

Resource Conservation Challenge: Reducing Priority and Toxic Chemicals in Products and Waste

Priority chemicals are part of most of the items we use every day. In 2001, our wastes contained 84 million pounds of EPA's "priority" chemicals nationwide. Priority chemicals are chemicals that are persistent, bioaccumulative (accumulate in living organisms), and highly toxic. These chemicals are of particular concern because they pose the most significant risks to our health and our environment.

The Resource Conservation Challenge (RCC) aims to reduce the amount of priority chemicals in waste, and we rely heavily on voluntary partnerships to accomplish this goal. Economic incentives and positive environmental results are moving our partners from waste treatment and disposal to waste minimization and materials management. By committing ourselves to reduce priority chemicals, we conserve energy and preserve natural resources.

Goal: 10 Percent Reduction by 2008

Our goal is to reduce priority chemicals in waste by 10 percent by 2008 (using 2001 data as a baseline). Under the RCC, companies can voluntarily reduce the volume of priority chemicals in their processes and waste by:

- Substituting safer alternatives whenever possible.
- Minimizing the amounts of chemicals used, if substitution is not possible.
- Maximizing recycling efforts.
- Practicing "cradle-to-cradle" chemical management.
- Designing products to minimize exposure to, and release of, priority chemicals during manufacturing and use.



RCC Partnerships Address Toxic Chemicals

We provide technical assistance to help companies reduce the amount of priority chemicals they use or dispose of, and we reward them with public recognition when they do. We also research safe chemical alternatives and tell businesses about those they can use instead of priority chemicals. Examples of RCC initiatives to reduce chemicals in our products and wastes include the following:

- **The National Partnership for Environmental Priorities (NPEP).**
Most companies that join this partnership pledge to reduce the amount of specific priority chemicals that must be treated or disposed by specific dates. They reduce their priority chemicals through a combination of techniques, from product substitutions, to increased product reuse, to innovative recovery or recycling processes. NPEP tracks chemical waste trends, identifies waste minimization opportunities, and offers public recognition to organizations that succeed in finding cleaner, often cheaper, and environmentally safer products and processes.
- **Get the Lead Out.**
We're working collaboratively with industry to reduce or eliminate lead through a variety of efforts, such as:
 - **Lead-Free Solder Partnership**, part of the Agency's Design for the Environment (DfE) program, is assisting industry with the phase-out of tin-lead solder. The partnership is working to transition to lead-free alternatives, which are used primarily by the electronics industry. In 2002, more than 175 million pounds of tin-lead solder was used worldwide.
 - **Cleaner Technology Substitute Assessment** is evaluating lead-free surface finish alternatives to a hot air solder process used for printed circuit boards. Printed circuit (or wiring) boards are used for virtually all electronics. Results of the assessment indicate that the alternative finishes perform at least as well as the hot air process that uses lead.
 - **Safe Alternatives for Lead Tire Weights**, which are used to balance automobile tires. The weights frequently come loose and fall off. They end up on our roads, where they are often crushed by traffic, resulting in lead dust in the air and water. Road traffic also may push them into storm drains, where they end up in our water, or they may get picked up by street cleaners and end up in our water bodies or landfills. We're working with wheel weight manufacturers and others to identify non-lead substitutes for tire weights.
- **Hospitals for a Healthy Environment.**
We have partnered with the American Hospital Association to provide health care professionals with tools and information to help reduce the volume of hospital waste, decrease mercury waste, and identify pollution prevention opportunities that result in decreased priority chemicals in waste.

- **Schools Chemical Cleanout Campaign.**
Our campaign encourages schools to remove existing stocks of hazardous chemicals, and to practice safe chemical management. They promote the safe purchase, use, handling, storage, and disposal of chemicals.
- **Early Retirement of Polychlorinated Biphenyls (PCBs).**
We've created a voluntary program encouraging electricity providers to retire or phase out transformers and capacitors that contain PCBs. We promote the benefits of early PCB retirement, which, among other things, include cost savings from newer, energy-efficient equipment, and reduced liability from owning older, PCB-equipment that can leak and spills. Companies participating in the program receive public recognition from the Agency.
- **Roadmap for Mercury.**
Although one of the Agency's priority chemicals, mercury is used in a wide range of consumer and industry products, including fluorescent bulbs and lamps, dental amalgams, automobile switches, and mining. Mercury reduction programs include:
 - ***Mercury Use Reduction and Recycling Partnerships*** establish mercury use, reduction, and phase-out goals with manufacturers. The partnerships also promote take-back and recycling programs for products containing mercury. We're collaborating with state agencies and dental associations to collect and recycle mercury-containing dental amalgam properly. We're also developing educational materials to help states collect and recycle mercury switches from scrap vehicles.
 - ***Actions To Recycle Fluorescent Bulbs and Other Mercury-Containing Products*** include flexible regulatory management provisions to promote wide-ranging recycling and proper collection of mercury-containing products. We're working with states and trade associations to further the voluntary recycling of fluorescent bulbs and other products containing mercury.
 - ***NPEP's Mercury Challenge*** is a targeted initiative that encourages the voluntary and systematic elimination of mercury-containing equipment and products in businesses and manufacturing facilities. The Mercury Challenge asks NPEP partners to use of mercury-free alternatives.

Resource Conservation Challenge

The RCC challenges everyone to accept responsibility and rededicate themselves to conserving resources. Accepting responsibility for improving our environment means changing our habits, processes, and practices. Everyone has a role. Businesses, consumers, and governments work together to make changes resulting in products designed to be more easily reused and recycled. Manufacturers can make products less toxic and more recyclable, and prevent and recycle waste. Individuals and businesses can change their buying and disposal habits, seeking less toxic products and recycling at every opportunity. For more information on the RCC, see <www.epa.gov/rcc> and the *RCC Action Plan* at <www.epa.gov/epaoswer/osw/consERVE/action-plan/act-toc.htm>.

Resources

The **National Partnership for Environmental Priorities (NPEP)** (www.epa.gov/epaoswer/hazwaste/minimize/partnership.htm) is a voluntary program that fosters partnerships between EPA and state regulatory agencies, manufacturers, commercial companies, and federal facilities to reduce the use and/or release of 31 priority chemicals.

EPA's **Safe Mercury Management Program** (www.epa.gov/epaoswer/hazwaste/mercury/oswsmmp.htm#smmp) promotes the safe management of mercury and mercury containing wastes. It also provides regulatory support, technical assistance, and information transfer for mercury related cleanups.

The **Toxic Release Inventory (TRI)** (www.epa.gov/tri) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain industries as well as federal facilities. Different groups often use the TRI in a variety of ways. For example: EPA often uses the TRI as a baseline for measuring improvements in companies' performance regarding chemical and waste reductions. Businesses can use TRI data as a basis for reducing their use of toxic chemicals. State and local governments use TRI data for emergency planning and response. Individuals use the TRI to help determine sources and amounts of toxic chemicals and possible related health risks in their communities.

INFORM (www.informinc.org) is a nonprofit environmental research organization that documents producer responsibility and product stewardship programs. INFORM also works with government agencies to minimize their purchase of products containing lead, mercury, and other highly toxic substances.

The **Product Stewardship Institute** (www.productstewardship.us) is a national organization that assists state and local government agencies to establish agreements with industry and develop other initiatives to reduce the health and environmental impacts from consumer products.

The **Hazardous Waste Resource Center** (www.etc.org) promotes the adoption of environmentally sound procedures and technologies for recycling and detoxifying industrial wastes and byproducts and properly managing and disposing of wastes.



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