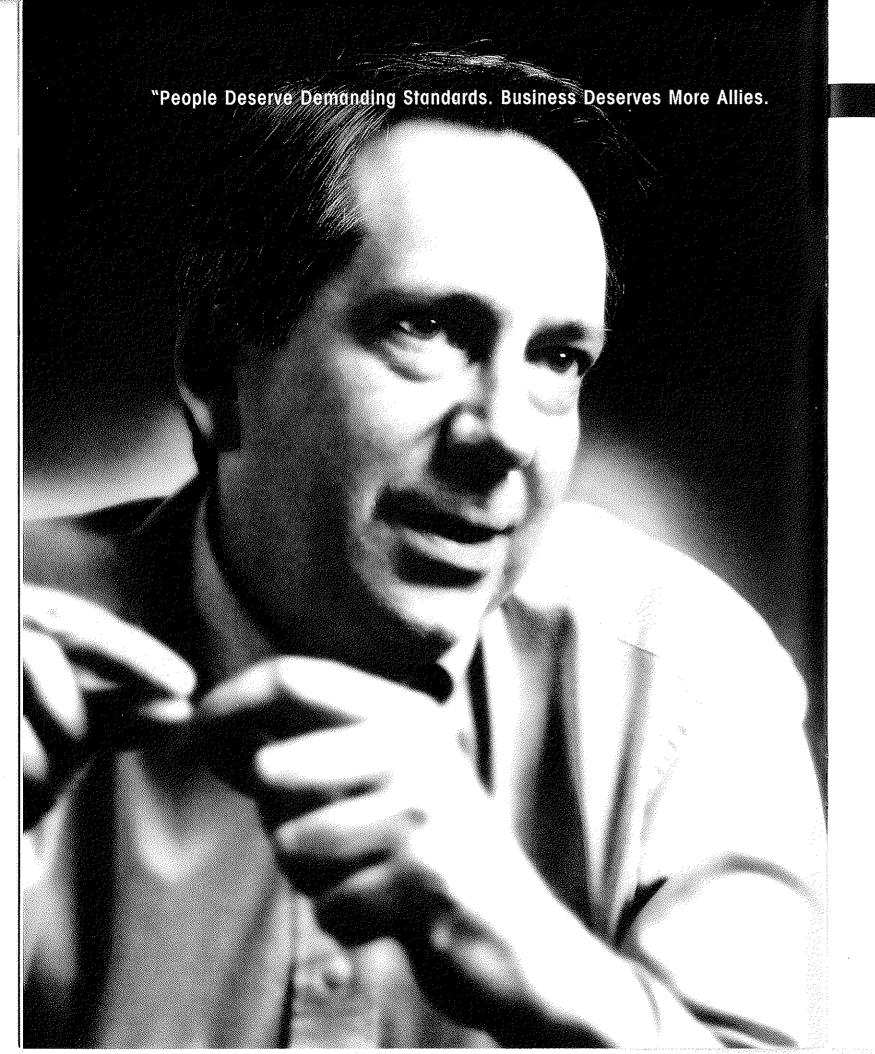
In February 1993, CGSB was accredited as an ISO 9000 registrar.

For the past 65 years, CGSB has been meeting the standardization needs of public and private-sector organizations. Our service excellence and expertise in Standards Development, Conformity Assessment, and Management Systems Registration is built on experience and an enduring commitment to our customers.

For further information, call us at 1-800-665-CGSB (Canada only) or visit our website at http://www.pwgsc.gc.ca/cgsb

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CSA Standards Development

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Directory of accredited registrars



isted below are the quality and environmental I management systems registrars accredited by the Standards Council of Canada. Organizations accredited to register quality management systems are identified with this symbol (Q); organizations accredited to register environmental management systems are identified with this symbol (94).

Accreditation formally recognizes the competence of a registrar, and provides a basis for national and international acceptance of ISO 9000 and 14000 registrations,

In most cases, registrars are accredited to provide services within a particular scope or field of activity. For complete scope information, or for information on the Standards Council's accreditation programs, please visit our Web site at http://www.scc.ca or contact our information division.

AOQC Moody International Registration Ltd.

Oshawa, Ontario Q Tel: (905) 433-2955 Fax: (905) 432-9308

AQSR Canada, Inc.

Mississauga, Ontario Tel: (905) 624-6004 Fax: (905) 624-7213 Toll free: 1-888-866-5666 Web site: http://www.aqsr.com/

Bureau de normalisation du Québec

Montréal, Québec O Tel: (514) 383-3253 Fax: (514) 383-3260 Toll-free: I-888-256-0660 Web site: http://www.criq.qc.ca/bnq or Quenviro Systems International Edmundston, New Brunswick Tel: (506) 736-6918 Fax: (506) 736-6908 Toll-free: 1-888-267-1476 Web site: http://www.terra-tech.nb.ca/QSI

Bureau Veritas Quality International (North America) Inc.

Jamestown, New York USA Tel: (716) 484-9002 Fax: (716) 484-9003

Canadian General Standards Board

Hull, Quebec Q Tel: (819) 956-3500 Fax: (819) 956-5644 Web site: http://w3.pwgsc.gc.ca/cgsb

International Quality System Registrars

Mississauga, Ontario Tel: (905) 565-0116

Fax: (905) 565-0117 Toll free: 1-800-267-0861 (Toronto)

Web site: http://home.istar.ca/~igsr Toll free: 1-888-472-9831 (Quebec)

Intertek Testing Services NA Ltd. Lachine, Québec Q 14

Tel: (514) 631-3100 Fax: (514) 631-1133

KPMG Quality Registrar Inc.

Mississauga, Ontario Tel: (905) 949-7800 Fax: (905) 949-7799

Western Region, Vancouver, BC 4 Tel: (604) 691-3376, (604) 691-3000

Fax: (604) 691-3031 Toll free: 1-800-862-6752 Web site: http://www.kpmg.ca

Lloyd's Register Quality Assurance Ltd.

Hoboken, NJ USA Q Tel: (201) 963-1111 Fax: (201) 963-3299

Orion Registrar Inc.

Arvada, CO USA Tel: 303 - 456-6010 Fax: (303) 456-6681 Web site: http://www.dim.com/~orion

Quality Certification Bureau Inc.

Edmonton, Alberta Tel: 780 - 496-2463 Fax: (780) 496-2464 Web site: http://www.qcbinc.com

Quality Management Institute

Mississauga, Ontario O 11 Tel: (905) 272-3920 Fax: (905) 272-3942 Web site: http://www.gmi.com/

QUASAR (Quality Systems Assessment Registrar)

Mississauga, Ontario Q Tel: (905) 542-1312 Toll free: 1-800-461-9001 Fax: (905) 542-1318 Web site: http://www.cwbgroup. com/english/quasar.htm

SGS International Certification Services Canada Inc.

Mississauga, Ontario Q 11 Tel: (905) 676-9595 Fax: (905) 676-9519 Web site: http://www.sgs.ca

Underwriters Laboratories Inc.

Melville, New York USA Q Tel: (516) 271-6200 Fax: (516) 439-6022 Web site: http://www.ul.com

Underwriters' Laboratories of Canada

Scarborough, Ontario Q Tel: (416) 757-3611 Fax: (416) 757-9540 Web Site: http://www.ulc.ca

₱± ISO 14 000 Q ISO 9 000



Despite the misgivings of some, sector-specific applications of ISO 9000 seem to be here to stay

hen the International Organization for Standardization (ISO) launched the ISO 9000 series in 1987, its intention was to create generic requirements for quality management systems that could be applied by organizations of any size, in any industry, and in any country around the world. ISO 9000 was expected to replace companyand industry-specific quality assurance systems.

Some industries have since concluded that the generic standards aren't enough to meet their needs. ISO, for example, has developed guidelines for computer software, food and beverages, and iron ore. These are meant to help users and registrars apply the core standards to these industries, but aren't meant to serve as mandatory requirements.

Some sectors have gone a step farther by developing additional standards and conformity assessment programs. Typically, these are based on the requirements of ISO 9001 or ISO 9002, plus additional sector-specific requirements. Accreditation bodies that meet the program's criteria can offer recognition under the specialty program as part of their registrar accreditation. Registrars, in turn, can offer specialtyprogram recognition to their clients as part of their registration. The Standards Council

of Canada is involved in three such specialty programs. One of these is based on ISO 13485 and 13488, standards which provide particular requirements for the application of ISO 9001 and 9002 to medical devices. Those standards are about to become part of Canada's system for regulating medical devices. Effective July 2001, certain devices will have to be manufactured under an ISO 13485 or 13488 quality management system to be sold in Canada. Health Canada and the Standards Council are establishing an accreditation program that will allow registrars to recognize manufacturers who conform to these requirements.

Another specialty program is TL 9000, an application for the telecommunications industry developed by the Quality Excellence for Suppliers of Telecommunications (OuEST) Leadership Forum (http://www.questforum.org). This spring, together with the U.S. Registrar Accreditation Board (RAB), the Standards Council will take part in a pilot implementation program that will test the registration and accreditation requirements.

The oldest and best-known of the sectorspecific applications is QS 9000, developed for the automotive sector by the "Big Three" North American auto manufacturers. Seven of the ISO 9000 registrars accredited by the Standards Council have QS 9000 included in their scope of accreditation (for details, please see the Standards Council's Web site at http://www.scc.ca).

While sector programs have become widespread, some critics are concerned that they detract from the generic nature of ISO 9000. Even the Standards Council has had to wrestle with misgivings about them.

However, the sector programs are preferable to the quality-assurance programs they replace, points out Joan Brough-Kerrebyn, the Standards Council's senior program officer for quality systems registration. In the past, suppliers in the telecommunications industry, for example, had

to deal with a different set of requirements for every customer. The sector programs replace that with a single set of requirements for each industry.

"We're glad to see industries using a widely-accepted international standard like ISO 9000 as the basis for their programs, rather than starting from scratch," Ms. Brough-Kerrebyn notes. "And we're pleased to see them making use of the existing ISO 9000 accreditation infrastructure."

One size, it seems, may not fit all.

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The users have their say

survey commissioned by the Standards Council of Canada's Canadian National Committee of ISO and Industry Canada is providing an inside look at Canadians' experience with ISO 9000 and ISO 14000.

The survey, conducted last fall by Performance Management Network Inc., involved about 1,000 registered organizations and about 2,000 non-registered organizations. Participants were queried about their reasons for registering or not registering, their experience with the standards, and their awareness and knowledge of ISO 9000 and ISO 14000. A full report on the research will be available from the Standards Council later this spring (watch the Standards Council's Web site at http://www.scc.ca for ordering information).

The results are still being analyzed, but here are some highlights:

- · Almost all of the registered organizations intended to maintain their registration, and more than half of the non-registered ones intended to seek ISO 9000 registration in the future.
- · Registered organizations tended to be satisfied with most aspects of the implementation process, especially their relationship with their registrar and with auditors. The least satisfying aspect of the process was the support they got from industry associations.
- · Nearly all of the registered organizations said that having a management system had improved their management practices, increased employee awareness of quality and the environment, and improved their customers' perception of the organization.
- Organizations that hadn't implemented ISO 9000 or ISO 14000 had a variety of reasons. Most commonly, the organization felt it wasn't necessary (ISO 9000) or was using other standards (ISO 14000).
- · About half of the non-registered organizations cited cost as the leading barrier to registration. About a third cited the time required.

The survey will be used to help the Standards Council develop new information products and services and guide Canada's involvement in the development and revision of the standards. Watch for more detailed coverage of the findings in a future issue of CONSENSUS.



anada. Pristine lakes, clean air, abundant forests, unlimited land. Ask anyone around the globe for their impressions of our country and you'll invariably get this description. So it is perhaps not surprising that this country plays such a prominent role in the ISO 14000 series of environmental management system standards.

Canada holds the international secretariat for the 72country committee charged with developing the ISO 14000 series. A Canadian also chairs the committee -Margaret Kerr, Nortel's vice-president of human resources and environment. The Standards Council of Canada has accredited five organizations to register Canadian companies to ISO 14001, the requirements standard in the series. A full list of accredited registrars appears on p. 10 and on the World Wide Web at http://www.scc.ca.

Fresh in the marketplace

ISO 14001 calls for companies to establish and follow an environmental management system (EMS) that allows them to address the environmental impact of their products, services and business practices.

Published late in 1996, ISO 14001 is enjoying healthy growth in the marketplace. Figures provided by Globus International Quality Group Inc. (http://www.globusreg-

istry.com) indicate that there were some 300 registrations across North America early in the year, including about 80 in Canada.

Internationally, Europe and the Far East lead the pack in terms of registrations. The September 1998 issue of International Environmental Systems Update reports a total of 5,446 registrations worldwide, with Japan accounting for 20 per cent and the United Kingdom 14.7 per cent. Companies in Canada and the United States have taken a more cautious approach to registration, together accounting for 4.6 per cent of the world total.

A major research study commissioned by the Standards Council's Canadian National Committee of ISO and Industry Canada is expected to provide some insight into the Canadian attitudes and experiences on the issue of ISO 14000 (please see "Users have their say" on p. 12). Early data indicates that an astounding 100 per cent of registered companies intend to maintain their registrations. Of non-registered companies interviewed, 18 per cent said they intended to become registered. The



complete study is expected to be published late this spring. Stay tuned for more information in upcoming issues of CONSENSUS and on the Standards Council's

Lars Ettarp, the Director General of SWEDAC, Sweden's government agency responsible for accreditation, points to a strong communal sense of environmental stewardship for his country's 5.4 per cent share of ISO 14001 registrations. "We only have 17 inhabitants per square kilometre in Sweden and yet our companies have been fast off the mark to adhere to standards such as ISO 14001," said Mr. Ettarp, who is also chairs the European co-operation for Accreditation. "While some of it is business-related because of our position within the European Community, a lot of it is based on the fact that our industries are keen to show the public and the politicians that they're environmentally friendly and don't pose a threat to the population's well-being."

Sowing seeds of change

Craig Camplong, of Camplong & Associates Inc., is a member of the Standards Council committee that advises on the accreditation of ISO 14001 registrars as well as the committee that contributes to the development of ISO 14000. He sees a bright future for the standards in

"I predict that ISO 14000 registration in Canada will snowball over the next three years. It has only been around for two years and it takes time for the concept to

One small tremor to help set off the avalanche might be IBM Corp.'s recent effort to encourage its suppliers to achieve ISO 14001 registration. In a letter sent to its more than 950 suppliers, the blue-chip technology company urged them to align their environmental management systems with ISO 14001 and to pursue third-party registration "in light of the increasing worldwide interest in environmental affairs".

> Mr. Camplong believes that a push by a few big industry players will help encourage widespread 14001 registration. "One sector will embrace it wholeheartedly and convince their suppliers that adherence is important," he said. "That was the primary impetus for 9000 getting off the ground - people saw it as a competitive advantage." In Canada, the sectors leading the way

are paper and allied products (12 regis-

trations as of September 1998), forestry

except computer equipment (10), transportation equipment (9) and chemicals and allied products (6). Growing strong

businesses

(10), electronic and electrical

equipment and components

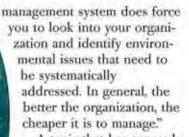
Does ISO 14001 adherence boost a company's bottom line? Its cheerleaders maintain that global adherence will lead to the minimization of trade barriers, the harmonization of national rules, labels and methods, as well as to marked improvements in environmental performance throughout the life-cycle of a company's product. Closer to a company's heart are the benefits of a reduction in costs for waste management, a lower consumption of energy and materials, an improved corporate image among regulators, customers and the public, and a solid framework for continuous improvement in environmental performance.

Naysayers, however, question the efficacy of a flexible, voluntary standard that can be easily adapted and adopted by a company of any size, industry or country, as well as the fact that it focuses on a company's processes rather than environmental performance. They also say that the cost and hassle of third-party registration and validation hinders the standard's acceptance.

Results of the recent management systems survey indicate that most Canadian companies are among the cheerleaders. Almost three-quarters of companies responding to the survey believed registered organizations could compete better in global markets, while fourfifths would encourage any Canadian organization to use the standards even if they don't seek registration.

"ISO 14001 gives companies a chance to be good corporate citizens. However, at this point in time, the standard is so new that most registered companies can't measure the return on investment," said Daniel Désilets, director of systems registration for Intertek Testing Services NA Ltd., which is a Standards Council accredited ISO 14001 registrar.

"The greatest benefits are expected to come from a reduction of costs incurred to correct environmental incidents. The standard should also help optimize the use of human and financial resources required to manage the EMS," said Mr. Désilets, who also chairs the Canadian Conformity Assessment Conference. "An environmental



A topic that has spurred interest in ISO 14001 is the issue of liability. If a business can demonstrate that it has an environmental management system in place that is consistent with the requirements of ISO 14001, can it plead due diligence in a court of law? While the jury is still out on this question, ISO 14001 has been used by courts in Canada and the United States as a remedy for breaking

pollution laws. In January 1996, Prospec Chemicals of Fort Saskatchewan, Alberta, was fined \$100,000 and ordered to become registered to ISO 14001 after it was found guilty of exceeding emissions limits at its chemical manufacturing plant. In 1998, the Ceneral Motors assembly plant in Wilmington, Delaware, agreed to have ISO 14001 registration in place by 2000, rather than pay \$200,000 US in environmental fines.

Taking the high road

Some Canadian companies have been quietly implementing ISO 14001 as part of their overall management strategies. Bombardier Inc. has already registered 16 of its sites worldwide and plans to register all of its manufacturing plants and applicable facilities within the next few months.

"Bombardier Inc. evaluated several environmental management system approaches before we selected ISO 14001," said Wayne Banting, an environmental engineer with Bombardier Aerospace (de Havilland). "With more and more major industries requiring their suppliers, contractors and partners to have some type of EMS, we had no hesitation in adopting this standard because of its flexibility, international recognition and growing acceptance by the industry."

The chance to maximize profits, streamline its processes and remain an industry leader is what compelled Stablex Canada Inc. of Blainville, Quebec, to achieve ISO 14001 registration in 1997 (please see "Stablex wastes no time" on this page). Stablex, which has 125 employees, was the first facility of its kind in North America to become registered, according to Roger Gibb,

the company's vice president and general manager.

"In order to differentiate ourselves from our competitors we decided to take the high road in terms of our environmental policy," said Mr. Gibb. "Both ISO 9001 and ISO 14001 played important roles in this strategy. When you're running a hazardous waste facility in an urban setting, it's essential that you don't make mistakes - and that this place runs day in and day out without any surprises."

Mr. Gibb points to increased earnings, decreased accident rates and a downward trend in the number of environmental infraction notices Stablex has received over the past three years from the Quebec government as proof positive that having an environmental management system in place is good for business.



Stablex wastes no time

Quebec company sees fast results from registration

Does adhering to ISO 14001 affect your bottom line? Stablex Canada Inc. of Blainville, Quebec. thinks so. This hazardous wastes treatment company cites some solid evidence that an Environmental Management System partnered with good management practices can enhance a company's performance. Some of the benefits that Stablex attributes, in part, to compliance:

- · Reduction in government inspection notices from 34 in 1992 to 0 in 1997.
- Reduction of off-spec from 1,790 tonnes in 1992 to 0 for the past five years.
- · Lost time accidents reduced from 11 in 1990 to 2 in 1998.
- · Steady increase in profits for the past five years.
- · Increased customer confidence due to the fact that Stablex was the first facility of its kind in North America to receive both ISO 9002 and ISO 14001 certification.

For more information on Stablex, check out their web site at

http://www.envirobiz.com/homepages/stx/stxhome.htm

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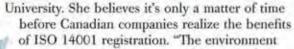
"Our quality and environmental management system initiatives have been quite successful in placing us at the top of an industry, that as a whole, is in a period of transition and consolidation," he said.

"Our success is counter-current to what's happening in the marketplace. I maintain that our adherence to ISO 9001 and 14001 standards is one of the elements of our success."

Planting the idea

Those familiar with ISO 14001 suggest that Canadian companies should give serious thought to the business implications of the standard. While the voluntary standard will not likely act as a nontariff barrier to trade, Canadian companies can expect that more of their foreign customers will begin to insist on adherence as it becomes more widely accepted.

Linda Lusby is chair of the Standards Council and associate professor and coordinator, environmental science, at Acadia



has got to become one of the critical factors for businesses to consider. I think a management system standard that assists companies to work toward continuous improvement of their environmental performance will become a proven, important and useful tool."

For Mr. Camplong, ISO 14001 adherence is just a matter of good business sense. "It forces senior management to look at their business practices with their eyes wide open. You have to focus on your environmental record and management practices at all levels. An EMS helps you to identify any conflicting processes that might negatively affect the environment and fix them in order to reach your objectives." .



Want to learn more about ISO 14000? Interested in obtaining copies? Have a look at the following Web sites.

Standards Council of Canada

http://www.scc.ca/iso14000/index.html

Includes criteria and procedures for ISO 14000 registration, a list of EMS registrars in Canada and regular news items on what's new in the world of standardization.

Global Engineering Documents

http://global.ibs.com

Allows you to order the ISO 14000 series from Global Info Centre Canada, the official Canadian distributor of the ISO 14000 standards on behalf of the Standards Council of Canada.

International Organization for Standardization (ISO)

http://www.iso.ch/9000e/9k14ke.htm

From the horse's mouth: ISO's "Magical Demystifying Tour of ISO 9000 and ISO 14000". Includes frequently asked questions, a description of ISO 14000 and the business benefits of adhering to the standard.

TC 207 (hosted by CSA International)

http://www.tc207.org

Official Web site of the ISO committee responsible for the ISO 14000 series, with details about the committee's structure and frequently asked questions.

Globus Registry

http://www.globusregistry.com

A database of registered companies and news items.

Status of the ISO 14000 Series



Document	Sub-committee (SC) and working group (WG)	Status*	Forecast
ISO 14001: Environmental Management Systems — Specification with Guidance for Use †	SC1/WG1	Published – revision in progress	Revised version (harmonized with ISO 9000) to be published in 2000
SO 14004: Environmental Management Systems — General Guidelines on Principles, Systems and Supporting Techniques †	SC1/WG2	Published – revision in progress	Revised version (harmonized with ISO 9004) to be published in 2000
ISO 14010: Guidelines for Environmental Auditing — General Principles on Environmental Auditing †	SC2	Published – revision in progress	Work is in progress on a joint auditing document for ISO 9000 & 14000, to be published in 2000
SO 14011: Guidelines for Environmental Auditing — Audit Procedures — Auditing of Environmental Management Systems †	SC2	Published – revision in progress	
SO 14012: Guidelines for Environmental Auditing — Qualification Criteria for Environmental Auditors †	SC2	Published – revision in progress	
SO 14015: Environmental Site Assessments	SC2/WG4	CD	Publication expected June 2000
SO 14020: Environmental Labels and Declarations — General Principles †	SC2/WG3	Published	
SO 14021: Environmental Labels and Declarations — Self-Declaration Environmental Claims — Terms and Definitions †	SC2/WG2	FDIS	Publication expected September 1999
SO 14024: Environmental Labels and Declarations — Environmental Labelling Type I — Guiding Principles and Procedures †	SC3/WG1	FDIS	Publication expected September 1999
SO 14025: Environmental Labels and Declarations — Environmental Labelling Type III — Guiding Principles and Procedures	SC3/WG1	WD	
SO 14031: Evaluation of Environmental Evaluation	SC4/WGs 1 & 2	FDIS	Publication expected June 1999
SO TC 14032: Environmental Management – Environmental Performance Evaluation – Case Studies Illustrating the Use of ISO 14031	SC4	In progress	Publication expected June 1999
SO 14040: Life Cycle Assessment — Principles and Framework †	SC5/WG1	Published	
SO 14041: Environmental Management — Life Cycle Assessment – Goal and Scope Definition and Inventory Analysis †	SC5/WGs 2 & 3	Published	
SO 14042: Life Cycle Assessment — Impact Assessment †	SC5/WG4	DIS	Publication expected September 2000
SO 14043: Life Cycle Assessment: Interpretation †	SC5/WG5	DIS	Publication expected September 2000
SO TR 14047: Examples for the Application of ISO 14042	SC5/WG4	In progress	
SO 14048: Environmental Management – Life Cycle ndicator Format	SC5/WG2	WD	
SO TC 14049: Examples for the Application of ISO 14041	SC5/WGs 1 & 2	In progress	Publication expected June 1999
SO 14050: Environmental Management Vocabulary †	SC6	Published	
SO TC 14061: Information to Assist Forestry Organizations in the Use of Environmental Management System Standards ISO 14001 and ISO 14004 †	WG2	Published	
SO Guide 64: Guide for the Inclusion of Environmental Aspects in Product Standards †	WG1	Published	

*CD = Committee draft DIS = Draft International standard FDIS = Final draft international standard IS = International standard

TR = Technical report WD = Working draft

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[†] Available from Global Info Centre Canada, 1-888-782-6327 or (613) 237-4250, fax (613) 237-4251, e-mail gic@ihs.on.ca



Questions and Answers about ISO 14000

Here's what clients of the Standards Council's information division are asking about ISO 14000



What is ISO 14000?

The ISO 14000 series is a family of environmental management standards developed by the International Organization for Standardization (ISO), one of the world's principal voluntary standards development bodies.

The ISO 14000 standards are designed to provide an internationally recognized framework for environmental management, measurement, evaluation and auditing. They do not prescribe environmental performance targets, but instead provide organizations with the tools to assess and control the environmental impact of their activities, products or services. The standards are designed to be flexible enough to be used by any organization of any size and in any field. They address the following subjects:

- · environmental management systems;
- · environmental auditing;
- · environmental labels and declarations;
- · environmental performance evaluation; and
- · life cycle assessment.

For a complete list of the standards in the series and their current status, please see "Status of the ISO 14000 series" on p. 17.



What is an environmental management system (EMS)?

An environmental management system is a management structure that allows an organization to assess and control the environmental impact of its activities, products or services. ISO 14001, Environmental management systems - Specification with guidance for use, outlines the requirements for an EMS.

According to ISO 14001, there are six key elements of an EMS:

- · an environmental policy, in which the organization states its intentions and commitment to environmental performance;
- · planning, in which the organization analyses the environmental impact of its operations;
- · implementation and operation: the development and putting into practice of processes that will bring about environmental goals and objectives;
- · checking and corrective action: monitoring and measurement of environmental indicators to ensure that goals and objectives are being met;
- · management review: review of the EMS by the organization's top management to ensure its continuing suitability, adequacy and effectiveness; and
- · continual improvement.



What is ISO 14000 registration?

Registration is the formal recognition of an organization's EMS. Some organizations, mainly those outside North America, refer to this as "certification".

Organizations may simply declare that their EMS meets the requirements of ISO 14001 ("self-declaration"). However, many organizations choose to have their EMS registered, usually to provide greater assurance to

clients or the public, or because regulators or clients require it. An independent third party, known as a "registrar", assesses and audits the organization's EMS to ensure that it complies with the requirements of the stan-

A further level of confidence is provided by the accreditation of registrars. Accreditation is the evaluation of an organization's competence to carry out certain functions. It provides the basis for national and international acceptance of a registrar's certificates of registration. The Standards Council of Canada is the Canadian ISO 14000 accreditation body (see "What role does the Standards Council of Canada play in ISO 14000?" below).



What are the benefits of ISO 14000?

An ISO 14000 EMS gives you the tools to monitor and improve your organization's impact on the environment. As a result, having one may help you to:

- · assure customers of your commitment to demonstrable environmental management;
- · maintain good public relations;
- · satisfy investor criteria and improve access to capital:
- · obtain insurance at reasonable cost;
- · enhance your image and market share;
- · meet your clients' registration requirements;
- · improve cost control;
- · reduce incidents that result in liability;
- · demonstrate reasonable care;
- · reduce your consumption of materials and energy;
- · obtain permits and authorizations;
- · reduce the cost of complying with environmental regu-
- · develop and share environmental solutions; and
- · improve industry-government relations.



What role does the Standards Council of Canada play in ISO 14000?

The Standards Council of Canada plays several important roles in the development and implementation of

As the Canadian member body of ISO, the Standards Council co-ordinates Canada's participation in the ISO technical committee on environmental management (TC 207), which develops and maintains the standards.

The Standards Council also holds both the chair and secretariat for TC 207. CSA International, formerly the Canadian Standards Association (CSA), manages both positions on behalf of the Standards Council.

As the Canadian ISO 14000 accreditation body, the Standards Council operates accreditation programs for EMS registrars, auditor certifiers and auditor trainers. In addition, the Standards Council will participate in multilateral recognition agreements to further the acceptance of its accreditation in other jurisdictions. For a complete list of accredited EMS registrars, please see p. 10 or visit the Standards Council's Web site at http://www.scc.ca.



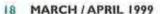
How do I find out if an organization is registered?

Neither ISO nor the Standards Council maintains lists of registered organizations. However, some private companies publish directories of registered organizations. One of these is the Globus Registry, available online at http://www.globusregistry.com, or on CD-ROM. For information, contact: Globus International Quality Group Inc., 150 York St., Suite 900, Toronto, Ontario M5H 3S5, (416) 863-0954, fax: (416) 863-0884, E-mail: info@globusregistry.com.



T Tave questions about ISO 14000? Check Out the Standards Council's Web site at http://www.scc.ca. The site provides plenty of ISO 14000-related information, including a directory of accredited registrars and back issues of CONSENSUS. Other helpful sites include the TC 207 Web site at http://www.tc207.org, and ISO at http://www.iso.ch.

If the answer you need isn't there, contact the Standards Council's information division (see the contact information on p. 3). Our information officers have access to a wide range of authoritative sources. Please note that a charge may apply for some queries.





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Pierre F. Caillibot, chair, International Organization for Standardization Technical Committee 176 (ISO TC 176)

7ith around 300,000 registrations to the ISO 9000 series worldwide, it's not surprising that the term "ISO 9000" has become synonymous with the concept of quality systems. In fact, ISO 9000 provides a portfolio of solutions, developed over the years, to answer a number of user needs.

The 1994 edition of the series is currently being revised, taking into account:

- · the evolution of the needs of customers and organiza-
- · quality management concepts and practices; and
- · standardization and conformity assessment deliverables and practices.

The Year 2000 Family

The revised edition of the standards, referred to as the Year 2000 Family, will bring key developments, including a significant reduction in the total number of standards.

One of the goals of the Year 2000 revisions is to consolidate information now spread out among 25 standards, parts of standards and guidelines, into a simpler structure centred on only four standards. With the revision still underway, it is not yet clear whether these four will suffice to address all user needs or whether a small number of additional standards will also be required. One thing is certain - the new structure will contain the same wealth of information as the 1994 edition, but in a form that is easier to navigate and

The four quality management systems standards that are the focus of the Year 2000 Family are:

- · a standard on fundamentals and vocabulary (ISO 9000);
- · a standard on requirements (ISO 9001);
- · a standard on guidance for performance improvement (ISO 9004); and
- a standard on auditing (ISO 10011).

Of particular interest to registered companies is the withdrawal of two quality systems models - ISO 9002 and ISO 9003. Many thousands of companies are now registered to these standards. ISO has stated that it is committed to making provisions for these companies, and is developing

transition planning guidance. According to ISO, "a major requirement of the ISO 9000 revision process is that organizations which have implemented the current ISO 9000 standards will find it easy to transition to the revised standards."

In the new family, ISO 9001 and ISO 9004 will form a complementary pair of documents that will be more easily applicable and understandable by organizations of all sizes in all areas. As a result, the new family will facilitate the enrichment of a quality management system based on ISO 9001.

More specifically, ISO 9001 will be:

- · centred on the needs and expectations of the customer,
- · applicable to all types of organizations and sectors.
- · simpler and more consistent in its terminology,
- · more focused on continuous improvement,
- · process-based in structure and focus,
- · more compatible with ISO 14001. As for ISO 9004, it will:
- · be based on eight quality management principles.
- · go beyond ISO 9001 to describe a comprehensive quality management system, and
- · have a structure consistent with ISO 9001, although it will be neither the implementation guide to ISO 9001 nor a document for contractual or third-party registration.

ISO 9000, the standard dealing with selection and use of other standards in the family, will provide a simpler and more coherent terminology and concepts that are applicable to the whole family. ISO 10011, the quality auditing standard, will be integrated with its equivalent in the ISO 14000 Family of environmental management standards, producing a single standard for management system auditing.

Compatibility between the ISO 9000 and ISO 14000 standards

A growing number of organizations are interested in implementing both ISO 9001 and ISO 14001 in their management systems. They rightly expect that there will be no unjustified differences between the two families in terms of concepts, structures and text that will make implementa-

tion more costly and the eventual registration of management systems more problematic.

Concerns that the next revision of the standards would increase whatever incompatibilities currently exist have lead to a significant international effort toward greater compatibility. However, those involved in this effort agreed that it should not cause a lessening of the pertinence and usefulness of the requirement standards since they may be used singly for different applications. It was therefore decided that both ISO 9001 and ISO 14001 will remain distinct but that all existing differences that cannot be justified will be removed.

In addition, existing standards on management system auditing - ISO 10011 Parts 1 to 3, and ISO 14010, 14011 and 14012 - will be integrated in a single document, thus establishing common principles and practices in this area. This should increase value to users of both series of standards and will contribute to greater understanding, wider use, more effective implementation and more credible registrations. Organizations will benefit but customers and consumers will also benefit.

Sectorial needs

The committee responsible for the ISO 9000 Family (ISO/TC 176) has come to recognize that some sectors have specific quality management needs. For example, the committee supports the development of an automotive sector document that harmonizes the existing automotive quality system specifications in North America, Germany, France and Italy. Entitled Quality systems - Automotive suppliers - Particular requirements for the application of ISO 9001 (ISO/TS 16949), this document is scheduled for imminent release. (TS means "Technical Specification", one of the new procedural options that ISO has recently intro-



The second committee drafts of ISO 9000, ISO 9001 and ISO 9004 are being circulated for comment and international ballot. To enquire about purchasing copies, contact the Global Info Centre Canada, the official distributor of ISO and IEC publications for the Standards Council. Global can be reached at 1-888-782-6327 or on the World Wide Web at http://global.ihs.com.

duced to respond to particular market requirements.)

As its title indicates, ISO/TS 16949 is based on ISO 9001:1994. By meeting the requirements of this document, an organization will meet the requirements of the North American automotive quality assurance regime (QS-9000) as well as the equivalent specifications in the three European countries,

The development of this document within ISO is an important step forward in the establishment of a new policy intended to answer the needs of sectors. Other similar initiatives are forthcoming in sectors such as aerospace and telecommunications.

These sectorial initiatives are not expected to undermine the ISO 9000 standards since they are based on ISO 9001. It is to everyone's advantage that all that can be done to encourage the convergence of these initiatives be done in a diligent manner so that they lead to a reduced number of individual company specifications and to a greater coherency of the requirements imposed on suppliers, thus lessening their burden. (For more on sector-specific applications of ISO 9000, please see "Does one size fit all?" on p. 11.)

Improvement

Clearly the next edition of the ISO 9000 Family will be a significant improvement for all users. In particular, ISO 9001 will be a better tool, less prone to a minimalist application and likely to provide more value to users. However, the standard is not the proverbial magic bullet. All participants in the "confidence chain" have an important role to play, including:

- · accreditors, who must continue to exercise their oversight role with diligence and rigor;
- · registrars, who must continue to view their role in a professional services context and guard against conflicts of interest that may undermine the credibility of these
- organizations demanding registration of their suppliers, who must themselves demonstrate the same rigor that they require from their suppliers and provide objective and informative feedback on the effectiveness of the confidence chain; and
- · registered organizations themselves, who have to apply ISO 9001 as a tool for better performance and not just as an opportunity for recognition.

When all is said and done, it is probably through this demonstration of maturity of management that organizations will truly obtain from ISO 9000 the value it inherently can deliver.

Preparing for the Year 2000 Family

Many registered organizations ask what they should do until the publication of the Year 2000 Family. Gertainly

ISO 9000: Closing on the year 2000

they should try to keep abreast of developments. Some useful Web sites include the Standards Council of

> Canada (http://www.scc.ca), CSA International (http://www.csa.ca) and the American Society for Quality U.S. Standards Group on Quality, Environment, Dependability and Statistics

(QEDS) (http://standardsgroup.asq.org).

Organizations should avoid falling prey to opportunists who may try to convince them that they urgently must apply a "special recipe" for updating their management systems. In particular, organizations should know that they do not have to rethink, restructure or rewrite the present documentation of their quality system, unless they see a definite advantage in doing so. As ISO puts it: "organizations can and should continue to document their quality management systems in a manner which reflects their own way of doing business."

Beyond these simple caveats, a typical "beyond ISO 9000" approach - that is, an after-registration approach remains appropriate. Companies should pursue continuous improvement of the effectiveness of their systems, focusing on improving customer satisfaction, product and service conformity to requirements, and process performance. They

should also focus on increased use of ISO 9004, including the standard's quality management principles, to identify further areas for improvement.

Pierre F. Caillibot chairs the technical committee responsible for the ISO 9000 series: Technical Committee 176 of the International Organization for Standardization (ISO TC 176). Mr. Caillibot also chairs the Standards Council of Canada's Canadian National Committee on ISO (CNC/ISO), which provides guidance on Canada's participation in ISO. He is quality systems advisor, general directorate, procurement and services, Hydro-Québec.



about ISO 9000

A collection of frequently asked questions about ISO 9000 is available on the Standards Council's Web site at http://www.scc.ca/iso9000/gues9000.html

Three for free

Three useful guides to ISO 9000 and ISO 14000 are now available for free from ISO's Web site. Selection and Use of ISO 9000 describes all of the publications in the ISO 9000 family, and explains how to choose and apply the standards that are right for your organization.

The ISO Survey of ISO 9000 and ISO 14000 Certificates Seventh Cycle - 1997 reports on the results of ISO's latest survey of registrations around the world. In addition to breaking down the survey findings by country and region, this publication includes comparisons to previous surveys.

ISO 14000 - Meet the Whole Family! lists the publications in the ISO 14000 family and describes how to apply them to an organization as a whole, or to its products and services.

To download any of these documents, visit http://www.iso.ch/presse/brochure.htm. You'll also need the Adobe Acrobat Reader, available free from http://www.adobe.com.

Notice of public review

Canadian OSI Registration Authority (COSIRA)

In accordance with the Canadian Standards Association's Canadian OSI Registration Procedures and Guidelines (Z243.110 Series-93), the organizations below have applied for authorization to use the following Open Systems Interconnection (OSI) identi-

Company Bank of Canada Object Type

Value

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For details, to comment on this application, or to obtain more information on OSI registration in Canada, please contact the administrator, COSIRA at (819) 956-4848, fax (819) 956-3321, e-mail cosira@pwgsc.gc.ca.

A list of approved OSI identifiers currently in use in Canada is available on-line through the Standards Council of Canada's database. Information on database access can be obtained by contacting Doug Langlotz at (613) 238-3222, e-mail dlanglotz@scc.ca.

ISO to go Three international agreements are an ISO 9000 passport for Canadian exporters

Then you travel, you may need to show your passport before being allowed to enter a foreign country. When your goods and services travel, foreign customers or regulators may insist on seeing a passport as well - your ISO 9000 registration.

And just as Canadian passports are widely recognized, Canadian registration certificates are respected worldwide. That's due in part to a trio of agreements between the Standards Council of Canada and its counterparts in some of Canada's most important foreign markets.

Since ISO 9000 is known around the world, suppliers and regulators in one country are often willing to accept registration certificates issued in another. But that acceptance isn't necessarily guaranteed. For greater assurance, some exporters will obtain ISO 9000 registration from a registrar based in their target market, look for a registrar that's accredited in more than one jurisdiction, or choose one that has recognition agreements with foreign regis-

Any of those options can cost additional time and money, however. So to increase the portability of ISO 9000 registrations, accreditation bodies such as the Standards Council have developed recognition agreements. Under these agreements, the parties agree to accept each other's accreditations as being

equivalent to their own, following an evaluation of each other's procedures.

If the accreditation body of a country you want to export to is a member of one of these agreements, clients and regulators there should accept your ISO 9000 registration just as they would accept one issued by a locally accredited registrar. See the box on the next page for tips on making these agreements work for you.

So far, the Standards Council is part of three such agreements:

- · a mutual recognition agreement with two U.S. bodies, the American National Standards Institute and the Registrar Accreditation Board (ANSI-RAB);
- · a multilateral agreement developed by the International Accreditation Forum (IAF); and
- · a multilateral agreement developed by the Pacific Accreditation Cooperation (PAC).

The ANSI-RAB agreement was signed in August 1997. Canadian exporters have told the Standards Council that it has been helpful in ensuring U.S. clients' acceptance of their products and services. The agreement is also saving registrars time and money. Because the Standards Council and ANSI-RAB can share results from their registrar assessments, registrars accredited in both countries don't have to undergo as many audits to maintain their accreditation.

The IAF and PAC agreements were originally signed in January 1998. Implementation is now in progress, and new members continue to join both agreements.



ISO 9000 embassies

Tust as the Canadian embassy may . be able to assist you if there's a problem with your passport, the Standards Council or other accreditation bodies may be able to help you win acceptance of your ISO 9000 "passport". Here are a few hints.

- · A letter describing the ANSI-RAB agreement is available from the Standards Council's information division. See p. 3 for contact information.
- News releases and CONSENSUS articles on the PAC and IAF agreements are available from the Standards Council's Web site (http://www.scc.ca) or the

- information division.
- · PAC's Web site is at http://www.apec-pac.org/. IAF does not yet have a Web site.
- · Contact the local accreditation body. Here's a list of the countries whose accreditation bodies are members of the agreements described in this article. For contact information, visit the Standards Council or PAC Web sites, or contact the information division.
- · Australia (IAF, PAC)
- · China (IAF, PAC)
- · Denmark (IAF)
- · Finland (IAF)
- · France (IAF)

- · Germany (IAF)
- · Ireland (IAF)
- · Italy (IAF)
- · Japan (IAF, PAC)
- · Malaysia (PAC)
- · Netherlands (IAF)
- · New Zealand (IAF, PAC)
- · Norway (IAF)
- · Singapore (PAC)
- · South Africa (IAF)
- · Spain (IAF)
- · Sweden (IAF)
- · Switzerland (IAF)
- · United Kingdom (IAF)
- · United States (ANSI-RAB, IAF)



New service

alerts businesses before product rules change

anadian companies can now stay a step ahead of changing government requirements using Export Alert!, a unique Internet-based service offered by the Standards Council of Canada.

Export Alert! is a free pilot service that automatically e-mails subscribers when governments in any of 134 World Trade Organization (WTO) member countries including Canada - are proposing changes to the rules that govern products and services. The Standards Council is believed to be the first organization in the world to use this technology to help companies take advantage of trade information made available through the WTO.

"The Web has provided us with a powerful and costeffective new means to help Canadian businesses put this information to work for them," said Linda Lusby, chair of the Standards Council. "This is a hassle-free. paper-free, fully-automated service that will benefit any company that must conform to government regulations." Subscribers choose from among 41 fields of interest

that they want to track. They are then notified by e-mail whenever a government is proposing a change to a technical regulation, conformity assessment regime or mandatory standard. Subscribers can also use the service to obtain full regulatory texts and relay comments back to government officials.

The most frequently notified areas include telecommunications, agriculture, food technology, health care technology, environment and health protection, construction materials and building, and road vehicle

The Standards Council operates the Canadian WTO/NAFTA Enquiry Point under contract to the Department of Foreign Affairs and International Trade Canada. In addition to offering Export Alert!, the Enquiry Point conducts research on behalf of clients into standards and regulations in global markets.

To subscribe to Export Alert! free of charge, visit the Standards Council's Web site at http://www.scc.ca.



Rick Wilson, secretary, Canadian Association of Environmental Analytical Laboratories (CAEAL)

any laboratory clients, including regulatory authorities, require labs to obtain accreditation V or participate in quality assurance programs. Do small laboratories have the technical and financial ability to participate? The answer is yes - at least when it comes to the programs offered by the Standards Council of Canada and its various partners in the Program for Accreditation of Laboratories - Canada (PALCAN). Many small labs are already participating successfully, and they are joining in increasing numbers.

The challenge for the operators of PALCAN and related programs is to make their programs affordable while ensuring that all labs meet the same program requirements. The examples provided below illustrate how this challenge has been met in the environmental laboratory sector, which makes up about 40 per cent of all labs accredited by the Standards Council.

Together with the Canadian Association for Environmental Analytical Laboratories (CAEAL), the Standards Council offers an environmental laboratory accreditation program based on guidelines developed by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). Those guidelines are laid out in ISO Guide 25, General Requirements for the Competence of Calibration and Testing Laboratories, and ISO Guide 43, Development and Operation of Laboratory Proficiency Testing.

The program is kept affordable for small labs because the fee is dependent on the number of tests (or "appendices") for which the lab is seeking accreditation. The base fee is also reduced by \$900 when there are fewer than six appendices and a single assessor can conduct the site assessment. As its program has grown, CAEAL

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has also steadily reduced the fees that it charges for proficiency samples.

The reaction of the smaller laboratories - those with five or fewer tests in their scope of accreditation - has been very positive. About 20 per cent of the environmental laboratories in the accreditation stream are classified "small", and this proportion is growing. In the last three years, 38 per cent of new applicants have been small labs.

CAEAL operates a proficiency testing program which includes the 100 laboratories in the accreditation program and another 125 labs which participate in the proficiency program alone. This program also shows the trend to participation by smaller labs. For example, 44 labs from British Columbia's Environmental Data Quality Assurance Program have recently registered. These labs are tested on an average of 3.7 sets of proficiency samples each, compared to the program average of 6.2

Another indicator is participation by municipal government laboratories, which usually test drinking water, waste discharges, or both. This sector has emerged as a recognizable segment of the CAEAL proficiency program during the last three years. There are now 33 municipal labs registered for an average of 4.5 test groups. Four of these 33 labs are also accredited. During the last three years, the fees for the four test groups that are most common for municipal labs have declined by 25 per cent.

The message seems clear. Small labs are participating in significant numbers in these quality assurance programs, and they seem to be responding in part to the increasing affordability of the programs. And as the participation of labs increases, there are even more opportunities to make the programs more affordable.

Accreditation News

The Standards Council of Canada accredits a variety of organizations that provide standards and conformity assessment services. Accreditation formally recognizes the competence of an organization to carry out specific functions and provides a basis for national and international acceptance of products and services.

In most cases, organizations are accredited to provide services within a particular scope or field of activity. For complete scope and contact information on any accredited organization, or for information on the Standards Council's accreditation programs, please visit our Web site at http://www.scc.ca or contact our information division.

New accreditations

Calibration and testing laboratories

- · Building Performance Inc., Oakville, Ontario
- · Great Lakes Institute for Environmental Research, University of Windsor, Windsor, Ontario
- · Infasco Nut Division, Ifastgroupe and Co. Ltd., Mississauga,
- · Metex Heat Treating, Brampton, Ontario
- · Philip Analytical Services Corporation, Edmonton, Alberta
- · Queen's Analytical Services Unit, Queen's University, Kingston, Ontario
- · Torcad Ltd., Toronto, Ontario

Voluntary withdrawals of accreditation Calibration and testing laboratories

- · Dynacare Laboratories, Division of Dynacare Health Group Inc., London, Ontario
- · Petroleum Products Testing Laboratory, SGS Canada Inc., Montreal-Est, Quebec
- Toronto Calibration Laboratory, Tektronix Canada Inc., Concord, Ontario

Application for extension of scope

This organization has applied for an extension of its scope of accreditation in the subject area shown below. Concerned interests wishing to comment on this application may submit their comments in writing to the director of standardization, using the contact information on p. 3, by July 7, 1999.

Certification organization

· Quality Auditing Institute, Port Moody, British Columbia Electrical and electronic products, pertaining to the safety of all types of electrical and electronic products, systems and related services.

National Standards of Canada

C ince the last issue of CONSENSUS, the following standards Owere approved as National Standards of Canada by the Standards Council of Canada. For information on availability and prices, or to order copies of these standards, please contact the appropriate standards development organizations below. Some documents may be available in only one language.

Canadian Standards Association (CSA)

Telephone: (416) 747-4044 Fax: (416) 747-2475



CAN-CSA ISO/IEC ISP 10609-28 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 28: Subnetwork-type dependent requirements for Data Link Layer for end systems attached to an ISDN

CAN-CSA ISO/IEC ISP 10609-3 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 3: Subnetwork-type independent requirements for Group TD

CAN-CSA ISO/IEC ISP 10609-30 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 30: Definition of profile TC1131 CAN-CSA ISO/IEC ISP 10609-31 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 31: Definition of profile TC1231 CAN-CSA ISO/IEC ISP 10609-32 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 32: Definition of profile TC4111 CAN-CSA ISO/IEC ISP 10609-4 Information technology -International Standardized Profiles TB, TC, TD and TE -Connection-mode Transport Service over connection-mode Network Service - Part 4: Subnetwork-type independent requirements for Group TE

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