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highlights

Sustainability: Focus for the future

by Gary O'Neal, Director
Office of Environmental Sustainability, EPA Region 10

When the '90s end, we'll be able to look back and see a decade of fundamental changes in environmental management. Things like market incentives, voluntary agreements, and pollution prevention initiatives are becoming important components in a comprehensive management framework that once included only regulation and enforcement. The focus of this evolving framework is the concept of sustainable development.

What is sustainable development? What does it mean for those in the business sector and in government and, importantly, what barriers are there to making the transition to sustainability?

Applying the philosophical to decision making

At a philosophical level, most people can agree with the goal of sustainable development: integrating economic and environmental goals to ensure that both are achieved and sustained over the long term. The difficulty comes in applying the philosophical to day-to-day decisions.

In the business sector, for instance, decisions that sustain long-term operations may not correspond with those that generate immediate profits. Or, the need to increase reliance on renewable resources may require the re-prioritizing of company objectives, necessitating hard choices. In government, agencies must broaden their approach to environmental management decisions. For example, marketplace forces might be more effective than traditional regulatory measures in achieving sustainable development practices. And the government might also play a larger role in developing data that can be applied to environmental management decisions, such as the relationships among the quality of our ecosystem, the quality of our lives, and our nation's economic viability.

Every organization must take up the challenge of evaluating operations with sustainability in mind. There are two levels to this challenge. The first is for each organization, whether private or public, to understand the components

***Sustainability** continued on page 6*

Report's Integration of Data Expected to Broaden Understanding of Environmental Toxics

For the first time, EPA has integrated a wide range of information about toxic chemicals into one report. The report, *Industrial Toxics and Pollution Prevention: A National Report,* will be available by March 1993.

The report includes data from the Toxics Release Inventory, the 33/50 Program, the TSCA Inventory, the New Chemicals Program, EPA's pollution prevention program, and other sources. Integration of these data is expected to increase the understanding of environmental toxics on the part of industry, public interest groups, government officials, and interested members of the public.

Various economic data are analyzed in the report, which broadens the context in which toxics are viewed. The economic data help explain how chemicals enter and move through commerce and how they ultimately enter the environment at the end of their useful life. Economic factors also affect toxic chemical releases and transfers. Analyzing the impact of such factors can help predict what may happen in the environment when certain conditions are present.

The report also looks at how public-private efforts and voluntary initiatives are increasingly playing a role in reducing risk and preventing pollution. Several case studies are presented to show some of the ways companies are facing their environmental responsibilities. Through the power of example, EPA hopes more companies will incorporate the pollution prevention ethic into their daily activities. In addition, as companies try new methods and approaches to pollution prevention and risk reduction, the country's technology and information base will expand.

In future reports, EPA's Office of Pollution Prevention and Toxics (OPPT) plans to use the information in the 1993 report as a baseline for analysis and comparisons of long-term trends in risk reduction and pollution prevention.

For more information

- To obtain *Industrial Toxics and Pollution Prevention: A National Report,* contact the TSCA Assistance Information Service (TSCA hotline) or the Emergency Planning and Community Right-to-Know (EPCRA) Information Hotline. Information on contacting the hotlines is on pages 36 and 38. Or, write to the Public Information Center (PM-211B), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.
- For more information about the report, call Ellen Shapiro at (202) 260-9557 or Kent Benjamin at (202) 260-1714; FAX them at (202) 260-0981; or write to them at the following address: Economics, Exposure, and Technology Division (TS-779), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Pollution Prevention Act Established Hierarchy for Environmental Management

In integrating pollution prevention throughout its activities, the Office of Pollution Prevention and Toxics applies the environmental management hierarchy established by Congress in 1990:

1. Pollution should be prevented or reduced at the source whenever feasible.
2. Pollution that cannot be prevented should be recycled in an environmentally safe manner.
3. Pollution that cannot be prevented or recycled should be treated in an environmentally safe manner.
4. Disposal or release into the environment should be a last resort and done in an environmentally safe manner.

Pulp and Paper Industry Sharing Information about Preventing Pollution

EPA Held International Symposium in August

More than 340 people from the pulp and paper industry, federal, state, and local governments, and environmental groups met last summer to discuss pollution prevention. EPA sponsored the three-day symposium, which kicked off an agency initiative to stimulate efforts by the pulp and paper industry to voluntarily reduce pollution.

The International Symposium on Pollution Prevention in the Manufacture of Pulp and Paper addressed a variety of issues related to the manufacture and use of pulp and paper. The topic generating the most discussion was the use of chlorine for bleaching paper.

Using chlorine to bleach paper

Treating wood pulp with chlorine produces dioxin compounds. There is scientific uncertainty regarding how exposure to dioxin and other chlorinated organic chemical compounds affects human health and the environment. EPA classifies dioxin as a highly toxic chemical and a probable human carcinogen. The majority of the pulp and paper industry, however, argues that the dioxin created by the chlorine-bleaching process contributes less than 1 percent of the dioxin found in the environment. Environmentalists support a switch to chlorine-free bleaching processes used throughout Sweden, in a few other European nations, and in a small number of U.S. mills.

In an open discussion, the pros and cons of the technical and economic issues of pulping and bleaching practices were argued by participants from industry, environmental groups, universities, foreign governments, and federal and state governments. Among the topics discussed were pulping and bleaching practices, including the use of chlorine, the use and performance of emerging technologies, and consumer acceptance of nonchlorine-bleached products.

In an open discussion, the pros and cons of the technical and economic issues of pulping and bleaching practices were argued.

Pollution prevention initiative

EPA sponsored the international symposium to open a dialogue among the pulp and paper industry, environmental and other public interest groups, other federal agencies, states, and the international regulatory community. Attendees at the symposium are meeting periodically to share information and continue the work begun at the symposium.

EPA's pulp and paper cluster workgroup initiated the symposium. Comprising high-level EPA personnel, the workgroup is identifying areas of concern in the pulp and paper industry and is coordinating agency efforts to reduce pollution associated with the industry.

Proceedings available

The proceedings for the conference contain presentations, transcripts of discussion sessions, and a list of attendees.

The proceedings are available through the National Technical Information Service (NTIS). For information on contacting the NTIS, see page 39.

State and Regional Programs Receive $3 Million For Pollution Prevention Projects

The Office of Pollution Prevention and Toxics has awarded $3 million to 16 programs under the 1992 Pollution Prevention Incentives for States grant program. These grants and cooperative agreements support state programs that seek to reduce or eliminate pollution.

Since 1989, $15.5 million has been awarded to 56 state organizations. States, state organizations, and tribal governments are eligible for the awards, which do not exceed $200,000. Grant recipients are required to match at least 50 percent of the federal funds.

Matching contributions can be made in dollars and in-kind goods and services, or both. This year's awards were announced in October 1992.

Grant Recipients 1992 Pollution Prevention Incentives for States

Arizona Department of Environmental Quality

Colorado Department of Health

Delaware Department of Natural Resources

Hawaii Department of Health

Illinois Environmental Protection Agency

Maine Department of Environmental Protection

Maryland Department of the Environment

Massachusetts Coastal Zone Management

Montana State University

New Mexico Pueblo Indians

New York Industrial Technology Assistance Corporation

University of Cincinnati, Ohio

Rhode Island Department of Environmental Management

South Dakota Department of Environment

Washington State Department of Ecology

Wyoming Department of Environmental Quality

The Denver Airport: Pollution Prevention by Design

Reprinted from the *EPA Journal*

By Jack W. McGraw
Acting Regional Administrator,
EPA Region 8

When the first of an expected 34 million passengers per year begin flying into America's newest and largest airport in October 1993, the planning that went into the airport will be obvious in the space-age architecture, the park-like setting, and the smooth flow of travelers and aircraft through its highly accessible layout. Not so obvious, but every bit as revolutionary, will be the environmental planning that went into the facility—a concept called "pollution prevention by design."

Preventing pollution in the first place simply makes more sense in economic and environmental terms than traditional "end-of-the-pipe" strategies. The Denver International Airport will embody features built into it specifically to cut much of the pollution that would otherwise accompany such a mammoth public works project. EPA's regional office in Denver assigned David Duster, one of its own scientists, to help design those features.

Duster's first obstacle was to overcome the single-focus approach that regulators develop when they work in specific programs such as air, water, waste, and toxics. Building pollution prevention into a $2.7 billion facility on a 53-square-mile parcel of land called for a "big picture" view—what is known as a "multimedia" approach.

The project was planned during an economic downturn and was not without critics. The expected economic benefits figured prominently in successful election campaigns to secure local approvals and to approve the sale of bonds to finance construction. The project and ancillary development promised jobs in an area still suffering from contractions in the energy industries, which boomed in the 1980s.

State and civic planners see Denver as an aircraft hub to the world. Equidistant to Tokyo and London, the airport is ideally positioned to handle the flow of goods and people between the economic giants of the Pacific Rim and a renewing Europe. Airport boosters see the new airport as assuring Denver and Colorado a preeminent role in the global economy of the next century.

While struggles with pollution will continue into the next century, conscious design choices such as those made for the Denver International Airport should help substantially. Here are some of the impact-reducing measures slated.

- Embedding some 180,000 tons of fly ash (unburned fuel particles from nearby coal-fired energy plants) in concrete, rather than sending it to landfills, will save enough space to accommodate the solid waste generated by a city of 40,000 over nine years. The fly ash also helps strengthen the concrete and make it more durable.
- Collecting 760 tons a year of glycol deicing fluids and reusing them for both deicing and reformulation will reduce the amount going to wastewater treatment by 95 percent.
- Installing ultra-low flow toilets (currently being tested at the area's existing airport, Stapleton International) throughout the Denver International Airport should conserve 130 million gallons of water annually, enough to supply the yearly water needs of 1,570 families.
- Using reclaimed wastewater (not treated to drinking water levels) to irrigate landscaping, beginning in 1999 is expected to save 542 million gallons of water per year.
- Conserving energy through measures built into the facility, from a Teflon-coated fiberglass roof to take advantage of natural light, to the use of natural gas chillers for air conditioning and energy-efficient lighting consistent with EPA's Green Lights program. This will mean the local utility, Public Service Company of Colorado, will not have to significantly increase its power supply capabilities (or air emissions) to serve the new airport.

***Airport** continued on page 6*

Airport *continued from page 5*

- Controlling volatile organic compounds—vapors—via floating roofs on fuel storage tanks and capturing those vapors during fuel transfers will keep some 52 tons a year of smog-forming chemicals out of the metro-area's atmosphere.
- Designing parking to take advantage of natural ventilation to disperse carbon monoxide, and offering employees staggered shifts, compressed workweeks, and shuttle services to cut their contribution of auto-related emissions by an estimated 7,000 pounds a year.
- Landscaping with a heavy reliance on the West's own water-stingy plants, especially prairie grasses, will yield water savings in the hundreds of millions of gallons per year.
- Building an energy-saving power plant for airport heating and cooling operations: low nitrogen-oxide boilers and flue gas recirculation will mean that 90 tons per year of nitrogen oxide will *not* be going into metro air.
- Driving fleet vehicles fueled by natural gas, rather than gasoline, thereby cutting both emissions of carbon monoxide and nitrogen oxide.
- Designing a solid waste plan aimed at cutting waste at its source, and reclaiming and recycling a variety of materials with a preliminary goal of reducing solid waste disposal by 16 tons per day.

Air. Water. Waste. These are the three basic pollution problems for any new facility, no matter how carefully planned.

Critics make the point, in fact, that the Denver International Airport, which will be the nation's largest when completed, and its ancillary development will ultimately cause more pollution than it can ever mitigate. Those arguments were present when Denver and Colorado voters went to the polls on two occasions. Since voters supported going forward with the airport, EPA decided to get involved early on with the project planning. This enabled us to employ the latest tools to minimize the impact of the project.

In working on the project, EPA has learned to apply new thinking and tools to technical challenges, and we have also learned a new way to relate to the regulated community. There have been so many winners in this process—including the environment—that I believe we can expect to see "pollution prevention by design" become the normal way of doing business through the rest of this century and into the new one.

How to subscribe to the *EPA Journal*

To subscribe to the *EPA Journal,* send a check or money order payable to the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954. The annual rate for subscribers in the United States is $10. The charge to subscribers in foreign countries is $12.50 a year.

Sustainability *continued from page 1*

of sustainable development and change its internal practices to support progress in those areas. Examples of such changes are modifying supplier contracts to provide incentives for use of recycled or renewable materials, modifying corporate accounting procedures to include environmental damages and benefits, or establishing a public advisory board to strengthen ties to the local community.

But internal changes alone will not ensure sustainability of the larger, supporting system. So, the second aspect of the challenge requires that each organization view its activities within the larger context of the community, the watershed, or the ecosystem. For instance, concern for the survival of tropical rain forests has brought furniture manufacturers together to ask how their operations affect forests. The answer? Using tropical woods produced from sustainable forestry—not boycotting tropical wood products—can enhance the survival of tropical rain forests, produce global environmental benefits, and increase the eco-

nomic value of the forests for the countries that contain them. The industry is now developing a definition of sustainable forestry—the first step toward integrating itself into the larger and more comprehensive sustainability framework. Another example might be called the "quality of life" factor. If the quality of the general environment declines, the quality of the community generally does also. This can adversely affect business in a number of ways, from hurting efforts to attract employees or new businesses to the area to increasing community demands for cleanup initiatives.

EPA activities

EPA is changing its approach to environmental management to encompass the concept of sustainable development. This new approach can be seen in EPA's Design for the Environment program and in the agency's emphasis on pollution prevention and waste minimization. These programs emphasize addressing problems in a holistic, integrated way within watersheds, ecosystems, and priority geographic areas. The use of market incentives to address a variety of issues has gained momentum.

EPA has also developed voluntary programs to conserve energy and other resources. The Green Lights Program is a successful example of such a program. As of November 1992, 301 major corporations, 24 state and county governments, 298 utilities, lighting and lighting product manufacturers, and nonprofit groups had agreed to survey their U.S. facilities and install energy-efficient lighting wherever appropriate. The Green Lights program estimates that the new lighting will use 52 percent less energy than the older lighting—and will save participants $952 million in utility costs over the next five years.

EPA's regional offices will play a large role in developing agency approaches to sustainability and implementing sustainability programs at the state and local levels. An example of this is evolving in the Northwest. EPA's Region 10 has a program under way to encourage the move toward sustainability. As the Sustainable Development Initiative continues to develop, it is expected to serve as a model for other parts of EPA. The program's activities are organized in three broad categories:

- Focusing on geographic priorities. Region 10 has identified a number of watersheds and geographic areas where ecological integrity of the system is threatened. These vary in size from small watersheds to major river basins. The region is selecting a subset of these areas where our work will emphasize sustainable development. Efforts will include integrating economic and environmental planning, establishing a consensus vision of what needs to be sustained, and developing information and educational programs to increase the focus on sustainability.
- Developing a business program. A growing body of information is becoming available on how businesses can modify practices to foster transitions toward sustainability. Region 10 plans to develop a series of workshops and other processes for increasing business awareness of and focus on these needed changes.
- Increasing the knowledge base. Region 10 will work with public and private universities to help develop the scientific, economic, and policy underpinnings of the needed changes. This will help fit together the pieces of the complex puzzle that is sustainability.

Facing the future

We are just at the beginning of understanding how to define and achieve economic development within environmental limits. At EPA, we have identified a number of the transitions that are necessary and are beginning to address them. Others are doing the same. We need to develop processes that include all sectors of society in rethinking some of the fundamental assumptions and practices driving the continued industrialization and urbanization of our world.

Albert Einstein wrote, "The significant problems we face cannot be solved by the same level of thinking we were at when we created them." I end with his words, which capture the essence of the problem. Rethinking the future to achieve sustainability is too important a challenge for us to refuse participation.

"Wet Cleaning" Tested in Demonstration Project

A process for cleaning clothes that doesn't use any chemical solvents was used in a monthlong demonstration project by two dry cleaners in Washington, D.C. The "wet cleaning" process relies on heat, steam, pressing, and biodegradable soaps to clean clothes.

The wet cleaning demonstration project is the first step in evaluating chemicals and technologies that could decrease exposures to chlorinated solvents used in dry cleaning. Currently, the chlorinated solvent perchloroethylene (PCE) is used by 82 percent of dry cleaners in the United States. PCE is listed as a hazardous air pollutant under the Clean Air Act. The demonstration project will indicate whether wet cleaning could substitute for some dry cleaning processes that use PCE and other chlorinated solvents.

EPA's Design for the Environment (DfE) program conducted the demonstration project, in cooperation with the Neighborhood Cleaners Association and the International Fabricare Institute, from November 16, 1992, to December 16, 1992. Two small dry cleaning businesses participated in the demonstration project: a dry cleaner in the shopping mall where EPA is located and a dry cleaner in L'Enfant Plaza, where a large number of U.S. government employees work. U.S. government employees and Greenpeace employees were asked to bring their clothing to these cleaners for use in the demonstration project. A competitive price was charged for the wet cleaning.

The large-volume demonstration project will help to determine

- whether wet cleaning works as well as dry cleaning;
- whether wet cleaning is cost effective; and
- whether there are ways to improve the wet cleaning process.

The DfE program will compare the risks, costs, and performance of wet cleaning with dry cleaning and with other alternatives tested in the future. The assessment will also weigh the opportunities to prevent pollution and conserve energy that are presented by alternative solvents and technologies. The DfE program is part of the Office of Pollution Prevention and Toxics.

National Pollution Prevention Center Awards Internships

Ford Motor Company Sponsors Students' Work at Plant

The National Pollution Prevention Center, located at the University of Michigan, is working with private industry to establish internships for graduate students. The first two internships, sponsored by the Ford Motor Company, were awarded by the center in spring 1992.

Two industrial engineering graduate students at the University of Michigan received the internships. The students developed a waste minimization guidance document based on waste minimization audits they conducted at the Ford plant in Livonia, Michigan. Ford will use the document to develop ways to reduce or eliminate waste streams in its manufacturing processes.

The National Pollution Prevention Center was established in 1991 to develop pollution prevention education and training activities. Its primary focus is development of pollution prevention modules for inclusion in graduate courses. The modules for law, industrial design, and engineering courses are almost completed and will be piloted at the University of Michigan this year. Modules for business, national resources, and other fields are under development.

Projects Seek Substitute Chemicals and Processes for Dry Cleaning and Printing Industries

The printing and dry cleaning industries are working with EPA to examine options for reducing environmental and health exposures to the chemicals they use. On its end, EPA will assess the risks, exposures, costs, and performance of alternative chemicals and technologies for each industry. On the industry side, companies have volunteered to pilot the use of certain alternatives.

The cooperative programs were initiated by EPA's Design for the Environment (DfE) program, which is administered by the Office of Pollution Prevention and Toxics (OPPT).

Dry cleaning project

During an international roundtable on pollution prevention for the dry cleaning industry, sponsored by EPA in May 1992, a number of representatives from both industry and state regulatory agencies asked EPA to assess alternative chemicals and technologies. In response, EPA began a "cleaner technologies substitutes assessment" as part of the DfE dry cleaning project.

The first alternative cleaning process being evaluated is "wet cleaning." In the United States, the process was tested for a few days in a Florida shop; EPA is working with an industry group to test the process in a high-volume cleaning operation. (See accompanying article, page 8.)

The DfE dry cleaning project is interested in hearing from manufacturers or others who are developing new technologies and solvents for the dry cleaning industry.

Printing project

Materials are printed by one of six methods, each of which uses different chemicals and processes. Representatives from the printing industry have chosen a particular area of concern for five of these methods; EPA is focusing on evaluating alternative chemicals and technologies for these concerns. The areas of concern are

- press and blanket washes used in lithography,
- inks used in flexography,
- inks used in gravure printing,
- cleanup washes used in screen printing, and
- roller washes used in letterpress printing.

To begin a comparison of alternatives, OPPT's printing project has developed information about printing market data, different printing methods, and technology trends. The information is available in the document *Use Cluster Analysis of the Printing Industry.*

Since the summer of 1992, printing industry trade groups and EPA have sponsored meetings with printers and product vendors to inform them of current and anticipated EPA regulatory activities affecting printing alternatives. Industry's participation in the project has also been coordinated at the meetings.

For more information

Printed materials on both the dry cleaning project and the printing project are available from the Pollution Prevention Information Clearinghouse, 7600-A Leesburg Pike, Falls Church, VA 22043; telephone, (703) 821-4800; or FAX, (703) 442-0584. Specific materials that may be of interest are the proceedings of the 1992 International Roundtable on Pollution Prevention and Control in the Dry Cleaning Industry; the "List of Federal Regulations Possibly Affecting the Printing Industry;" and *Use Cluster Analysis of the Printing Industry.*

Additional information about the dry cleaning project is available from Ohad Jehassi, Economics, Exposure, and Technology Division (TS-779), U.S. EPA, 401 M Street, S.W., Washington D.C. 20460; telephone, (202) 260-0676; FAX, (202) 260-0981.

Persons interested in participating in the printing project can contact Cathie Ramus, Economics, Exposure, and Technology Division (TS-779), U.S. EPA, 401 M Street, S.W., Washington D.C., 20460; telephone, (202) 260-0667; FAX, (202) 260-0981.

Universities Receive Grants for Research on Alternative Synthetic Chemical Pathways

The Office of Pollution Prevention and Toxics has awarded $330,000 to six universities for research on making chemical substances while minimizing or eliminating the use or production of toxic substances. Toxic substances are generally used as feedstocks, catalysts, and solvents or are produced as byproducts and impurities.

Receiving $55,500 each are Brandeis University, the University of California at Los Angeles, the University of Connecticut at Storrs, Iowa State University, Purdue University, and Virginia Polytechnic Institute and State University.

Each of the six research projects addresses a methodology to reduce or prevent pollution through the design of a more benign synthetic step, or pathway. Specifically, the research projects would reduce the generation of pollution by

- eliminating the use of organic solvents for various types of chemical reactions;
- using alternative, recyclable reagents or biocatalysts in place of heavy metals as catalysts for certain synthetic transformations;
- producing certain chemicals using sunlight as the active reagent rather than toxic chemicals;
- using simple sugars as a feedstock for the production of large-volume commodity chemicals, such as hydroquinone and adipic acid.

EPA intends for these projects to serve as models for future organic chemistry research. The agency believes the research will support pollution prevention (1) by stimulating thinking and further research on alternative synthetic pathways and (2) by producing tools for industry to use to incorporate environmental criteria in designing synthetic chemical pathways.

200 applicants

EPA invited about 200 colleges and universities to submit research proposals for funding. A panel of senior chemists from EPA and chemistry experts from outside of the agency selected the six proposals that received awards. The panel assessed each project's potential to further pollution prevention goals. EPA will track the projects' progress over the coming year.

Research Projects

University	Project
Brandeis University	Development of new catalysts to replace highly toxic tin-based catalysts. Project will include research on regenerating the new catalysts electrochemically so they will not enter the waste stream.
University of California at Los Angeles	Synthesis of styrene without the feedstock benzene, a suspected human carcinogen.
University of Connecticut at Storrs	Use of visible light instead of toxic heavy metals in a number of important chemical reactions, including reactions commonly used in the dye industry.
Iowa State University	Use of visible light to create a photochemical reaction. This method could be substituted for the Freidel-Crafts reaction, among the ten most widely-used chemical reactions in the world, in which highly toxic reagents are used.
Purdue University	Use of simple sugars as feedstocks, rather than toxic feedstocks and catalysts, in the synthesis of large-volume chemicals.
Virginia Polytechnic Institute and State University	Development of methods to use liquid carbon dioxide as the solvent for certain chemical reactions.

How to Obtain TRI Data

- **Through a computer network.** Online access to national and state TRI data is available from the National Library of Medicine's TOXNET. To obtain an account, call (301) 496-6531, or write TRI Representative, Specialized Information Services, National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20894. Account holders also have access to other National Library of Medicine databases on toxicology, health, and chemical substances.
- **At the library.** Access to state TRI data is available at most federal depository and county public libraries. The depository libraries holding the fiche or CD-ROM in their collection are listed in *Federal Depository Libraries: Your Source for the Toxic Release Inventory;* the names and addresses of the public libraries that have TRI on fiche are listed in the *Directory of Public Libraries.* To obtain a list of the libraries that provide TRI access or to obtain the brochure *Public Access to the Toxic Release Inventory,* call EPA's EPCRA Information Hotline at (800) 535-0202 or (703) 920-9877.
- **By purchasing one of these formats: CD-ROM, microfiche, diskette, magnetic tape, or written report.** These formats can be purchased from the National Technical Information Service (NTIS), the U.S. Government Printing Office (GPO), or the Department of Commerce (DOC). Listed below are the years for which the data are available. For additional information, please contact NTIS at (703) 487-4650; GPO at (202) 783-3238 (microfiche, CD-ROM, and report form) or (202) 275-0186 (magnetic tape and diskette); or DOC at (202) 377-1986 (CD-ROM).

TRI Data Available for Purchase*

	CD-ROM	Microfiche	Diskette	Magnetic Tape	Report
NTIS	1987 national inventory		1987, 1988, 1989 national inventory	1987 national inventory	1987 complete report
	1987-1989 national inventory		1987, 1988, 1989 individual state	1988 national inventory	1987 executive summary
				1989 national inventory	
				1990 national inventory	
GPO	1987 national inventory	1987 national inventory	1988 and 1989 national inventory	1987 national inventory	1987 complete report
	1987-1989 national inventory	1988 national inventory	1988 and 1989 individual state	1988 national inventory	1987 executive summary
		1987 and 1988 individual state		1989 national inventory	1988 complete report
				1990 national inventory	1989 complete report
DOC	1989 complete report (included in the "National Economic, Social, and Environmental Data Bank")				

* Order numbers can be obtained from the Emergency Planning and Community Right-to-Know Act (EPCRA) Information Hotline at (800) 535-0202 or (703) 920-9877.

SBA Petitions EPA to Modify TRI Reporting Requirements

In August 1991, the Office of Advocacy of the U.S. Small Business Administration petitioned EPA to exempt facilities releasing small amounts of toxic chemicals from reporting to the Toxics Release Inventory (TRI).

The Small Business Administration suggested that EPA "exclude facilities with releases and transfers below 5,000 pounds annually for the vast majority of section 313 chemicals" no matter how large a quantity of the chemical is used by the facility. For chemicals that are toxic in very small amounts, the SBA suggests a lower release threshold, such as 10 pounds.

In its petition, the Small Business Administration stated that current reporting regulations (1) subject small businesses to reporting toxic releases of insignificant amounts, (2) have a minimal impact on the environment, and (3) subject small businesses to unnecessary regulation. The petition does not define "small business" or suggest an acceptable level of burden for these facilities.

The Small Business Administration petitioned EPA under section 553(e) of the Administrative Procedure Act, which allows any person to petition EPA or other federal agencies to issue, amend, or repeal rules.

Reporting thresholds for chemicals and chemical categories are established by section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986. EPCRA requires that certain facilities report to the TRI if they manufacture, process, or import 25,000 pounds of a toxic chemical annually or if they otherwise use 10,000 pounds of a toxic chemical annually.

Section 313 of EPCRA allows EPA to add or delete chemicals from the TRI list and to change the threshold reporting limits. The statute does not address other means of modifying EPCRA reporting.

EPA requests comment

EPA identified several areas of concern regarding this petition and published a Notice of Receipt of Petition (57 FR 48706, October 27, 1992). The notice requested public comment on the overall effect of release-based TRI reporting and other issues.

For more information, contact Tamara McNamara, Environmental Assistance Division (TS-799), 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-5997.

EPA Makes Proposals for Adding Substances to TRI List

EPA has made two alternate proposals for adding chemical substances and chemical categories to the list of toxic substances subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).

- EPA proposes adding 68 chemicals and two chemical categories to the reporting list.
- EPA proposes to establish an annual manufacturing threshold and add the chemicals that exceed this threshold to the reporting list.

Background

New York Governor Mario M. Cuomo and the Natural Resources Defense Council petitioned the agency in March 1992 to add 80 chemicals and two chemical categories to the EPCRA list. All of the chemicals and chemical categories on the petition are listed as toxic wastes in the Resource Conservation and Recovery Act.

EPA proposes to add 68 of the chemicals and the two chemical categories listed on the petition to the EPCRA list. Available data indicate that these 70 chemicals meet the criteria for addition to the reporting list as established by section 313(d)(2) of EPCRA. The cri-

***Proposals** continued on page 13*

TRI Attracts Attention at International Exhibition

The Toxics Release Inventory (TRI) was showcased this summer at the International Exhibition of Environmental Technology in San Paulo, Brazil. The technology fair took place in conjunction with the United Nations' Earth Summit in Rio de Janeiro.

Thousands of people visited the TRI exhibit during the six-day fair. The United States is one of the few nations in the world that collects and provides public access to data about toxic chemicals emitted by industry. The emissions data are taken from reports that certain facilities are required by law to file with EPA. EPA compiles and releases this information annually in the TRI.

Among the visitors to the TRI exhibit were foreign officials interested in learning how to provide their citizens access to data about toxic emissions in their communities. Visitors from Brazil were particularly interested in learning how to integrate toxic chemical reporting by industry with information the nation currently collects for emergency preparedness.

The TRI exhibit provided background on the U.S. commitment to the principle of the public's right to know the amounts and kinds of chemicals that are stored, used, and released in their midst. It provided specific information about the TRI and EPA's 33/50 Program, a voluntary effort to reduce toxics emissions. The exhibit also included a demonstration of the CD-ROM version of TRI and videos on the Right-to-Know program and the 33/50 Program.

EPA Administrator William K. Reilly and United Nations Secretary-General Maurice Strong conducted the ribbon-cutting ceremony at the TRI exhibit. The delegation from EPA's Office of Pollution Prevention and Toxic Substances, sponsors of the TRI exhibit, was headed by Linda Travers, director of the Information Management Division.

***Proposals** continued from page 12*

teria are that the chemicals cause acute human health effects, cancer or other chronic human health effects, or harmful environmental effects.

In a second proposal, EPA proposes to add to the EPCRA list only those chemicals manufactured, imported, or processed in quantities greater than an annual per-facility threshold set by EPA. EPA is considering two manufacturing and processing thresholds: (1) a 25,000-pound a year threshold for each facility, which is the current EPCRA section 313 manufacturing and processing threshold or (2) a 10,000-pound a year threshold for each facility, which is the current EPCRA section 313 use threshold. EPA sought public comments during the fall on the use of an annual threshold and on what an appropriate threshold should be.

EPA believes that adding chemicals that do not meet the 25,000-pound threshold (1) will not result in additional release information and (2) will impose an undue burden on industry.

Twenty-two of the 70 chemicals that EPA is proposing to add to the EPCRA reporting list are manufactured or processed at individual facilities in quantities of greater than 25,000 pounds.

In regard to the 48 chemicals that do not meet the 25,000-pound threshold, EPA proposes requiring industry to notify the agency prior to any activity that would meet the 25,000-pound threshold. Notification would be required by a significant new use rule (SNUR) under section 5 of the Toxic Substances Control Act (TSCA). The advance notice required by SNURs would allow EPA to act to prevent potentially adverse exposure to or effects from the increased use of the substance.

For more information

For further information, see 57 FR 41020; September 8, 1992. Or, contact Maria J. Doa, Environmental Assistance Division (TS-799), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, 260-9592; FAX, (202) 260-0981.

TRI Section 313 Petitions

Receipt Date	Chemical Name	Submitter	Action Requested	180-Day Deadline	Proposed Rule FR Pub Date	Final Rule or Denial Pub Date
Petitions Denied						
11/25/86	Inorganic Fluorides	Safe Water Foundation of Texas	List	/ /	/ /	05/29/87
04/30/87	Orthophenylphenol	DOW Chemical Company	Delist	/ /	/ /	10/29/87
05/15/87	Cobalt & Compounds	Hall Chemical Company	Delist	/ /	/ /	12/03/87
05/15/87	Nickel & Compounds	Hall Chemical Company	Delist	/ /	/ /	12/03/87
05/15/87	Manganese & Compounds	Hall Chemical Company	Delist	/ /	/ /	12/03/87
07/13/88	Ethylene	Chemical Manufacturers Assoc.	Delist	/ /	/ /	01/27/89
07/13/88	Propylene	Chemical Manufacturers Assoc.	Delist	/ /	/ /	01/27/89
09/09/88	Cyclohexane	Chemical Manufacturers Assoc.	Delist	/ /	/ /	03/15/89
04/14/89	Cadmium Selenide	SCM Chemicals, Inc.	Delist	/ /	/ /	10/19/89
04/14/89	Cadmium Sulfide	SCM Chemicals, Inc.	Delist	/ /	/ /	10/18/89
05/15/89	Decarbromodiphenyl Oxide	Great Lakes Chemical Corp.	Delist	/ /	/ /	11/03/89
06/27/89	Cr/Sb/Ti Buff Rutile	Dry Color Manufacturers Assoc.	Delist	/ /	/ /	01/08/90
08/07/89	Barium Sulfate	Petroleum Equipment Suppliers Assoc	Delist	/ /	02/12/90	05/23/91
09/05/89	Antimony Compound	Synthetics Product Company	Delist	/ /	/ /	02/13/90
09/07/89	Zinc Borate Hydrate	U.S. Borax Research Corp.	Delist	/ /	/ /	03/20/90
09/19/89	Barium Sulfate	Dry Color Manufacturers Assoc.	Delist	/ /	02/12/90	05/23/91
12/12/89	Sulfuric Acid	ECOLAB Inc	Delist	/ /	/ /	06/18/90
01/29/90	Zinc Sulfide	Ore and Chemical Corp.	Delist	/ /	/ /	08/01/90
05/21/91	Chromium(III) Compounds	California Products Corp.	Delist	/ /	/ /	11/22/91
Petitions Granted						
08/24/87	Titanium Dioxide	Dupont De Nemours And Co.	Delist	/ /	02/19/88	06/20/88
08/19/87	Titanium Dioxide	SCM Chemicals, Inc. and Didier Taylor Refractories Corp.	Delist	/ /	02/19/88	06/20/88
08/19/87	Titanium Dioxide	Didier Taylor Refractories Corp.	Delist	/ /	02/19/88	06/20/88
10/06/87	Titanium Dioxide	Kemira Oy.	Delist	/ /	02/19/88	06/20/88
10/06/87	CI Acid Blue 9	Ecological and Toxicological Assoc of the Dyestuffs Manufacturing Industry	Delist	/ /	04/12/88	10/07/88
10/06/87	CI Acid Blue 9	Ecological and Toxicological Assoc. of the Dyestuffs Manufacturing Industry	Delist	/ /	04/12/88	10/07/88
10/07/87	Melamine Crystal	Melamine Chemical Company	Delist	/ /	06/20/88	03/29/89
04/22/88	Sodium Hydroxide Solution	Chlorine Institute Inc.	Delist	/ /	12/09/88	12/15/89
06/01/88	CI Pigment Blue 15	Dry Color Manufacturers Assoc.	Delist	/ /	05/15/91	05/23/91
06/01/88	CI Pigment Green 7	Dry Color Manufacturers Assoc	Delist	/ /	05/15/89	05/23/91
06/01/88	CI Pigment Green 36	Dry Color Manufacturers Assoc.	Delist	/ /	05/15/89	05/23/91
08/09/88	Sodium Sulfate	Hoechst Celanese Corp	Delist	/ /	02/17/89	06/20/89
09/30/88	Alum. Oxide (Non-Fibrous)	Aluminum Association, et al.	Delist	/ /	04/12/89	02/14/90
07/27/89	Terephthalic Acid	Amoco Corp.	Delist	/ /	02/15/90	12/10/90
01/09/90	Seven CFCs and Halons	Natural Resources Defense Council and Governors Mario Cuomo of New York, Madeleine Kunin of Vermont, Thomas Kean of New Jersey	List	/ /	03/21/90	08/03/90

TRI Section 313 Petitions

Receipt Date	Chemical Name	Submitter	Action Requested	180-Day Deadline	Proposed Rule FR Pub Date	Final Rule or Denial Pub Date
Petitions Pending						
11/19/90	Phosphoric Acid	The Fertilizer Institute	Delist	05/18/91	/ /	/ /
09/11/91	Hydrochloric Acid	Vulcan/Dupont/BASF/Monsanto	Modify	03/09/92	/ /	/ /
09/24/91	Acetone	Eastman Chem./ Hoechst Celanese	Delist	03/22/92	/ /	/ /
09/24/91	Barium Sulfate	Chemical Products Corp.	Delist	03/22/92	/ /	/ /
11/06/91	Barium Sulfate	Dry Color Manufacturers Assoc.	Delist	03/22/92	/ /	/ /
01/28/92	Di-N-Octyl Phthalate	Vista Chemical Company	Delist	07/26/92	/ /	/ /
06/18/92	Chromium in Stainless Steel	Russel Harrington Cutlery Co.	Exempt	12/15/92	/ /	/ /
10/06/92	Nickel in Stainless Steel	Bath Iron Works	Exempt	04/06/93	/ /	/ /
Proposed Rules						
02/09/87	Butyl Benzyl Phthalate	Monsanto Chemical Co.	Delist	/ /	07/20/87	/ /
01/23/89	Ammonium Sulfate (SOLN)	Allied Signal, Inc.	Delist	/ /	03/30/90	/ /
12/24/90	Sulfuric Acid	American Cyanamid	Modify	/ /	07/26/91	/ /
12/03/91	HCFCs	Natural Resources Defense Council, Friends of the Earth, Environmental Defense Fund	List	/ /	06/24/92	/ /
03/04/92	82 Resource Conservation Recovery Act U Listed Chemicals	Natural Resources Defense Council, Governor Mario Cuomo of New York	List	/ /	09/08/92	/ /
Petitions Withdrawn						
01/27/88	Iron Chromite	American Minerals	Delist	/ /	/ /	/ /
01/27/88	Molybdenum Trioxide	Amax Mineral Resource Co	Delist	/ /	/ /	/ /
07/21/88	Phthalic Anhydride	Chemical Manufacturers Assoc.	Delist	/ /	/ /	/ /
09/09/88	Methyl Ethyl Ketone	Chemical Manufacturers Assoc.	Delist	/ /	/ /	/ /
09/09/88	Methyl Isobutyl Ketone	Chemical Manufacturers Assoc.	Delist	/ /	/ /	/ /
11/22/88	Diethyl Phthalate	Firmenich, Inc.	Delist	/ /	/ /	/ /
11/28/88	Trifluralin	Eli Lilly and Co.	Delist	/ /	/ /	/ /
12/14/89	Phosphoric Acid	Ecolab, Inc.	Delist	/ /	/ /	06/25/90
Chemicals Added to TRI Reporting List by EPA						
/ /	2,3-Dichloropropene	EPA	List	/ /	04/21/89	12/01/89
/ /	m-Dinitrobenzene	EPA	List	/ /	04/21/89	12/01/89
/ /	p-Dinitrobenzene	EPA	List	/ /	04/21/89	12/01/89
/ /	o-Dinitrobenzene	EPA	List	/ /	04/21/89	12/01/89
/ /	Allyl Alcohol	EPA	List	/ /	04/21/89	12/01/89
/ /	Isosafrole	EPA	List	/ /	04/21/89	12/01/89
/ /	Creosote	EPA	List	/ /	04/21/89	12/01/89
/ /	Dinitrotoluene-mixed Isom	EPA	List	/ /	04/21/89	12/01/89
/ /	Toluenediisocyanate-mixed	EPA	List	/ /	04/21/89	12/01/89

Local Emergency Planning Committees Receive Grants

EPA has awarded more than $500,000 to 15 states and one Indian tribe to strengthen the capabilities and operations of their local emergency planning committees. Federal law requires these committees to develop local emergency response plans to manage accidents involving hazardous materials in their communities.

Each recipient of the funds is located in an area at high risk for a major accident associated with a chemical release.

The Emergency Planning and Community Right-to-Know Act (EPCRA) required that states and Indian tribes set up local emergency planning committees. EPCRA is part of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and is also known as title III of SARA. There are more than 3,800 local emergency planning committees in the United States.

State/Tribe	Grant Recipient	Award Received
Kansas	Office of Emergency Management	$ 50,000
Kentucky	Emergency Response Commission	$ 41,872
Louisiana	Emergency Response Commission	$ 51,475
Massachusetts	Emergency Response Commission	$ 46,367
Montana	Emergency Response Commission	$ 44,017
Nebraska	Department of Environmental Control	$ 49,500
Nevada	Emergency Response Commission	$ 15,000
New York	Emergency Response Commission	$ 50,000
North Carolina	Emergency Response Commission	$ 39,750
Ohio	Emergency Response Commission	$ 12,000
Pennsylvania	Emergency Management Agency	$ 46,350
Rhode Island	Department of Labor	$ 10,000
Umatilla Tribe	Confederated Tribes of the Umatilla	$ 47,842
Vermont	Emergency Response Commission	$ 27,400
Virginia	Emergency Response Commission	$ 30,000
West Virginia	Emergency Response Commission	$ 25,000

Congress Passes Law to Reduce Hazards from Lead-Based Paint in Housing

On October 16, 1992, Congress passed a broad housing bill that contained provisions to eliminate lead-based paint hazards in private and public housing. President Bush signed the bill into law on October 28.

The lead provisions are contained in the Residential Lead-based Paint Hazard Reduction Act, also known as title X of the Housing and Community Development Act of 1992.

Requirements for EPA

The new law provides EPA with the authority to carry out activities to reduce the prevalence of childhood lead poisoning in a reasonable and cost-effective manner. For instance, the bill asks EPA to issue guidelines for reducing the risk of exposure when renovating or remodeling, and it requires the training and certification for inspection workers and lead-based paint abatement contractors. The law also directs EPA to

- work with HUD to jointly promulgate rules that require people who are selling or renting pre-1978 housing to disclose the presence of any known lead-based paint;
- identify lead-based paint hazards, lead-contaminated soil, and lead-contaminated dust; and
- study the extent to which people who renovate or remodel homes are exposed to lead and the extent of the hazard created by the renovation or remodeling. If appropriate, the agency is to revise the accreditation regulations using the results of this study.

Requirements for HUD

The U.S. Department of Housing and Urban Development (HUD) is also required to undertake a number of activities under the law. The law directs HUD to

- work with EPA to jointly promulgate rules that require people who are selling or renting pre-1978 housing to disclose the presence of any known lead-based paint;

Lead Bill continued on page 19

Lead Hotline Opens

Information about Reducing Children's Exposure to Lead Available From New Information Service

Call the National Lead Information Center at (800) LEAD-FYI (532-3394)

The U.S. government has opened a toll-free information service to educate parents about simple steps for reducing their children's exposure to lead in the home. Callers to the automated answering service will receive an easy-to-read brochure outlining these steps and several fact sheets on related topics. The materials are available in both English and Spanish. The information service will also provide each caller with a list of state or local contacts for additional information. The toll-free telephone number for the information service is (800) LEAD-FYI (532-3394). The TDD phone number is (800) 424-LEAD (424-5323).

The information service is the first phase of the federal government's National Lead Information Center. The next phase, slated to open in mid-1993, is a lead clearinghouse. The clearinghouse, staffed by information specialists, will serve as a resource for a wide range of people, including health professionals; state and local officials; the housing, construction, and residential renovation sectors; the financial, real estate, and insurance sectors; and private citizens.

The National Lead Information Center is a joint effort of EPA, the Centers for Disease Control, the Department of Housing and Urban Development, the Department of Defense, the Consumer Product Safety Commission, and other federal agencies.

EPA Establishing Lead Accreditation Program for Labs

Interagency Report Provides Guidelines

Agencies involved in a federal initiative to reduce exposures to lead have agreed a national program to accredit laboratories analyzing lead is necessary. Congress recently gave EPA responsibility for setting up the program, which will focus particularly on laboratories performing analyses of lead-contaminated paint, dust, and soil from homes.

An Interagency Lead-Based Paint Task Force subcommittee provided guidelines for establishing the program in its report *Laboratory Accreditation Program Guidelines: Measurement of Lead in Paint, Dust, and Soil.* The task force comprises a number of agencies—including EPA and the Department of Housing and Urban Development—involved in a federal initiative to reduce children's exposure to lead-based paint.

EPA activities

EPA's Office of Pollution Prevention and Toxics (OPPT) has established the EPA National Lead Laboratory Accreditation Program (NLLAP). The accreditation program will help ensure the quality of analytical data used for decisions about abatement and control of lead-contaminated paint, dust, and soil from homes.

OPPT has drafted two sets of guidelines for the program: training guidelines for lead laboratory assessors and operations guidelines for laboratories that want to be accredited. To receive accreditation, laboratories must successfully (1) complete a proficiency testing program and (2) undergo an on-site systems audit. The proficiency testing program is being implemented by the National Institute of Occupational Safety and Health, in cooperation with the American Industrial Hygiene Association. EPA will accredit private organizations to perform the on-site systems audits. These activities, as well as other planned activities, are based on the task force subcommittee report's recommendations.

For more information

For further information or to obtain a copy of *Laboratory Accreditation Program Guidelines: Measurement of Lead in Paint, Dust, and Soil,* contact John Scalera, Chemical Management Division (TS-798), 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-6709.

The accreditation program will help ensure the quality of analytical data used for decisions about abatement and control of lead-contaminated paint, dust, and soil from homes.

Lead Bill continued from page 17

- provide grants to states and local programs to certify contractors who engage in lead-based paint activities;
- ensure the inspection and abatement of lead-based paint hazards in federally owned housing constructed before 1960; and
- require periodic risk assessments and interim controls in pre-1978 housing (1) covered by HUD mortgage insurance or (2) rented with HUD housing assistance, in addition to providing a pamphlet on lead-based paint risks to people who buy or rent this housing.

Federal lead activities

EPA, HUD, and the Department of Health and Human Services have been at the forefront of federal efforts to reduce children's exposure to lead. During 1990 and 1991, the three agencies released strategies aimed at reducing the health risks caused by lead exposure, particularly in children. They are working with 14 other federal agencies on the Federal Interagency Lead-based Paint Task Force.

EPA Studies Leaching of Lead from Abated Materials

When lead-based paint is abated in people's homes, housing materials such as windows, doors, and moldings are often removed. In 1990, Congress directed EPA to study which of these and other abated materials are likely to fall within the definition of hazardous waste that is contained in the Resource Conservation and Recovery Act (RCRA). Materials classified as hazardous waste must be disposed of according to RCRA regulations.

In the study, EPA collected samples of wastes typically generated by abatement: paint chips, plaster, wash water, and plastic sheeting used to protect floors and carpets from contamination, in addition to the bulk woodwork samples mentioned in the first paragraph. The agency tested these materials to determine whether lead is likely to be leached from them into groundwater and surface water. The agency followed RCRA regulations in conducting toxicity testing of the sample wastes.

EPA will report to Congress on the test results in 1993. The report will also be available to the public. The report will contain preliminary cost information about disposal of abatement materials if classified as hazardous waste. The report is currently being reviewed by the Office of Management and Budget.

For more information

EPA's Office of Solid Waste and Office of Pollution Prevention and Toxics conducted the study. For information about the report, contact Melinda Pearce, Chemical Management Division (TS-798),

EPA collected samples of wastes typically generated by abatement: paint chips, plaster, wash water, and plastic sheeting.

U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-3397.

For information about RCRA hazardous waste testing, treatment, and disposal requirements, contact Dave Topping, Characterization and Assessment Division (OS-333), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-7737.

OPPT Restructures Functions, Programs

In October 1992, the Office of Pollution Prevention and Toxics (OPPT) restructured many of its functions and programs. The reorganization reflects the way OPPT operates today and will better accomplish OPPT's mission: protecting and improving public health and environmental resources.

OPPT's vision

OPPT uses both regulatory and nonregulatory approaches to promote

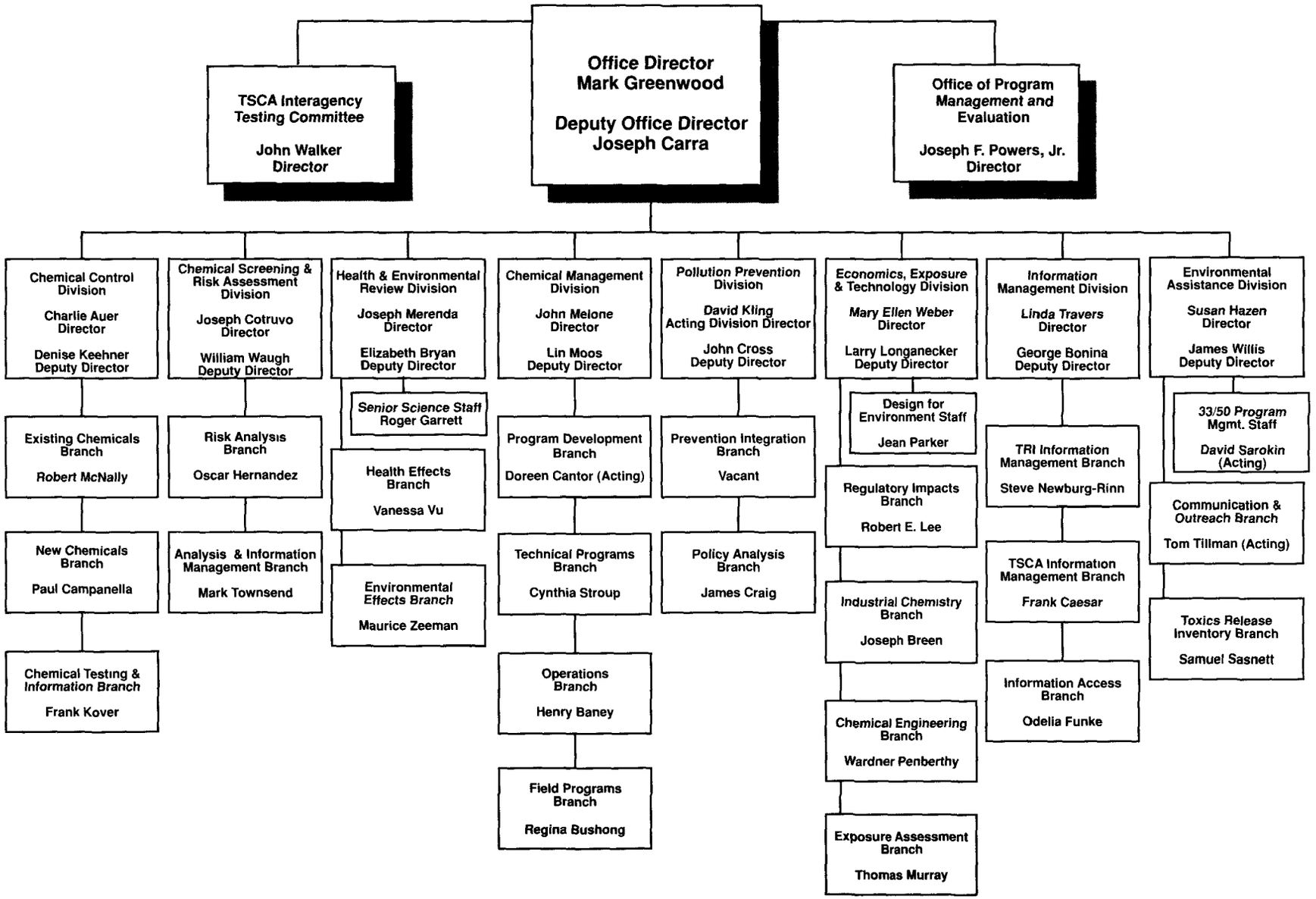
- pollution prevention as a principle of first choice to achieve environmental stewardship throughout society;
- the design, development, and application of safer chemicals, processes, and technologies in industry;
- risk reduction and responsible risk-management practices throughout the life cycle of major chemicals of concern; and
- public understanding of chemical risks and public involvement in environmental decision making.

To achieve this vision, OPPT

- focuses on activities that (1) maximize risk-reduction opportunities, emphasizing ecological as well as human health concerns; (2) involve multimedia exposures; (3) link OPPT activities to EPA priorities; and (4) emphasize pollution prevention opportunities;
- acquires, helps to interpret, and disseminates information to governments, industry, and the public on (1) chemical uses, exposures to chemicals, and risks posed by chemicals; (2) chemical releases, including reductions of toxic chemicals in releases and in waste streams; and (3) pollution prevention technologies, strategies, and successes; and
- supports adoption of pollution prevention activities by (1) supplying information, training, and technical assistance to all sectors of government and industry and (2) publicly recognizing those who have successfully implemented pollution prevention activities.
- *OPPT organization chart is on page 21.*

The reorganization reflects the way OPPT operates today and will better accomplish OPPT's mission: protecting and improving public health and environmental resources.

OFFICE OF POLLUTION PREVENTION AND TOXICS



Update of Existing Chemicals Program RM1 and RM2 Activity

EPA's Existing Chemicals Program identifies and develops strategies for managing risks posed by "existing chemicals," those chemicals that can be commercially produced or used under the Toxic Substances Control Act (TSCA). There are about 70,000 existing chemicals in the United States.

The Office of Pollution Prevention and Toxics (OPPT) administers the Existing Chemicals Program, which comprises two levels of review:

- During Risk Management One (RM1), OPPT identifies existing chemicals that (1) need additional testing; (2) present potentially significant risk-management concern; or (3) do not currently require further OPPT review.
- During Risk Management Two (RM2), OPPT focuses on (1) improving understanding about the potential risks posed by exposure to particular chemicals and (2) developing strategies to reduce or eliminate the potential risks.

RM materials are available to the public through the RM administrative record.

Activity update

A chart showing RM1 and RM2 activity as of July 1992 ran in *Chemicals-in-Progress Bulletin,* Volume 13, No. 2. The chart on page 23 shows only those chemicals that have moved to another stage of RM review as of October 1992.

For more information

OPPT encourages public participation throughout the RM process. RM materials are available to the public through the RM administrative record. The public can gain access to the administrative record in four ways:

1. In person, by going to the Public Reading Room, in room G-004 of the Northeast Mall, EPA headquarters, 401 M Street, S.W., Washington, D.C., between 8:00 a.m. and noon and 1:00 p.m. and 4 p.m., Monday through Friday.
2. By writing to EPA/OPPT/PDB (TS-793), Attention: RM Administrative Record, Room G-004, Northeast Mall, 401 M Street, S.W., Washington, D.C., 20460.
3. By calling (202) 260-3587.
4. By FAXing (202) 260-4655, Attention: RM Administrative Record.

RM Activity from July 1992 through September 1992

Chemical Name	RM1 Activity	RM2 Activity
Aerosol paints	Risk reduction	Entered in queue for assessment
Carpet emissions	Testing to assess the effect of carpet emissions in laboratory animals	
Chloranil		Consent agreements and voluntary industry agreements to convert to cleaner product
Chloroethane		Implementing RM2 exit options (Implementing lower American Conference of Governmental Industrial Hygienists' threshold level value; negotiating with industry on labeling)
Epichlorohydrin	Dropped	
Lead encapsulants	Dropped	
Lead, nonplumbing solder		Exited RM2 in October 1992
Methyl ethyl ketone /methyl isobutyl ketone	Dropped	
Metal-cutting fluids	Dropped	
N-Methylpyrrolidone		Assessment under way individually and as part of paint-stripping cluster
Polyacrylamide	Dropped	
Phosphoric acid waste		Exited RM2 in August 1992

Chemical Cluster	RM1 Activity	RM2 Activity
Management audit chemicals:		
Glycol ethers	Dropped	
Tri (alkyl/alkoxy) phosphates	Dropped	

1992 Master Testing List Is Available

For the Master Testing List or additional information, contact the TSCA Assistance Information Service (TSCA hotline) at (202) 554-1404.

EPA has updated the Master Testing List (MTL), which is the agency's agenda for testing industrial chemicals over the next two to three years. Development of test data is necessary because existing test data on the substances are insufficient for EPA to evaluate potential health and environmental risks. The MTL indicates the testing needed for hazard endpoints (health and environmental toxicity) and exposure.

Additions to the MTL

Since 1990, when EPA released the first MTL, the agency has added 222 chemical substances and nine chemical categories to the MTL.

The 222 chemical substances comprise 106 chemicals from the Organization for Economic Cooperation and Development's Screening Information Data Set (SIDS) program; 14 chemicals designated by the Interagency Testing Committee in its 27th and 28th Reports; 66 chemicals from the category of glycidol and glycidol derivatives; 12 chemicals from the category of aryl phosphates; 12 chemicals that are listed in the proposed multi-chemical test rule for developmental and reproductive toxicity; 10 chemicals that are listed in the proposed multi-chemical test rule for neurotoxicological effects; refractory ceramic fibers, for which exposure monitoring will be undertaken; and formaldehyde, for which emissions characterization in new conventional and manufactured housing will take place.

The nine chemical categories that have been added are persistent bioaccumulators; chemical categories of concern identified by EPA's New Chemicals Program; a subset of chemicals from the Toxics Release Inventory; a subset of chemicals from the air toxics list in section 112 of the Clean Air Act Amendments of 1990; a subset of chemicals listed for priority testing by the Agency for Toxic Substances and Disease Registry under section 104 of the Superfund Amendments and Reauthorization Act; respirable synthetic and naturally occurring fibers; polychlorinated dioxins and furans in wood pulp and paper mill sludge; volatile organic compounds from carpets and carpet products for indoor air source characterization; and volatile organic compounds from paint, varnishes, and other interior coatings for indoor air source characterization.

Summary of testing activity

Since 1990, EPA has begun efforts to obtain needed testing for more than 110 chemicals. EPA has also issued test rules, signed consent orders, or negotiated voluntary agreements with industry for testing six individual chemicals and various chemicals in carpet and carpet products. Risk assessments were completed for more than 40 chemicals, and these chemicals were deleted from the 1992 MTL. Further, industry from around the world is voluntarily testing 159 international high-production-volume chemicals through the SIDS program. U.S. participants have agreed to test 39 of the SIDS chemicals.

EPA asks for submission of existing data

EPA requests that industry and other parties submit existing relevant data on the substances listed in the MTL. Existing data may meet or refocus the need for testing of specific chemicals and make it unnecessary for the agency to develop consent orders and test rules under the Toxic Substances Control Act (TSCA). The agency encourages respondents to consult EPA prior to submitting such information. For consultations, contact David Williams, Chemical Control Division (TS-794), U.S. EPA, 401 M Street, S.W., Washington D.C. 20460; telephone, (202) 260-8130.

How to submit comments

To provide comments on this or future updates of the MTL, write to the TSCA Public Docket (TS-793), Attn: TSCA Section 4 Master Testing List, Office of Pollution Prevention and Toxics, U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

EPA to Propose Measures to Decrease Number of TSCA CBI Submissions

Early this year, EPA will propose a number of voluntary and regulatory measures to reduce the amount of material submitted as confidential business information (CBI) under the Toxic Substances Control Act (TSCA). The proposal follows a commissioned study's findings that CBI claims severely limit public access to TSCA data and that a significant number of claims do not appear to be supportable under the statute. EPA will continue to protect legitimate CBI claims that preserve a company's competitive advantage, such as CBI claims made for information contained in premanufacture notices submitted for review.

TSCA directs EPA to collect chemical data and make it available to the public. The law also allows companies to claim information submitted to EPA as confidential, provided the information meets certain criteria. EPA provides full CBI security protection to all CBI claims. However, there are no penalties under TSCA for false claims of confidentiality, and EPA's existing procedures do not provide effective regulatory controls for CBI claims. The CBI study found that the proportion of data submitted under TSCA that is covered by CBI claims is much greater than that for data submitted under other statutes that collect comparable information, but which impose more stringent requirements for asserting CBI claims. In fact, the study found publicly available data in the Toxics Release Inventory (TRI) that were similar to data claimed as CBI under TSCA.

OPPT activity

The Office of Pollution Prevention and Toxics (OPPT) has taken steps to reverse the upward trend of CBI submissions. The focus of this effort was, and continues to be, health and safety studies and notices of substantial risk submitted under sections 8(d) and 8(e) of TSCA. First, in 1990, OPPT initiated a program to challenge submissions that did not appear to meet the legal definition of CBI. In every case challenged by EPA, the submitting company amended its CBI claim. Second, in 1991, OPPT commissioned the study of CBI claims. The study, completed last year, found that while many CBI claims are valid, many others are unsubstantiated or are not allowed under the TSCA. Third, in September 1992, OPPT began a series of individual meetings with industry, state officials, and representatives from environmental groups to discuss the study's findings and the future direction of the TSCA CBI program. Fourth, in October 1992, OPPT held an open public meeting on the subject. In these meetings, participants discussed whether OPPT should (1) exclude certain classes of information from ever being submitted as CBI; (2) allow CBI claims to expire after an established time limit, known as a sunset provision; (3) require industry to substantiate CBI claims at the time of submittal; or (4) require that a senior company official certify the claim is necessary, as required when submitting CBI to the TRI. The participants' comments are being considered by EPA in preparing for the next step: proposing voluntary and regulatory measures to decrease TSCA CBI submissions. The proposal will be subject to a public meeting and further discussions with industry, states, and public interest groups.

In the course of the coming year, OPPT will continue to meet with interested and affected members of the community to address TSCA CBI issues. OPPT is especially interested in working with industry to voluntarily reduce the number of CBI claims. Education programs, voluntary industry guidelines, and other cooperative activities could reduce the need for regulatory measures. OPPT will continue to review and challenge CBI claims for information submitted about existing chemicals, which are listed on the TSCA Inventory.

EPA Conducts Study of Environmental Design Used in Washington State Office Building

EPA is conducting a large-scale pilot study in an office building to confirm the effectiveness of using fresh-air exchanges to flush out indoor pollutants. The office building is part of a government complex in Olympia, Washington. In 1989, the state of Washington received complaints from state employees about their office building's air quality. The complaints spurred the state to design environmental features into other office buildings planned for the government complex. The Natural Resources Building, completed last April, is the site of the pilot study. EPA will use the pilot findings to develop a more detailed study of the Ecology Building, slated for completion in 1993.

In designing the buildings, the state set maximum indoor pollutant levels and established testing procedures to ensure that the limits are met. Before purchasing building materials, the state developed environmental criteria for heating, ventilation and air conditioning systems and required vendors to certify that interior finishes, furnishings, and products met established emission rates.

How effective is fresh-air flushing?

EPA is evaluating whether the state's efforts did in fact improve the air quality in the Natural Resources Building. The study is primarily focusing on the effectiveness of a 90-day flush-out period, which took place prior to the building's occupation. During these 90 days, the heating and air conditioning system continuously flushed the building with outdoor air and exhausted the building's indoor air. The state specified that furnishings, wall coverings, flooring, and carpeting were to be installed prior to or during the flush-out period.

> This is the first study that seeks to confirm that the flush-out procedure improves air quality in large buildings.

Chamber studies have demonstrated the effectiveness of a flush-out period in increasing emissions of toxics from products used indoors. Scientists have speculated that air exchange would also work in larger areas. This is the first study, however, that seeks to confirm that the procedure improves air quality in large buildings.

EPA's evaluation

EPA is analyzing air samples from the building for total volatile organic compounds, individual volatile organic compounds, and total particulates. The samples, collected in periodic intervals over eight months, were taken from four representative locations within the building and from air drawn into the building through the heating and air conditioning system. The agency also set up continuous monitors at one site in the building. In addition, EPA continuously monitored emissions of formaldehyde at the four representative locations.

Throughout the eight-month period, EPA periodically measured the rate at which outdoor and indoor air were exchanged in the building. Temperature and humidity, which affect the release of pollutants from products, were also measured at the four representative locations. EPA expects to complete its analysis in April 1993.

For more information

To obtain additional information about the pilot study, write to Sid Abel, Economics, Exposure, and Technology Division (TS-779), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Indoor Air Pollution Prevention Program Seeks to Reduce Health Risks From Products Used Indoors

In the early '80s, EPA compared the results of air samples taken from public buildings with air samples taken outdoors. The results indicated that indoor air was frequently more polluted than outdoor air in both rural and urban areas. Since then, EPA has worked on a number of projects to reduce indoor air pollution.

One of these programs is the Indoor Air Pollution Prevention Program. In this program, EPA is identifying products that contribute to indoor air pollution and obtaining data on the chemicals contained in those products. The long-term goal of the Indoor Air Pollution Prevention Program is to reduce the risks associated with products in indoor environments. EPA's Office of Pollution Prevention and Toxics (OPPT) and the Indoor Air Division, of EPA's Office of Radiation and Indoor Air Programs, are working together on the Indoor Air Pollution Prevention Program.

> The program will ask manufacturers to characterize the chemical emissions from their products.

Prioritizing product classes for review

OPPT's Indoor Air Pollution Prevention Program has designed a system to rank product classes by the risks they pose in the indoor environment. The Existing Chemicals Program will review the product classes in the order of their risk scores. (For information about product classes, see accompanying article.)

The ranking system uses a source-ranking database to score product classes according to existing information on chemical formulations, emissions, product use rates, toxicity, and the size of exposed populations.

Characterizing chemical emissions

The Indoor Air Pollution Prevention Program will ask manufacturers to characterize the chemical emissions from their products. OPPT will analyze this information and document the extent of chemical use in each product class. Health hazard information will be developed to develop a quantitative

Indoor Air continued on page 28

U.S. Census Bureau Product Classes Used for Indoor Air Pollution Prevention Program

The Indoor Air Pollution Prevention Program is screening products by their product class. The product classes have been defined by the U.S. Census Bureau's Standard Industrial Classification (SIC) system.

For instance, the Indoor Air Pollution Prevention Program is assessing resilient floor covering. The breakdown of the SIC classification for this product class is shown below.

Product group	Building materials Consumer products Furnishings and equipment
Product class (five-digit code)	Resilient floor covering
Product (seven-digit code)	Sheet vinyl flooring
Product name/brand	Armstrong vinyl flooring

Indoor Air continued from page 27

or qualitative sense of a chemical's toxicity.

OPPT will seek voluntary agreements with industry to conduct the characterizations. If this approach is unsuccessful, the agency will use its regulatory authorities under the Toxic Substances Control Act (TSCA).

Reducing indoor toxics emissions

To reduce the risks posed by indoor air pollution, the Indoor Air Pollution Prevention Program is focusing on reducing the toxic emissions from building materials and other products widely used by consumers at home and at work. Reductions are best achieved by substituting chemicals used in producing consumer products or by developing alternative products and technologies.

OPPT plans (1) to actively work with industry and other interested people to assess how indoor air pollutants affect human health; (2) to solicit voluntary participation in surveys of existing alternative and safer products and technologies that could result in reductions of indoor emissions; (3) to encourage development of new products and technologies for source reduction; and (4) to develop regulations under TSCA, when necessary, to require testing, labeling, or reduction of toxic emissions.

Assessment process for product classes

The process for assessing indoor air products for review is summarized here.

1. OPPT is prioritizing product classes according to the potential health risks created by their toxic emissions. After the prioritization is complete, OPPT will select a product class and perform preliminary testing of sample products, develop test procedures for chemical content and emissions, and develop market studies, exposure estimates, estimates of human health risk, and other preliminary information.
2. If the information developed indicates that the product class presents a potential risk, OPPT will assess the availability and potential risks of alternative formulations and technologies. At this point, OPPT will also establish a stakeholders' dialogue with industry and other interested parties. In the stakeholders' dialogue, EPA and other participants will exchange test data and information.
3. OPPT will encourage industry to voluntarily identify and use alternative products and technologies. OPPT will also ask industry to characterize their products and to use environmental indicators to measure their progress in reducing chemical emissions. If voluntary means cannot be used, EPA will use its regulatory authorities under TSCA as appropriate.

Clearinghouse Provides Information on Indoor Air Quality

IAQ INFO

EPA recently opened IAQ INFO, formally known as the Indoor Air Quality Information Clearinghouse. IAQ INFO is a central resource for information about indoor air quality.

Three ways to contact IAQ INFO

1. Call (800) 438-4318 or (301) 585-9020 between 9 a.m. and 5 p.m., Monday through Friday, or leave a voice message after hours.
2. FAX (301) 588-3408 at any time.
3. Write Indoor Air Quality Information Clearinghouse, IAQ INFO, P.O. Box 37133, Washington, D.C. 20013-7133.

NOTE: IAQ INFO is continuing to build its resources. If your organization develops or distributes information on indoor air quality topics, please contact IAQ INFO or place IAQ INFO on your organization's mail list.

EPA Reviewing Public Comments on What Constitutes Chemical Processing Under TSCA

In September 1992, EPA held a public meeting to solicit comments on how chemical "processing" is defined in the Toxic Substances Control Act (TSCA) and in regulations promulgated under TSCA. Four representatives from automobile manufacturing groups and electronics companies spoke at the meeting and urged EPA to limit the scope of activities considered as processing. Such limits would exclude certain activities—for instance, the use of chemical substances to manufacture consumer goods—from regulation under TSCA.

Since TSCA was passed in 1977, EPA has promulgated a number of regulations in which "processing" is defined in different ways. The agency has received numerous inquiries about the term's definition. Many of the inquiries sought to establish when companies are subject to TSCA requirements for processors in reporting, keeping records, and in some cases, testing chemicals.

Section 3 of TSCA defines "process" as a step after the manufacture of chemical substances or mixtures. "Processing" a substance or mixture involves preparing it for distribution in commerce in one of the following ways:

- in the same form or physical state as that in which it was received by the person who prepared the substance or mixture;
- in a different form or physical state from that in which it was received by the person who prepared the substance or mixture; or
- as part of an article containing the chemical substance or mixture.

About 65 people attended the September meeting, which was held in Washington, D.C. They represented the chemical, automotive, and electronics industries, trade associations, law firms, consulting firms, EPA regional offices, EPA's Office of Pollution Prevention and Toxics, EPA's Office of Compliance Monitoring, EPA's Office of Enforcement, and EPA's Office of General Counsel. Oral remarks were presented by the American Electronics Association, the General Electric Company, the Motor Vehicle Manufacturers Association of the United States, and the Association of International Automobile Manufacturers.

Since TSCA was passed in 1977, EPA has promulgated a number of regulations in which "processing" is defined in different ways.

EPA also solicited written comment from the public on the term's definition (57 FR 38832; August 27, 1992). When review of the oral and written comments is completed, EPA will address those that it has determined are of the greatest concern.

For more information

A public record (docket number 00123) is available for review in the TSCA Public Docket Office, in room G-004 of the Northeast Mall, EPA headquarters, 401 M Street, S.W., Washington, D.C., between 8:00 a.m. and noon and 1:00 p.m. and 4 p.m., Monday through Friday.

Revisions to Asbestos Accreditation Requirements Under Way

EPA is revising the training and accreditation requirements for asbestos control professionals. Congress mandated the revisions in the Asbestos School Hazard Abatement Reauthorization Act (ASHARA) of 1990.

Since 1987, anyone performing asbestos abatement work in public and nonprofit private schools has been subject to basic training and accreditation requirements. ASHARA requires that asbestos control professionals working in public and commercial buildings meet similar requirements and receive accreditation as of November 28, 1992. The statute also increased the hands-on health and safety training required for all asbestos workers.

EPA is working toward promulgating a revised model accreditation plan as an interim final rule early in 1993. The revised plan will establish minimum federal training and accreditation standards. State accreditation programs are required to be no less stringent than the EPA model plan. The agency's Office of Compliance Monitoring, in the Office of Prevention, Pesticides, and Toxic Substances, has provided an interim compliance policy for contractors to follow until EPA completes the revised plan.

Public meeting held

On May 13, 1992, EPA published a *Federal Register* notice outlining the changes to the model accreditation plan under consideration (the 1987 model accreditation plan is found at 40 CFR part 763, appendix C to subpart E). The agency accepted public comment during a 45-day period and held a public hearing on June 8, 1992, in Washington, D.C. The administrative record on the agency's proposed changes comprises 80 written submissions and a hearing transcript, which contains testimony from 23 commenters.

The public comments are being carefully considered in development of the new rule. When promulgated, the rule is expected to provide for a phase-in period to allow an orderly transition from the old standards to the new. EPA-approved state accreditation programs and all approved training programs will need to make adjustments to comply with the new requirements.

National Human Adipose Tissue Survey Specimens Available for Research

EPA's Office of Pollution Prevention and Toxics (OPPT) is developing guidelines to provide researchers access to human adipose tissue specimens collected for the National Human Adipose Tissue Survey (NHATS). OPPT will announce the procedures for applying for access to the specimens later this year. EPA is not providing any funds for research on the specimens; applicants must have their own funding sources.

OPPT began collecting human adipose tissue specimens from the general U.S. population in 1970. At first, the agency analyzed the specimens for the presence of organochlorine pesticides and polychlorinated biphenyls (PCBs). Later, analysis was expanded to include halogenated dioxins and furans, volatile chemicals, and semi-volatile chemicals.

EPA halted analysis of the specimens in 1988 due to a lack of resources. At the direction of Congress, however, EPA continued collecting samples and commissioned a review of the program from the National Academy of Sciences. The academy's report, issued in May 1991, recommended that EPA replace NHATS with a human tissue monitoring program centered on probability sampling of blood, supplemented by adipose tissue collection.

EPA created an agencywide task force to review the report's findings and

***NHATS** continued on page 31*

***NHATS** continued from page 30*

recommend a direction for the program. In 1992, the task force proposed that human tissue monitoring be incorporated into the National Human Exposure Assessment Survey (NHEXAS), which is being designed by EPA's Office of Research and Development. The task force further recommended that EPA accelerate implementation of NHEXAS and discontinue NHATS.

Accordingly, OPPT has halted collection of specimens under NHATS. The decision to make existing specimens available to researchers is the result of a lengthy review of the future of NHATS. All existing specimens and data files will be preserved until the end of 1995. At that time, OPPT will review the research petitions received to determine whether outside interest merits continuing to preserve the specimens. At the end of 1997, OPPT will stop maintaining the specimens. The NHATS specimens will be transferred to a new steward or discarded.

OPPT expresses appreciation to all the hospitals, medical examiners, and pathologists who supplied the specimens from 1970 through 1992 and to the staff at contractor institutions who provided technical expertise in analyzing them.

Information on how to petition EPA for access to the human adipose tissue specimens will be published in the *Federal Register* in 1993.

EPA Issues Draft Criteria for Exempting Chemicals from Reporting

EPA has released a draft document that clarifies when industrial chemicals are exempt from two Toxic Substances Control Act (TSCA) reporting rules. Over the past three years, a number of chemical companies have questioned EPA's interpretation of the rules' exclusion provisions.

The two rules are the premanufacture notice (PMN) rule and the inventory reporting rule. The PMN rule requires that anyone who plans to manufacture or import a new chemical substance submit a PMN to EPA at least 90 days prior to the activity. The inventory reporting rule governs reporting for the TSCA Chemical Substance Inventory, commonly referred to as the TSCA Inventory.

In both rules, reporting is not required when a substance

- is not manufactured or processed for distribution in commerce as a chemical substance per se and
- has no commercial purpose separate from the product of which it is a part.

These substances are usually formed during the manufacture or processing of another substance that is reportable under TSCA.

EPA sponsored meetings with industry

The agency held meetings with representatives from industry and trade groups in February 1992 and July 1992. At the July meeting, EPA's draft document, which had been released earlier that month, received a supportive response from participants.

The draft document states that only commercial chemical substances that provide the "primary properties" of a product must be reported under the two rules. It establishes three criteria for determining when substances are exempt from the TSCA reporting rules:

> A number of chemical companies have questioned EPA's interpretation of the rules' exclusion provisions.

1. The substance is formed from a chemical reaction that involves the use of a substance of the type described in 40 CFR 710.4(d)(7) or 40 CFR

***Draft Criteria** continued on page 32*

***Draft Criteria** continued from page 31*

720.30(h)(7).

2. The substance does not function to provide the primary properties that determine the use of the product or product mixture distributed in commerce, even though it may impart certain physicochemical characteristics to the product or product mixture of which it is part.
3. The substance is not itself the one intended for distribution in commerce. Although it may be a component of the product mixture or formulation actually distributed in commerce, it has no commercial purpose separate from the product mixture or formulation of which it is a component.

EPA considering comments

Since release of the draft document, a number of trade associations and chemical companies have submitted written comments on it to EPA. The agency is reviewing the comments before formally proposing a clarification of the exclusion provisions in the *Federal Register* in 1993 for public review and comment.

For more information

- For information about the exclusion provision of the inventory reporting rule, see 40 CFR 710.4(d) and 40 CFR 710.4(d)(7).
- For information about the exclusion provision of the PMN rule, see 40 CFR 720.30(h) and 40 CFR 720.30(h)(7).

Guidelines Available for Submitting PMN Pollution Prevention Information

Guidelines are now available on providing pollution prevention information about new chemical substances to EPA. The agency's New Chemicals Program worked with the Chemical Manufacturers Association and other groups in developing the guidelines.

EPA has incorporated pollution prevention information into its review of new chemical substances since 1991. That year, the agency began asking companies to voluntarily include pollution prevention information in premanufacture notices (PMNs) submitted to the agency's New Chemicals Program. The New Chemicals Program, which is part of the Office of Pollution Prevention and Toxics (OPPT), reviews PMNs to identify new substances that require regulatory action.

The guidelines discuss the types of pollution prevention information the New Chemicals Program considers in evaluating the toxicity of the new substance, human exposures to the substance, and releases of the substance to the environment. A checklist of pollution prevention items is included in the document.

> Questions about individual cases can be discussed with the PMN coordinators.

For more information

To obtain a copy of *EPA Guidance for Providing Optional Pollution Prevention Information in TSCA Section 5 Premanufacture Notices (PMNs),* contact the TSCA Assistance Information Service (TSCA hotline). For information on how to contact the TSCA hotline, see page 36.

Comments on the document can be provided in writing to Stuart McArthur, Chemical Control Division (TS-794), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

Questions about individual cases can be discussed with the PMN prenotice coordinators at (202) 260-1745 or (202) 260-3937.

OPPT Begins Pollution Prevention Pilot Programs

EPA's review of new chemical substances often reveals steps that can be taken during manufacturing or processing to reduce or prevent pollution. In October 1992, the Office of Pollution Prevention and Toxics (OPPT) announced two new pilot projects aimed at identifying more pollution prevention opportunities.

Section 5 of the Toxic Substances Control Act (TSCA) requires anyone who plans to manufacture or import a new chemical substance to submit a premanufacture notice (PMN) to EPA at least 90 days prior to the activity.

Pollution Prevention Plan Pilot Program

OPPT's new Pollution Prevention Plan Pilot Program provides PMN submitters the option of developing a plan for reducing unnecessary exposures to or releases of the PMN chemical. To identify cases for which development of pollution prevention plans may be beneficial, the New Chemicals Program will evaluate the following three factors: (1) whether the chemical may present an unreasonable risk to human health or the environment; (2) the level of human exposures to the chemical and the level of environmental releases; and (3) the potential for pollution prevention opportunities in the manufacture or processing of the chemical. The pollution prevention plan will be used in two circumstances, which are discussed below.

1. If the New Chemicals Program determines that a new chemical substance may pose unreasonable health or environmental risks, section 5(e) of TSCA allows EPA to enter into a consent order with the PMN submitter. A section 5(e) consent order permits the PMN submitter to manufacture or import the substance under certain restrictions, intended to sufficiently mitigate the risk from exposures to or releases of the chemical. Section 5(e) consent orders generally require that certain toxicity test data be submitted before exceeding a specified production volume.

   In the future, some section 5(e) consent orders will also require companies to develop a pollution prevention plan when production volume of the PMN chemical reaches a certain level. EPA is not mandating implementation of the plan; it is left to the company's discretion.

2. Section 5(e) of TSCA allows EPA to permit the PMN submitter to suspend the new-chemical review period and develop additional data. Submitters generally take this step when the New Chemicals Program determines a substance may pose unreasonable health or environmental risks that cannot sufficiently be mitigated by TSCA section 5(e) consent order restrictions.

   In these cases, development of a pollution prevention plan may indicate a safe way to manufacture or process the chemical substance. EPA will determine, case-by-case, whether to require implementation of specific pollution prevention activities or development of additional data.

Alternate Synthetic Pathway Pilot Program

The objective of the Alternate Synthetic Pathway Pilot Program is to assist the PMN submitter in reducing pollution in the manufacture, processing, and use of new non-polymer substances that will be produced in large quantities.

During the PMN review, the New Chemicals Program will assess the chemical process being used by the PMN submitter. An evaluation of the feedstocks, solvents, byproducts, and impurities will be conducted to characterize the waste stream and to identify where the use and generation of toxic chemicals can be reduced or eliminated. Whenever possible, the New Chemicals Program will identify alternative processes and provide information sources to help the PMN submitter in assessing and modifying these alternatives.

For more information

To obtain more information on the Pollution Prevention Plan Pilot Program, contact Roy Seidenstein, Chemical Control Division (TS-794), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-2252.

To obtain more information on the Alternate Synthetic Pathway Pilot Program, contact Paul Anastas, Economics, Exposure, and Technology Division (TS-779), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-2257.

Appeals Court Upholds TSCA Import Certification Compliance Rule

The U.S. Court of Appeals for the 3rd Circuit has affirmed EPA's authority to enforce U.S. Customs Service regulations for chemical importers. The court decision upheld the agency's authority to require self-policing by importers and to subject chemical importers who violate import certification requirements to civil penalties.

The appellate court also upheld penalties of $19,500 against the ALM Corporation, of New Jersey, for violations of section 15 of the Toxic Substances Control Act (TSCA). Section 15 of TSCA makes it a violation to fail to submit reports, notices, or other information required by the statute.

Background

In 1985 and 1986, ALM imported seven shipments of plastic pellets without certifying to the Customs Service (1) that the shipments were in compliance with TSCA regulations or (2) that the shipments were not subject to TSCA. In 1986, the company imported two more shipments of the pellets accompanied by false certification stating they were not subject to TSCA.

Importers are required to provide TSCA certification to the Customs Service by section 13 of TSCA. Section 13 of TSCA authorizes the Customs Service to refuse entry into the United States of any chemical substances or mixture that does not comply with TSCA or any rule issued under TSCA. However, the Customs Service did not detain ALM's shipments, and in 1986, EPA filed a complaint against ALM for failure to submit "reports, notices, or other information" required under section 15 of TSCA.

In 1989, an administrative law judge found that ALM's failure to submit appropriate certifications violated section 15 of TSCA. Following an appeal by ALM, EPA Administrator William K. Reilly issued a final decision and order affirming the decision and a $19,500 fine. ALM appealed the decision to the Court of Appeals for the 3rd Circuit.

ALM's appeal

In its appeal, the ALM Corporation argued that (1) the required certification is not a "report, notice, or other information" under section 15 of TSCA; (2) Customs Service detainment is the exclusive remedy when import shipments violate the compliance certification requirements; and (3) a company that violates the compliance certification requirement is entitled to a "right to rectify" its violation before penalties are assessed.

The Court of Appeals rejected ALM's arguments. A summary of the appeals court's ruling follows:

- The required certification informs EPA that the chemical substances being imported are in compliance with applicable TSCA requirements and is a "report" or at least "other information."
- Customs Service detainment procedures and EPA's TSCA penalty provisions are coexisting but independent means of enforcement: it is impractical to expect the Customs Service to identify every noncomplying shipment in port, and EPA has the authority to impose civil penalties for failure to certify.
- Companies are responsible for self-policing their compliance with TSCA certification; if companies were allowed an opportunity to submit certification after the fact, they would have no incentive to comply with the law.

TSCA Section 8(e) Notices

Under section 8(e) of the Toxic Substances Control Act (TSCA), anyone who obtains information that indicates a chemical may pose a substantial risk of injury to human health or the environment must report that information to EPA within 15 working days of obtaining it.

The Office of Pollution Prevention and Toxics (OPPT) received more than 2,200 TSCA section 8(e) notices from April 1, 1992, through September 30, 1992. Most of these notices were submitted by companies participating in EPA's Compliance Audit Program.

In the past, *Chemicals-in-Progress Bulletin* has listed recent section 8(e) submissions. Because of the volume of notices recently submitted, however, the list is not being published in this issue. For information on how to obtain an index of section 8(e) notices or copies of the notices, see the related article on this page.

FYI Submissions

For Your Information (FYI) submissions are voluntary submissions that cover a wide variety of information and may include data on chemical toxicity and exposure, epidemiology, monitoring, and environmental fate. FYIs are submitted by chemical manufacturers, chemical processors, federal, state, and local agencies, foreign governments, academic institutions, public interest and environmental groups, and the general public.

The agency established the FYI classification system to distinguish such submissions from notices submitted formally to EPA under section 8(e) of the Toxic Substances Control Act (TSCA). The Office of Pollution Prevention and Toxics received 28 FYI submissions from April 1, 1992, through September 30, 1992.

Availability of 8(e) Notices and FYI Submissions

Section 8(e) notices and FYI submissions are available to the public in a number of ways, which are listed below. Note that EPA no longer issues submission summaries of section 8(e) notices.

- Section 8(e) notices and FYI submissions can be reviewed and photocopied at EPA headquarters in the OPPT Public Reading Room, NE-G004, U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460; telephone, (202) 260-7099. The room is open from 8 a.m. to noon and 1 p.m. to 4 p.m., Monday through Friday.
- A copy of a full section 8(e) or FYI submission can be obtained by writing to Freedom of Information Office (A101), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. Duplication of the first 166 pages of any document is free. At the 167th page, there is a $25 fee and an additional $0.15 charge for each page. For example, duplication of a 167-page document will cost $25.15.
- Chronological indices of section 8(e) and FYI notices are available from the TSCA Assistance Information Service (TSCA hotline) two to three months after the end of each fiscal quarter. The fiscal quarters end on September 30, December 31, March 31, and June 30. See page 36 for information on how to contact the hotline.

TSCA Hotline: Call (202) 554-1404

The TSCA Assistance Information Service (TSCA hotline) operates Monday through Friday, from 8:30 a.m. to 5 p.m. Eastern time. To speak to an information specialist, call (202) 554-1404. FAX requests for documents are received every day, at all times, on (202) 554-5603. Documents can also be requested by deaf persons who have TDD equipment by calling (202) 554-0551.

To request assistance by mail, write to the Environmental Assistance Division at the address provided on page 37.

TSCA Hotline: Question & Answer

Q: Does a chemical substance being imported for research and development require certification under the Toxic Substances Control Act (TSCA)?

A: Yes, it does. When any chemical substance is imported into the United States, the importer must (1) certify to the U.S. Customs Service that the shipment is subject to TSCA and complies with all applicable rules under TSCA or (2) certify that the shipment is not subject to TSCA.

If the imported chemical is not listed on the TSCA Chemical Substance Inventory, which is a list of the chemicals in commerce in the United States, the importer must also submit a premanufacture notice (PMN) to EPA at least 90 days before importing the substance. However, chemicals that are imported for research and development are exempt from the PMN requirement if all of the conditions described below are met. These conditions are described in general terms; more specific information is available from the resources listed at the end of this article.

1. The substance is being imported in small quantities solely for research and development. (TSCA defines a small quantity as that which is "reasonably necessary.")
2. The importer notifies the people who will work with the chemical of the potential health risks associated with the substance.
3. A technically qualified individual performs the research and development or supervises research-and-development activities.
4. The importer notifies everyone to whom it distributes the substance outside of the importing company that use of the substance is limited to research and development, and the company informs them of the substance's potential health risks.

Noncommercial research and development

Chemicals that are imported for noncommercial research and development are exempt from PMN submission requirements. Examples of noncommercial research and development are scientific research at a university or analysis at a hospital.

For more information

- See 40 CFR sections 720.3(cc), 720.30(c), 720.30(i), 720.36, and 720.78.
- See the Chemical on Reporting Rules Database (CORR List), which lists the chemicals subject to proposed or final regulations under TSCA.
- See questions 45 through 56 in the *TSCA Guide for Chemical Importers/Exporters, An Overview.*
- See the *New Chemical Information Bulletin: Exemptions for Research and Development, and Test Marketing.*

To obtain any of the publications listed here, contact the TSCA Assistance Information Service (TSCA hotline) at (202) 554-1404.

Send All Correspondence to

Environmental Assistance Division (TS-799)
Office of Pollution Prevention and Toxics
U.S. EPA
401 M Street, S.W.
Washington, D.C. 20460

Editor: Jane Gurin

Would You Like to Receive the *Chemicals-in-Progress Bulletin?*

The *Chemicals-in-Progress Bulletin* is published by EPA's Office of Pollution Prevention and Toxics. If you are not currently receiving the *Bulletin* and would like to become a subscriber, or if you would like to stop receiving the *Bulletin,* please fill out this form or tape a mailing label onto it, and mail it to the address on this page.

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CERCLA, PCBs, and Ballasts

The September 1992 issue of *Chemicals-in-Progress Bulletin* (volume 13, number 2) discussed what EPA regulations must be followed when removing or disposing of PCBs contained in fluorescent light fixtures. The statement that "CERCLA requires that building owners notify the National Response Center if they dispose of or move (from one location to another) more than one pound of PCBs within 24 hours" generated questions from readers who asked for a reference for the statement.

CERCLA defines a release or threat of release to include the discarding of containers or other closed receptacles containing any hazardous substance, pollutant or contaminant, such as PCB-containing fluorescent light ballasts, into the environment (40 CFR section 300.5). A release equal to or exceeding the reportable quantity in any 24-hour period requires notification to the National Response Center (40 CFR section 302.6). Placement into or destruction by an approved disposal facility should not be considered a release to the environment and no notification is required.

For more information

For additional information on CERCLA reporting requirements, contact the Superfund hotline at (800) 424-9345.

New Publications

From the TSCA Hotline

New information package on the Organization for Economic and Community Development's Screening Information Data Set (SIDS) program. Single copies can be obtained by calling or sending a FAX to the TSCA hotline (see page 36) or by filling out and mailing the form on page 37.

From EPA's Emergency Planning and Community Right-to-Know (EPCRA) Information Hotline

Managing Chemicals Safely uses nontechnical language to explain good practices for managing chemical process safety, suggests how to get started, and recommends sources and resources for more information. The publication is directed to owners and managers of small- to medium-sized businesses that use hazardous chemicals.

Single copies can be obtained by calling the EPCRA hotline at (800) 535-0202 or (703) 920-9877. Additional copies and bulk orders can be ordered from the U.S. Government Printing Office (GPO) for $2.00 a copy; the order number is 055-000-00398-0. Information about ordering from GPO is below.

From the U.S. Lead Hotline

The brochure *Lead Poisoning and Your Children,* which explains how to reduce children's exposure to lead in the home, is available from the U.S. lead hotline at (800) 532-3394. See page 17 for additional information about the brochure and the hotline.

From the National Institute of Building Sciences (NIBS)

The *NIBS Manual: Asbestos Operations and Maintenance Work Practices* is available in hard copy or on diskette from NIBS, 1201 L Street, N.W., Suite 400, Washington, D.C. 20005; telephone, (202) 289-7800; FAX, (202) 289-1092. Contact NIBS for information on prices.

To order publications from the U.S. Government Printing Office

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954

Telephone: (202) 783-3238
FAX: (202) 275-2529

Agency's Information Resources Described in *ACCESS EPA*

ACCESS EPA is a series of directories that provides contacts and descriptions of information available to the public from EPA and related sources. The directories can be purchased individually from the National Technical Information Service (NTIS).

A consolidated volume of *ACCESS EPA* can be purchased for $21 from NTIS or the U.S. Government Printing Office (GPO). For information on contacting NTIS and GPO, see below and page 38.

Series Title	NTIS Order Number	GPO Order Number
ACCESS EPA	PB92-147438	055-000-00378-5
ACCESS EPA Public Information Tools	PB91-151571	
ACCESS EPA Major EPA Dockets	PB91-151589	
ACCESS EPA Clearinghouses and Hotlines	PB91-151597	
ACCESS EPA Records Management Programs	PB91-151605	
ACCESS EPA Major EPA Environmental Databases	PB91-151613	
ACCESS EPA Libraries and Information Services	PB91-151621	
ACCESS EPA State Environmental Libraries	PB91-151639	

To order publications from the National Technical Information Service

NTIS
5285 Port Royal Road
Springfield, VA 22161

Telephone: (703) 487-4650
FAX: (703) 321-8547

Toxicology Profile Information Line

The Agency for Toxic Substances and Disease Registry (ATSDR) has developed more than 100 toxicological chemical profiles, which are available to interested parties. Each profile contains information on potential exposure routes to the chemical substance, possible health effects of exposure, and other scientific data.

A list of the available profiles can be obtained through the automated TOX Information Line at (404) 639-6000. The TOX Information Line also provides information about how to order toxicological profiles. A touchtone phone is required to use the automated line, which operates 24 hours a day. ATSDR also announces the availability of profiles in the *Federal Register.*

ATSDR is part of the Department of the U.S. Public Health Service. The agency is responsible for developing information about the health effects caused by hazardous substances found at hazardous waste sites.

EPA's Public Information System

17EPA's Public Information Center (PIC) responds to inquiries for general information about EPA or the environment. The PIC also directs public inquiries on technical issues to EPA program offices, clearinghouses, dockets, hotlines, and other federal agencies.

Requests for information can be made by calling (202) 260-7751 or (202) 260-2080; by FAXing (202) 260-6257; or by writing or visiting Public Information Center (PM211-B), U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. The PIC accepts phone calls and FAXes from 8:00 a.m. to 5:30 p.m., Monday through Friday. The PIC is open to visitors from 9:00 a.m. to 4:30 p.m., Monday through Friday. The PIC is closed on federal holidays.

Other services available to PIC visitors

The PIC Visitor Center contains computer workstations that allow visitors to gain access to a variety of data bases, including EPA's online library system, the Toxics Release Inventory, and several EPA bulletin boards, such as the Pollution Prevention Information Exchange System (PIES). In addition, the PIC provides presentations, multimedia programs, and tours to on-site visitors.

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