

United States
Environmental Protection
Agency

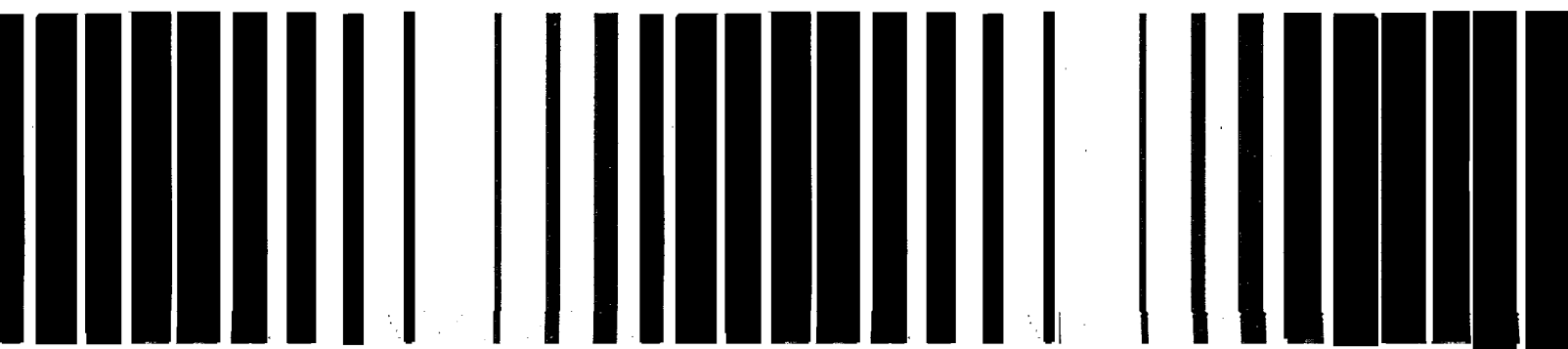
Office of Research and
Development
Washington DC 20460

Office of Pollution
Prevention and Toxics
(7409)

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ISO 14000 Resource Directory



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ISO 14000 Resource Directory

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DISCLAIMER

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FOREWORD

The U.S. Environmental Protection Agency is charged by Congress with protecting the Nation's land, air, and water resources. Under a mandate of national environmental laws, the Agency strives to formulate and implement actions leading to a compatible balance between human activities and the ability of natural systems to support and nurture life. To meet this mandate, EPA's research program is providing data and technical support for solving environmental problems today and building a science knowledge base necessary to manage our ecological resources wisely, understand how pollutants affect our health, and prevent or reduce environmental risks in the future.

The National Risk Management Research Laboratory is the Agency's center for investigation of technological and management approaches for reducing risks from threats to human health and the environment. The focus of the Laboratory's research program is on methods for the prevention and control of pollution to air, land, water and subsurface resources; protection of water quality in public water systems; remediation of contaminated sites and ground water; and prevention and control of indoor air pollution. The goal of this research effort is to catalyze development and implementation of innovative, cost-effective environmental technologies; develop scientific and engineering information needed by EPA to support regulatory and policy implementation of environmental regulations and strategies.

This publication has been produced as part of the Laboratory's strategic long-term research plan. It is published and made available by EPA's Office of Research and Development to assist the user community and to link researchers with their clients. This publication was developed jointly with the USEPA Standards Network, Office of Prevention, Pesticides and Toxic Substances.

This report, *ISO 14000 Resource Directory*, funded through the Center for Environmental Research Information, is a pollution prevention guide for government and nonprofit initiatives and projects related to the developing ISO 14000 series of Environmental Management Standards.

E. Timothy Oppelt, Director
National Risk Management Research Laboratory

ABSTRACT

This Directory provides information about current initiatives related to the developing ISO 14000 series of environmental standards. Interest in the standards among governments, nongovernmental organizations, industry and the public is high and expected to grow as the standards become finalized. A measure of this interest is the fact that even before the first of the ISO 14000 series standards was issued, over 100 government and nonprofit organizations submitted information for inclusion in this Directory. This number excludes the hundreds of private sector initiatives, not included in this Directory, that are also underway. The U.S. Technical Advisory Group (TAG) to ISO Technical Committee 207 (the ISO Committee developing the ISO 14000 series standards), for example, consists of hundreds of members from industry, government, consulting firms, nongovernmental organizations, and academia. Dozens of private sector organizations have emerged to offer training, consulting, and other services related to ISO 14000, while hundreds of individual companies are investigating ISO 14000 to determine its implications.

The ISO 14000 is a global series of standards developed outside regulatory channels that has the potential to revolutionize both the way industrial and other organizations manage environmental affairs, the way regulatory agencies relate to the regulated community, and the way customers and society at large relate to companies and other organizations. Whether this potential will be realized is not yet clear. Much will depend on how industry, governments, and nongovernmental organizations respond to, and use, the standards. If their potential is realized, the introduction of the ISO 14000 series standards could be one of the most significant environmental developments of our time.

This Directory is an effort by EPA to contribute to an understanding of the ISO 14000 series standards. It does not attempt to promote or discourage use of the standards. Rather, it is intended to facilitate communication among the many groups or individuals examining or using the standards. A useful first step in improving our understanding of the standards is to provide a forum where interested parties can communicate and learn from each others' experience.

The audience for this resource directory is anyone interested in the ISO 14000 series of International Environmental Standards. Companies from large to small and government at all levels could find the information contained in this directory useful.

This report was submitted in fulfillment of Contract #68-3-0315 by Eastern Research Group, Inc. under the sponsorship of the U.S. Environmental Protection Agency. This report covers a period from January, 1997 to May 31, 1997.

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NOTICE

The purpose of this Directory is to provide information on government activities concerning ISO 14000 and/or Environmental Management Systems (EMS). It is therefore beyond the scope of the Directory to include a comprehensive listing of all the private sector organizations and initiatives also involved in ISO 14000 and/or EMS.

The ISO 14000 series of standards are copyrighted and can be obtained by contacting any of the following organizations: **ANSI**, 7315 Wisconsin Ave., Suite 250-E Bethesda, MD 20814. Tel: 301-469-3363. **ASTM**, 100 Bar Harbor Dr., West Conshohocken, PA 19428. Tel: 601-832-9721. Fax: 601-832-9666. **ASQC**, 611 East Wisconsin Ave., P.O. Box 3005, Milwaukee, WI 53201. Tel: 800-248-1946. Fax: 414-272-1734. **NSF International**, 2100 Commonwealth Blvd., Ann Arbor, MI 48105. Tel: 313-332-7333. Fax: 313-669-0196.

ACKNOWLEDGMENTS

This Directory was prepared under the direction and coordination of Emma Lou George of the U.S. EPA's Office of Research and Development, National Risk Management Research Laboratory in Cincinnati, Ohio, with assistance from Mary McKiel of the EPA Standards Network, Office of Pollution Prevention and Toxics, in Washington, DC.

Eastern Research Group, Inc. (ERG) of Lexington, Massachusetts, collected and compiled the information contained in the Directory, and prepared and edited the material for publication. Michael Cronin and Donald Fried-Tanzer, under the direction of Jeff Cantin, were the primary ERG contributors to its development.

INTRODUCTION

Overview

This Directory provides information about current initiatives related to the developing ISO 14000 series of environmental standards. Interest in the standards among governments, nongovernmental organizations, industry and the public is high and expected to grow as the standards become finalized. A measure of this interest is the fact that even before the first of the ISO 14000 series standards was issued, over 100 government and nonprofit organizations submitted information for inclusion in this Directory. This number excludes the hundreds of private sector initiatives, not included in this Directory, that are also underway. The U.S. Technical Advisory Group (TAG) to ISO Technical Committee 207 (the ISO Committee developing the ISO 14000 series standards), for example, consists of hundreds of members from industry, government, consulting firms, nongovernmental organizations, and academia (see Figure 2). Dozens of private sector organizations have emerged to offer training, consulting, and other services related to ISO 14000, while hundreds of individual companies are investigating ISO 14000 to determine its implications. At least two U.S. companies certified to ISO 14001 while the standard was still in draft form, and prior to the existence of U.S. nationally accredited registrars.

The reasons for this interest in the ISO 14000 series standards are not hard to find. It is a global series of standards developed outside regulatory channels that has the potential to revolutionize both the way industrial and other organizations manage environmental affairs, the way regulatory agencies relate to the regulated community, and the way customers and society at large relate to companies and other organizations. Whether this potential will be realized is not yet clear. Much will depend on how industry, governments, and nongovernmental organizations respond to, and use, the standards. If their potential is realized, the introduction of the ISO 14000 series standards could be one of the most significant environmental developments of our time.

This Directory is an effort by EPA to contribute to an understanding of the ISO 14000 series standards. It does not attempt to promote or discourage use of the standards. Rather, it is intended to facilitate communication among the many groups or individuals examining or using the standards. A useful first step in improving our understanding of the standards is to provide a forum where interested parties can communicate and learn from each others' experience.

What is ISO?

The International Organization for Standardization (ISO) is a private sector, international standards body based in Geneva, Switzerland. The short form "ISO" is not an acronym, but instead is derived from the Greek *isos*, meaning "equal" (implying "standard"). Founded in 1947, ISO promotes the international harmonization and development of manufacturing, product and communications standards. ISO has promulgated more than 8,000 internationally accepted standards covering everything from paper sizes to film speeds. More than 120 countries belong to ISO as full voting members, while several other countries serve as observer members. The United States is a full voting member and is officially represented by the American National Standards Institute (ANSI), a nongovernmental, nonprofit standards setting organization.

ISO produces internationally harmonized standards through a structure of Technical Committees (TCs). The TCs usually divide into Subcommittees (SC), which are further subdivided in Working Groups (WG) where the actual standards writing occurs. For example, ISO TC 207 is the ISO Committee developing the ISO 14000 series of standards, SC1 pertains to Environmental Management Systems (EMS), and SC1 WG1 produced the ISO 14001 standard (Figure 1 shows the structure of ISO TC 207).

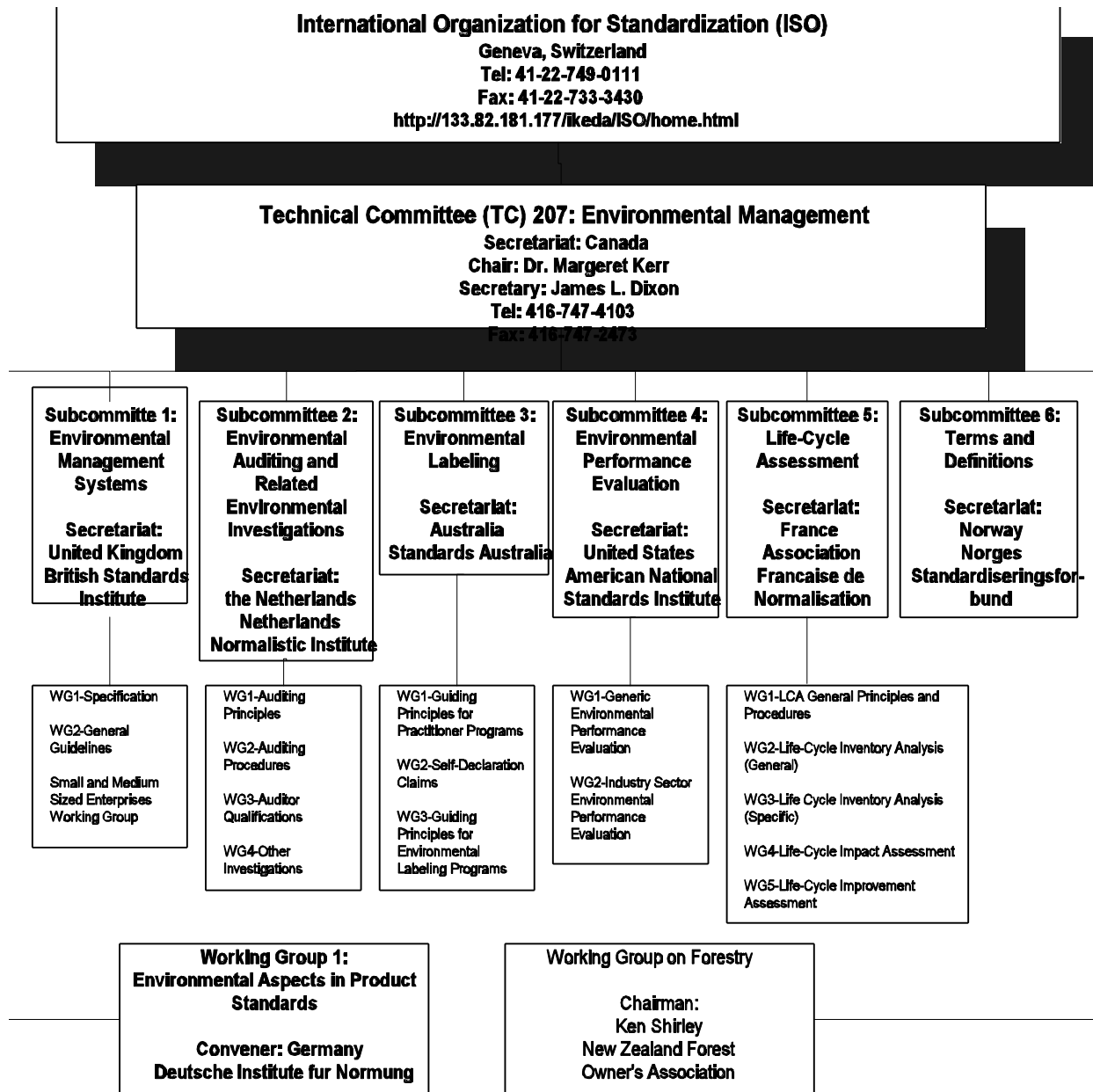


Figure 1. Structure of ISO Technical Committee 207.

Figure 2. U.S. Technical Advisory Group (TAG) to ISO TC-207

American National Standards Institute 212-642-4900	
US TAG to ISO/TC 207	
Chair: Joe Cascio 703 750 6401 jcascio@gnet.org	Vice-Chair: Mary McKiel 202-260-3584 mckiel.mary@epamail.epa.gov
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Chair: Joel Charm 201-455-4057 joel.charm@alliedsignal.com	EPA Rep: Jim Horne 202-260-5802 horne.james@epamail.epa.gov
ST2—Environmental Auditing	
Chair: Cornelius (Bud) Smith 203-778-6114 203-778-6487 Fax	EPA Rep: Cheryl Wasserman 202-260-8797 wasserman.cheryl@epamail.epa.gov
ST3—Environmental Labeling	
Chair: Jim Connaughton 202-736-8364 jconnaugh@sidley.com	EPA Rep: Julie Lynch 202-260-4000 lynch.julie@epamail.epa.gov
ST4—Environmental Performance Evaluation	
Chair: John Master 610-359-4810 610-359-4862 Fax	EPA Rep: John Harman 202-260-6395 harman.john@epamail.epa.gov
ST5—Life Cycle Assessment	
Chair: James Fava 610-701-3636 favaj@wcpost2.rfweston.com	EPA Rep: Mary Ann Curran 513-569-7837 curran.maryann@epamail.epa.gov
ST6—Terms and Definitions	
Chair: Christopher Bell 202-736-8118 cbell@sidley.com	EPA Rep: Mary McKiel 202-260-3584 mckiel.mary@epamail.epa.gov
SWG—Environmental Aspects in Product Standards	
Chair: Stanley Rhodes 510-832-1415	EPA Rep: John Shoaff 202-260-1831 shoaff.john@epamail.epa.gov

For information on joining the U.S. TAG, contact ASTM at 610-832-9721.

What are the ISO 14000 Series Standards?

The ISO 14000 standards are a series of voluntary standards developed under the ISO framework to address organizational environmental management. Like the ISO 9000 series quality standards on which they are largely modeled, the ISO 14000 series standards focus on management systems rather than on performance levels. Just as it is impossible to define “quality” across a wide range of products, it is difficult to define environmental performance across a wide range of activities, products, and services, as well as across differing national regulatory systems. The ISO 14000 series standards do not address the issue of performance. Instead, they identify management system elements that are intended to lead to improved performance: a method to identify significant environmental aspects; a policy that includes a commitment to regulatory compliance, the prevention of pollution and continual improvement; environmental objectives and targets for all relevant levels and functions in the organization; procedures to ensure performance, as well as compliance procedures to monitor and measure performance; and a systematic management review process. One of the issues regulatory agencies and stakeholders must consider is how these systems' conformance requirements will interact with regulatory performance requirements.

The ISO 14000 series of standards include “specification” standard, ISO 14001. The rest are guidance standards which provide optional guidance for companies developing and implementing management systems and product standards. The ISO 14001 specification standard “contains only those requirements that may be objectively audited for certification/registration purposes and/or self declaration purposes.” The various standards are at different stages of development from published final International Standards (IS) to New Work Item (NWI) Proposals (see Figure 3).

ISO 14001, 14004, 14010, 14011/1 and 14012 are published final International Standards. For the developing status of the other documents it is best to consult one of the many newsletters or Internet websites which track this information (please see Chapter 7, Resources).

The ISO 14000 series of standards are copyrighted and can be obtained by contacting any of the following organizations: **ANSI**, 7315 Wisconsin Ave., Suite 250-E, Bethesda, MD 20814, Tel: 301-469-3363. **ASTM**, 100 Bar Harbor Dr., West Conshohocken, PA, 19428, Tel: 610-832-9721, Fax: 610-832-9666. **ASQC**, 611 East Wisconsin Ave., P.O. Box 3005, Milwaukee, WI 53201, Tel: 800-248-1946, Fax: 414-272-1734. **NSF International**, 2100 Commonwealth Blvd., Ann Arbor, MI 48105, Tel: 313-332-7333, Fax: 313-669-0196.

Initiatives Described in this Resource Directory

Application and acceptance of the ISO 14000 standards are still evolving, therefore very few initiatives described in this Resource Directory are tightly tied to the ISO standards themselves. Organizations are not waiting, however, for all the various standards to be finalized. Instead, they are initiating a wide range of projects revolving around the major themes addressed in the ISO 14000 series standards: environmental management systems, product and process life cycles, extended producer responsibility, moving beyond compliance, environmental performance evaluation, third party certification, etc. For the purposes of this Resource Directory the definition of an “ISO 14000 Initiative” includes both projects related formally to the ISO 14000 series standards and those more loosely related to some of the major themes of the standards. With this scope identified, a wide variety of organizations were invited to submit information about initiatives that would be of interest to others tracking ISO 14000. The purpose of this Directory is to provide information on government activities concerning ISO 14000 and/or Environmental Management Systems (EMS). It is therefore beyond the scope of the

Directory to include a comprehensive listing of all the private sector organizations and initiatives also involved in ISO 14000 and/or EMS. Each entry includes a description of the initiative and provides the name, address and telephone number of a contact person who is prepared to discuss the results of their exploration with others examining or using the standards. Where possible, e-mail addresses and Universal Resource Locators, or URLs addresses (World Wide Web), have also been provided to facilitate electronic communication. This Resource Directory will also be available for download in *.pdf format online at: <http://www.epa.gov/ttbnrml/ceri.htm> and in the near future will be interactive to allow users to access these resources directly through the Internet.

EPA's Involvement with ISO 14000

ISO 14000 is a voluntary, private sector initiative that EPA views has the potential to achieve environmental benefits. EPA has been involved in the development of the standards since their inception. EPA's Mary McKiel is the Vice Chairman of the U.S. Technical Advisory Group (TAG) to ISO Technical Committee 207. Moreover, EPA is represented on the Chairman's Advisory Group and on the U.S. National Accreditation Program for environmental management systems standards (ISO 14001). The chief mechanism for organizing EPA's involvement with ISO 14000 is the Voluntary Standards Network.

The Voluntary Standards Network was established by Administrator Carol Browner in 1993 to address international voluntary standards activities. A primary focus of the Network has been to coordinate the Agency's participation in the development of the ISO 14000 standards for environmental management. This coordination helps ensure that the Agency speaks with one voice on important issues and activities as they pertain to voluntary standards, such as the ISO 14000 series.

Key EPA activities to date have included:

- **Providing an information clearinghouse.** EPA activities such as this Directory are intended to inform the regulatory community, stakeholder groups, and other interested parties (including industry) of key activities taking place both within the ISO setting, and among government agencies and nonprofit organizations.
- **Evaluating the potential usefulness of ISO 14000 in a regulatory setting.** A number of projects are underway to evaluate whether and how the ISO 14000 series standards interact with regulatory requirements. Numerous legal and practical issues remain to be resolved in evaluating ISO 14000 as a complement to regulatory programs. These issues are being addressed in pilot projects that will provide useful lessons for future programs.
- **Assisting small and mid-sized companies.** A key issue facing small and mid-sized companies will be how to adapt to the requirements of ISO 14000 with fewer resources than those available to the large multinational companies that participated heavily in the development of standards.
- **Organizing conferences.** EPA Headquarters held a one-day conference on ISO 14000 in February, 1997 in Washington, DC. The conference provided an overview of the ISO 14000 standards, and included presentations from EPA offices involved in standards development and pilot projects.

Other Initiatives Related to ISO 14000

- As illustrated in this Resource Directory, other government agencies, state governments, and nonprofit organizations are

involved in a number of significant initiatives related to ISO 14000. Included are:

- Work groups and study groups established by federal agencies, states, and multilateral organizations to evaluate the potential role of ISO 14000 in regulatory and nonregulatory programs.
- Initiatives by various departments of the federal government and the U.S. Postal Service to use ISO 14000 in facilities management.
- Inclusion of ISO 9000 and ISO 14000 by the Food and Drug Administration in environmental management system registration.
- Development of tools for ISO 14000 by the National Institute of Science and Technology (NIST) Manufacturing Extension Programs (MEP) which provide technical assistance to small and medium sized enterprises (SMEs).
- Programs in over 28 states to include, or to consider ISO 14001, as part of innovative environmental management programs.
- Industry and trade association programs to acquaint their members with ISO 14000.

How To Use This Resource Directory

This Resource Directory is intended principally as a forum for users and interested parties to learn about ISO 14000, to find out who is involved in ISO 14000-related initiatives, and to communicate with one another. The Directory contains information primarily on initiatives being developed by government and nonprofit organizations. Other organizations are developing useful directories of resources and initiatives in the for-profit sector (see Chapter 7, Resources). It is important to recognize, therefore, that in addition to the resources listed in this Directory, there exist numerous other directories, newsletters, and other publications

related to ISO 14000, as well as a wide range of private organizations that organize conferences, provide training programs, and assist with implementation of ISO 14000.

EPA hopes that the audience for this Resource Directory will be able to use it in a number of ways:

- Review the Directory from beginning to end to get an idea of the breadth and scope of initiatives currently underway.
- Reference the sections that include organizations you work with to see what initiatives are underway and learn how they may affect you.
- Find out about initiatives underway in your local area by referencing the state-by-state or regional EPA listings.
- Look up organizations similar to yours to find out what they are doing and learn from their progress to date.

Reference the online version of this directory at EPA's Technology Transfer webpage: <http://www.epa.gov/ttbnrmrl/ceri.htm> (to be in place in early 1998) and use the search engine to find entries by keyword.

Acronyms and Abbreviations Used in this Resource Directory

EMS	Environmental Management Systems
E-mail	Electronic Mail
ISO	International Organization for Standardization
P2	Pollution Prevention

SME Small to Medium Sized Enterprises

URL Universal Resource Locator

<i>Figure 3. Standards in the ISO 14000 Series—Status as of June 1997</i>		
<i>Organizational Evaluation</i>		
ISO 14001	Environmental Management Systems—Specifications with Guidance for Use	Final International Standard
ISO 14004	Environmental Management Systems—General Guidelines on Principles, Systems, and Supporting Techniques	Final International Standard
ISO 14010	Guidelines for Environmental Auditing—General Principles on Environmental Auditing	Final International Standard
ISO 14011/1	Guidelines for Environmental Auditing—Audit Procedures—Audit of Environmental Management Systems	Final International Standard
ISO 14012	Guidelines for Environmental Auditing—Qualification Criteria for Environmental Auditors	Final International Standard
ISO 14015	Environmental Site Assessments	First Working Draft
ISO 14031	Evaluation of Environmental Performance	Committee Draft
<i>Product Evaluation</i>		
ISO 14040	Environmental Management—Life Cycle Analysis—Principles and Framework	Under vote as Final International Standard
ISO 14041	Environmental Management—Life Cycle Analysis—Life Cycle Inventory Analysis	Committee Draft for ballot
ISO 14042	Environmental Management—Life Cycle Analysis—Impact Assessment	Working Draft
ISO 14043	Environmental Management—Life Cycle Analysis—Interpretation	Working Draft
ISO 14020	Goals and Principles of All Environmental Labeling	Committee Draft for Comment
ISO 14021	Environmental Labels and Declarations—Self Declaration Environmental Claims—Terms and Definitions	Draft International Standard
ISO 14022	Environmental Labels and Declarations—Self Declaration Environmental Claims—Symbols	Under vote as Committee Draft
ISO 14023	Environmental Labels and Declarations—Self Declaration Environmental Claims—Testing and Verification	as above
ISO 14024	Environmental Labels and Declarations—Environmental Labeling Type I—Guiding Principles and Procedures	Committee Draft
ISO 14025	Environmental Labels and Declarations—Environmental Information Profiles—Type III Guiding Principles and Procedures	New Work Item

Figure 3. Standards in the ISO 14000 Series—Status as of June 1997

ISO Guide 64	Guide for Inclusion of Environmental Aspects in Product Standards	ISO Guide
<i>Overall</i>		
ISO 14050	Terms and Definitions—Guide on the Principles for ISO/TC 207/SC6 Terminology Work	Draft International Standard

ISO Standards Development Process:

(1) New Work Item proposal, (2) New Work Item assigned to Subcommittee, (3) Working Draft, (4) Committee Draft, (5) Draft International Standard (or optional Final Draft International Standard), (6) International Standard.

How To Update This Resource Directory

Like the ISO 14000 standard development process, this Resource Directory is a work in progress. Over the coming months and years, it will evolve dramatically as new initiatives are added and other initiatives are completed or discontinued. This Resource Directory will only function well if it is maintained in an up-to-date manner. For that the Agency must rely on the user community. We therefore ask you, the users of the Resource Directory, to help us keep it up to date by informing us of:

- New entries to add to the Directory.

- Corrections to entries listed in the Directory.
- Updates and changes in your activities.
- New initiatives undertaken by your organization.
- Leads on new or existing initiatives that have not been included in this Resource Directory.

Please use the form on the inside back cover of the Resource Directory to submit updates, corrections, and information on new initiatives.

U.S. EPA INITIATIVES

Numerous offices within the United States Environmental Protection Agency (EPA) are examining the ISO 14000 series of standards and considering its effects upon their program and activities. The first part of this chapter lists initiatives undertaken by EPA headquarters offices, sorted alphabetically by the lead EPA office. The second part lists regional EPA initiatives, presented in numerical order by EPA region.

- 1. Agency-wide Initiatives**
- 2. Headquarters Initiatives**
- 3. Regional Initiatives and Support**

AGENCY-WIDE INITIATIVES

The Voluntary Standards Network

The Voluntary Standards Network was established by EPA Administrator Browner in 1993 to address international voluntary standards activities. A primary focus of the Network has been to coordinate the Agency's participation in the development of the ISO 14000 standards for environmental management. With the passage of the National Technology Transfer and Advancement Act in 1996, the Network also acts a principal means by which the EPA Standards Executive communicates policies and procedures regarding national and international voluntary consensus standards to the designated Agency Standards Coordinators. The Standards Coordinators are key points of contact for the Network. The Network mechanism assists the Agency in developing positions on the development and implementation of standards, including the ISO 14000 standards, and identifying their applicability to EPA projects and initiatives. The Network also provides standards-related information and training to EPA offices nationwide and works closely with the EPA Trade and Environment Task Force on issues involving international trade agreements such as the World Trade Organization. Coordination through the Network helps ensure that EPA speaks with one voice on important activities as they pertain to standards, such as the ISO 14000 series. To date, there are over 160 members of the Network from across the Agency. While the Network is administered by the Office of Pollution Prevention and Toxics, other Agency Offices and Regions are actively involved and take lead roles in the Network activities.

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HEADQUARTERS INITIATIVES

Office of Air Quality Planning & Standards (OAQPS)

OAQPS Web site. The OAQPS Web site is the clearinghouse for EPA regulations regarding air quality.

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Office of Air and Radiation (OAR)

Natural Gas STAR Program. This voluntary program is designed to cost-effectively reduce emissions of greenhouse gases from the natural gas industry. Developed as a partnership

between the EPA and the natural gas industry, the program addresses emissions of methane and carbon dioxide through a series of cost-effective best management practices.

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OAR Web site. The OAR Web site is the clearinghouse for information on EPA's efforts to protect and preserve air quality.

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Office of Enforcement and Compliance Assurance (OECA)

Environmental Leadership Program (ELP). ELP is one of the 25 Reinventing Environmental Regulations announced on March 16, 1995, by President Clinton. A 1-year pilot phase was completed in August 1996 that evaluated opportunities for new tools using third party auditing and alternative performance-based management systems. The success of the 12 pilot projects demonstrated the effectiveness of partnerships with state environmental agencies, and the cooperative ability in conducting a voluntary program with industry and federal facilities.

The goals for the implementation of the full-scale ELP by January 1997 include 1) better environmental and human health protection by promoting a systematic approach to managing environmental issues and by encouraging environmental enhancement activities; 2)

increased identification and timely resolution of environmental compliance issues by ELP participants; 3) multiplying the compliance assistance efforts by including industry as mentors; and 4) fostering constructive and open relationships between agencies, the regulated community, and the public.

The foundation for recognizing environmental leaders will be the implementation of an environmental management system (EMS), an integrated, structured, and systematic approach for identifying significant environmental impacts resulting from an organization's activities, products, and services. The intent is to achieve compliance with environmental regulations, provide an ability for continuous improvement, identify opportunities for implementing pollution prevention activities and practices, and communicate effectively with outside stakeholders on the organization's EMS and its performance.

The 6-year ELP participation period is designed to publicly recognize specific facilities or entities, as well as offer benefits for participation through reduced inspections, a self-correction period for violations, and streamlined administrative requirements. EPA anticipates that the ELP will be coordinated in partnership with interested state environmental agencies, in order to extend the benefits offered on a state-by-state basis. Facilities/entities will be required to conduct compliance and EMS auditing in conjunction with third party verification of the audits. EPA will also make an annual environmental report available to the public. This proposed framework is currently available to all stakeholders for review and comment.

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ISO 14001/EMS Task Group. This task group is composed of representatives from all major EPA offices and 8 Regions, the Department of Justice, and 18 states (Alaska, Arizona, California, Colorado, Delaware, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Washington, and Wisconsin).

The primary purpose of the task group is to determine and make recommendations regarding the relationship between ISO 14001, EMS standards, compliance, enforcement, and improved environmental performance. By fall 1997, EPA expects to solicit public comment on metrics or indicators for evaluating environmental performance in EMS pilots.

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Office of Federal Activities

EMS Audit Procedural Guidelines. A sub-task group of the U.S. Technical Advisory Group (U.S. TAG) for ISO's EMS development produced the EMS audit procedural guidelines. A final draft currently out for comment will be used in conjunction with ISO Standard Guidelines in Environmental Auditing Principles, procedures and qualifications set forth in ISO14010-12 related to environmental auditing. These guidelines will assist auditors conducting ISO 14001 conformance audits and set boundaries for EMS audits used for internal self-assessments, self-certifications of conformity with ISO 14001, or by registrars for ISO 14001

registrations to ensure they are at once credible, replicable, and not overly burdensome or interpretive of the ISO standards. This document will be revised as needed upon further review within the United States and among key stakeholder groups.

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Office of Policy, Planning, and Evaluation (OPPE)

Indiana Small Business Pilot Project. Please see Chapter 4, under Indiana, for full listing.

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Office of Prevention, Pesticides and Toxics

Consumer Labeling Initiative. The Consumer Labeling Initiative's goal is to foster pollution prevention, empower consumer choice, and improve understanding by presenting clear, consistent, and useful safe use, environmental, and health information on household consumer product labels. This is a multi-phased voluntary pilot project focusing on indoor insecticides, outdoor pesticides, and household hard surface cleaners.

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Environmental Accounting Project. The Environmental Accounting Project is a nonregulatory partnership program with a mission of helping organizations highlight the economic benefits of practicing pollution prevention. Its objective is to encourage and motivate businesses to understand the full spectrum of their environmental costs, and integrate these costs into strategic decision-making.

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Environmentally-Preferable Public Purchasing. The Environmentally Preferable Purchasing Program implements Executive Order 12873 which requires EPA to “issue guidance that recommends principals that Executive agencies should use in making determinations for the preference and purchase of environmentally preferable products” and services. The Program’s goal is make environmental performance a factor in Federal government purchasing decisions, along with traditional factors, such as product performance and cost.

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Expanding the Use of Environmental Information by the Banking Industry Through ISO 14000. This effort will initially be an EPA-funded study to explore the potential utility of ISO 14000-generated information for banks in their risk management practices.

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Office of Research and Development (ORD)

Environmental Technology Verification Program. EPA has evaluated technology to determine their effectiveness in preventing, controlling, and cleaning up pollution. As a part of the Environmental Technology Initiative, EPA is now expanding these efforts by instituting a new program, the Environmental Technology Verification Program (ETV), to verify the performance of a larger universe of innovative technical solutions to problems that threaten human health or the environment. ETV was

created to substantially accelerate the entrance of new environmental technologies into the domestic and international marketplace. It supplies technology buyers and developers, consulting engineers, states, and EPA regions with data on the performance of new technologies to encourage more rapid protection of the environment with better and less expensive approaches. EPA will utilize the expertise of both public and private partner "verification organizations," including federal laboratories, states, universities, and private sector facilities, to design efficient processes for conducting or overseeing performance tests of innovative technologies.

Verification organizations will oversee and report verification activities based on testing and quality assurance protocols developed with input from all major stakeholder and customer groups associated with the technology area.

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Implementing EMS in the Metal Finishing Industry. In this EPA-funded project, 11 organizations from the metal finishing industry are piloting the implementation of the ISO 14001 Standard. The project will result in a publicly available report, in addition to an EMS guidance document for metal finishers. The metal finishing report and guidance document will be completed by December 1997.

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Office of Water (OW)

EMS Demonstration Project. This EPA project has provided seed money for 18 public and private organizations to put an EMS in place using ISO 14001 as a model. The program has provided initial training and follow-up consulting through NSF International. This initiative will generate a series of reports on the various pilot projects, which will be available through the OW resource center in both hard copy and on the Internet.

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EMS Implementation Guide for Small- and Medium-Sized Organizations. EPA's Office of Water and Office of Compliance, in conjunction with NSF International, has developed an implementation guide geared specifically to the needs of small- and medium- sized organizations. The elements of the document are based on the ISO 14001 Standard. The guide is formatted and written in such a way as to give these types of organizations useful ideas on how to begin implementing EMS and ways to find additional helpful information.

Using EMS To Meet Watershed Protection Goals. This project seeks to contribute to the attainment of watershed goals through a system-based voluntary approach. Participants are linked to achievement of watershed goals in the Arbor-Middle Kron River Watershed. A joint project of OW and the county government in Washtenaw County (Michigan), the initiative involves recruiting organizations to participate in training and improving technical systems relevant to the organization.

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EMS Implementation by Municipal Governments. OW hopes to work with selected municipal or county government organizations that are willing to implement EMS for their various activities, using ISO 14001 as a baseline. Preliminary discussions with interested parties have begun and an overall project implementation plan is expected in Fall 1997. This effort will demonstrate the relevance of EMS for public-sector organizations.

OW EMS Implementation Workgroup. OW, in conjunction with regional offices and states, is forming a workgroup to explore possible ways to encourage implementation of EMS by facilities regulated under various parts of the water program. The workgroup will concentrate on issues relating to regulatory programs in areas such as permitting, and explore the possible use of incentives for facilities with good compliance records that can also implement effective EMS. ISO 14001 will serve as the baseline for this

effort, but the workgroup will also examine other possible criteria that facilities may need to satisfy as a condition for any type of regulatory or other flexibility.

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Office of Federal Facilities Enforcement

Code of Environmental Management Principles for Federal Agencies (CEMP).

CEMP, an element of the Federal Government Environmental Challenge Program established in response to Section 4-405 of Executive Order 12856, is a set of five principles encouraging federal agencies to be more aware and visionary in their management of environmental protection issues. The principles incorporate many common elements of EMS, and ISO 14001 and several other public and private sector documents were used as background. A Pacific Northwest National Laboratory (PNNL) team supported EPA's Office of Federal Facilities Enforcement in developing the CEMP. EPA has asked federal agencies to endorse the principles and provide a description of how they will be implemented at the facility level.

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EMS Primer for Federal Facilities. EPA's Federal Facility Enforcement and DOE's Office of Environmental Policy and Assistance are

jointly sponsoring the development of an Environmental Management Systems Primer for Federal Facilities with EPA's Office of Federal Facilities Enforcement. A PNNL team is supporting development. Topics covered will include an introduction to EMS and federal facility issues; the first steps in building an EMS; regulatory issues; innovative regulatory approaches; performance indicators; pollution prevention; audits and conformity assessment options; and the National Environmental Policy Act (NEPA). The primer is designed to be concise, include extensive references, and provide useful examples and concrete steps.

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(This entry is cross-listed under DOE initiatives in Chapter 3.)

National Enforcement Investigations Center

Compliance-Focused EMS. Since the late 1980s, civil multimedia compliance investigations conducted by the NEIC have increasingly involved identifying causes of observed noncompliance. When investigated, noncompliance most often appeared to be caused by dysfunctional EMS. Through this work and by participating in followup enforcement actions,

NEIC developed criteria for a compliance-focused EMS that has been used as the basis for several of the settlement agreements when EMS improvements were required. The agreements required the organization to document policies, systems, procedures, and standards for 11 program elements, with the resulting document serving as a guidebook to more detailed procedures and processes located elsewhere at a facility.

The intended result is to develop an EMS that will both improve the organization's compliance with applicable environmental requirements and lead to improved environmental performance. The elements were synthesized primarily from EMS assessment protocols developed for the Global Environmental Management Initiative (1992) and a regulated industry (1994) by Deloitte and Touche LLP of San Francisco; ISO 14001; National Sanitation Foundation EMS standards (NSF 110-1995); and the due diligence definition in the EPA policy regarding Incentives for Self-Policing (60 FR 66710). Element refinement continues through settlement negotiations and discussions with EPA staff, EMS consultants, and environmental personnel from several companies with medium and large facilities.

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Project XL

XL projects are real world tests of innovative strategies that achieve cleaner and cheaper results than conventional regulatory approaches. EPA will grant regulated entities regulatory flexibility in exchange for their commitment to achieve better environmental results than would have been attained through full regulatory compliance.

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EPA REGIONAL INITIATIVES AND SUPPORT

Region 1

StarTrack. EPA's regional office in Boston is conducting a groundbreaking experiment to privatize compliance assurance for leading companies. Built on the ISO 14000 model, the region will be empowering third parties to certify to three basic components: 1) an environmental management system modeled on ISO 14001; 2) facility environmental compliance and pollution prevention audits; and 3) a commitment to correct certain violations within an established time frame. The third party will certify to each component and provide a summary report. In return, EPA will grant certified companies limited penalty amnesty, no routine inspections, simplified reporting and expedited permitting. EPA plans to refocus resources previously devoted to these sources to issues that pose a greater risk to the environment.

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Environmental Leadership Program-New England. EPA's regional office in Boston is conducting a regional environmental leadership program to encourage and reward environmental leadership and to experiment with alternative models to achieve environmental compliance. The region periodically requests applications for businesses or other organizations that have demonstrated a commitment to environmental performance going beyond regulatory compliance. Selected organizations receive public recognition, and partner with the region to experiment with alternative approaches. In many cases, companies are experimenting with approaches based on the ISO EMS, including self-certification and mentoring EMS implementation with customers and suppliers.

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Compliance Leadership Through Environmental Audits and Negotiation (CLEAN). EPA's regional office in Boston has launched an effort to improve environmental management and performance in smaller companies. In exchange for a commitment to achieve performance, in part by adopting pollution prevention practices, SMEs receive a comprehensive compliance and pollution prevention assessment by a partnership comprising federal, state, and private sector experts. The program is determining how these assessments may include an analysis of EMS based on 14000 to help these small companies maintain compliance.

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Region 3

ISO 14000 Project XL. The projects combine the ISO 14000 standards with the requirements of the Project XL initiative, thereby adding greater environmental specificity to the usage of ISO 14000 standards in the United States. As the EMS is developed, EPA will focus on defining superior environmental results, establishing public involvement, developing methods of pollution prevention, and improving processes and results.

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Region 4

Using ISO 14000 in the Paper Industry. The Weyerhaeuser Flint River Operations paper mill has signed a Project XL Agreement with EPA. The Weyerhaeuser paper mill will implement ISO 14000 at its Flint River site in Georgia. The overall objective of this XL Agreement will be to half the solid waste at the facility, cut energy consumption, reduce the toxic waste stream, and set records for low water usage for a paper mill of its size.

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Region 5

Life Cycle Assessment Methodology. This effort is developing and demonstrating Life Cycle Assessment (LCA) applications within industry and government. Specifically, the focus has been on streamlined LCA applications. Existing LCA data is being analyzed using methods currently employed by LCA practitioners. Areas of demonstration include alternative adhesives for auto interiors, recycled versus virgin newsprint for newspapers, alternative cleaning systems, fiberglass reinforced plastics, and composite wood. The estimated completion date is September 1997.

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Region 6

ISO 14000: A National Dialogue. This national conference was one in a series of events designed to facilitate a dialogue on issues surrounding ISO 14000 and its implementation. EPA Region 6 presented this conference in conjunction with the

Global Environment & Technology Foundation (GETF) and the University of Texas at Arlington (UTA) on November 11-12, 1996, at the UTA campus.

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Region 8

EMS for Federal Facilities. EPA Region 8 conducted EMS reviews at selected federal facilities in February 1997. In conjunction with this activity, an EPA consultant offered training in the ISO 14001 Standard.

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Region 9

The Merit Partnership for Pollution Prevention. The Merit Partnership for Pollution Prevention is a "public-private partnership" dedicated to the advancement of pollution prevention technologies and practices that both protect the environment and aid economic growth.

Merit is developing a series of pilot projects to demonstrate the environmental and economic impacts of ISO 14001. The Merit ISO projects will explore a number of issues, including the

effect of ISO 14001 on a company's environmental insurance options, how ISO 14001 may affect companies' government procurement opportunities, the accounting costs of the development and implementation of ISO 14001, and the effect of ISO 14001 on companies' environmental compliance records.

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Region 10

Evaluation of Policy Implications of ISO 14000 and Other EMS Standards. The overall objective of this effort will be to examine how ISO 14000 and other EMS standards can help make regulatory activities more effective (reducing pollution) and efficient (reducing the costs of assistance, compliance, and enforcement). This assessment will include a review of existing pilot projects and initiatives on a regional and national level, a review of the professional literature related to standards deployment, and an analysis of what this information implies for policy making and regulatory reform efforts currently underway within the region.

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*State of Washington Department of Ecology
ISO 14000 Leadership Project.* Please see
Chapter 4, under Washington, for full listing.

3 OTHER FEDERAL INITIATIVES

Many federal agencies besides EPA are also interested in the ISO 14000 series of standards. These range from the Department of Commerce, which has an interest in how the standards may affect trade and competitiveness, to the U.S. Army, which is considering using IO 14001 management systems principles to manage their facilities. This chapter includes initiatives funded and managed by federal government departments and agencies other than EPA. The listed initiatives explore the use of ISO 14000 in their respective jurisdictions and also application of ISO 14000 within the departments or agencies themselves.

- 1. Department of Commerce**
- 2. Department of Defense**
- 3. Department of Energy**
- 4. Department of State**
- 5. Food and Drug Administration**
- 6. Federal Trade Commission**
- 7. U.S. Postal Service**

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Informational Paper. The NIST has published an informational paper on the evolving ISO 14000 series.

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210/216/environ.html](http://ts.nist.gov/ts/htdocs/210/216/environ.html)

Interagency Committee on Standards Policy's EMS/ISO 14000 Workgroup. The operating guide for the workgroup is to provide information and recommendations to the Interagency Committee on Standards Policy regarding development and implementation of the ISO 14000. The committee has chosen to focus its initial efforts on four main areas: 1) implementation and integration with other systems and federal role in pilots; 2) metrics and evaluation of proposed indicators, cost measurement, and relationship to current indicators; 3) technical assistance and the role of federal government in providing technical assistance to NGOs, SMEs, other state and federal government bodies; 4) procurement and ISO 14000 fit with policies, contracting issues, and federal acquisition regulations. The workgroup is co-chaired by Ms. Mary McKiel of EPA and Mr. Larry Stirling of DOE.

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Manufacturing Extension
Partnership (MEP)

Formerly the Manufacturing Technology Center program, this partnership is a nationwide system of manufacturing extension centers, state planning nonprofit support, and coordinated information, services, and resources. The partnership is designed to bridge a technological gap between sources of manufacturing technology and the small- and medium-sized enterprises (SMEs) that need to improve their competitiveness through the use of appropriate modern technologies, processes, and techniques.

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ISO 14000 Workgroup for the National P2 Roundtable. Please see Chapter 4, under North Carolina, and Chapter 5, under Nongovernmental Organizations, for full listing.

ISO 14000/EMS Gap Analysis Tool Suite. The tool suite will include an implementation primer that will detail protocol for implementation of an EMS gap analysis with three appendices. A case study of an EMS gap analysis used as a screening tool by field engineers and consultants for marketing, to present the benefits of ISO 14000 and EMS will be included. One initial output from the screening tool will be a 1-2 page letter with a visual attachment showing gaps in conformance to ISO 14001. This gap analysis will cover the main elements of the standard and may lead to a detailed EMS gap analysis or an implementation project. Also, the appendices will illustrate the EMS gap analysis as a detailed

ISO 14001 audit, and include an interpretation guide (glossary of terms).

The tool will use a “look for ... and look at...” type of format with a rating system for the field engineer or consultant to rank the company on a per-element basis. This project is being created by a consortium of MEP centers, private firms, and NIST-MEP.

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GreenscoreTM. GreenscoreTM is an environmental self-assessment tool.

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NCMS
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URL: <http://www.ncms.org>

Environmentally Conscious Manufacturing (ECM). Please see Chapter 4, under Maine, for full listing.

ISO 14000 Awareness for Maryland Manufacturers. Please see Chapter 4, under Maryland, for full listing.

Vermont Manufacturing Extension Center. Please see Chapter 4, under Vermont, for full listing.

DEPARTMENT OF DEFENSE (DOD)

Environmental Management Systems Committee

The Office of the Deputy Undersecretary of Defense for Environmental Security has established an Environmental Management Systems Committee to examine the feasibility of implementing EMS, such as the ISO 14000 series. In addition to work within the Department, DOD is working with North American Trade Organization (NATO) and Partnership for Peace nations (Eastern European nations, the newly independent Baltic/Slavic states, Finland, and Sweden) to determine how environmental management systems can be implemented in the military. The purpose of DOD analysis of environmental management systems is to determine whether adoption of environmental management standards will improve the quality of DOD's environmental programs through the application of uniform quality management techniques.

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U.S. Army

Adoption of ISO 14000 Methodologies for Environmental LCA being conducted on weapon systems and materials. The Systems Life Cycle Readiness Office, Armament Research and Development Command, acts as a bridge between the developer and the producer of new materials and systems. Key aspects include life cycle evaluations of producibility and environmental impacts, costs, and risks. This

office conducts environmental LCAs (research and development, production, fielding and storage, and disposal) of new components or systems. It also works closely with operating sites on environmental management plans and initiatives on pollution prevention and compliance. This parallels industry's life cycle stages and activities as addressed by EPA, Society of Environmental Toxicology and Chemistry (SETAC), and ISO 14000.

Recent DOD guidance on Acquisition Strategy has strengthened many areas of LCAs that are parallel with emerging SETAC and ISO guidance.

Addr: Lawrence R. Laibson
Systems Life Cycle Readiness Office
AMSMC-STA-AR-SRE
Building 172
Picatinny Arsenal, NJ. 07806-5000
Tel: 201-724-2822
Fax: 201-724-4096
E-mail: llaibson@pica.army.mil
URL: <http://www.pica.army.mil/orgs/slcro/top.html>

Total Quality Environmental Management (TQEM) - Green Initiatives. This program is a U.S. Army Armament Research, Development, & Engineering Center (ARDEC) program that provides linkage between current quality initiatives and programs in environmental stewardship. The pilot programs will be implemented by industry and government partners who will voluntarily adopt the ISO 14000 environmental management system standards. By achieving ISO 9000/14000 certification, Army contractors and government facilities will improve quality, reduce operations costs, and develop products for both U.S. and foreign military sales; enhance their competitive position and facilities reputation; and reduce government oversight. Finally, the pilot programs will also offer an excellent opportunity to partner with U.S. Army materiel contractors to jointly pursue acquisition reform strategies.

Addr: Henry J. Van Dyke III

U.S. Army Armament Research
Development and Engineering Center
Industrial Ecology Center
Product Assurance
Attn: AMSTA-AR-ET(QA)
Building 172
Picatinny Arsenal, NJ 07806-5000

Tel: 201-724-4071
or DSN 880-4071
Fax: 201-724-6759
E-mail: henryv@pica.army.mil
URL: <http://www.pica.army.mil/orgs/eto/top.html>

ISO 14001 Feasibility Initiative. The U.S. Army is evaluating the applicability of the ISO 14001 standard to the facility's existing environmental programs. With assistance from Concurrent Technologies Corporation, this initiative will explore the current status of the environmental programs at the DOD facility, identify the missing ISO 14001 requirements or "gaps" between these programs and the EMS standard; the standard requirements and the associated costs and benefits of modification; and realign and adopt ISO 14001 requirements.

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Concurrent Technologies Corporation
1450 Scalp Avenue
Johnstown, PA 15904
Tel: 814-269-6805
Fax: 814-269-2798
E-mail: thoms@ctc.com
URL: <http://www.ctc.com>

Air Force ISO 14001 Workshops

A series of ISO 14001 primers and introductory, overview, and implementation workshops for the U.S. Air Force Materiel Command, in conjunction with Concurrent Technologies Corporation, will be initiated. Headquarters and base-level training are to be provided. Training will be specifically directed to DOD requirements and mission-specific activities.

Addr: Joe Hollingsworth

Concurrent Technologies Corporation
Suite 165
Fairborn, OH 45324
Tel: 513-429-6178
Fax: 513-429-6178
E-mail: hollings@ctc.com
URL: <http://www.ctc.com>

Addr: **Sondra Gutkind**
Naval Surface Warfare Center,
Carderock Division
Philadelphia, PA 19112-5083
Tel: 215-897-7828
Fax: 215-897-7030
E-mail: gutkind@oasys.dt.navy.mil

U.S. Navy EMS Evaluation

The U.S. Navy is evaluating EMS and ISO 14000 as they pertain to Navy operations to identify and quantify any value added by their implementation. This effort will lead to the development of U.S. Navy policy on EMS and/or ISO 14000.

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Fax: 703-602-2676
E-mail: cyrc@N4.opnav.navy.mil

Addr: **Terry Bowers**
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Arlington, VA 22244-5108
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Naval Surface Warfare Center (NSWC) Carderock ISO 14000 Implementation and Certification

NSWC Carderock is pursuing its first ISO 14000 certification at its Philadelphia site. Gap analysis has been completed and process documentation is underway as of March, 1997. ISO 14000 is being pursued in an attempt to gain competitive advantage, to reduce risk in environmental programs by establishing consistent and repeatable processes, to reduce dependence on personality-driven environmental programs, and to establish a framework for managing environmental impacts.

DEPARTMENT OF ENERGY (DOE)

Energy Facilities Contractors Group (EFCOG) ISO 14000 Working Group

EFCOG is a self-directed group of senior level contractor executives who manage and operate DOE laboratories, manufacturing and production facilities, and environmental restoration projects. EFCOG member companies have joined together for the purpose of exchanging management and technical information in areas of mutual interest. EFCOG's objective is to promote, coordinate, facilitate, encourage, and support information exchanges between facilities on successful programs, practices, procedures, and lessons learned. The ISO 14000 Working Group (ISO 14000 WG) is a working committee whose intent is to facilitate the objectives of EFCOG as related to the particular area of EMS. The purposes of the ISO 14000 WG include promoting excellence in DOE EMS by sharing information and lessons learned, facilitating the exchange of information and experiences in implementing the ISO 14000 series of EMS standards, and communicating the implications for integrating strategic environment, safety, and health management programs into the daily operations at DOE sites. Working group participation will provide EFCOG member companies the opportunity to exchange information and to discuss the benefits of ISO 14000.

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U.S. Department of Energy

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Fax: 202-586-0955
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Addr: **George D. Greenly, Jr.**, CCM, QEP,
Chairman
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Amarillo, TX 79120-0020
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Fax: 806-477-5518
E-mail: ggreenly@pantex.com

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Germantown, MD 20874
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EMS Fact Sheets

DOE's Office of Environmental Policy and Assistance is developing a series of fact sheets addressing topics related to EMS. The fact sheets provide basic information and communicate DOE's approach to EMS issues. Topics in the series consist of frequently asked questions; getting started; EPA's Code of Environmental Management Principles (CEMP); identifying environmental aspects and impacts; and pollution prevention. A PNNL team is supporting the project.

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Environmental Management Systems at DOE

DOE's Office of Environmental Policy and Assistance (EH-41) is actively evaluating uses of the ISO 14001 EMS Standard in improving the environmental sensitivity of DOE operations. This effort comprises an expanding list of activities, such as drafting and releasing a Secretarial memorandum encouraging ISO 14001 use in the field; integrating EMS with DOE's Integrated Safety Management System; preparing EMS guidance documents and fact sheets; raising awareness through panel discussions, invited presentations, conferences, white papers, and briefings; integrating EMS with National Environmental Policy Act (NEPA), pollution prevention, and contract reform; organizing an internal EMS Work Group, a baseline survey of EMS awareness at DOE facilities, ISO 14001 training and technical assistance to sites; working with DOE's Energy Facility Contractor Group and posting a Web site on ISO activities linked to DOE's home page. DOE is also collaborating with EPA on EMS issues. DOE also works with EPA's Office of Federal Facilities Enforcement to produce an EMS Primer for Federal Facilities, co-chairs an EMS Interagency Working Group with EPA's Mary McKiel, and provides review and comment on CEMP, which DOE has endorsed.

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EMS Primer for Federal Facilities

Please see Chapter 2, Headquarters Initiatives, Office of Federal Facilities Enforcement, for full listing.

Implementation of ISO 14001 at Westinghouse-Managed DOE Sites.

Westinghouse is reviewing and modifying its environmental management systems to ensure they conform to the ISO 14001 standard at three sites it manages for the Department of Energy: the Savannah River Site, near Aiken, SC; the West Valley Demonstration Project, near West Valley, NY; and the Waste Isolation Pilot Plant, near Carlsbad, NM. A fourth operation, Safe Sites of Colorado (a Westinghouse and Babcox and Wilcox joint venture), is also working to ensure its EMS conforms to the standard. Safe Sites of Colorado is a subcontractor for Kaiser-Hill, the integrating contractor for the DOE at its Rocky Flats site near Golden, CO.

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Addr: **Tom DuPlessis**
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11 Stanwix Street, Room 2181
Pittsburgh, PA 15222-1384
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Strategic and Program Planning for EMS Initiatives. DOE has been a leader in evaluating uses of the ISO 14001 EMS Standard in improving management of its environmental activities. Initiatives consist of EMS strategic and program planning; linking EMS to other agency initiatives (e.g., integrated Environmental Health & Safety, NEPA, pollution prevention); using ISO 14001 in streamlining internal directives; analyzing statutory and regulatory impacts; preparing EMS technical materials; developing program and field implementation strategies; developing fact sheets, briefings, and guidance materials; coauthoring technical papers; preparing presentations; and supporting internal and interagency EMS working groups. Since 1994, a PNNL team has provided support in developing these activities.

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DEPARTMENT OF STATE (DOS)

US-Asia Environmental Partnership (US-AEP)

Led by the United States Agency for International Development (USAID), US-AEP

was founded in 1992 to assist in addressing environmental degradation and sustainable development issues in the Asia/Pacific region by mobilizing U.S. environmental experience, technology, and practice. The program brings together 25 U.S. government departments and agencies and thousands of businesses and nongovernmental organizations that work with 35 nations and territories in Asia and the Pacific. US-AEP activities focus on the objective of promoting an Asian “clean revolution” the extensive continuing development and adoption of continuously less polluting and more resource efficient products, processes, and services in the Asian region. While individual US-AEP activities seek practical solutions to local problems, the cumulative effort positively affects global environmental issues.

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US-Asia Environmental Partnership
U.S. Agency for International
Development
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E-mail: lreade@usaid.gov
URL: <http://www.usaep.org>

US-AEP Clean Technology and Environmental Management Initiative (CTEM). Under this initiative, US-AEP works with Asian governments, industries, professional associations, and trade academic institutions to promote cleaner methods of production. Activities focus on incentives that persuade companies to refine environmental practices; enhancing the capacity of those businesses to respond to incentives; and the transfer of technology that takes advantage of the incentives and capacities within a given business, industrial sector or country. Through consultations, seminars, workshops, and exchanges, these activities promote the understanding and adoption of voluntary standards for corporate environmental management.

Addr: **Julie Haines, Managing Director**,
CTEM
U.S.-Asia Environmental Partnership
1720 Eye Street, Suite 700
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Tel: 202-835-0333
Fax: 202-835-0366
E-mail: jhaines@usaep.org
URL: <http://www.usaep.org>

US-AEP Clean Technology and Environmental Management Information Centers (CTEM). CTEM Information Centers provide accurate and timely information to the Asian business community. Each center is staffed with an information specialist who uses in-house print and electronic resources, the Internet, and personal contacts to promote the CTEM concept.

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Specialist
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Fax: +65-338-5906
E-mail: ctemsin@pacific.net.sg

Addr: **Kerith McFadden**, Information
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Fax: 202-496-9720
E-mail: kmcfadden@usaep.org

US-AEP Environmental Exchange Program (EEP). US-AEP's EEP provides Asian professionals and organizations with

opportunities for addressing critical environmental needs by identifying sources for U.S. technology, observing and evaluating facilities first-hand for their suitability, meeting with potential partners, and conferring with U.S. government and industry authorities. The program helps link leading ISO 14000 experts in the United States to top 5 industry leaders and environmental professionals in Asia to discuss EMS standards and their implications for industry.

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Fax: 202-326-7709
E-mail: eep@iie.org
URL: <http://www.usaep.org>

FOOD AND DRUG ADMINISTRATION (FDA)

Standards Policy Committee

The Standards Policy Committee is composed of senior FDA management officials who set agency-wide policy with respect to the development and use of standards. FDA employees actively participate with a variety of private standards organizations, both domestic and international. FDA develops product standards, criteria for the assessment of test data, and enforcement procedures, and also includes ISO 9000 and ISO 14000 for quality and environment management system registration.

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FEDERAL TRADE COMMISSION (FTC)

Environmental Marketing Claims Guidelines

These 1992 guides are administrative interpretations of laws administered by the FTC to help public comply with the law covering environmental marketing claims. Inconsistent conduct may result in corrective action taken by the FTC under §5 of the FTC Act, which prohibits false or deceptive claims in advertising or labeling. The guidelines focus on what environmental claims mean to consumers and are meant to bolster consumers' confidence in environmental claims and reduce manufacturers uncertainty about which claims might lead to FTC law enforcement actions. The guidelines address general environmental benefit claims and the use of terms such as degradable, recyclable, recycled, source reduction, refillable, and ozone-safe claims.

Addr: **Michael Dershowitz**
Federal Trade Commission
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601 Pennsylvania Avenue, NW
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Fax: 202-326-3259
URL: <http://www.ftc.gov>

U.S. POSTAL SERVICE (USPS)

Development of ISO 9000/14000 Protocol for Fleet Maintenance Activities

USPS - Southeast Area is in the initial stage of developing an ISO protocol that will blend the

quality improvement aspect of ISO 9000 with the environmental improvements associated with ISO 14000.

The USPS's Southeast Area fleet management organization provides operations and maintenance support to approximately 25,000 USPS-owned vehicles assigned throughout a five-state area. By combining ISO 9000 and ISO 14000 protocol, USPS anticipates providing a more uniform, cost effective process of fleet management while improving the environmentally sensitive aspects of operating a large commercial fleet.

Developing this protocol should begin in early 1997, with "first article" roll out anticipated in Fall 1997.

Addr. **Robert Martin**
Southeast Area Office - USPS
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Memphis, TN 38166-0860
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Fax: 901-747-7482

4 STATE INITIATIVES

State governments are examining ISO 14000 and its relevance to state environmental compliance and permitting activities. States are also providing technical assistance to organizations interested in ISO 14000. Besides the initiatives directly managed by state governmental agencies, this chapter includes other geographically based initiatives such as those of the national Institute of Standards manufacturing Extension partnership Centers.

1. Alphabetical Listings by State

MULTI-STATE WORK GROUP

The Multi-State Work Group on environmental management systems includes representatives from California, Texas, Oregon, Arizona, Illinois, Minnesota, Wisconsin, Pennsylvania, Massachusetts, and North Carolina. The Work Group has prepared a voluntary project design document, including a Project Evaluation Matrix, which can be used by states and others in the design of projects involving ISO 14001.

Addr: **Dr. Robert Stephens**
CAL/EPA
Dept. of Toxic Substances Control
Hazardous Materials Laboratory
2151 Berkeley Way, Room 515
Berkeley, CA 94704

Tel: 510-540-3003
Fax: 510-540-2305

ALABAMA Department of Environmental Management

Alabama is in the preliminary stages of investigating possible application.

Addr: **Richard E. Grusnick**, Deputy Director
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Management
P.O. Box 301463
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Tel: 334-271-7710
Fax: 334-271-7950
E-mail: adem@state.al.us

ARKANSAS ISO 14000 Infrastructure Development

Westark College Business and Industrial Institute is partnering with the Arkansas Department of Pollution Control and Ecology to develop ISO 14000 training. This training will support efforts of Arkansas companies to develop and implement EMS that can be certified to ISO 14000.

Addr: **Mike Jones**
Westark College
P.O. Box 3649
5210 Grand Avenue
Ft. Smith, AR 72413-3649

Tel: 501-788-7763
Fax: 501-788-7780
E-mail: mjones@systema.westark.edu

CALIFORNIA CAL/EPA ISO 14000 Pilot Project

CAL/EPA will conduct two to four pilot demonstration projects to test and evaluate the utility of an EMS in achieving and maintaining compliance with regulatory requirements, continuing environmental improvement, and streamlining regulatory procedures.

Addr: **Robert Stephens**, Chair
CAL/EPA Task Force on ISO 14000
Department of Toxic Substances Control
Hazardous Materials Laboratory
2151 Berkeley Way, Room 515
Berkeley, CA 94704

Tel: 510-540-3003
Fax: 510-540-2305

San Francisco Bay Area Green Business Program

Businesses in full environmental compliance with relevant multimedia regulations (air, land, and water) and meeting program defined, industry-specific standards for energy and water conservation, solid waste reduction, and pollution prevention will be recognized as "green." After local governments certify the company as green,

it may then use the program logo in its advertising to attract environmentally conscious consumers. This program does not include standards for an EMS per se.

Addr: **Jennifer Krebs**, Senior Environmental Planner
Association of Bay Area Governments
Oakland, CA 94604
Tel: 510-464-7977
Fax: 510-464-7980
E-mail: jenniferk@abag.ca.gov

COLORADO Pollution Prevention Program

The Colorado Department of Public Health and Environment has included ISO 14000 as a possible criterion in a proposed program that would reduce government oversight and provide financial incentives to companies who excel in environmental performance.

Addr: **Parry Burnap**
Pollution Prevention Program
OE B2 PPU Colorado Department of
Public Health and Environment
4300 Cherry Creek Drive North
Denver, CO 80222-1530
Tel: 303-692-3009
Fax: 303-782-4969
E-mail: parry.burnap@state.co.us

CONNECTICUT Common Sense Initiative, and StarTrack Pilot Project

As part of EPA's Common Sense Initiative, Environmental Leadership Program and StarTrack Initiatives in Connecticut, the state of Connecticut is participating in pilot projects that focus on EMS and ISO 14000.

Addr: **Robert Kaliszewski**, Ombudsman
State of Connecticut, DEP

79 Elm Street
Hartford, CT 06106-5127

Tel: 860-424-3003
Fax: 860-424-4077
E-mail: robert.kaliszewski@po.state.ct.us
URL: <http://www.state.ct.us/dep>

DELAWARE Department of Natural Resources

Delaware is tracking and investigating ISO 14000 activities of other interested states.

Addr: **Nicholas A. DiPasquale**, Director
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Delaware Department of Natural
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P.O. Box 1401
89 Kings Highway
Dover, DE 19903
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Fax: 302-739-5060
E-mail: ndipasquale@dnrec.state.de.us

FLORIDA Florida Department of Environmental Protection (FDEP)

EMS help ensure compliance with state and federal regulations and requirements, and can serve as a mechanism to guide improvement in environmental performance. FDEP is working closely with the business community to foster a cooperative spirit of putting well-crafted EMS in place.

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Fax: 904-488-7093

E-mail: phillips_M@epic9.dep.state.fl.us
URL: <http://www.dep.state.fl.us>

GEORGIA Pollution Prevention Assistance Division (P2AD)

P2AD provides industry within the state information regarding ISO 14000. This is done through P2AD newsletters, assessments, and participation in industry conferences.

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Georgia P2AD
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Atlanta, GA 30334
Tel: 404-651-5120
Fax: 404-651-5130
E-mail: p2ad@ix.netcom.com
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IDAHO Idaho Manufacturing Alliance

The executive director currently conducts ISO 14000 training workshops across the state of Idaho.

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Idaho Manufacturing Alliance
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Tel: 208-385-3689
Fax: 208-385-3877
E-mail: jsteinf@idbsu.bsue.edu

INDIANA Small Business Pilot Project

The Indiana Department of Environmental Management (IDEM) and EPA plan to undertake three to five pilot projects as part of the thermoset plastics sector of the Sustainable Industry Project. The project has three distinct goals: 1) to identify the problems faced by small businesses trying to implement an EMS, 2) to identify the infrastructure and support needed by small businesses for EMS implementation, and 3) to demonstrate a new regulatory regime for small businesses.

IDEM and EPA have identified project resources to help small businesses through the project, including a) an IDEM grants program that in place will help offset some of the costs in implementing an EMS; b) technical assistance from IDEM's Compliance and Technical Assistance Program; c) additional technical assistance from the Indiana Pollution Prevention and Safe Materials Institute at Purdue University; d) regional EPA technical assistance from EPA Region 5; and, e) reporting and permitting flexibility from IDEM and EPA.

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Indiana Department of Environmental
Management
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Indianapolis, IN 46206
Tel: 317-233-1043
Fax: 317-233-5627
E-mail: mhanc@opn.dem.state.in.us
URL: <http://www.epa.gov/oppe/isd/indiana.htm>

Addr: **Carl Koch**
U.S. EPA, OPPE
401 M Street, SW
Washington, DC 20460
Tel: 202-260-2739
Fax: 202-260-9322
E-mail: koch.carl@epamail.epa.gov
URL: <http://www.epa.gov/oppe/isd/isd.htm>

IOWA Iowa Waste Reduction Center (IWRC) EMS Assistance Program

The IWRC provides ISO 14001 EMS development assistance to small businesses in Iowa.

Addr: **Marci Carter**
University of Northern Iowa
75 Biology Research Complex
Cedar Falls, IA 50614-0185
Tel: 319-273-2079
Fax: 319-273-2926
E-mail: carterm@uni.edu
URL: <http://www.iwrc.uni.edu>

Waste Reduction Assistance Program (WRAP)

Through on-site assessments, workshops, and continual support, WRAP provides nonregulatory, confidential, no-cost assistance designed to reduce wastes and enhance a company's bottom line. The program targets Iowa business and industry with more than 100 employees or those classified as RCRA large quantity generators.

Addr: **Beth Hicks**
Iowa Department of Natural Resources
900 East Grand Avenue
Des Moines, IA 50309
Tel: 515-281-8927
Fax: 515-281-8895
E-mail: ehicks@max.state.ia.us.
URL: <http://www.recycleIowa.org>

KANSAS Environmental Management System

K.S.A. 60-332 et seq., enacted by the 1995 Kansas legislature, outlines the components of an

EMS. If a finding of violation occurs, a facility that has implemented an EMS is afforded consideration by the court or administrative tribunal in determining whether to impose an administrative, civil, or criminal penalty and the severity of the penalty. The Kansas Department of Health and Environment is actively encouraging facilities to implement EMS.

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Kansas Department of Health and
Environment
Office of Science and Support
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Fax: 913-291-3266

KENTUCKY Kentucky Pollution Prevention Center's (KPPC) ISO 14000 Awareness

KPPC is facilitating ISO 14000 training through contractors, partnerships with other assistance providers, and by downlinking national teleconferences. It has sponsored/presented two 2-day workshops in Louisville and Lexington, KY. In addition, two 3-hour teleconferences were downlinked in those two cities in October 1996. A presentation titled "An Overview of ISO 14000" has been offered at conferences and lecture series statewide. KPPC will continue to provide training opportunities for Commonwealth business as well as further identify its role in ISO 14000 implementation.

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420 New Academic Building
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E-mail: jcmetc01@ulkyvm.louisville.edu

URL: <http://www.louisville.edu/org/kppc>

Fax: 504-765-0742

LOUISIANA Department of Environmental Quality

Environmental Leadership/ISO 14000. The Louisville Department of Environmental Quality (LDEQ) Office of Secretary is developing an Environmental Leadership Program/ISO 14000 initiative for Louisiana's business and industry. A coordinator provides consultation and workshops to educate interested parties regarding U.S. government policy regarding ISO 14000, including environmental management systems (EMS).

Addr: **Gary Johnson/Hugh Finklea**
Louisiana Department of
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Tel: 504-765-0720
Fax: 504-765-0742
E-mail: gary_j@deq.state.la.us

Environmental Leadership Pollution Prevention Program

This is a cooperative effort between the Louisiana Department of Environmental Quality and Louisiana's industry that encourages companies to assume environmental leadership roles by committing to minimizing their waste streams in all media, and participating in activities to enhance Louisiana's environment.

Addr: **Charles Killebrew**, Technical
Manager
Technical Program Support Section
Louisiana Department of
Environmental Quality
Office of the Secretary
P.O. Box 82263
Baton Rouge, LA 70884-2263
Tel: 504-765-0720

MAINE Department of Environmental Protection (DEP)

As a component of the state's Environmental Excellence: Maine Program, DEP works with businesses developing EMS (including ISO 14000) to review gap analyses and provide compliance assistance and regulatory review as the plans are developed.

Addr: **Ron Dyer**
Maine DEP
STP #17
Augusta, ME 04333
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E-mail: ron.e.dyer@state.me.us

Center for Technology Transfer (CTT)

Environmentally Conscious Manufacturing (ECM) Program. CTT is a private nonprofit organization that works primarily with Maine's metals and electronics industries to enhance their competitiveness through training, technology transfer, and technical assistance. ECM is one of CTT's focus areas; pollution prevention assessments, training, development literature, conferences, and seminars were all initiated under this program over the last 2 years. CTT will work with its target industries to educate companies on EMS and why they may or may not want to become certified to ISO 14001.

Addr: **Mark Arienti**, P.E., Field Engineer
ECM Project
Center for Technology Transfer
190 Riverside Street
Portland, ME 04103
Tel: 207-871-8254
Fax: 207-780-1547
E-mail: marienti@mstf.org

URL: <http://www.ctt.org>

EMS Development for Industry - Electric Power Sector

The Central Maine Power Company and the Natsionalna Elektricheska Kompania of Bulgaria are working on a U.S. AID-funded effort to develop EMS for major power plants in Bulgaria and for the central electric utility system.

Bulgaria has adopted environmental standards similar to those of western Europe and the United States, however, both the plant equipment and the management systems are dated in terms of being able to meet these standards. This initiative will help the management side of environmental businesses. One major power plant was selected for system development; at the discretion of the Natsionalna Elektricheska Kompania, the EMS techniques will be transferred to the rest of the system.

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Central Maine Power International
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Winthrop, ME 04364
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Fax: 207-626-959

Addr: **Hristo Shwabsky**
Natsionalna Elektricheska Kompania
Sofia, Bulgaria
Tel: 359 2 980 1968
Fax: 359 2 875826
E-mail: nek.s.msp@mcr1.poptel.org.uk

Addr: **Dr. Robert Ichord, Jr.**
U.S. AID
320 21st Street NW
Washington, DC 20523
Tel: 202-647-6962
Fax: 202-647-8274

(Cross-listed with International Initiatives, chapter 6)

MARYLAND

Maryland Department of the Environment (MDE)

MDE conducts various ISO 14000 training programs for management and field personnel.

Addr: **Mitch McCalmon**
Maryland Department of the Environment
2500 Broening Highway
Baltimore, MD 21224
Tel: 410-631-4499
Fax: 410-631-3896

ISO 14000 Awareness for Maryland Manufacturers

Various agencies, public and private organizations in Maryland are making significant strides in identifying and providing ISO 14000 related information and awareness training throughout Maryland. The Environmental Engineering Program of the University of Maryland's Engineering Research Center (ERC) has begun an initiative to assist these efforts, identifying potentially interested participants, promoting the program, and assisting with presentation as requested. Primary efforts to date have been with the regional offices of the ER's Technology Extension Service (an affiliate of the Maryland NISTMEP), the Maryland Department of the Environment, and various local technology councils.

Addr: **Paul Gietka**
University of Maryland at Baltimore
618 West Lombard Street, 1st Floor
Baltimore, MD 21201
Tel: 410-706-3233
Fax: 410-706-3446
E-mail: pg26@umail.umd.edu

MICHIGAN

Clean Corporate Citizen Program

This program gives businesses tangible incentives and benefits, such as faster permits, expanded construction and operational waivers, and plantwide applicable limits for air permits. Such benefits are attainable by meeting three criteria: 1) a demonstrated commitment to reduce waste through a pollution prevention program; 2) consistent compliance with all environmental requirements and no outstanding unresolved violations; and 3) a strong and effective EMS such as ISO 14001.

Addr: **Robert Basch**, Chief
Technical Assistance Section,
Environmental Assistance Division
Department of Environmental Quality
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Lansing, MI 48909-7957
Tel: 517-335-7161
Fax: 517-373-3675
E-mail: baschr@deq.state.mi.us

MINNESOTA Office of Attorney General

EMS Training. The initiative involves two projects designed to improve EMS training. The first project involves a series of ten seminars on various aspects of environmental management including ISO 14000; the primary audience is larger businesses. The second project focuses on smaller businesses and will include five separate training sessions that incorporate environmental management elements into small business manufacturing excellence programs.

Banking/Insurance Initiative. This is an effort to identify the risk reduction and competitiveness advantages of good EMS and to inform bankers, insurers, and investors of these advantages. ISO 14000 certification and implementation could conceivably be used as a tool in measuring likely improved performance.

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MISSOURI ISO 14000 Cooperation Project

This project supports research and educational activities within Missouri state government and with nongovernmental groups, including a joint relationship with the National Center for Environmental and Information Technology in St. Louis.

Addr: **Steve Mahfood**
Missouri Environmental Improvement
and Energy Resources Authority
P.O. Box 744
325 Jefferson
Jefferson City, MO 65101
Tel: 573-751-4919
Fax: 573-635-3486

NEBRASKA Department of Environmental Quality (NDEQ)

Quality Assurance Implementation for Technical Policy and Independent Technical Oversight of Low Level Radioactive Wastes Application. NDEQ has the regulatory oversight and licensing authority, in conjunction with the Nebraska Health and Human Services (HHS), for licensing commercial low level waste disposal under 10XFR Part 61 in the state of Nebraska. NDEQ was charged with license review and independent technical assessment under NDEQ title 132 and NDOH Title 180. NDEQ developed a comprehensive quality assurance program using

NUREG 1293/NUREG 1383 and NQA-1. The program incorporates requirements to address NRC Reg. Guide 415. Over a seven year period, the quality assurance implementation has been successfully implemented to over 200 personnel and covers all elements of technical review and oversight process. NDEQ has successfully implemented a “graded approach” to audits and surveillance that had never been implemented to this level for license review. It is unique for government oversight for state regulatory license review.

Addr: **Jay D. Ringenberg** , LLRW Program Manager
Nebraska Department of Environmental Quality
P.O. Box 98922
1200 N Street, Suite 400, The Atrium
Lincoln, NE 68509-8922
Tel: 402-471-3372
Fax: 402-471-2909

NEW HAMPSHIRE New Hampshire Pollution Prevention Program (NHPPP)

This nonregulatory pollution prevention program offers technical assistance services such as conferences and workshops, information requests, onsite assistance, pollution prevention information clearinghouse, internships, educational curricula, pollution prevention regulatory integration, and strategic partnerships.

Addr: **Vincent R. Perelli**, NHPPP Manager
New Hampshire Department of Environmental Services Pollution Prevention Program
6 Hazen Drive
Concord, NH 03301-6509
Tel: 603-271-2902
Fax: 603-271-2456
E-mail: perelli@deswmdpl.mv.com

NEW MEXICO Green Zia Environmental Excellence Program

The Green Zia program will recognize businesses, institutions, and governmental entities that have met specific criteria for achieving environmental excellence: 1) long-term compliance with all environmental regulations and development of a pollution prevention plan; 2) achievement of specified pollution prevention goals outlined in the plan; and 3) achievement of additional goals and mentorship in pollution prevention technologies for other businesses, institutions or governmental entities. The criteria for receiving recognition will be developed with input from regulators and industry representatives, and will include ISO 14000 conformance. The program should be implemented in mid-1997.

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Forestry and Resources Conservation Division
Energy, Minerals, and Natural Resources Department
P.O. Box 1948
Santa Fe, NM 87504-1948
Tel: 505-827-7474
Fax: 505-827-3903
E-mail: jkowalski@emnrdsf.state.nm.us

NEW YORK ISO 14000 Regulatory Integration Pilot Program

The Department of Environmental Conservation is developing two pilot projects with one small business and one large business to explore how ISO 14000 certification can be incorporated into regulatory oversight programs.

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NYSDEC
50 Wolf Road

Albany, NY 12233-8010
Tel: 518-457-2553
Fax: 518-457-2570

Tel: 919-715-6507
Fax: 919-715-6794
E-mail: ravila_gupta@owr.ehnr.state.nc.us

NORTH CAROLINA

The North Carolina Department of Environment, Health and Natural Resources

Environmental Management Systems. The North Carolina Department of Environment, Health and Natural Resources has formed a workgroup to look at the use of EMS. Specifically, the group will be involved in pilot projects, internal training, gaining support of external groups, and policy development.

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North Carolina Department of
Environment, Health and Natural
Resources
P.O. Box 29569
Raleigh, NC 27626
Tel: 919-715-6507
Fax: 919-715-6794
E-mail: ravila_gupta@owr.ehnr.state.nc.us

ISO 14000 Workgroup for the National P2 Roundtable. The first official meeting of this group was held in November 1996 as part of the National Pollution Prevention (P2) Roundtable's regular workgroup meetings. Some example issues addressed were: How can P2 mesh with the standard? Will P2 be included in the auditor training and if so, how? What is the role of technical assistance personnel? Can small- and medium-sized manufacturers benefit from ISO 14000 and what are some of their implementation issues? Will the standard lead to source reduction? This workgroup will generate and maintain an ISO 14000 e-mail list.

Addr: **Ravila Gupta**
P.O. Box 29569
Raleigh, NC 27626

Addr: **Krista Johnsen Leuteritz**
NIST/MEP
Building 301, Room C-100
Gaithersburg, MD 20899
Tel: 301-975-5104
Fax: 301-926-3787
E-mail: kristin.johnsen@nist.gov
URL: <http://www.mep.nist.gov/>

NORTH DAKOTA

Wetland Conservation Strategy

This multifunctional program includes a variety of incentive programs and demonstrations to encourage restriction and preservation of the state's substantial wetland resources.

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North Dakota State Water
Commission
900 East Bird
Bismarck, ND 58501
Tel: 701-328-2750
Fax: 701-328-3696
E-mail: lklap@water.swc.state.nd.us
URL: <http://water.swc.state.nd.us>

OHIO

ISO 14000 Information Gathering

The Ohio Office of Pollution Prevention is presently gathering information about the ISO 14000 series of voluntary standards.

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Ohio EPA
Office of Pollution Prevention
P.O. Box 1049

Columbus, OH 43216-1049
Tel: 614-644-2813
Fax: 614-726-1245
E-mail: andrea_futrell@central.epa.ohio.gov
URL: <http://www.epa.ohio.gov/opp/oppmain.html>

OKLAHOMA Department of Environmental Quality

The Pollution Prevention Program provides technical assistance to business and industry across the state of Oklahoma. It also houses a clearinghouse of up-to-date information on pollution prevention advances in various industries, reference materials, and journals. ISO 14000 activities consist of educating program members about the standards.

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Oklahoma Department of
Environmental Quality
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Oklahoma City, OK 73117-1212
Tel: 405-271-1400 or 800-869-1400
Fax: 405-271-1317

OREGON Environmental Action Agreement Project

The Department of Environmental Quality's Pollution Prevention Core Committee is developing the framework of a program that will provide regulatory incentives for companies that demonstrate environmental performance beyond that required by law. Details of how companies qualify for participation and what types of rewards will be offered are still being determined. In order to qualify to be part of the Environmental Action Agreement Project, participants must have 1) an EMS in place that assures compliance with mandated environmental

requirements, 2) some supplemental activities that demonstrate protection of the environment beyond that required by law, and 3) some mechanism for public communication about the facility's environmental performance.

Possible rewards include both a recognition program and some regulatory relief, such as expedited permit processing, reduced monitoring and reporting frequency, and enforcement discretion. A workgroup will convene to develop these ideas and develop recommendations for turning pilot efforts into a full-scale incentive program.

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DEQ Northwest Region
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Fax: 503-229-6945
E-mail: holly.schroeder@state.or.us
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PENNSYLVANIA Strategic Environmental Management: Beyond Compliance

Strategic Environmental Management is a regulatory approach that incorporates ISO 14001 environmental accounting, full life-cycle assessment, and performance measurements into a pollution prevention approach to environmental management.

Addr: **Marylou Barton**
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Environmental Management
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URL: <http://www/dep.state.pa.us>

Market-Based Audits of EMS: Implementing ISO 14000

Those conducting the project are studying four interrelated hypotheses concerning ISO 14000: 1) ISO 14000 will improve public knowledge and reduce acceptability of industrial activities with environmental impacts; 2) ISO 14000 will improve internal management capabilities and reduce compliance costs for companies over other environmental management alternatives; 3) ISO 14000 will improve risk management practices and will lead to better relations with insurers and a risk managers and to lower premiums for certified companies; and 4) ISO 14000 will lead to decreased transaction costs of regulation, both at the state and federal level. A series of pilot studies in Wisconsin and Pennsylvania are planned to test these hypotheses.

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Wharton Risk Management and
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Fax: 215-573-2130
E-mail: kleindorfer@wharton.upenn.edu
URL: <http://opim.wharton.upenn.edu/risk/>

Pennsylvania Environmental Council

The Pennsylvania Environmental Council is a statewide education, advocacy, and policy nonprofit organization that is promoting discussion of ISO 14000 in Pennsylvania through several mechanisms, including publication of related articles in a quarterly newsletter and hosting discussion groups with representatives of government, business, industry, and environmental interests.

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Philadelphia, PA 19107
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Fax: 215-563-0528
E-mail: pecphila@libertynet.org
URL: <http://www.libertynet.org/~pecphila>

TENNESSEE Department of Environment and Conservation (TDEC)

TDEC is following the development of the ISO 14000 standards and potential uses. In addition, TDEC is participating, as an Environmental Council of States (ECOS) representative, in EPA's ISO 14000/EMS Task Group.

Addr: **David L. Harbin**, Assistant General
Counsel
Department of Environment and
Conservation
Office of General Counsel
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TEXAS

Office of Pollution Prevention and Recycling

The Office currently oversees multiple projects analyzing EMS and its application. These projects include analyzing potential inspection protocols to incorporate EMS, analyzing the relationship between EMS and environmental economic performance in industrial facilities, and incorporating EMS into voluntary recognition/incentive programs.

Addr: **Andrew Neblett**, Director
Office of Pollution Prevention and Recycling
Texas Natural Resource Conservation Commission
P.O. Box 13087 (MC 112)
Austin, TX 78711-3807

Tel: 512-239-3166
Fax: 512-239-3165
E-mail: aneblett@tnrcc.state.tx.us

UTAH Department of Environmental Quality (DEQ)

Utah's pollution prevention program serves as the contact point for promotion and dissemination of information related to ISO 14000. The pollution prevention program will notify other DEQ divisions and industrial groups and also serve as a contact for communicating with these groups regarding ISO 14000.

Addr: **Sonja F. Wallace**
Utah Department of Environmental Quality
168 North 1950 West
Salt Lake City, UT 84114-4810

Tel: 801-536-4477
Fax: 801-536-0061
E-mail: eqoas.swallace@state.ut.us

VERMONT Vermont Manufacturing Extension Center (VMEC)

VMEC is a NIST-MEP center serving the technical assistance needs of Vermont's manufacturers.

Addr: **Muriel Durgin**, Director
Vermont Manufacturing Extension Center
P.O. Box 500
Randolph Center, VT 05061-0500

Tel: 802-728-1312; in VT 800-MEP-4MFG
Fax: 802-728-1456
E-mail: vmec@night.vtc.vsc.edu
URL: <http://www.vmec.org>

VIRGINIA Department of Environmental Quality

Virginia is tracking and investigating ISO 14000 activities of other interested states.

Addr: **T. March Bell**
Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240-0009

Tel: 804-698-4417
Fax: 804-698-4019

WASHINGTON Department of Ecology *Compliance Assurance and Environmental Audits.* Several "Beyond Compliance" related initiatives that relate to ISO 14000 exist, including an EPA ISO 14000 task group, an environmental leadership program, and a performance based permits system.

Addr: **Greg Sorlie**, Program Manager

Department of Ecology
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Olympia, WA 98504-7600
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Addr: **John Williams**, Staff
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ISO 14000 Leadership Project. This project is sponsored by EPA Region 10 and the Washington State Department of Ecology, working in conjunction with the International Standards Initiative, to clarify the environmental, economic, and regulatory benefits of ISO 14001 certification. The project comprises four tasks: 1) focus group discussions, 2) discussion forum, 3) EMS analysis, and 4) final report.

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Addr: **John Palmer**, Pollution Prevention Manager
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Addr: **K.C. Ayers**, Executive Director
International Standards Initiative
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Issaquah, WA 98027-1202

Tel: 206-392-7610
Fax: 206-392-7630
E-mail: kcayers@isi-standards.org
URL: <http://www.isi-standards.org>

WISCONSIN Wisconsin ISO 14000 Working Group

This group is composed of members of the public and private sector with extensive knowledge of ISO 14000. A number of interim reports have been developed by the group and will form the basis for a pilot study. The pilot effort of the Wharton/LaFollette project will be the same pilot effort as the Wisconsin ISO 14000 Working Group project. Companies are expected to begin participating in 1997.

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Madison, WI 53707
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Fax: 608-267-5231
E-mail: eggert@dnr.state.wi.us

Wharton/LaFollette Joint Research Effort

The states of Wisconsin and Pennsylvania are working together with the Wharton Business School and the LaFollette Institute of Public Affairs to identify cost, benefits, and public policy issues of ISO 14000. The research will be supplemented by a pilot study, which will test out assumptions and theories.

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E-mail: smollj@dnr.state.wi.us

Addr: **Paul R. Kleindorfer**
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Tel: 215-898-5830

Fax: 215-573-2130

E-mail: kleindorfer@wharton.upenn.edu

URL: <http://opim.wharton.upenn.edu/risk/>

5 NONPROFIT INITIATIVES

The nonprofit organizations in this chapter are divided into three sections. An *industry* section lists organizations that promote communication about ISO 14000 in their respective industry sectors. The section on *nongovernmental* initiatives includes nonprofit organizations representing stakeholders with an interest in improved environmental performance, as well as nonprofit organizations that directly provide ISO 14000 related services. Initiatives based at *academic* institutions includes training services, consulting services and the application of the ISO 14000 standards to the academic institutions themselves.

- 1. Industry Associations and Networks**
- 2. Nongovernmental Organizations**
- 3. Academic Organizations**

INDUSTRY ASSOCIATIONS

Air & Waste Management Association (AWMA) Intercommittee Task Force on ISO 14000

AWMA's Intercommittee Task Force on ISO 14000 will cosponsor an international forum, in conjunction with the AWMA 1997 Annual Conference, to be held in June 1997. The forum, entitled AISO 14000 Environmental Management Systems: Where we've been and where we're going, will be held in Toronto, Canada.

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Battelle-Pantex
6900 I-40 West, Suite 130
Amarillo, TX 79106
Tel: 806-353-4198
Fax: 806-353-4628
E-mail: gggreenly@pantex.com
URL: <http://www.awma.org>

American Petroleum Institute

Strategies for Today's Environmental Partnership (STEP). STEP represents the petroleum industry's collective initiatives to improve petroleum industry environmental, health, and safety (EHS) performance, document and communicate its achievements, and improve the public's understanding of its performance. STEP provides a unifying framework, through the American Petroleum Institute (API), that the industry can use to improve EHS performance in a flexible, yet systematic manner; to share best practices; to enhance operating efficiencies and reduce costs; and to document performance improvements.

Many companies, working collectively and individually, have successfully used management systems approaches to accomplish cost-effective improvements on an ongoing basis. Individual company and industry EHS performance and efficiency are expected to improve as a result of successful implementation of EHS management systems, an expectation that several API members with EHS management systems have affirmed. Based on these successes, API promotes the use of flexible EHS management systems, which provide a means for integrating EHS management into everyday business operations, regardless of company size. API is developing a template for an EHS management system that can be used by its members as a guide for their own systems.

Addr: **Walter C. Retzsch**
American Petroleum Institute
1220 L Street, NW
Washington, DC 20005
Tel: 202-682-8598
Fax: 202-682-8579
E-mail: step@api.org
URL: <http://www.api.org/step/>

American Society for Quality Control (ASQC)

Energy and Environmental Division (EED). EED produced the first American national standard on quality assurance for environmental programs, ANSI/ASQC E4-1994. Members are active on several ISO Technical Committees, including TC 176 and TC 207. EED has been an active participant in the development of the ISO 14000 series of EMS.

Addr: **John Dew, Vice-Chair**
Administrative Services
Lockheed Martin Utilities Services
P.O. Box 1410
Paducah, KY 42001
Tel: 502-441-6759

Fax: 502-441-6103
E-mail: dewjr@ornl.gov

Electronic Industries Association (EIA)

EIA has organized a variety of educational programs to provide information to members concerning strategic and practical considerations applicable to ISO 14000. These education programs include presentations, seminars, and documents.

Addr: **David Isaacs**
Electronic Industries Association
2500 Wilson Boulevard
Arlington, VA 22201-3834
Tel: 703-907-7576
Fax: 703-907-7501
E-mail: disaacs@eia.org
URL: www.eia.org

The Associated Industries of Massachusetts/Massachusetts Manufacturing Partnership ISO 14000 Collaborative

The Associated Industries of Massachusetts is working with the Massachusetts Manufacturing Partnership to provide companies with a comprehensive program designed to prepare for ISO 14000 registration. The ISO 14000 Collaborative is an innovative program that provides small manufacturers with the opportunity to prepare for registration at an affordable price. The program is led by world class corporate education professionals experienced in ISO 14000 training who follow a proven method of interactive instruction over a period of 12 to 14 months.

Addr: **Beverly Cadorette**
Massachusetts Manufacturing Partnership

Corporation for Business, Work, and Learning

101 Summer Street
Boston, MA 02110

Tel: 617-292-5100, ext. 285
Fax: 617-292-5105
E-mail: bcadorette@mmp.bssc.org
URL: <http://www.mmpmfg.org>

National Association of Environmental Professionals (NAEP)

ISO 14000 Working Group. The NAEP ISO 14000 Working Group is composed of NAEP members from government, industry, the financial community, and the consulting field with an interest in the development and implementation of ISO 14000 standards. The group's mission is threefold: 1) to participate in the development and implementation of the ISO 14000 standards; 2) to promote and facilitate communication among environmental professionals on the impacts of these standards; and 3) to promote the integration of NAEP ethics, principles, interests, and practices into the standards.

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Glover-Stapleton Associates
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Fax: 202-296-6270
URL: <http://enfo.com/NAEP>

Industrial Designers Society of America (IDSA)

Environmental Responsibility Section. IDSA's Environmental Responsibility Section is dedicated to the exploration of environmentally responsible design solutions and product management systems. The tools being explored

include Life Cycle Modeling, Design for the Environment, Integrating Design with the EMS of ISO 14000, and other strategies that may move society toward a sustainable future.

Addr: **John Paul Kusz**, IDSA
 301 South Home Avenue
 Park Ridge, Illinois 60068
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Fax: 847-692-9590
E-mail: jpkusz@aol.com

Northeast Business Environmental Network (NBEN)

The Forum for Best Management Practices.

The forum will serve as a network providing examples of best practices for pollution prevention and compliance management. Examples include the EPA self-policing guidelines and ISO 14001. Participants exchange their best practice examples based on a summary model consisting of ten basic features; the best of these examples will be summarized and annotated in a manual to be published by NBEN and posted to NBEN's Web page. NBEN fosters sustainable development through the exchange of practical information in regular meetings, seminars, and over the Internet. Raytheon hosted a conference discussing the forum on November 15, 1996, in Lexington, MA.

Addr: **Jennifer Hill**
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Fax: 508-557-5493
E-mail: execdirector@nben.org
URL: <http://www.nben.org>.

National Center for Manufacturing Sciences (NCMS)

NCMS is a membership organization best described as a consortium of North American manufacturing organizations whose main activity is to put together and manage cooperative research projects among its member companies.

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 NCMS
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Tel: 313-995-4911
Fax: 313-995-1150
E-mail: paul.chalmer@ncms.org
URL: <http://www.ncms.org>

NON- GOVERNMENTAL ORGANIZATIONS

Alliance for Environmental Innovation

The Alliance for Environmental Innovation is a project of the Environmental Defense Fund and the Pew charitable trusts. The alliance will develop projects that 1) implement measurable actions to reduce waste, prevent pollution, and conserve resources while enhancing business performance; and 2) create actionable models and methodologies for other businesses to adopt.

Each project will identify environmental issues, analyze solutions in the context of functional and economic needs, refine new methodologies for reducing environmental impacts, and develop implementation options.

Addr: **Ralph Earle**

Environmental Defense Fund
6 North Market Building
Fanueil Hall Marketplace
Boston, MA 02109

Tel: 617-723-2996

Fax: 617-723-2999

E-mail: ralph@ef.org

American Institute for Pollution Prevention (AIPP)

AIPP is an educational, not-for-profit organization that works with trade associations and professional societies to promote pollution prevention within industry and throughout society. Many of AIPP's initiatives involve EMS. AIPP's annual meeting includes updates on ISO 14000 and discussions regarding if and how companies are proceeding with implementation.

Addr: **Julie Fero**
American Institute for Pollution
Prevention
1616 P Street NW
Suite 100
Washington, DC 20036

Tel: 202-797-6567

Fax: 202-797-6559

E-mail: cd001001@mindspring.com

URL: <http://es.inel.gov/aipp/>

Coalition for Environmentally Responsible Economies (CERES)

CERES promotes responsible corporate activity for a safe and sustainable future for our planet. The coalition engages environmental organizations, the investment community, and corporations in a dialogue about environmental performance, both to forge a new and meaningful dialogue with corporations about the protection of the planet and to establish a well-informed public that chooses where to invest its capital based on environmental, not just

economic, performance. CERES is promoting the creation of a widely-accepted mechanism for corporate self-governance that will maintain business practices consistent with the idea that economic vitality and environmental responsibility are compatible.

Addr: **Randy Rice**
CERES
711 Atlantic Avenue
Boston, MA 02111

Tel: 617-451-0927

Fax: 617-482-2028

E-mail: ceres@igc.apc.org

URL: <http://www.ceres.org>

Community Nutrition Institute (CNI)

Joint Policy Dialogue on Trade and the Environment. CNI is currently hosting a series of facilitated policy dialogues between the environmental and business communities in an effort to promote consensus-based trade and environmental policy. Dialogue participants include the U.S. Council for International Business, DuPont, National Association of Manufacturing, U.S. Chamber of Commerce, Chemical Manufacturing Association, and other concerned business organizations. Environmental nongovernmental organizations include the Sierra Club, National Wildlife Federation, World Wildlife Fund, Center for International Environmental Law, National Resources Defense Council, and others.

CNI's trade and environment team is currently researching and drafting a discussion document addressing ISO 14000 and the relevant trade and environment issues related to this topic. The paper will serve as a basis for a future dialogue workshop, and copies will be made available upon request to interested parties outside the dialogue group

Addr: **Deborah Siefertt, Jake Caldwell, or**

David Wirth
Community Nutrition Institute
910 17th Street, NW
Washington, DC 20006

Tel: 202-776-0595

Fax: 202-776-0599

E-mail: cnitrade@ige.apc.org

The Global Environmental Management Initiative (GEMI)

GEMI is committed to Environmental Health and Safety excellence throughout the business community. GEMI's 21 member companies represent a cross section of industry with over a million employees and combined annual revenues exceeding \$400 billion. Established in 1990, GEMI is a 501(c)(3) nonorganization. GEMI produced an ISO 14001 EMS self-assessment program in March 1996.

Addr: **Tammy Marshall**, Operations
Manager
1090 Vermont Avenue
NW Third Floor
Washington, DC 20005

Tel: 202-296-7449

Fax: 202-296-7442

E-mail: gemi@worldweb.net

URL: <http://www.gemi.org>

The Good Neighbor Project for Sustainable Industries

This project helps to shape stakeholder participation disclosure, input, and participation by neighbors and workers by including these elements in ISO 14000 environmental management processes.

Addr: **Sanford Lewis**, Director
P.O. Box 79225
Waverly, MA 02179

Tel: 617-354-1030

Fax: 617-492-1635

E-mail: sanlewis@igc.apc.org

URL: <http://www.envirolink.org/orgs/gnp>

Green Seal Environmental Partners Program

The program provides Agree@ buying assistance to businesses concerned about the environmental impacts of their purchases. Partners receive comprehensive, expert advice, including lists of products recommended on the basis of their environmental impact, product performance, and packaging. Members include large and small businesses, universities, government agencies and nonprofit organizations; participants number over 1000.

Addr: **Michael Shor**
Green Seal Environmental Partners
Program
1730 Rhode Island Avenue, NW
Suite 1050
Washington, DC 20036-3101

Tel: 202-331-7337

Fax: 202-331-7533

E-mail: green Seal@aol.com

ANSI/GETF ISO 14000 Integrated Solutions (IIS)

The American National Standards Institute (ANSI) and the Global Environment & Technology Foundation (GETF) developed this program to serve as the primary disseminator and facilitator of ISO 14000 information in the United States.

IIS is composed of four services: training (currently being done through a national network of community colleges), ISO 14000 conferencing, publications, and an on-line information service, IIS ON-Line. Each service

promotes awareness, competence, confidence, and skills for ISO 14000 implementation in both public and private sectors.

Addr: **Mary Clare Lynch**
ANSI
11 West 42nd Street
New York, NY 10036
Tel: 212-642-4956
Fax: 212-598-0023
E-mail: mlynch@ansi.org
URL: <http://www.ansi.org>

Addr: **Jacqui Keller**
GETF
7010 Little River Turnpike, Suite
2\300
Annandale, VA 22302
Tel: 703-750-6401
Fax: 703-750-6506
URL: <http://www.iso14000.org>

GETF

GETF is a foundation committed to facilitating the cooperative integration of enterprise, technology, and the environment into sustainable systems in the United States and abroad. GETF facilitates strategic thinking, supports environmental policy development, builds consensus and knowledge sharing, and encourages partnership building and collaboration; GETF also provides training and education about ISO 14000 standards.

Addr: **Steve Wassersug**, President
GETF
7010 Little River Turnpike
Suite 300
Annandale, VA 22302
Tel: 703-750-6401
Fax: 703-750-6506
E-mail: steve.wassersug@gnet.org
URL: <http://www.iso14000.org>

Addr: **Lynne Rasmussen**, Director of Legal Affairs, GETF

7010 Little River Turnpike, Suite 300
Annandale, VA 22302

Tel: 703-750-6401
Fax: 703-750-6506
E-mail: lynne.rasmussen@gnet.org
URL: <http://www.iso14000.org>

Green Mountain Institute for Environmental Democracy (GMIED)

GMIED provides assistance to regional, state, and local governments; comparative risk projects; and place-based initiatives in the development of environmental indicators and program measures. GMIED also serves as a clearinghouse for environmental indicator reports and activities and produces a bimonthly newsletter covering environmental management.

Addr: **James R. Bernard**
GMIED
104 East State Street
Montpelier, VT 05602
Tel: 802-229-6077
Fax: 802-229-6076
E-mail: jbernard@gmied.org

ISO 14000 Legal Issues Forum

The ISO 14000 Legal Issues Forum was established by the U.S. Technical Advisory Group in September 1995 to provide a vehicle of discussion of legal issues arising in the implementation of the ISO 14000 series of standards. Under the co-chairmanship of David J. Freeman of Battle Fowler LLP and Ira R. Feldman of GT Strategies and Solutions, the Forum has grown to a membership of over 200 individuals and organizations. Its members include both governmental officials and representatives of nonprofit groups.

The forum meets bimonthly, with each meeting devoted to addressing a specific topic of interest to its membership. A participation fee of \$75 entitles members to attend bimonthly meetings and to receive detailed reports of the proceedings.

Addr: **David Freeman**
Battle Fowler LLP
75 East 55th Street
New York, NY 10022
Tel: 212-856-7126
Fax: 212-856-7820
E-mail: dfreeman@battlefowler.com

Addr: **Ira Feldman**
GT Strategies and Solutions
1300 Connecticut Avenue
Washington, DC 20036
Tel: 202-530-9770
Fax: 202-530-9772
E-mail: I@erols.com

Management Institute for Environment and Business (MEB)

Industrial Products, Inc.: Measuring Environmental Performance (Case Study). In 1993, Industrial Products, Inc., was a highly diversified privately-held manufacturing company with two business objectives: increase return on equity and decrease environmental impact. This case examines management's efforts to design and implement a management system for measuring the impact of its operations on the environment. The student gains an understanding of the system, and is asked to evaluate its effectiveness. The industrial products management system illuminates the ISO 14000 series standards. A teaching note is available.

Addr: **Rebekah Paulson**

Management Institute for Environment and Business
1709 New York Avenue, NW
Washington, DC 20006

Tel: 202-434-1980
Fax: 202-737-1510
E-mail: briann@wri.org
URL: <http://www.wri.org/wri/meb>

ISO 14000 Workgroup for the National P2 Roundtable

The first official meeting of this group was held in November 1996 as part of the National Pollution Prevention (P2) Roundtable's regular workgroup meetings. Some example issues addressed were: How can P2 mesh with the standard? Will P2 be included in the auditor training and if so, how? What is the role of technical assistance personnel? Can small- and medium-sized manufacturers benefit from ISO 14000 and what are some of their implementation issues? Will the standard lead to source reduction? This workgroup will generate and maintain an ISO 14000 e-mail list.

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P.O. Box 29569
Raleigh, NC 27626
Tel: 919-715-6507
Fax: 919-715-6794
E-mail: ravila_gupta@owr.ehnr.state.nc.us

Addr: **Krista Johnsen Leuteritz**
NIST/MEP
Building 301, Room C-100
Gaithersburg, MD 20899
Tel: 301-975-5104
Fax: 301-926-3787
E-mail: kristin.johnsen@nist.gov
URL: <http://www.mep.nist.gov/>

New England Environmental Network

Nothing To Waste Initiative (NTW). The NTW Initiative is a pilot environmental justice and pollution prevention program designed to provide and link necessary economic and environmental resources to small businesses in low income communities of color. NTW infuses pollution prevention tools and continuous improvement techniques into peer lending groups of four to ten small business owners who are participating in the business education and loan program of Working Capital, a nonprofit community development finance agency. With initial funding from EPA, the NTW pilot has functioned as a unique collaboration between local community development corporations (Grove Hall CDC in Roxbury, MA, and Green Island CDC in Worcester, MA); Working Capital, Cambridge Environmental, Inc.; and the New England Environmental Network at Tufts University.

Addr: **Marcy Goldstein-Gelb,**
Massachusetts Director, Working
Capital
New England Environmental Network
99 Bishop Allen Drive
Cambridge, MA 02139

Tel: 617-576-8620

Fax: 617-576-8623

E-mail: wcapmgelb@aol.com

Addr: **Rona Julien**
U.S. EPA Region 1

Tel: 617-565-9454

The Pacific Institute

The Pacific Institute for Studies in Development, Environment and Security is an independent, non-profit center conducting research and policy analysis in the areas of environment, sustainable development, and international security. The Institute focuses on the interrelatedness of many

of the problems facing our planet and seeks comprehensive solutions to these problems.

Addr: **Peter Gleick,** President
Pacific Institute
1204 Preservation Park Way
Oakland, CA 94612

E-mail: pistaff@pacinst.org

The Rainforest Alliance

The Smart Wood Program. Initiated in 1989, the program initially focused on tropical forests. Today, Smart Wood works in all forest types worldwide. The purpose of Smart Wood is to provide independent, objective evaluation of forest management practices, forest products, timber sources, and companies, enabling the public to identify products and practices that do not destroy forests. Through certification and use of the Smart Wood label the program provides a commercial incentive for forest managers to adopt sustainable forestry practices. Smart Wood certifies forest products that come from Asustainable@ or Awell managed@ forests (Asources@); Smart Wood also certifies companies that process, manufacture, or sell products made from certified wood, through Achain of custody@ certification.

Addr: **Richard Donovan,** Director
65 Bleecker Street
New York, NY 10012-2420

Tel: 212-677-1900

Fax: 212-677-2187

E-mail: smartwood@ra.org

URL: <http://www.rainforest-alliance.org>

The Sierra Club

The Sierra Club is tracking the application of ISO 14000 to ensure that it is applied in a manner that will result in increased environmental protection and it reflects accurate information about how ISO 14000-rated firms

are promoting a high standard of environmental performance.

Addr: **Dan Seligman**, Trade and Environment Director
Sierra Club
408 C Street NW
Washington, DC 20016

Tel: 202-675-2387

Fax: 202-547-6009

E-mail: dan.seligman@sierraclub.org

URL: <http://www.sierraclub.org>

Addr: **Jerry Speir**, Director
Tulane Institute for Environmental Law and Policy
Tulane Law School
New Orleans, LA 70118-5670

Tel: 504-862-8829

Fax: 504-862-8857

E-mail: jspeir@law.tulane.edu

Addr: **John Audley**
2247 Laeb
Political Science Department
Purdue University
West Lafayette, IN 47907

Tel: 317-494-7599

E-mail: audley@polsci.purdue.edu

ACADEMIC

Brown University

Brown Is Green (BIG) Program. BIG is an environmental education and advocacy program established to involve undergraduates in the research and analysis of environmental problems related to university operations and provide a model for active learning that can be replicated nationally. The students involved in this program develop skills in incorporating environmentally benign technology and methods into daily

operations. They also devise and test methods for educating individuals within an organization on the environmental effects of their behavior.

Addr: **Kurt Teichert**, Environmental Coordinator
Brown University
Box 1943

Providence, RI 02912-1943

Tel: 401-863-7837

Fax: 401-863-3503

E-mail: kurt_teichert@brown.edu

URL: http://www.brown.edu/departments/brown_is_green

Georgia Institute of Technology, Economic Development Institute (EDI)

EDI provides ISO 14000 information, training, and implementation assistance through EDI's Center for International Standards and Quality (CISQ). Companies can enroll in a customized implementation program that will help them successfully prepare for ISO 14000 registration, participate in the ISO 14000 discussion group (a forum of business representatives who meet periodically to share information and experiences related to ISO 14000), and access current ISO 14000 information through CISQ's Standards Information Service.

Addr: **Donna M. Ennis**
Georgia Tech/CISQ/EDI
151 6th Street, Room 143
Atlanta, GA 30332-0640

Tel: 404-894-0968

Fax: 404-894-1192

E-mail: cisq.mail@edi.gatech.edu

URL: <http://www.edi.gatech.edu>

Montana State University Extension Service

Montana Pollution Prevention Program. This program provides pollution prevention technical assistance to small businesses (automotive, wood working, printers, hotels/motels, construction, dry- cleaning), schools, Native American tribes, local government, and agricultural operations.

Addr: **Dr. Michael P. Vogel**
Montana State University Extension
Service
109 Taylor Hall
Bozeman, MT 59717
Tel: 406-994-3451
Fax: 406-994-5417
E-mail: acxmu@trex.oscs.montana.edu
URL: <http://www.montana.edu/wated>

University of Maryland

Environmental Finance Center (EFC). Part of the Coastal and Environmental Policy Program at the University of Maryland, EFC was created to train, provide assistance, and act in an advisory capacity to state and local governments on issues related to environmental finance. Among other activities, EFC advises local officials in forums for frank discussions between local officials and finance experts about financing difficulties experienced by communities in meeting their environmental demands.

Addr: **Elizabeth Hickey**
EFC
University of Maryland
Coastal and Environmental Policy
Program
0112 Skinner Hall
College Park, MD 20742
Tel: 301-405-6383
Fax: 301-314-9581
E-mail: hickey@umbi.umd.edu
URL: <http://www.mdsg.umd.edu:80/mdsg/envifin/index.html>

Salt Lake Community College

The Environmental Training Center. The Environmental Training Center provides noncredit workshops in environmental health and safety subjects. This includes 1- and 2-day workshops on the ISO 14000 standard.

Addr: **Neal K. Ostler**, Center Coordinator
Millcreek Center
1521 East 3900 South
Salt Lake City, UT 84124
Tel: 801-957-4942
Fax: 801-957-3848
E-mail: ostlerne@slcc.edu
URL: <http://www.slcc.edu/cce/hazwop.htm>

SUNY Buffalo

The Science and Engineering Library at SUNY Buffalo, in conjunction with other university libraries, is compiling a list of print and electronic resources related to the topic of Environment and Business, including resources for ISO 14000, Clean Products and Design, and Life Cycle Assessment. The resources are maintained on the Science and Engineering Library Web site under Internet Resources by Subject: Environment. Other fee-based information services are also available from the Science and Engineering Library upon inquiry.

Addr: **Frederick W. Stoss**, M.S., M.L.S.,
Associate Librarian
Science and Engineering Library
Capen Hall, Room 228-B
SUNY Buffalo
Buffalo, NY 14260-2200
Tel: 716- 645-2946 ext. 224
Fax: 716-645-3710
E-mail: fstoss@acsu.buffalo.edu
URL: <http://wings.buffalo.edu/libraries/units/sel/>

Tulane Institute for Environmental Law and Policy

ISO 14000 From a Public Interest Perspective.

This initiative attempts to assess and respond to developments in ISO 14000 implementation from a nongovernmental and nonindustry perspective.

Addr: **Jerry Speir**, Director
Tulane Institute for Environmental
Law and Policy
Tulane Law School
New Orleans, LA 70118-5670
Tel: 504-862-8829
Fax: 504-862-8857
E-mail: jspeir@law.tulane.edu

University of Wisconsin-Stout

Economic Development Administration

University Center (EDA-UC). The University of Wisconsin-Stout's EDA-UC provides service and assistance in management system education, training, and outreach to regional businesses and industry on the implementation and operation of systems based on international standards.

Addr: **Dr. Wallace Carlson**, Professor
Industrial Management
University of Wisconsin-Stout
Menomonie, WI 54751
Tel: 715-232-5162
Fax: 715-232-1105
E-mail: carlsonw@uwstout.edu

Addr: **Nancy Jennejohn**,
EDA-UC Program Manager
University of Wisconsin-Stout
Menomonie, WI 54751
Tel: 715-232-5023
Fax: 715-232-1985
E-mail: jennejohn@uwstout.edu

Vanderbilt Center for Environmental Management Studies (VCEMS)

VCEMS was formed to promote and develop partnerships between industry, government, and academia to explore new environmental management practices and opportunities. VCEMS' most recent initiatives include incorporation of ISO 14000 principles into the established environmental management framework and to remove the Agreen wall@ barriers to sound environmental management programs.

Addr: **Paige Macdonald**, Program Director
VCEMS, Vanderbilt University
1207 18th Avenue South
Nashville, TN 37212
Tel: 615-322-8004
Fax: 615-343-7408
E-mail: macdonald@uansv5.vanderbilt.edu
URL: <http://www.vanderbilt.edu/vcems>

6 INTERNATIONAL INITIATIVES

The international listings in this chapter include multilateral organizations with initiatives that extend across national boundaries and a sampling of national initiatives based in other countries that may be useful both as information resources as well as models for programs in the United States.

- 1. Multilateral Organizations**
- 2. Alphabetical Listings by Country**

MULTILATERAL ORGANIZATIONS

Environmental Management Secretariat for Latin America and the Caribbean (LAC)

The purpose of the Environmental Management Secretariat in the LAC region is to facilitate the improvement of environmental management through the application of three interrelated instruments: research, horizontal cooperation, and information systems (largely Internet based) to support decisions by those engaged in policy formulation and implementation and in activities based on services or raw materials derived from renewable resources.

The secretariat is also developing a focused research program through competitive small research grants to address the key environmental management issues of the region.

Addr: **Alexis Ferrand**
Environmental Management
Secretariat
c/o CIID/IDRC
Casilla de Correo 6379
Montevideo, Uruguay
Tel: +598-2-922031/4 - 922037/44
Fax: +598-2-920223
E-mail: aferrand@idrc.ca
URL: <http://www.chasque.apc.org/sema>

Commission for Environmental Cooperation (CEC)

CEC was created to address regional environmental concerns, help prevent potential trade and environmental conflicts, and promote the effective enforcement of environmental laws.

Current related activities of the CEC include a study of North American experiences with voluntary compliance, including ISO 14000 and an examination of the interface between ISO 14000 and enforcement and compliance policies and programs.

Addr: **Linda F. Duncan**, Head
Law & Enforcement Cooperation
Program
CEC
393 Rue St. Jacques Bureau 200
Montreal, Quebec, H2Y 1N9
Tel: 514-350-4334
Fax: 514-350-4314
E-mail: lduncan@ccemtl.org
URL: <http://www.cec.org>

Organisation for Economic Cooperation and Development (OECD)

Sustainable Product Policies and Life Cycle Management. The objective of the project is to monitor initiatives and policies that favor the diffusion of life cycle approaches among economic factors. This entails following the work that ISO and other organizations are carrying out, and examining implications for the transfer of information in the marketplace (e.g., through ecolabelling initiatives and life cycle assessments), product performance standards, public purchasing of environmentally preferable goods and services, and extended producer responsibility.

Addr: **Carlo Pесо**
OECD
2 Rue Andre Pascal
75775 Paris
France
Tel: +33-1-45-24-16-82
Fax: +33-1-45-24-78-76
E-mail: Carlo.PESSO@oecd.org
URL: <http://www.oecd.org/env/divppc.htm>

United Nations Conference on Trade and Development (UNCTAD)

Training Program for Officials Interested in ISO in Developing Countries. Many businesses operating in or trading with developing countries are not fully aware of the developments in ISO 14000. A training guide is being developed by a United Nations (UN) agency in Geneva, Switzerland (the UN Conference on Trade and Development), to provide information. Benchmark Environmental Consulting served as the consultant for the research and writing.

Addr: **Dr. John Cuddy**, Coordinator
Sustainable Development Program
UNCTAD
Rm. E9077
Palais des Nations
CH-1211 Geneva 10
Switzerland

Fax: +4122-907-0045

Addr: **Dr. Harris Gleckman**
Benchmark Environmental Consulting
470 Forest Ave, Suite 302
Portland, ME 04101

Tel: 207-775-9078

Fax: 207-772-3539

E-mail: benchmark@interramp.com

URL: www.greenchannel.com and
<http://194.177.160.204:80/standards/iso/14001/>

United Nations Environmental Program (UNEP)

UNEP Metadata Directory. The UNEP Metadata Directory serves as a card catalogue of environmental information. It contains card entries (or metadata descriptions) of institutes and datasets and allows users to search for environmental information by institute name or dataset (title), contact person (author), theme, keyword, and location (subject), as well as other criteria.

Addr: **James McKenna**, Program Officer
UNEP

P.O. Box 3052

Nairobi, Kenya

Tel: +254-2-623899

Fax: +254-2-624315

E-mail: mckennaj@unep.no

URL: <http://www.grid.unep.no>

United Nations Industrial Development Organization (UNIDO)

UNIDO is conducting several studies to make recommendations for government policies and strategies related to productivity, quality, and environment in the Economic and Social Commission for the LAC region. The studies pay particular attention to the impact of ISO 14000 standards on industrial competitiveness and policy recommendation.

Addr: **Mr. Hessel Schuurman**,
ECLAC/UNIDO

Associate Expert

P.O. Box 179-D

Santiago, Chile

Tel: +56 2-210-2417

Fax: +56 2-208-0252

E-mail: hschuurm@eclac.cl

US-AID

EMS Development for Industry - Electric Power Sector.

The Central Maine Power Company and the Natsionalna Elektricheska Kompania of Bulgaria are working on a U.S. AID-funded effort to develop EMS for major power plants in Bulgaria and for the central electric utility system. Bulgaria has adopted environmental standards similar to those of western Europe and the United States, however, both the plant equipment and the management systems are dated in terms of being able to meet these standards. This initiative will help the management side of environmental businesses. One major power plant was selected for system development; at the discretion of the Natsionalna

Elektricheska Kompania, the EMS techniques will be transferred to the rest of the system.

Addr: **Dr. Robert Ichord, Jr.**
U.S. AID
320 21st Street NW
Washington, DC 20523
Tel: 202-647-6962
Fax: 202-647-8274

Addr: **Hristo Shwabsky**
Natsionalna Elektricheska Kompania
Sofia, Bulgaria
Tel: 359-2 980-1968
Fax: 359-2-875826
E-mail: nek.s.msp@mcr1.poptel.org.uk

Addr: **James H. Wazlaw**
Central Maine Power International
One Grandview Place
Winthrop, ME 04364
Tel: 207-626-9749
Fax: 207-626-9597

(Cross-listed with State Initiatives, chapter 4)

The United States Environmental Training Institute (USETI)

USETI is working in conjunction with Environmental Pollution Control and Sanitation Technology Company of Sao Paulo State (CETESB) coordinating a Green Procurement Policy project and P2/ISO 14000 courses.

Addr: **Joel Riciputi**
USETI
100 Thomas Jefferson Street, NW
Suite 106
Washington, DC 20007
Tel: 202-338-3400
Fax: 202-333-4782

Addr: **Julia Alves**
Rua Murupi, 195
Sao Paulo, Capital 05467-040
Brazil
Tel: +55-11-3030-6491 or +55-1-3030-6490
Fax: +55-11-3030-6401
E-mail: juliaa@cetesb.br

World Bank

Informal Working Group on ISO 14000. This group is addressing the possible implications on environment and trade for the countries. No documents have yet been published.

Addr: **David Hanrahan**
Environment Department (Room S3069)
World Bank
1818 H Street NW
Washington, DC 20433
Tel: 202-458-5686
Fax: 202-477-0968
E-mail: dhanrahan@worldbank.org

COUNTRY INITIATIVES

Austria

EU Environmental Management and Audit Scheme (EMAS). The objective of the scheme is to promote continual improvements in the environmental performance of industrial activities by 1) establishing and implementing environmental policies, programs, and management systems; 2) evaluating the performance of such elements; and 3) establishing public information vehicles.

Addr: **Johannes Mayer**, Director
Dept. Information-Documentation-
Library
Federal Environment Agency
Spittelauer Laende 5, A

1090 Vienna, Austria
Tel: +43-1-31304-3240
Fax: +43-1-31304-5400
E-mail: mayer@uba.ubavie.gv.at
URL: <http://www.ubavie.gv.at>

Institute for Ecological Research in Economics. The institute conducts research in the field of environmental management, ecobalances, environmental accounting, pollution, and ecodesign.

Addr: **Dr. Christine Jasch**
Institut für Ökologische
Wirtschaftsforschung
Rechte Wienzeile 19/5, A-1043 Wien
Austria
Tel: +0043-1-587-21-89
Fax: +0043-1-587-09-71
E-mail: ioew@magnet.at

Bolivia

Sustainable Development Networking Programme (SDNP). SDNP comprises a network of institutions related to sustainable development and environment issues through e-mail connectivity and Internet facilities. The institutions are from the government, private, academic, and international cooperation sectors.

Addr: **Juan Pablo Arce**, National Coordinator
Sustainable Development and
Environment Ministry
RDS/UNDP
P.O. Box 12814
La Paz, Bolivia
Tel: +591-2-317320
Fax: +591-2-317320
E-mail: sdnpc@coord.rds.org.bo
URL: <http://coord.rds.org.bo>

Canada

The Health Sciences Centre (HSC). HSC is currently implementing an ISO 14001 Pilot Project in a 900 bed tertiary care teaching hospital.

HSC is participating in the Canadian Standards Association's (CSA) Pilot Project to implement an EMS in conformance with the draft ISO 14000 series of environmental standards. HSC already has several components of the system in place: 1) an environmental policy and senior management commitment to the policy, 2) an initial environmental review of issues, and 3) a performance reporting process.

During the next 12 months, the complete specifications for all processes in the EMS will be drafted in conformance with the ISO 14001 standard.

Addr: **John Reimer**, P.E.
Health Sciences Centre
Environmental Protection Department
Room MH 216
59 Pearl Street
Winnipeg, Manitoba
R3E 3L7 Canada
Tel: 204-787-4792
Fax: 204-787-4854
E-mail: j.reimer@awnet.com
URL: <http://www/hsc.mb.ca> (under construction)

Canadian Departments of Environment and Industries' National Environmental Training Initiative. This initiative provides training materials and other source documents on the implementation of ISO 14000 voluntary environmental management standards to small and medium sized businesses.

Addr: **Dennis Landry**
13th Floor
351 St. Joseph Blvd.
Hull, Quebec K1A 0H3
Tel: 819-994-7977
Fax: 819-953-7970

EMS Accreditation Program. The program is governed by guidelines contained in Standards Council of Canada (SCC) publications entitled "Criteria and Procedures for Accreditation of

Organizations Registering Environmental Management Systems” (CAN-P-14), “Criteria and Procedures for Accreditation of Environmental Auditors Certification Organizations” (CAN-P-1412), and, in the near future, “Criteria and Procedures for the Accreditation of Environmental Auditor Training Courses and Providers” (CAN-P-1413). The SCC is a federal crown corporation and a nonprofit organization. All components of this program operate on a full cost-recovery basis.

An advisory committee on EMS, made up of experts in the field, oversees the accreditation program and provides advice to SCC on matters pertaining to the environment. The SCC's deputy director of standardization is currently responsible for the day-to-day operation of the program; the manager of conformity assessment will assume this responsibility in the summer of 1997.

Registrars submit a written application to the SCC for accreditation, describing their organization and resources and including a fee as outlined in a published fee schedule. The environmental auditor certifiers submit a similar application as will the environmental auditor course providers.

Addr: **Don Wilson**, P.E.
45 O'Connor Street
Ottawa, ON K1P 6N7
Canada
Tel: 613-238-3222, ext. 140
Fax: 613-995-4564
E-mail: dwilson@scc.ca
URL: <http://www.scc.ca>

Kyrgyzstan

Ecologist Club. The club manages independent monitoring of Human Ecology in Kyrgyzstan and neighboring regions.

Addr: **Khodjamberdiev Igor**, President

Ecologist Club
Khodjamberdiev, P.B.1451
Bishkek, Kyrgyzstan, 720040
Tel: +3312-221041
Fax: +3312-288362
E-mail: igorho@nlpub.freenet.bishkek.su

Romania

Advanced Interactive Training Course on EMS. This course applies the principles of the British Standard 7750 (BS 7750) and the European Eco Management and Audit Scheme (EMAS) in Romania.

The course is delivered over 3 days with the participants implementing the first 2 stages of an EMS, gaining commitment and policy formulation and performing the initial review during the month following the course. After a month, they participate in a 2-day workshop where they present achievements, receive an attendance diploma, and receive training in management for change.

Addr: **Bogdan O. Paranici**
Str. Academiei 27, et. 2, Apartment 5
70108, Sector 1
Bucharest, Romania
Tel: +40-1-312-66-39 or 615-02-32
Fax: +40-1-312-42-63
E-mail: opananici@pcnet.pcnet.ro

Spain

Program of communication and interpretation in protected natural areas. Make available information and general services for visits to natural areas, services of interpretation and guided itineraries, formation and coordination of a volunteer program, communication to the local population and promotion of local participation

Addr: **Mariano Soriano Urban**, Ph. D
Instituto de Ciencias Sociales y Ambientales

Gral. Martin Carrera
Ed. Dunia II, B-A
E-30011-Murcia
Spain

Tel: +34-908-36-19-37 or +34-968-26-97-91

Fax: +34-968-26-97-91

E-mail: murban@ctv.es

URL: <http://ctv.es/USERS/murban>

Sweden

Chalmers University of Technology, Managing for Environmental Opportunities. Chalmers University of Technology offers this program through its executive education organization, Chalmers Advanced Management programs (CHAMPS).

The focus is business-oriented and covers issues like scenario-based strategy development, transformation of the enterprise to gain environmental competitive advantage, development and implementation of EMS such as ISO 14000, and the EMAS. The program brings together a faculty of internationally renowned lecturers, NGOs, and industry cases with a mixed group of participants. The program is divided into two modules that is carried through in Sweden and the Netherlands.

Addr: **Peter Lindwall**
CHAMPS
Chalmers Teknikpark
S-412 88 Gothenburg
Sweden

Tel: +46 31-772-43-22

Fax: +46 31-772-41-71

E-mail:

peter.lindwall@champs.chalmers.se

URL: <http://www.champs.chalmers.se/>

Switzerland

Quality Management Systems / Environmental Management Systems (QMS / EMS). This project introduces EMS in accordance with ISO 14001 to companies who already are in accordance with ISO 9000 to ensure the most

efficient changeover process. The project commenced January 1, 1995, and is working closely with the primary certifier for EMS accreditation for ISO standards in Switzerland.

Addr: **Reto Felix**

University of St. Gall
Institute for Management of Technology
(ITEM-HSG)
Unterstrasse 22
CH-9000 St. Gall
Switzerland

Tel: +41-71-228-24-14

Fax: +41-71-228-24-20

E-mail: reto.felix@item.unisg.ch

URL: <http://www.unisg.ch/~item/PROJECT/QM/qmsems.html>

United Kingdom

Centre for Environmental Technology. The Centre is currently running three EMS oriented projects in the United Kingdom (UK) and the European Union (EU): 1) a pilot project to investigate the application of a standard methodology to implement the EU Eco-management and audit scheme (EMAS) in selected SMEs across the EU, 2) a UK study into environmental threats and opportunities facing SMEs and their associated management strategies, and 3) a pilot study investigating the barriers and opportunities facing enterprises implementing EMAS and other EMS such as the British standard BS 7750 and ISO 14001.

Addr: **Ruth Hillary**

Centre for Environmental Technology
Imperial College of Science, Technology,
and Medicine
48 Prince's Gardens
London SW7 2PE England

Tel: +44-171-589-5111

Fax: +44-171-581-0245

E-mail: r.hillary@ic.ac.uk

7 RESOURCES

This chapter presents listings of ISO 14000-related *resources* rather than *initiatives*. These resources may be useful sources of information to organizations exploring ISO 14000, and several categories of resources are included. Each entry only briefly describes the resource; contact information is provided for use in obtaining more details.

The entries included in this section are not endorsed or approved in any way by EPA. All submitted entries that were applicable for inclusion in the Directory have been listed. Because the purpose of this Directory is to provide information on government activities concerning ISO 14000 and/or Environmental Management Systems (EMS), it is beyond the scope of the Directory to include a comprehensive listing of all the private sector organizations and initiatives also involved in ISO 14000 and/or EMS. Every effort has been made to ensure the information in each entry is correct.

- 1. U.S. national Standards**
- 2. International Standards**
- 3. Accreditation**
- 4. Training**
- 5. Clearinghouses**
- 6. Publications**
- 7. Internet Resources**

U.S. NATIONAL STANDARDS

The American National Standards Institute (ANSI)

ANSI is the single, private sector certifier of U.S. national standards, and is the sole U.S. member body to the International Organization for Standardization (ISO). ANSI does not develop standards, rather ANSI is responsible for providing U.S. input, through Technical Advisory Groups (TAGs), to international standards development committees in ISO. Contact: **Jane Schweiker**, Director Public Policy and Government Relations, ANSI, 7315 Wisconsin Ave., Suite 250-E Bethesda, MD 20814. Tel: 301-469-3363. E-mail: jschweik@ansi.org.

Three U.S. standards organizations, which are members of ANSI, cooperate in the administration of the U.S. TAG for ISO 14000 standards. They are:

American Society for Testing & Materials Initiatives (ASTM)

ASTM is the primary administrator for the entire U.S. TAG to ISO TC207. **Kathy Morgan**, ASTM, 100 Bar Harbor Dr., West Conshohocken, PA 19428. Tel: 610-832-9721. Fax: 610-832-9666. E-mail: kmorgan@local.astm.org. URL: <http://www.astm.org>.

American Society for Quality Control (ASQC)

611 East Wisconsin Ave., P.O. Box 3005, Milwaukee, WI 53201. Tel: 800-248-1946. Fax: 414-272-1734.

NSF International

NSF International is an authorized source for the ISO 14000 standards. **Anita M. Cooney**, NSF International, 2100 Commonwealth Blvd., Ann Arbor MI 48105. Tel: 313-332-7333. Fax: 313-669-0196.

Information on these and other U.S. standards-setting bodies is provided through NIST (see page 3-1) or ANSI.

INTERNATIONAL STANDARDS

Both the World Trade Organization (WTO) and the North American Free Trade Agreement (NAFTA) recognize the national standards-setting bodies that are members of ISO. Information on TC207 Member Bodies and the countries they represent is available via the ISO home page: www.iso.org.

ACCREDITATION

ANSI-Registrar Accreditation Board (RAB)

National Accreditation Program (NAP) for ISO 14000 Environmental Management Standards.

ANSI-RAB conducts the U.S. national accreditation program that accredits registrars and training course

providers. **Rick James**, ANSI-RAB, 7315 Wisconsin Avenue, Suite 250-E, Bethesda, MD 20814. Tel: 301-469-3360. Fax: 301-469-3361.

TRAINING

ISO 14000 training courses are offered by a wide variety of organizations and companies within the private sector. Various federal and state agencies, universities, and other organizations may also offer in-house training courses. Information about these courses may be obtained by contacting them directly. Training course information within EPA may be obtained by contacting **Eric Wilkinson**, Voluntary Standards Network, U.S. Environmental Protection Agency (7409), 401 M St., SW, Washington, DC 20460. Tel: 202-260-3575. Fax: 202-260-0178. E-mail: wilkinson.eric@epamail.epa.gov.

CLEARINGHOUSES

EPA's Pollution Prevention Information Clearinghouse (PPIC)

PPIC disseminates information on the U.S. EPA's involvement with ISO 14000 via the Internet and EPA and Pollution Prevention Division home pages. **Susan Westerburg**, US. EPA., 401 M St., SW (MC 7407), Washington, DC 20460. Tel: 202-260-1758. Fax: 202-260-4659. E-mail: ppic@epamail.epa.gov.

World Data Center A (WDC-A) for Human Interactions in the Environment

Data resources available include collections of international environmental agreements, integrated assessment models of global climatic change, as well as the distributed international resources of CIESIN's Information Cooperative. **Dr. Roberta Balstad Miller**, Director, CIESIN, 2250 Pierce Road, University Center, MI 48710-0001. Tel: 517-797-2727. Fax: 517-797-2622. E-mail: ciesin.info@ciesin.org URL: <http://www.ciesin.org>

PUBLICATIONS

The ISO 14000 series of standards are copyrighted and can be obtained by contacting any of the following organizations: **ANSI**, 7315 Wisconsin Ave., Suite 250-E Bethesda, MD 20814. Tel: 301-469-3363. **ASTM**, 100 Bar Harbor Dr., West Conshohocken, PA 19428. Tel: 610-832-9721. Fax: 610-832-9666. **ASQC**, 611 East Wisconsin Ave., P.O. Box 3005, Milwaukee, WI 53201. Tel: 800-248-1946. Fax: 414-272-1734. **NSF International**, 2100 Commonwealth Blvd., Ann Arbor MI 48105. Tel: 313-332-7333. Fax: 313-669-0196.

INTERNET RESOURCES

Mailing Lists

#ecdm

The Environmentally Conscious Design and Manufacturing mailing list is as a forum for discussing issues regarding designs and manufacturing processes for products (including buildings) from an environmentally friendly viewpoint. Methods for analyzing these products are also discussed. Post messages to ecdm@pdomain.uwindsor.ca. The listserv address is: listserv@pdomain.uwindsor.ca. URL: <http://ie.uwindsor.ca/ecdmlist/welcome.html>.

#govpub

This list promotes the dissemination of local and state government information online to exchange ideas and information related to their efforts. Both the technical and policy issues of government information on the Internet are addressed. Post messages to: govpub@listserv.nodak.edu. The listserv address is: listserv@listserv.nodak.edu.

#iso14000

This unmoderated list is designed for the discussion of the ISO 14000 certification guidelines for environmental and related industries. Post messages to iso14000@quality.org. Listserv at majordomo@quality.org.

#quest

The QUEST list (Quality, Environment, Safety in Management). Post messages to quest@listserv.nodak.edu. Listserv at listserv@listserv.nodak.edu.

#regref-l

This list (Regulatory Reform List) is a moderated discussion group that is intended to foster an interdisciplinary discussion about the reform of regulation. No one accepted definition of regulation exists for the purposes of this discussion group, the term "regulation" is used broadly to include the full range of legal instruments by which governing institutions, at all levels of government, impose obligations or constraints on private sector behavior. Post messages to regref-l@cyberus.ca. Listserv at majordomo@cyberus.ca. URL: <http://www.cyberus.ca>.

#tenep

The Electronic Network of Environmental Professionals (TENEP) moderated list. Post messages to tenep@envision.net.

ISO Websites

International Organization for Standardization

Official ISO Online site. ISO information including Your guide to ISO Online, Introduction to ISO, ISO structure, ISO members worldwide, ISO technical committees, ISO meeting calendar, ISO Catalogue; What's new at ISO?, and Other Web servers providing standards information. For specific questions and comments on this WWW server: webmaster@isocs.iso.ch. For general information and questions on ISO: CENTRAL SECRETARIAT ADDRESS 1, rue de Varembé, Case postale 56, CH-1211 Genève 20, Switzerland. Tel: + 41 22 749 01 11. Fax: + 41 22 733 34 30. E-mail: central@isocs.iso.ch. URL: <http://www.iso.ch>.

International Organization for Standardization

Additional WWW server for the ISO (as of 4/30/97, faster access than official site). ISO information including: How to place your order for ISO Standard Publications published by ISO in Geneva, What is ISO?, Technical Committees, Newly Published ISO and IEC Standards, and ISO and IEC Draft International Standards (DIS). H. Ikeda, Computer Engineering, Electronic Systems Division, Department of Electric and Electronics Engineering, Faculty of Engineering, Chiba University, 1-33 Yayoi, Inage, Chiba 263, Japan. Tel: +81 43 290 3352. Fax: 81 43 290 3039. E-mail: ikeda@hike.te.chiba-u.ac.jp. URL: <http://133.82.181.177/ikeda/ISO/home.html>.

International Organization for Standardization: Environmental Management

ISO site dealing with Environmental Management. Information on each of the subcommittees can be found here as well. URL: <http://www.iso.ch/meme/TC207.html>.

U.S. Federal & State Government Websites

Pennsylvania Department of Environmental Protection (DEP) ISO 14000 information site

This site includes ISO 14000 and the Next Generation of Environmental Protection Tools, DEP Looking for ISO 14000 Partners, Privatization of Environmental Regulation, So What is ISO 14000 Anyway?, Going Green With Less Red Tape, ISO 14000: A Building Block for Redefining Environmental, Sustainable Development, and Links to Others Sites With ISO 14000 Information.

E-mail: ASKDEP@a1.dep.state.pa.us.

URL: <http://www.dep.state.pa.us/dep/deputate/pollprev/ISO14000/ISO14000.HTM>.

President's Council on Sustainable Development site

This site includes a message from the Executive Director, General Information, Council Report, Vice President's Speech, Task Force Reports, and Newsletters. E-mail: pcsd@igc.apc.org. URL:

<http://www.whitehouse.gov/WH/EOP/pcsd/index.html>

Enviro\$en\$e

Enviro\$en\$e is a pollution prevention and environmental compliance assistance network. Its databases offer full-text and multisite search tools to address technical and regulatory issues with information from a wide spectrum of government, industry, academic, and public interest sources. URL: <http://es.inel.gov/>.

EPA's Partners for the Environment

EPA's Partners for the Environment Web site contains links to many other initiatives including 33/50, Common Sense Initiative (CSI), Design for the Environment, Environmental Leadership Program, EPA Standards Network, and Project XL. E-mail: anderson.joe@epamail.epa.gov. URL:

<http://www.epa.gov/partners/>.

The Public Sector Continuous Improvement Site

This site offers suggested reading material, a library of documents available online, organizations of interest, and a guide to online resources. John Hunter, Webmaster, Public Sector Continuous Improvement Site. E-mail: asqcpn@aol.com. URL: <http://deming.eng.clemson.edu/pub/psci>.

International Websites

Canadian Standards Association

This site includes: Background Standards Information, News and Information, and Member and Technical Committee Services. Canadian Standards Association, 178 Rexdale Boulevard, Etobicoke (Toronto), Ontario, M9W 1R3. Tel: 800-463-6726, 416-747 4000. Fax: 416-747-4149. E-mail: webmaster@csa.ca. URL: <http://www.csa.ca/toc-prog.htm>.

Central European Environmental Data Request Facility (CEDAR)

This is a project of the Austrian Federal Ministry for the Environment providing information including CEDAR/ISEP, Databases and Resources, CEDAR Mailing List Archives (INFOTERRA, ENVENG-L), Environmentally Relevant Institutions, other interesting links, and CEDAR/ISEP staff. E-mail: webmaster@cedar.univie.ac.at. URL: <http://www.cedar.univie.ac.at/>.

United Nations Environment Programme Geneva Executive Center (Switzerland)

This Web site is maintained by UNEP's Information Unit for Conventions (IUC) to make information from secretariats more widely available. Many environmental resources including: Trade and the Environment and other Web sites on environment and sustainable development. E-mail: Webmaster@unep.ch. URL: <http://www.unep.ch>.

La Planete a Besoin de Nous

French and European Environmental Associations Directory. Tel: 33-01-42-63-34-62. E-mail: adme@worldnet.fr. URL: <http://www.worldnet.fr/~adme>.

Manitoba Pollution Prevention

This home page has link to the Canadian Council of Ministers of Environment, which in turn links to all provincial environment department home pages. URL: <http://www.gov.mb.ca/environ>.

Standards Council of Canada

This site includes an article on pressures to create sector specific standards for ISO 14000. [Http://www.scc.ca/consensu/fitall2307.html](http://www.scc.ca/consensu/fitall2307.html)

Industry Websites

IAS Environmental Management Systems (EMS) Registration Program and ISO 14000 Page

International Approval Services (IAS) is a joint venture of the American Gas Association and the Canadian Gas Association EMS Registration Program and ISO 14000 Page that includes: ISO 14000 Introduction; Who - What - Where - When - Why - How of the ISO and ISO 14000; The U.S. Technical Advisory Group (TAG) and Its Role in ISO; What Is An EMS?; ISO 14001 Guidance Document; Benefits of EMS Implementation and Registration; and EMS Assessment Pilot Project. Cleveland Office (Main), 8501 E. Pleasant Valley Road, Cleveland, Ohio 44131. Tel: 800-247-0802 / 216-524-4990. Fax: 216-642-3463. URL: <http://www.gasweb.org/gasweb/ias/iso14000.htm>

Nongovernmental Organization Websites

The Committee for the National Institute for the Environment (CNIE)

CNIE is a national, nonprofit organization working to improve the scientific basis for making decisions on environmental issues through creation of a new, non-regulatory environmental science and education agency. E-mail: cnie@access.digex.net. URL: <http://www.inhs.uiuc.edu/niewww/temp.html>

ISO 14000 West Coast Working Group

This site has the work of several committees from the West Coast of North America as well as general ISO 14000 information. URL: <http://www.wcwg.org>.

University Websites

Asian Institute of Technology (AIT). This site details how to implement ISO 14000. URL: <http://www.ait.ac.th/AIT/som/as/ISO14000/index.htm>.

Links

EcoNet World-Wide Web pages

This site contains links to the many environmental organizations. Information categories include EcoNet News Of Note; EcoNet New and Featured Items; EcoNet Issue Resource Center (Web sites sorted by category); EcoNet's Directory of Organizations; EcoNet's Environment Gopher; and a search engine for EcoNet's Web site. There is no direct ISO 14000 information. E-mail: econet@igc.apc.org. URL: <http://www.igc.apc.org/econet>.

GLOBE Resource Centre (GRC)

This site has links to Internet environmental business sites. E-mail: grcinfo@globe.apfnnet.org. URL: <http://globe1.apfnnet.org/>.

Quality Resources Online

This site provides a list of links to other Web resources (sites and mail lists) related to ISO 14000. E-mail: help@quality.org. URL: <http://www.casti.com/qc/html/iso14000.html>.

ISO World

This site provides links to quality and EMS sites, and is the source of free Global Strategic Systems Newsletters. E-mail: db700378@jnet.sumiden.co.jp. URL: <http://www.omninet.co.jp/isoworld/english/english.htm>.

Centre for Economic and Social Studies for the Environment (CESSE)

Information includes activities; studies achieved and/or in progress; selected papers; training programs in the field of environment; and a Directory of Best Environmental Directories. Université Libre de Bruxelles (ULB) 44, Avenue Jeanne, CP 124, B-1050 Brussels, Belgium. Tel: +32-2-650 33 77. Fax: +32-2-650 46.91. E-mail: whecq@ulb.ac.be. URL: <http://www.ulb.ac.be/ceese/cesse.html>.

WWW Virtual Library Environment

This site has links organized by subject and includes a List O' Lists of Environmental Resources. URL: <http://ecosys.drdr.virginia.edu/environment.html>.