

EPA's Pollution Prevention Strategy

The Pollution Prevention Act of 1990 states "that pollution should be prevented or reduced at the source whenever feasible." It further establishes pollution prevention as the strategy of first choice in the hierarchy of environmental management practices.

It is my goal to build pollution prevention into the very framework of our mission to protect human health and the environment. Just as EPA is the leader in developing national policy in pollution prevention across the federal government, we must be the leader in integrating pollution prevention in the operation of our own facilities.

In moving beyond compliance with Executive Order 12856, EPA commits to applying prevention-oriented solutions to environmental concerns at EPA facilities. EPA will reduce the manufacture, use, and release of toxic chemicals and will adopt pollution prevention approaches wherever feasible to improve environmental quality in and around EPA facilities.

In so doing, and in the spirit of community "right-to-know", EPA is fully committed to involving the public in developing and implementing pollution prevention strategies and will provide a model for all federal agencies that seek to build prevention into the foundation of its operations management.

Carol Browner, Administrator
December 1994

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EPA's POLLUTION PREVENTION GOALS

It is EPA's goal to ensure that pollution prevention becomes part of the environmental ethic at every level of the federal government. It is the goal of the Agency that federal workers build environmental considerations into their daily routines -including decision-making processes, programs, policies, and operating principles.

The Agency aims to fulfill both the spirit and the letter of Executive Order 12856 and to serve as a catalyst for change within EPA and across the federal government. Implementation of this Order will establish the federal government as the national leader in implementing pollution prevention policies and practices across all missions, activities, and functions. Prevention will promote the sustainable use of natural resources and protect the environment and public health.

EPA intends to vigorously pursue the goal of prevention and its widespread acceptance in several broad activities:

Reduced Generation of Pollutants

EPA will review its facilities to determine which are using, releasing, or transferring toxic chemicals and materials. Using this data, the Agency will determine which facilities must report to the Toxic Release Inventory (TRI), the chemical emissions register

established under the Emergency Planning and Community Right-to-Know Act (EPCRA). EPA will go beyond the requirements of EPCRA by waiving the laboratory exemption, thereby making all its facilities potential reporters, and setting more stringent reporting thresholds than the those established under EPCRA. EPA will annually review all facilities that generate waste, but do not meet the TRI reporting thresholds, and will evaluate progress against a baseline year. EPA will make those reports publicly available through an annual report to Congress on the Agency's progress in implementing Executive Order 12856.

Education, Guidance, Regulation, and Enforcement

With education, guidance, regulation, and enforcement tools, EPA can exert a significant influence and motivate change across all sectors of society (e.g., industry, agriculture, energy, and the public sector). EPA will work to ensure coordination across agencies as a key element in promoting prevention in the government and private sector. EPA will pursue outreach and education programs, develop and provide technical assistance where appropriate, develop reporting and strategy guidance, and promulgate necessary regulations and ensure compliance with this Order.

Purchasing and Consumer Practices

The federal government is the single largest consumer of goods, products, and services in the United States. Through all stages of decision-making in the acquisition process, the government can help create markets for environmentally preferable products and technologies and encourage the use of cleaner, less toxic products and materials in all sectors of the economy. Federal leadership in demonstrating and purchasing innovative technologies can spur competition, create business opportunities, and enhance local and regional economies. EPA will review its own purchasing practices and acquisition requirements to ensure that the Agency is paving the way toward environmentally preferable products. To this end, the Agency will revise its own acquisition specifications as well as offer assistance to other agencies. EPA will review its use of toxic materials to reduce use wherever possible, find safer substitutes, and encourage research where substitute chemicals or processes do not exist.

Advocating Clean Technology through R&D and Technology Transfer

Through its media programs, research and development offices, and laboratories, EPA is in a strategic position to make pollution prevention the dominant approach to solving environmental problems. EPA will use its media-based programs to advocate prevention as a first choice through its regulations, permits, and standards. EPA laboratories will work with industry to introduce pollution prevention technologies to the national and international marketplace. EPA will continue to pursue such programs as Design for the Environment, Green Lights, 33/50, and the Common Sense Initiative to ensure the substance behind the concept of prevention.

EXECUTIVE ORDER 12856

SUMMARY OF FEDERAL COMPLIANCE WITH RIGHT-TO-KNOW LAWS AND POLLUTION PREVENTION REQUIREMENTS

Executive Order 12856 extends to the federal government the right-to-know requirements of EPCRA of 1986 and the Pollution Prevention Act (PPA) of 1990. The major provisions of the Order are outlined below.

Federal facilities manufacturing or processing 25,000 pounds of toxic chemicals annually, or otherwise using 10,000 pounds, must publicly report their release, off-site transfers, and other waste management data under the TRI. On July 1, 1995, federal facilities are required to file an annual report, known as Form R, for every toxic chemical that meets the above thresholds. The Form R provides a mechanism for making data on the releases and off-site transfers of toxic chemicals available to the public. Additionally, federal facilities must comply with the emergency planning and notification requirements of EPCRA.

All federal agencies must develop a pollution prevention strategy, and each federal facility must formulate a pollution prevention plan. These strategies and plans must be made publicly available. By August 3, 1995, federal agencies are required to review standard documents on procurement and acquisition and develop plans to reduce or eliminate the use of extremely hazardous substances and toxic chemicals. Furthermore, federal agencies will set a voluntary goal of at least a 50 percent reduction by 1999 of total releases and transfers of toxic chemicals or toxic pollutants. These reductions must be achieved through source reduction when possible.

EPA will establish the "Federal Government Environmental Challenge Program," which will recognize outstanding facilities and individual employee practices in environmental management and performance. Federal agencies will submit annual reports to the EPA Administrator describing their progress toward meeting the requirements of this Order. EPA will annually report the federal government's progress in reducing their toxic chemical releases and transfers to the President.

All strategies, plans, and reports will be available to the public so that it may also track and evaluate the progress of federal facilities, both in neighborhoods as well as nationally. Public accountability is vital for the successful implementation of this Executive Order and is the underpinning of the right-to-know program.

EPA's POLLUTION PREVENTION STRATEGY

EPA's strategy to meet the requirements of Executive Order 12856 follows the guidance in *Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond* (EPA 300 B-9G-007). The strategy is built on the central ethic of prevention as articulated in the Pollution Prevention Act and EPA's Pollution Prevention Policy Statement of 1991. Simply stated, pollution should be prevented or reduced at the source whenever feasible, and while prevention is not the only strategy for reducing risk, it should be the preferred choice. Environmentally sound recycling shares many of the advantages of prevention and

should be seen as a second-level choice. If prevention or recycling are not feasible, waste treatment followed by safe disposal completes the hierarchy of alternatives. EPA's strategy includes:

- EPA's policy statement which incorporates source reduction in facility management and acquisition programs, endorses the pollution prevention hierarchy, and calls for Agency leadership in pollution prevention
- A commitment to achieve pollution prevention through source reduction, where practicable, as the primary means of complying with all applicable federal, state, and local environmental requirements
- Goals for reducing releases and transfers of EPCRA section 313 chemicals and other toxic pollutants by filing Form Rs to TRI based on waiving the laboratory exemption and applying a lower, more stringent threshold
- Presentation of the baseline for measurement and evaluation
- Timetable for compliance with Executive Order 12856
- Plans for disseminating pollution prevention techniques and approaches internally through training and externally by making public pollution prevention reports, strategies, and plans
- Designation of a senior Agency official to coordinate EPA's efforts
- Identification of internal organizations with specific responsibilities for developing, implementing, and evaluating the strategy
- An outline of provisions for public involvement.

A detailed description of the nine-point pollution prevention strategy follows.

1. Source Reduction in EPA Facility Management and Acquisition

EPA will review the current activities of its facilities, including laboratories, and will assess the availability and feasibility of source reduction opportunities. For all EPA facilities, an assessment of opportunities will be completed by December 1995 along with a plan outlining those opportunities, concrete activities, and goals. This assessment and plan will be developed following the facility guidance contained in Appendix A of this strategy. Where source reduction is not a feasible approach, the tiers in the environmental management hierarchy will be evaluated in order, beginning with environmentally sound recycling and followed by safe treatment methods and disposal. These plans will be made publicly available and will be evaluated annually to reflect progress and new opportunities. EPA will seek public involvement in this process.

Reduction opportunities will be pursued in the Agency's acquisitions of services, buildings, and computers to fulfill the Executive Order requirements to revise specification and reduce toxic chemicals in products. EPA is currently identifying specific opportunities for acquisitions which will serve as pilot efforts for the more comprehensive alignment of procurement and acquisition considering source reduction and pollution prevention. EPA will reduce its purchases of products containing toxic

chemicals and will move toward less hazardous products and chemicals that pose less risk to manufacture, process and use, and treat and dispose.

EPA will go beyond the provisions of this Executive Order by applying prevention approaches to reduce environmental impacts stemming from activities other than chemical usage. EPA is committed to aggressively reduce energy and water usage and the generation of solid waste. EPA is an active participant in environmental initiatives such as the Green Lights program, the Alternative Fuels Program, and the Green Buildings Project. These programs will be reviewed regularly and assessed for progress towards achieving individual goals. Additional programs will be developed as opportunities are identified.

2. Pollution Prevention in Complying with Federal, State, and Local Requirements

As stated in EPA's Pollution Prevention Policy Statement (Appendix B), EPA will use pollution prevention as defined in PPA in meeting or exceeding all federal, state, and local environmental requirements. EPA intends to become a leader in environmental accountability and source reduction.

Each EPA facility is committed to full compliance with all federal, state, and local environmental requirements as well as all permits and applicable environmental standards. EPA will continue to audit its facilities for full compliance with all environmental and health and safety requirements. Source reduction will be used wherever possible as a means of meeting or exceeding these requirements. Recycling, followed by treatment and disposal of waste, will be applied if source reduction is not possible.

3. Goals for Reducing Releases and Transfers of EPCRA §313 Chemicals and Other Toxic Materials

Many EPA facilities manufacture, process, or otherwise use EPCRA §313 chemicals. Most chemicals fall within the "otherwise use" category. Appendix C provides a complete list of EPA facilities, chemicals, and estimated use volume.

Of the 32 laboratories and research facilities listed, only one, based on 1994 data supplied by laboratory personnel, possibly meets the thresholds of TRI without applying any of the exemptions. Because of the low volume of toxic chemicals used at EPA facilities, the Agency will apply a more stringent threshold level equivalent to 80 percent of the required level to determine reporting under EPCRA section 313. For example, if a toxic chemical is otherwise used at an EPA facility in excess of 8,000 pounds, then it would be reportable under TRI. Even if a chemical's use was exempt for some reason, such as the laboratory activity exemption, EPA facilities do not intend to take advantage of these exemptions. The Agency believes that it was the intent of this Order to assure that all federal facilities report significant TRI releases to the public. Because the public should see reports for all facilities meeting thresholds, withholding data for exempted uses at its facilities will not fulfill the spirit of this Order.

EPA's laboratories will meet and exceed the goal of reducing significant releases and off-site transfers of toxic chemicals by 50 percent. If possible, every individual facility will meet the goal as well. Individual facilities will also develop goals to reduce the use,

release and off-site transfer for other toxic and hazardous substances. Fifty percent will be the minimum goal for these additional substances. In keeping with the spirit of this Order, EPA will strive to achieve these ambitious goals through source reduction. EPA will achieve these goals by 1999 and report annually on progress until they are met.

4. Measurement and Evaluation Baseline

EPA will use 1994 TRI data as the baseline for measurement and evaluation for all TRI chemical releases and transfers reported on Form Rs. For non-TRI chemicals and hazardous waste, EPA will establish and publish a baseline with its first annual progress report.

Developing baselines for each facility involves building a comprehensive picture of materials use -- specifically toxic and hazardous chemicals, other pollutants, and energy and water use -- and assessing the associated environmental impacts associated, including releases and workplace exposures.

EPA is working toward an integrated approach to environmental management of its facilities. EPA will use two different baselines to measure progress under Executive Order 12856. The first baseline will measure progress primarily in the reductions of toxic chemical releases and transfers based on data collected under the EPCRA TRI program. Since EPA facilities use and release such small quantities of toxic chemicals, a baseline in release and transfer data may not reflect all opportunities for pollution prevention. Therefore, the second baseline will examine the most common uses of chemicals at EPA facilities to determine opportunities for revising laboratory standards to be more environmentally friendly. The Agency will develop a work group to investigate analytical procedures used in EPA laboratories. The work group will identify opportunities for pollution prevention, such as reducing the use of halogenated solvents, while still maintaining the required high standards needed for analytical procedures. EPA will use data that is currently available to develop its baseline, which may include the following types of information:

- Facility design
- Materials usage for toxic chemicals and hazardous and non-hazardous substances of concern, including quantities of chemicals used or generated, the type and location of operation, potential worker exposures, chemical releases, and environmental procurement practices
- Handling procedures for toxic chemicals and hazardous and non-hazardous substances of concern
- Power usage and water consumption and disposal information
- Solid and hazardous waste generation and disposal statistics
- Solid waste management procedures
- Regulatory operating procedures
- Environmental impacts.

EPA will determine whether it is necessary to develop national guidance on data collection and reporting for facility managers. If so, EPA will develop such guidance to ensure consistency among facilities and an integrated EPA database of all facilities. EPA will also work with other federal agencies to develop consistency across the federal government. Consistent data collection will allow both the public and the federal government to review progress towards achieving national goals. Resources that are available for laboratory personnel to meet the goals of this strategy and the requirements of Executive Order 12856 are as follows:

- Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond
- Pollution Prevention and the Right-to-Know in the Government: Executive Order 12856
- A guidance document currently being developed by the Office of Pollution Prevention and Toxics on establishing and communicating facility goals to parent agencies, other federal agencies, and the public.

5. Timeline of Compliance Plans for Executive Order 12856

The following table outlines actions and dates of completion or deadlines for Executive Order 12856:

Action	Date
President Clinton signs Executive Order 12856	08/03/93
EPA prepares list of facilities subject to EPCRA reporting requirements	12/31/93
EPA begins data collection for EPCRA §§312-313 reporting for reporting year 1994	01/01/94
EPA complies with EPCRA §304 release reporting requirements	01/01/94
EPA complies with EPCRA §302 planning notification requirements	03/03/94
EPA submits interim Pollution Prevention Strategy	08/03/94
EPA submits Emergency and Hazardous Chemical Inventory Forms under EPCRA §312	03/01/95
EPA submits Form Rs for each toxic chemical exceeding a more stringent threshold	07/01/95
EPA submits first annual progress report	10/01/95
EPA facilities prepare pollution prevention plans	12/31/95
EPA reduces total toxic pollutants by 50 percent	12/31/99

6. Internal EPA Training and External Communication with the Public

Integral to the success of this Executive Order is the full support of all employees of the federal government. In order to ensure that support is forthcoming, EPA will make every effort to communicate the Agency's goals to its employees, provide education and training where it is needed, offer support through budget and resource management needed to accomplish our goals, and listen carefully to the workforce as plans are designed to meet our goals. EPA's Office of Pollution Prevention and Toxics is developing a guidance to assist federal facilities in establishing and communicating their

goals to the public, federal agencies, and their parent agency. This guidance will be available to all EPA laboratories to assist in external and internal communication.

EPA already offers a number of pollution prevention training courses to its staff. EPA will ensure that every employee has the opportunity to take basic pollution prevention training courses and specialized courses when necessary. EPA will also work to make these courses and training sessions available to federal, state, local, and tribal governments.

Each facility will clearly articulate its goals and the Agency's goals to every employee. Employees will be integrally involved in the design of the plan that will help that facility achieve its targets. EPA will develop recognition systems for outstanding performance and creativity in this effort.

Outside of the government, EPA will assure that the concept of right-to-know becomes a central driving force as Executive Order 12856 is implemented. In addition to TRI Form R which must be made public, EPA will make facility plans public and will hold meetings in interested facility communities to bring the public into the decision-making process.

Each EPA Region's public affairs officer will provide annual status reports for the facilities and will meet with the public on issues of interest.

7. Designation of a Senior Agency Official for Coordination

EPA's Environmental Executive, James V. Aidala, Associate Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances, will serve as the senior Agency official for coordination.

8. Specific Responsibilities of Internal Organizations for Developing, Implementing, and Evaluating the Strategy

Office of Pollution Prevention and Toxics

- Lead on TRI/pollution prevention issues
- Technical assistance on TRI and hazards evaluation of toxic chemicals

Office of Administration and Resource Management

- Lead for implementing the Executive Order in EPA facilities
- Compile annual report to Congress

Office of Research and Development

- Lead on analyzing laboratory standards for pollution prevention opportunities

Office of Solid Waste and Emergency Response

- Lead on solid waste auditing and guidance issues

9. Provisions for Public Involvement

The following EPA offices will work together to develop a communication strategy: Office of Administration and Resource Management, Office of Communications,

Education and Public Affairs, Office of Regional Operations and State/Local Relations,
and Office of Pollution Prevention and Toxics.

EPA Waste Prevention

It Makes Good Business Sense!



U.S. Environmental Protection Agency
Office of Solid Waste
Communications Services Branch
401 M Street, SW.
Washington, DC 20460

Official Business
Penalty for Private Use, \$300



Printed with vegetable-based
ink on paper containing at
least 50% recycled fiber.

Minimize Waste, Maximize Profits!

As in every business, your company's **bottom line** is your **top priority**. While you might never have considered it before, the garbage your company generates can cut into your company's **profit margin**. Not only do you pay to transport and dispose of waste, but you could be inadvertently throwing away **valuable resources**. Minimizing waste can help to maximize profits. By reducing discards—from computer paper to cafeteria trays—you can save money, increase productivity, and even attract customers. Just a few simple changes, such as eliminating some paper memos or a layer of shipping material, can translate into **big savings** for your organization. And many companies don't stop there. Some firms have implemented comprehensive waste prevention programs that save them **millions of dollars** annually!

Computer Manufacturer Redesigns Packaging for Big Savings

A Massachusetts-based supplier of networked computer systems, software, and service redesigned protective packaging to ship large computer enclosures. The result was a 31 percent reduction in packaging volume for this product and an estimated first year savings of \$200,000.

What Is Waste Prevention?

Waste prevention, also referred to as source reduction, involves the design, manufacture, purchase, or use of materials and products to reduce the amount or toxicity of what is thrown away. Experts agree waste prevention is the most effective way to control municipal solid waste.

Waste prevention is not recycling. Recycling is a beneficial way to **manage** materials that would otherwise become waste, whereas waste prevention helps create less waste in the first place. For waste that cannot be prevented, however, recycling is the next best choice.

To help you set up a waste prevention program tailored to your own company, the U.S. Environmental Protection Agency (EPA) has developed a handbook of case studies from successful business waste prevention programs and a waste prevention guidance manual. To order these publications free of charge, send in the form at the end of this pamphlet.

What Are the Benefits of Waste Prevention?

Your business could reap significant benefits from waste prevention, including:

- Reduced waste disposal costs
- Savings in material and supply costs
- Savings from more efficient work practices
- Revenues from marketing reusable materials

Waste prevention also can enhance your corporate image and help you stay competitive. In addition, your employees might welcome, and even champion, waste prevention initiatives, giving a boost to company teamwork and morale.

Waste prevention benefits the environment, too. Waste prevention can conserve natural resources and slow the depletion of valuable landfill space. It also can reduce the pollution associated with the manufacture of products. In addition, reducing the amount of hazardous constituents in goods can reduce potential management problems at landfills and incinerators when these items are discarded.

Some Approaches to Waste Prevention

If you are implementing a comprehensive waste prevention program, you will want to look at all of your operations for opportunities to cut waste. Here are some tips to get your waste prevention program started:

Use or manufacture minimal or reusable packaging.

Encourage your suppliers to eliminate unnecessary packaging. In your purchasing, you can favor suppliers who offer products with minimal packaging. Whenever possible, buy products in bulk quantities and in reusable packaging. To reduce waste in your own shipping department, see if you can use fewer layers and ship merchandise in returnable or reusable containers.

Use and maintain durable equipment and supplies.

Consider investing in quality, long-lasting supplies and equipment that can be repaired easily. These items will stay out of the waste stream longer, and the higher initial costs may be justified by lower maintenance, disposal, and replacement costs. Setting up a regular maintenance schedule for machines will extend their useful lives, cutting back on waste and the need to replace expensive equipment.

Reuse products and supplies.

Adopt simple, cost-effective measures to conserve materials through reuse. Disposable items, such as coffee cups and single-use cafeteria trays, can be replaced with long-lasting, reusable products. A one-time investment for such items breaks the frequently expensive cycle of discarding and reordering. Encourage employees to reuse common items such as files and interoffice envelopes.

Reduce the use of hazardous constituents.

Find out which products in your graphics and maintenance departments (such as ink, solvent, paint, glue, and other materials) are available with fewer or no hazardous constituents. Ask your suppliers about water-based (rather than oil- or solvent-based) products.

Utility Licks Purchase Costs with Reusable Envelopes

A utility company in Maryland uses "send-'n'-return" envelopes to save money and time and decrease waste. One envelope is used for both sending bills and returning the payment. This strategy avoids using 1.5 million return envelopes per year, which equals a \$55,000 savings in purchasing costs.

PLACE
STAMP
HERE

RCRA Information Center (5306)
U.S. Environmental Protection Agency
401 M Street, SW.
Washington, DC 20460

EPA Offers Additional Information on Preventing Waste

EPA has published two documents to help businesses design and implement waste reduction programs in their facilities:

Waste Prevention Pays Off: Companies Cut Waste in the Workplace, a 24-page handbook, presents a brief overview of waste prevention strategies that are working for different types of businesses.

A Business Guide for Reducing Solid Waste is a 92-page manual providing detailed "how-to" instructions for businesses that are ready to embark on a waste reduction program.

Order Form

Please send me:

Waste Prevention Pays Off: Companies Cut Waste in the Workplace

A Business Guide for Reducing Solid Waste

Name _____

Company _____

Address _____

City _____

State _____

Zip _____

Telephone _____

Use supplies and materials more efficiently.

Try changing some of your company's operations to increase efficiency, reduce waste, and conserve materials. Examples include switching to double-sided copying and using electronic mail instead of paper memos.

Compost yard trimmings on site.

An option that most companies can adopt to reduce waste is "grasscycling," or leaving grass clippings on the lawn. In addition, if your company has sufficient space, start a compost bin on site for grass and leaves, rather than shipping them elsewhere for disposal. Composting is a natural process by which yard trimmings and other organic materials are allowed to decompose under controlled conditions.

Exchange, sell, or give away unneeded goods or materials so they can be reused.

Donate excess food, used furniture, and other materials to local organizations, such as homeless shelters or charities. You might try exchanging materials with another company. In a materials exchange, businesses trade, sell, or give away goods or materials that would otherwise become waste.

Eliminate unnecessary items.

Finally, don't overlook the obvious! Over time, your company may have begun routinely using materials that contribute little or nothing to your product or service. Eliminating the use of such unnecessary items can add up to significant waste reductions—and cost savings!

For More Information

Call the RCRA/Superfund Hotline at 800-424-9346 or TDD 800-553-7672 for the hearing impaired. For Washington, DC, and outside the United States, call 703-412-9810 or TDD 703-412-3323.

EPA has a program to encourage and assist businesses to reduce solid waste. For information on the WasteWise program, call 1-800-EPA-WISE.