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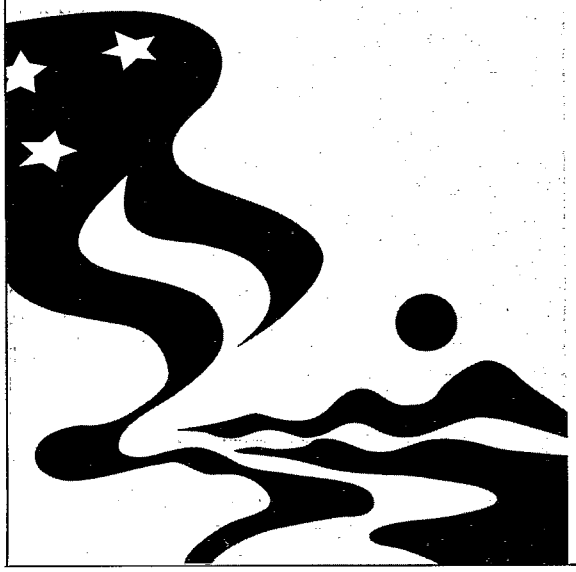
EPA

Meeting the Challenge:

A Summary of Federal Agency Pollution Prevention Strategies



Executive Order 12856:
Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements

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OVERVIEW AND HIGHLIGHTS

"...it is time that the United States government begins to live under the laws it makes for other people."

President Clinton
Earth Day Address 1993

BACKGROUND

On August 3, 1993, President Clinton signed Executive Order 12856, entitled "Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements." This Order requires that Federal agencies comply with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and Pollution Prevention Act of 1990. Moreover, the Order sets a new standard for Federal environmental excellence by extending this compliance requirement to many activities not currently monitored in private industry. In requiring compliance with EPCRA, the Executive Order affirms and strengthens the Federal Government's obligation as a responsible neighbor in communities where Federal facilities are located. The Order further ensures that facilities work with communities on emergency preparedness and response measures and that those communities are advised of routine and accidental releases of potentially hazardous pollution.

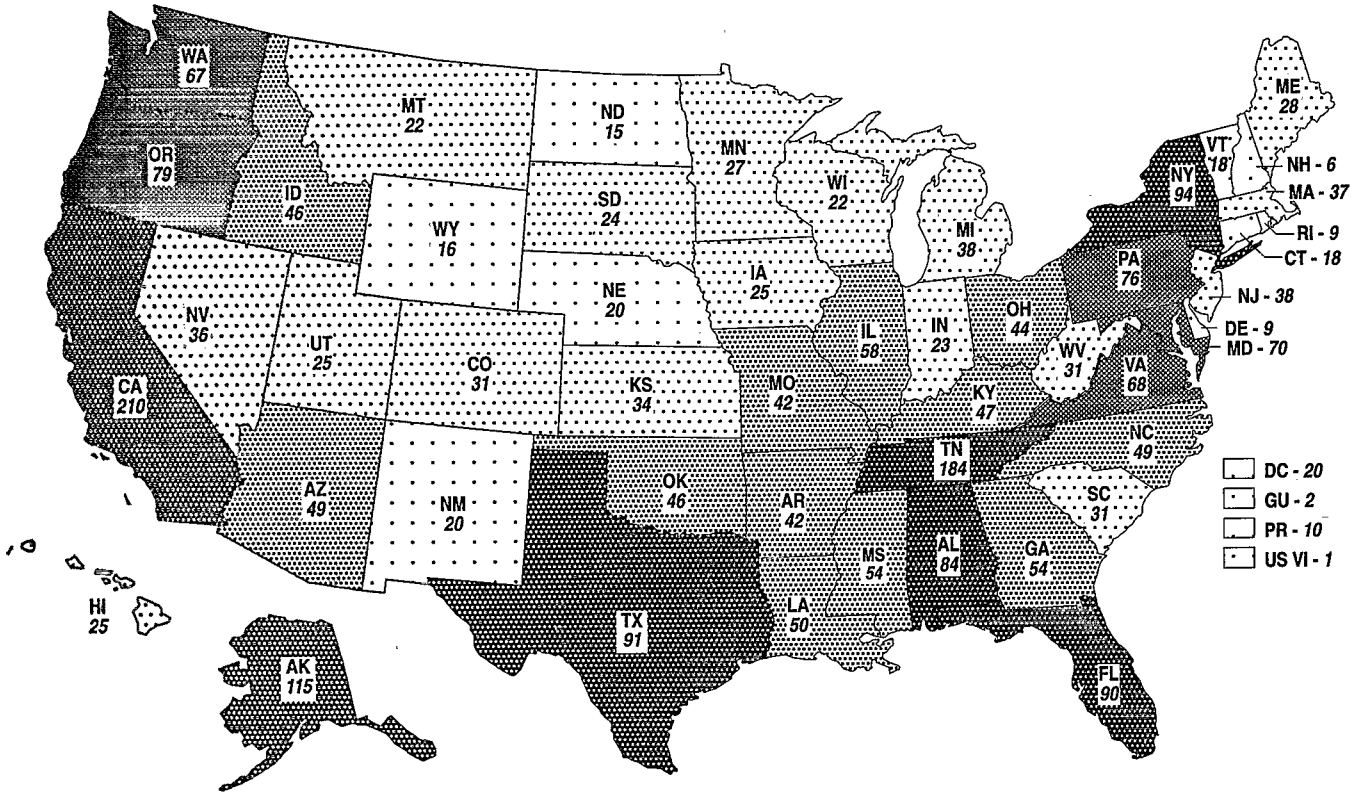
In addition to community right-to-know requirements, Executive Order 12856 also establishes the Administration's vision for Federal government leadership in pollution prevention. The Order directs that Federal agencies and facilities take steps to embrace pollution prevention as a government-wide ethic in the day-to-day management of Federal facilities and sets ambitious goals for reducing or eliminating the release of toxic and hazardous pollutants from Federal facilities into the environment. The Order supports these goals by committing the Federal community to modify acquisition and procurement practices by adopting pollution prevention as standard practice for government purchase of goods and services. Finally, the Order supports the continuing Federal commitment to work with the private sector in the development, testing and implementation of innovative pollution prevention technologies.

PURPOSE OF THIS DOCUMENT

To ensure that Federal agencies and facilities fulfill the provisions of Executive Order 12856, the Order directs that all Federal agencies with "covered facilities"* develop a strategy for implementation of the Executive Order. Sixteen Federal agencies have prepared pollution prevention strategies that will direct implementation of the Executive Order at more than 2,400 covered Federal facilities (See map on next page).

* Covered facilities are defined in the Executive Order to include any Federal facility which meets one or more of the threshold requirements for reporting set forth in sections 302, 303, 304, 311, 312 or 313 of EPCRA.

Number of EO 12856 "Covered" Federal Facilities by State



1 to 20 Facilities
13 States/Territories

21 to 40 Facilities
17 States/Territories

41 to 60 Facilities
12 States/Territories

61 to 80 Facilities
5 States/Territories

81 + Facilities
7 States/Territories

Agencies that have prepared strategies include the Department of Veterans Affairs, which does not currently have facilities covered by the Executive Order but has nevertheless prepared a pollution prevention strategy covering various non-reporting aspects of the Executive Order. The United States Postal Service and Smithsonian Institution are not legally covered by the Executive Order, but have prepared formal agency pollution prevention strategies and committed to implement the Executive Order. Additional supplemental strategies have been prepared by branches or services of several Federal departments.

This document outlines the collective Federal commitment to pollution prevention and community right-to-know as established by the Executive Order. The remainder of this section reviews the major provisions of Executive Order 12856 and the responses of the Federal agency strategies. The next section provides a summary and highlights of each Federal agency strategy as well as other Federal agency commitments. Appendix A provides the full text of each Federal agency strategy.

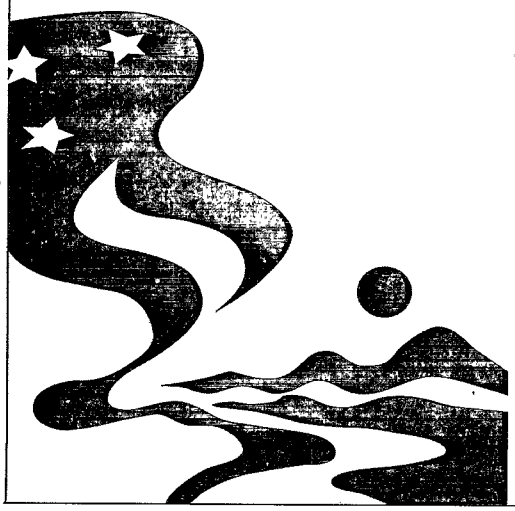
Since 1990, Tinker Air Force Base in Oklahoma has been an authorized Local Emergency Planning Committee (LEPC). As the first Air Force installation to be designated an LEPC, Tinker established a program for emergency response coordination between the base and surrounding communities in the event of an accidental release of hazardous chemicals from the base.

EXECUTIVE ORDER REPORTING REQUIREMENTS

As noted, Executive Order 12856 establishes a requirement for Federal facility compliance with EPCRA and its various reporting requirements. For compliance with EPCRA section 301 through 312, the Executive Order calls for a reporting schedule similar to that set up for industry compliance when EPCRA was enacted and mirrors private sector time frames for annual reporting. The time frame for Federal facility reporting under section 313 of EPCRA also coincides with the reporting schedule established for private industry, with the first Federal reports due to be submitted by July 1, 1995. As previously noted, the Order applies the reporting requirements of EPCRA to Federal facilities more broadly than current application in private sector industries. A discussion of applicable EPCRA reporting requirements is provided below.

Emergency Planning and Response:

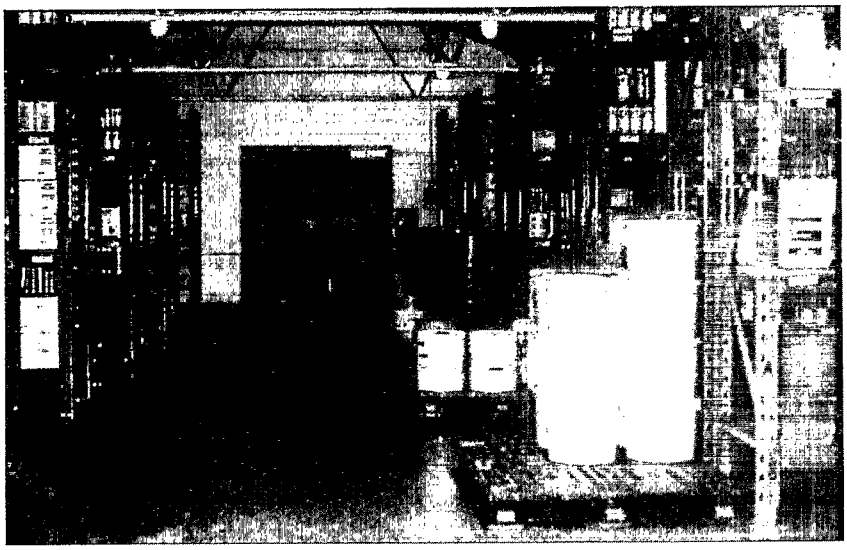
- EPCRA SECTIONS 302 AND 303: Pursuant to section 3-305 of the Executive Order, Federal facilities must comply with sections 302 and 303 of EPCRA by providing the State Emergency Response Commissions (SERC) and Local Emergency Planning Committees (LEPC) information necessary for planning community response to rare but potentially catastrophic events such as the release of hazardous chemicals during a facility accident. To comply with EPCRA section 302, facilities with an EPA designated extremely hazardous substance (EHS) on-site at any one time at or above the stipulated threshold planning quantity must inform the SERC and LEPC that the facility is subject to emergency planning and notification requirements. Additionally, to comply with section 303 of EPCRA, Federal facilities must provide the LEPC with information necessary for the development or revision of local emergency plans established under this section of EPCRA.



- EPCRA SECTION 304: To provide for public notification of emergency releases of chemicals potentially harmful to the community, the Executive Order states that, effective January 1, 1994, Federal agencies are subject to the reporting requirements of section 304 of EPCRA. Under this requirement, Federal facilities that have an emergency release of an extremely hazardous substance or hazardous substance must immediately provide notification to the appropriate LEPC and SERC and must provide written follow-up regarding the release.

- EPCRA SECTIONS 311 and 312: To enhance community awareness of chemical hazards and provide information about the identity and amount of chemicals including storage conditions and locations, the Executive Order requires Federal facility compliance with sections 311 and 312 of EPCRA. Under section 311, facilities must complete a one-time submission of material safety data sheets for chemicals meeting established threshold quantities to the appropriate SERC, LEPC and local fire department. Similarly, to satisfy the reporting requirements of section 312 of EPCRA, facilities must submit additional chemical inventory information annually to these entities.

Analogous to the process used to dispense prescriptions in a medical pharmacy, the hazardous material pharmacy safely stores only the amount of hazardous material needed to meet the demands of installation-level customers and issues a fixed amount to authorized users as required.



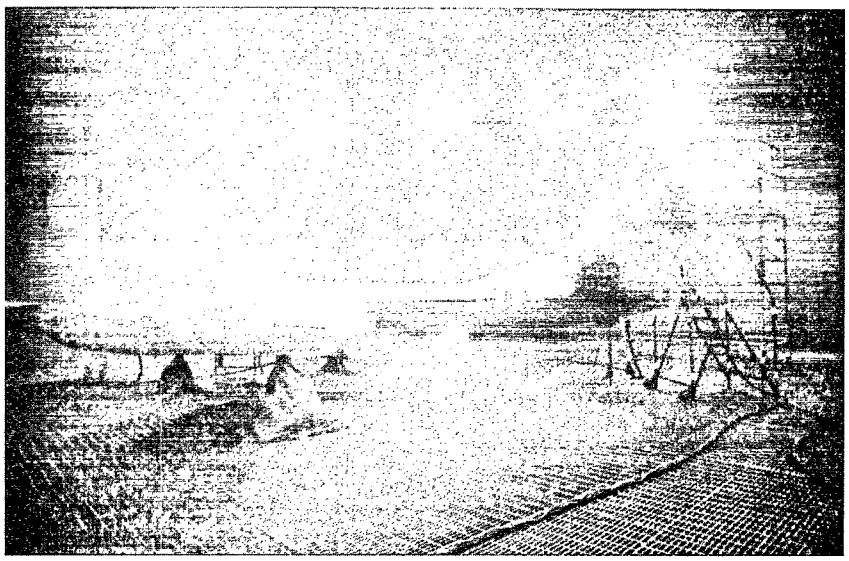
- EPCRA SECTION 313: EPCRA section 313 establishes a nationwide inventory of toxic chemical releases to all environmental media and provides affected communities and states with information about chemical releases into the community. While section 313 has been applicable to specific sectors of private industry since 1987, the Executive Order now requires that Federal facilities comply with the requirements of this section. Moreover, in directing

Federal facility compliance with this section of EPCRA, the Executive Order also removes qualifications which limit compliance by private industry primarily to facilities engaged in manufacturing. Federal facilities which meet applicable thresholds must submit EPCRA section 313 and Pollution Prevention Act data on EPA Toxic Chemical Release Inventory Reporting Form R beginning with calendar year 1994 with the first submission due to EPA and the states on July 1, 1995.

Selected Agency Highlights

The Department of Energy voluntarily complied with Section 313 of EPCRA at its facilities that met reporting criteria beginning in calendar year 1993. This leadership initiative provided a better understanding of the nature of toxic chemical releases from Federal facilities and provided an incentive to DOE reporting facilities to attain many of the goals of the Executive Order even before it was issued.

Nearly all Air Force installations have adopted plastic media blasting for removing paint from both aircraft and aircraft support equipment. Not only does this method eliminate or reduce the use of toxic solvents, but has been found by the maintenance community to be a more efficient, cleaner operation.



In complying with EPCRA section 313, EPA will forego an established laboratory exemption in determining which of its facilities must report and will lower the "otherwise use" threshold to 8,000 pounds (from the 10,000 pound threshold under current regulations).

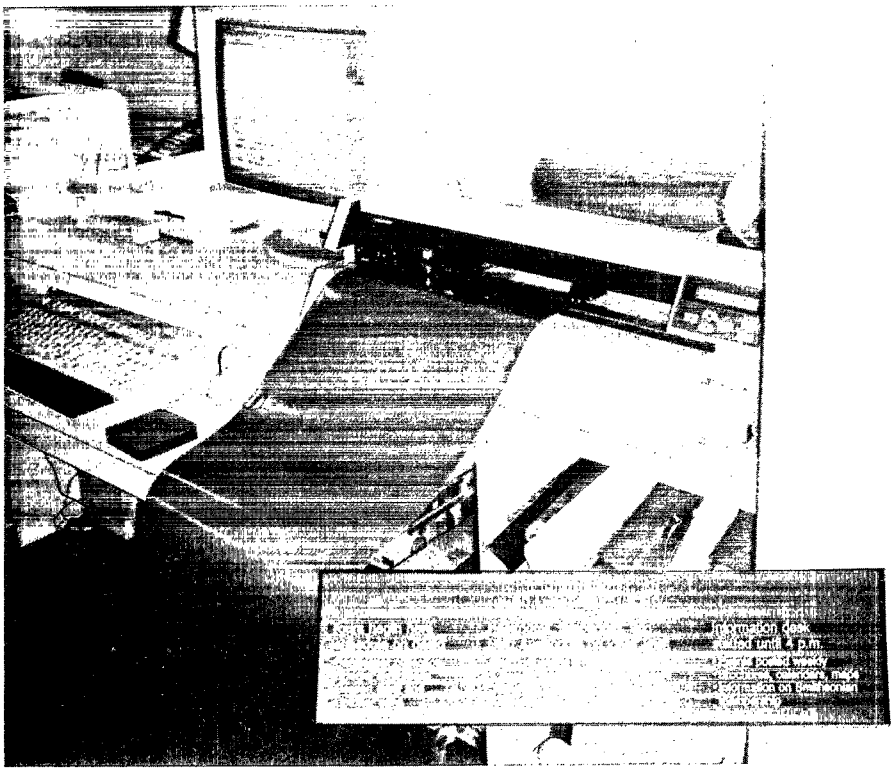
The Department of Veteran's Affairs has reviewed activities at its facilities and has determined that no VA facilities meet the reporting thresholds established under EPCRA. The Department has nonetheless prepared a pollution prevention strategy which promotes many of the pollution prevention goals of the Executive Order and directs VA offices to support those goals in establishing agency policies.

The pollution prevention strategy for the Department of Agriculture includes comprehensive service-specific strategies prepared by the Forest Service, Animal and Plant Health Inspection Service, Agricultural Research Service and Food Safety and Inspection Service.

EXECUTIVE ORDER POLLUTION PREVENTION GOALS

To underscore the Federal government's commitment to environmental leadership, the Executive Order directs that each Federal agency develop voluntary goals to reduce the agency's total releases and transfers of toxic chemicals by 50 percent by the end of calendar year 1999. The Executive Order establishes 1994 as the baseline year against which progress toward the agency-wide goal is measured and emphasizes that reductions should be achieved through source reduction practices. The Executive Order also allows agencies to expand the chemicals covered under the reduction goal to include other toxic **pollutants** in addition to the toxic **chemicals** identified under section 313 of EPCRA.

The Smithsonian Institution has significantly reduced the use of toxic solvents in the manufacture of exhibition graphics and facility signs. Water-based printing, accompanied by laser print technology and computer driven vinyl cutting processes, have eliminated chemical waste associated with graphics and sign making for museums and support facilities.



Selected Agency Highlights

A majority of Federal agency pollution prevention strategies explicitly commit to the goal of a 50 percent reduction in the release and transfer of toxic chemicals from their facilities by the end of 1999. Further, many agency strategies endorse source reduction activities as the alternative of choice for facility pollution prevention improvements.

The Department of Agriculture pollution prevention strategy allows Agriculture services to set their 50 percent reduction goal for toxic pollutants rather than toxic chemicals, thereby expanding the number of chemicals that will be reported as well as identifying opportunities for source and release reductions at Agriculture facilities.

The Central Intelligence Agency pollution prevention strategy includes a commitment expanding the CIA's 50 percent reduction goal to include releases of extremely hazardous substances.

The Environmental Protection Agency pollution prevention strategy calls for the development of two baselines for its reduction goals; one baseline for reductions of toxic chemicals and an additional baseline identifying uses of hazardous chemicals at EPA facilities that offer opportunities for pollution prevention through substitution of more benign chemicals or process changes.

The Department of Interior's Fish and Wildlife Service is working to develop a prototype pollution prevention plan to be implemented at its field offices and facilities. Most of the Service's 250 facilities are not formally covered by the Executive Order.

FACILITY-SPECIFIC POLLUTION PREVENTION PLANS

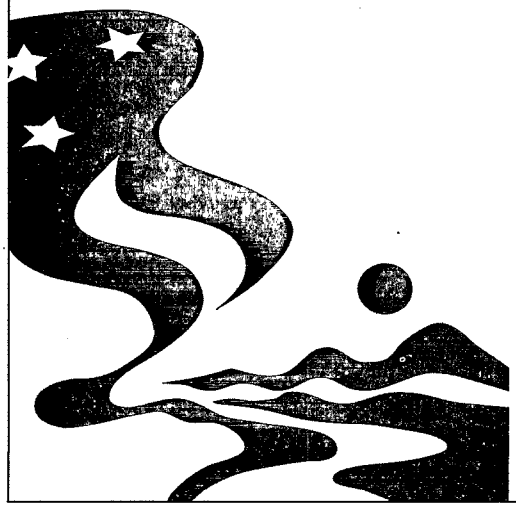
The Executive Order directs that the head of each agency ensure that its covered facilities develop a written pollution plan that sets forth the facility's contribution toward the agency 50 percent reduction goal. Facilities which do not report under EPCRA section 313, and are therefore not likely to be included in the agency's baseline but are nevertheless "covered facilities" under the Executive Order, are also required to prepare pollution prevention plans. The inventory of facilities covered under the Order encompasses facilities from 15 different Federal agencies and includes nearly 1,700 civilian facilities. The plans that result from this requirement will assist Federal facilities in assessing pollution prevention opportunities and will serve as a mechanism for ensuring that facility management decisions fully consider and implement pollution prevention directives embodied in agency strategies. EPA has prepared a document, *Federal Facility Pollution Prevention Planning Guide*, to assist agencies in complying with this aspect of the Executive Order.

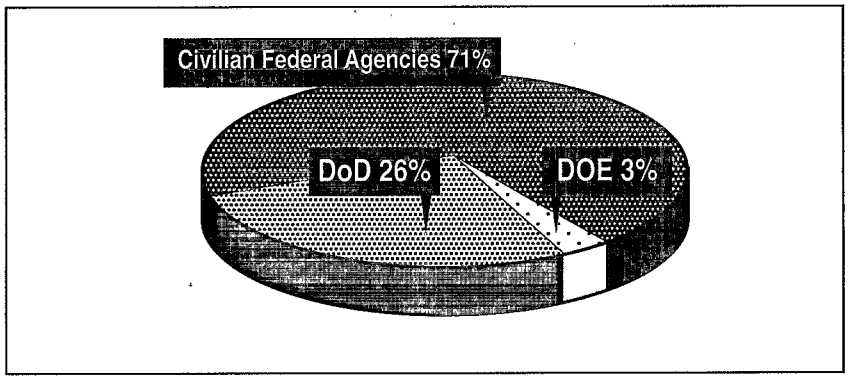
Selected Agency Highlights

Nearly all of the Federal agency pollution prevention strategy documents include an agency commitment to ensure development of facility specific pollution prevention plans for covered facilities and most strategies direct facilities to conduct formal facility pollution prevention opportunity assessments to enhance the effectiveness of the plan.

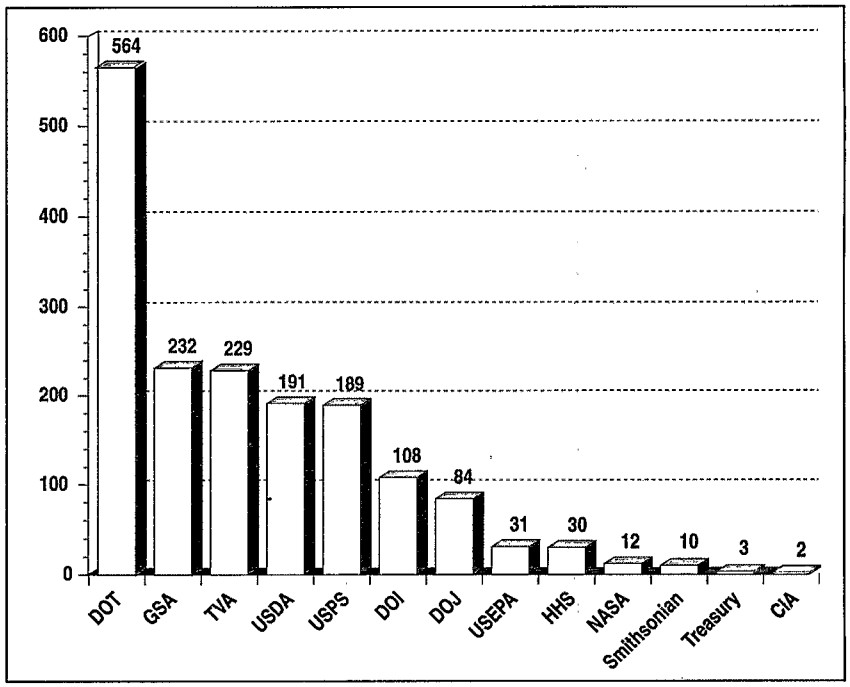
The strategies prepared by the National Aeronautics and Space Administration and the Department of Defense direct all of their constituent facilities and installations -- including those that do not meet the "covered facility" threshold -- to prepare facility specific pollution prevention plans.

The Department of Transportation strategy specifies that all DOT facility pollution prevention plans include: an inventory of products used and waste streams generated, as well as an evaluation and selection of pollution prevention alternatives with a schedule for implementation, training needs, methods for measuring success and community involvement.





EO 12856 Covered Facilities by Agency (2,472 Facilities)



EO 12856 Civilian Federal Agency Covered Facilities (1,685 Facilities)

COMPLIANCE THROUGH POLLUTION PREVENTION

The Executive Order states that the Federal agency pollution prevention strategies should reflect the Federal government's commitment to utilize pollution prevention through source reduction, where practicable, as the primary means for achieving and maintaining compliance with Federal, State and local environmental requirements. Thus, pollution prevention is the alternative of first choice in achieving compliance with new environmental regulations or requirements, ensuring compliance with existing regulations and requirements, and returning to compliance when violations are identified.

Selected Agency Highlights

Each of the Federal agency strategies includes a specific commitment to utilize pollution prevention as the primary means of achieving and maintaining compliance with environmental requirements.

POLLUTION PREVENTION IN ACQUISITION AND PROCUREMENT AND FACILITY MANAGEMENT

The Executive Order states that Federal agency pollution prevention strategies must reflect a commitment to pollution prevention through source reduction at the facility management and acquisition level. This directive ensures that consideration of pollution prevention is incorporated into the routine of Federal facility management decisions. This commitment to pollution prevention "at the source" is a cornerstone of the Executive Order and aims not only at preventing pollution and conserving natural resources, but also at reducing wastes and creating markets for environmentally sound products and technologies. Further, integrating pollution prevention concepts such as total cost accounting and life cycle analysis into the acquisition and procurement process permits the economic benefits of pollution prevention to be recognized and pollution prevention projects to be evaluated appropriately in facility management decisions.

"The Department of Defense must improve its environmental performance by actively implementing polices that embrace pollution prevention in all phases of the acquisition process, the procurement of goods and services and in the life-cycle management of our installations."

William J. Perry, Secretary of Defense, August 11, 1994

Selected Agency Highlights

All 16 Federal agency pollution prevention strategies contain a commitment to pollution prevention in both facility management and acquisition.

The strategy for the Department of Defense requires the integration of pollution prevention and other environmental concerns into the entire life-cycle of acquisition programs from concept development to final disposal.

The General Services Administration has committed to reduce or eliminate products that contain hazardous chemicals from the inventory of products purchased for the Federal supply system.

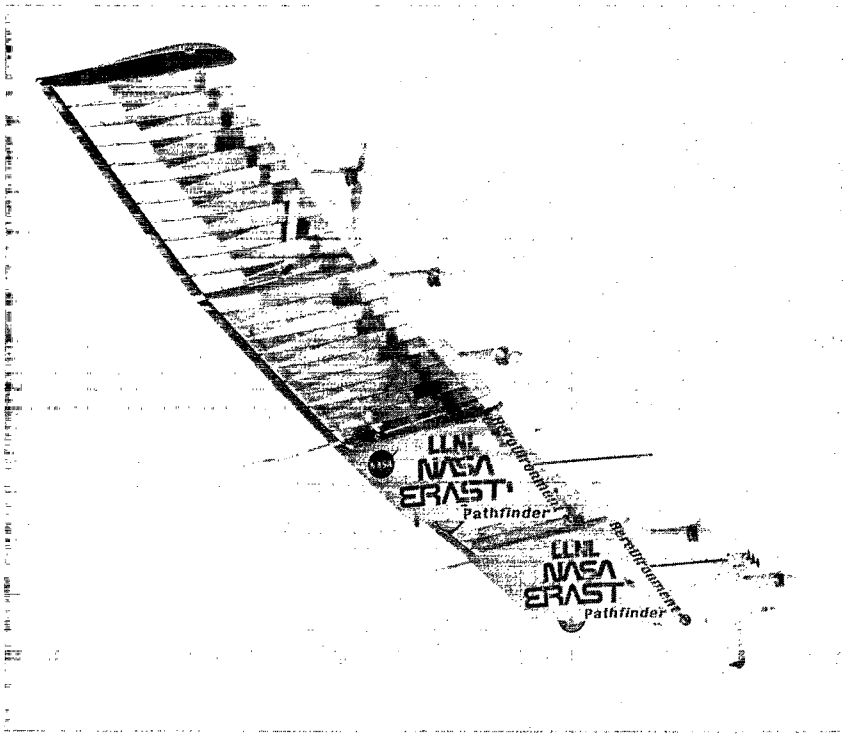
The Department of Health and Human Services has committed to revise standard internal administrative and policy manuals to ensure that those documents embrace pollution prevention and reflect the Executive Order.

The Tennessee Valley Authority's strategy calls for a review of agency standardized documents to identify opportunities to eliminate or reduce use of extremely hazardous substances or toxic chemicals, and the ultimate revision of those documents to reflect the goals of the Executive Order.

DEVELOPMENT, TESTING AND SUPPORT OF INNOVATIVE POLLUTION PREVENTION TECHNOLOGIES

Executive Order 12856 calls for Federal leadership in supporting innovative pollution prevention technologies and programs and developing strong market incentives for those programs and technologies. The Executive Order encourages Federal agencies to develop partnerships with other Federal agencies and with other groups such as industry and academia for the development and implementation of pollution prevention technologies. This provision of the Executive Order recognizes the unique role of the Federal community as both a national leader in pollution prevention research and development and the nation's single largest consumer of goods and services.

The National Aeronautics and Space Administration has developed the "Pathfinder" aircraft to gather information about the earth's upper atmosphere. The unpiloted, solar-powered craft captures energy on its wing surface. With energy stored in on-board cells, the craft is able to stay aloft for extended periods and does not contribute to pollution through the use of conventional fueled propulsion systems.



Selected Agency Highlights

Over half of the Federal pollution prevention strategies contain specific commitments endorsing the development, testing and support of innovative pollution prevention technologies and programs.

The Department of Defense pollution prevention strategy provides for the development of contracting incentives to stimulate the development of environmentally sound products and calls for integration of DoD's pollution prevention research, development, testing and evaluation programs with those of other agencies, academia and private industry.

INVOLVING THE PUBLIC IN PLANNING AND DECISION MAKING

Public involvement, open communication and a general good neighbor approach by Federal facilities are basic tenets of the Executive Order. To support these goals beyond the reporting requirement of EPCRA, the Executive Order encourages Federal agencies to involve the public during the preparation of agency strategies and plans related to the Executive Order and in monitoring the progress toward meeting the goals established by agency strategies and plans.

Under the leadership of the U.S. Army Corps of Engineers, Federal facilities in the Anacostia river watershed, a "Region of Concern" for toxics under the Chesapeake Bay Program, will coordinate to ensure that facility pollution prevention plans reflect the Anacostia River Toxics Management Action Plan.

Selected Agency Highlights

The General Services Administration has committed to conducting community-wide environmental conferences highlighting compliance with the Executive Order at GSA facilities, other Federal facilities and private industry.

AGENCY COMMITMENTS BEYOND COMPLIANCE

While the Federal agency pollution prevention strategies discussed in this summary were prepared in response to provisions of Executive Order 12856, many Federal agencies took the opportunity of developing pollution prevention strategies to delineate their intentions for compliance with environmental Executive Orders other than EO 12856 and to outline improvements in agency and facility environmental management and policy. The agency strategy summaries presented in the next section provide a review of the strategy elements that go beyond compliance with Executive Order 12856.

Natural Resource Considerations

Executive Order 12856 clearly embraces protection of natural resources through conservation and many pollution prevention activities reduce potential adverse environmental impacts to natural resources. Several Federal agencies pledged to further pursue natural resource protection through activities such as limiting the use of pesticides and applying integrated pest management techniques at Federal facilities.

Executive Order 12898: "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"

Executive Order 12898 provides a blueprint for increased Federal recognition of populations which have experienced a significant portion of the nation's environmental burden. Many Federal agency pollution prevention strategies refer to Executive Order 12898 and propose to incorporate the goals of that Executive Order with activities carried out under Executive Order 12856.

Executive Order 12873: "Federal Acquisition, Recycling and Waste Prevention"

This Executive Order sets goals for solid waste prevention and recycling in the Federal community and requires implementation of affirmative procurement programs for EPA-designated guideline items. Many of the Federal agency pollution prevention strategies endorse the recycling and procurement goals of Executive Order 12873.

Executive Order 12902: "Energy Efficiency and Water Conservation at Federal Facilities"

Executive Order 12902 sets goals for reduction in energy and water consumption at Federal facilities through increased efficiency and facility audits as well as the purchase of energy-efficient products. Several agencies utilized the preparation of the pollution prevention strategy to ensure compliance with the energy and water conservation and procurement aspects of Executive Order 12902.

The Chesapeake Bay Basinwide Toxics Reduction and Prevention Strategy, signed in October of 1994, commits Federal facilities within the Chesapeake Basin to a 75 percent reduction in releases and off-site transfers of toxic chemicals by the year 2000.

EXECUTIVE ORDER 12856: IMPLEMENTATION ACCOMPLISHMENTS

Interagency Pollution Prevention Task Force

In accordance with the Executive Order, a Task Force has been formed to ensure appropriate and uniform implementation of the Executive Order. The Interagency Pollution Prevention Task Force is composed of senior level representatives from the Central Intelligence Agency, Departments of Agriculture, Defense, Energy, Health and Human Services, Interior, Justice, Transportation, Treasury, and Veterans Affairs, Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, Smithsonian Institution, Tennessee Valley Authority, and US Postal Service, as well as the Office of the Federal Environmental Executive and the Office of Management and Budget. The Task Force meets four times a year and has endorsed several actions described below.

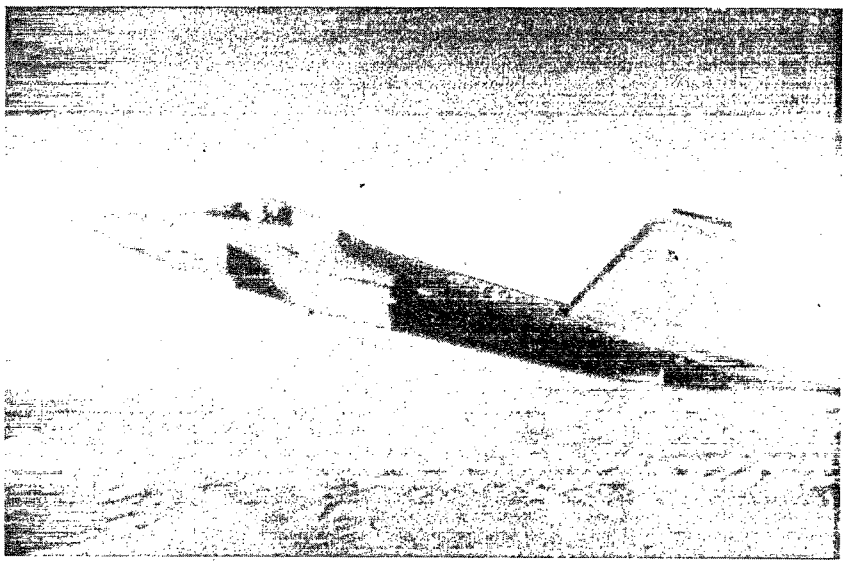
Interagency Pollution Prevention Task Force Charter: Through a group established by the Task Force, a Charter has been prepared which delineates the roles and responsibilities of the Task Force in implementation of the Executive Order. The Charter provides each agency an opportunity to formally recognize the goals of the Executive Order and pledge to implement the provisions of the Order.

Guidance and Implementation Assistance: In coordination with other agencies on the Interagency Task Force, EPA has prepared and released general guidance for implementation of Executive Order 12856. Additionally, EPA has prepared assistance documents

focusing on Federal agency pollution prevention strategies and facility level plans required by the Executive Order. EPA has also developed a document entitled *Federal Facility Pollution Prevention Project Analysis: A Primer for Applying Life Cycle and Total Cost Assessment Concepts* to assist field level personnel in addressing life cycle accounting concepts at the facility level.

Environmental Management Principles: EPA has prepared a draft "Code of Environmental Principles" as part of the "Federal Government Environmental Challenge Program" called for in section 4-405 of the Executive Order" and has circulated that document to other agencies for review and comment.

Development of the F-22 Fighter has been marked by a systematic effort to reduce the amount of hazardous materials used both operationally and in the maintenance of the aircraft. Halon 1301 fire suppressant located in the engine compartment is, for example, the aircraft's only requirement for an ozone depleting substance. By comparison, the C-5A Airlifter cargo plane, developed in the 1960's, required over 3000 specifications for ozone depleting substances.



Effective Implementation: A work group established by the Task Force has prepared a plan to address crosscutting Federal management issues which affect implementation of the Executive Order. The work group is capitalizing on the collective knowledge and resources of the 16 Task Force agencies to ensure a coordinated and effective effort. The Task Force has established subcommittees composed of representatives from the various Task Force member agencies to assist in implementation of specific aspects of the Executive Order. A brief description of each subcommittee's work is presented below.

- **Revising Acquisition and Procurement Procedures -** Incorporating pollution prevention into the Federal Government acquisition and procurement system is critical to the effective implementation of Executive Order 12856 and other environmental Executive Orders. This subcommittee is reviewing how existing Federal Acquisition Regulations and other regulations and policies hinder the ability of Federal agencies to implement the Executive Order and how alternative approaches can be developed to incorporate the goals of the Executive Order into the acquisition and procurement process.

- **Coordinating Pollution Prevention Research and Development and Technology Diffusion -** Section 3-303(d) of Executive Order 12856 encourages Federal facilities to serve as demonstration and testing centers for innovative pollution prevention technologies. Many Federal agencies and facilities conduct research and demonstration projects to identify pollution prevention alternatives, and participate in cooperative research and development and demonstration programs. This subcommittee will explore ways to integrate pollution prevention into Federal research and development activities, dedicate appropriate resources to pollution prevention, minimize duplication of effort between Federal research and development communities, and facilitate technology diffusion across the Federal sector.

Design and operation of the U.S. Postal Service Long Life Vehicle (LLV) incorporates many pollution prevention features. With a planned life of 24 years and a recyclable aluminum body, the vehicle is designed to operate on clean burning compressed natural gas, resulting both in reduced air emissions and maintenance. Postal Service maintenance of the vehicle includes use of re-refined oil, recycled antifreeze and retread tires, as well as a variety of shop methods designed to eliminate the use of hazardous chemicals.

- **Information Transfer and Technical Solutions -** Most Federal agencies provide technical assistance and centralized information transfer including, clearinghouses, training, hotlines and electronic bulletin boards. While this support is useful, many agencies and

facilities, particularly the smaller agencies, need additional technical support in "hands on" facility planning, prototype evaluation, identification of substitutes, and full-scale implementation of pollution prevention programs. This subcommittee will assist in the identification or development of additional sources of technical assistance, and identify a means of consolidating and making existing information and technical data transfer systems more "user friendly."

- **Standardize Method for Data Gathering for Executive Order 12856 -** Current standardized chemical information systems, such as the material safety data sheet, are not designed to satisfy the reporting requirements of the Executive Order. To assist in proper reporting by contractors and government staff, standardized, good quality, chemical information systems are needed. This subcommittee will review existing chemical data systems and determine whether those systems can be modified to provide information necessary to comply with the reporting requirements of the Executive Order.

As an alternative to paint, flame coating flightline equipment, which is subject to the rigors of outdoor exposure year-round, has proven to be very effective. The hazardous solvents associated with painting are reduced at the source and the flame coating lasts longer because exterior damage can be easily touched up by reflaming.

- **Outreach and Showcase Federal Government's Progress on Executive Order 12856 and Pollution Prevention -** The Federal Government has made considerable progress in implementing the Executive Order as well as developing and implementing innovative procedures and technologies involving pollution prevention. The public and industry should be made aware of the collective efforts of the Federal community. This subcommittee is evaluating various options for presenting the Government's progress.

- **Substitute Chemicals and Alternative Processes -** As the reporting requirements of the Executive Order reveal which chemicals are being released in significant quantities, Federal agencies will need to work together and with industry and communities to find substitute chemicals and processes which allow true pollution prevention through source reduction. This subcommittee is reviewing past government reports as well as current forecasts regarding chemical releases to determine available alternative chemicals and processes that will help reduce releases of toxic chemicals and extremely hazardous substances.

Executive Order 12856 has ushered in a new era of Federal agency responsibility and leadership in environmental management and pollution prevention. Publication of these Federal agency strategies is a first and important step in delineating the scope of the Federal commitment to meet the challenge.

Training: Many Federal facility managers and personnel have received federally sponsored training in pollution prevention and compliance with the Executive Order. In 1994, 11 EPA courses were attended by more than 1,100 facility personnel. In 1995, 17 additional EPA training courses have been held or are scheduled across the country to provide additional training in compliance with the EPCRA requirements of the Executive Order and development of pollution prevention plans at covered facilities. Other Federal agencies have provided agency-specific training for implementing Executive Order 12856. For example, the Department of Defense provided approximately 40 training courses for over 1,500 management and field level personnel, and the Department of Energy prepared a 20 minute videotape for its managers covering requirements and resources needed for successful implementation of the Executive Order.

NEXT STEP

The Federal agency Pollution Prevention strategies provided in this document lay the foundation for effective implementation of Executive Order 12856. The goals embodied in the strategies, however, will only be realized if agencies and facility managers commit to aggressively execute the strategies. The most important next step in this process will be the preparation and implementation of facility-specific pollution prevention plans by approximately 2,500 covered Federal facilities. These plans, which are due to be completed by the end of 1995, will establish fundamental actions to be taken at the facility level where the greatest impact can be accomplished and will ensure that the Federal government meets the goals of Executive Order 12856.

Summary of Federal Agency Pollution Prevention Strategies

Full text of these strategies is also available on the Enviroene network, a free, public computer based information exchange system supported by DOE and DoD and operated by EPA. The system allows technical personnel, industry, policy makers and the public to share information regarding pollution prevention and innovative technology. Instructions on accessing Enviroene are provided at the end of this document.

The following section provides a brief overview, in matrix format, of the commitments made in the pollution prevention strategies prepared by 16 Federal agencies in compliance with Executive Order 12856. The matrix reveals the breadth and magnitude of the Federal commitment to the requirements and goals of the Order.

Following the matrix, each of the sixteen Federal agency pollution prevention strategies is profiled in a brief summary. The summaries detail each agency's commitment to various requirements and recommendations in the Executive Order, as well as other environmental Executive Orders issued in 1993 and 1994.

Overview of Agency Pollution Prevention Strategies

	Central Intelligence Agency	Department of Agriculture	Department of Defense	Department of Energy	Department of Health & Human Services	Department of the Interior	Department of Justice	Department of Transportation	Department of Treasury	Department of Veterans Affairs	Environmental Protection Agency	General Services Administration	National Aeronautics & Space Administration	Smithsonian Institute	Tennessee Valley Authority	U.S. Postal Service
	Section 3-301- Federal Agency Strategy															
Strategy includes a commitment to utilize pollution prevention (through source reduction, where practicable) as a primary means to achieve and maintain environmental compliance	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Strategy contains a commitment to incorporate pollution prevention (through source reduction, where practicable) in facility management and acquisition	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Strategy identifies individual(s) responsible for coordinating Agency EO 12856 efforts	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Strategy includes a Pollution Prevention Policy Statement	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Strategy includes a commitment to involve the public in monitoring progress*		●	●	●		●	●	●	●		●					

*Denotes an Executive Order recommendation

Overview of Agency Pollution Prevention Strategies

	Central Intelligence Agency	Department of Agriculture	Department of Defense	Department of Energy	Department of Health & Human Services	Department of the Interior	Department of Justice	Department of Transportation	Department of Treasury	Department of Veterans Affairs	Environmental Protection Agency	General Services Administration	National Aeronautics & Space Administration	Smithsonian Institute	Tennessee Valley Authority	U.S. Postal Service
Section 3-302- Toxic Chemical Reduction Goal																
Strategy: (1) commits to voluntary goal of reducing total releases of toxic chemicals and off-site transfers for treatment or disposal, through source reduction whenever practicable, by 50% by December 31, 1999, or(2) 50% reduction goal for toxic pollutants	●	●	●	●	●		●	●	●		●	●	●	●	●	●
Strategy includes a commitment to develop a written pollution prevention plan for each covered facility	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●
Strategy directs facilities to conduct assessments as necessary to develop pollution prevention plans and facility pollution prevention programs	●	●	●	●	●		●	●		●	●		●	●	●	●
Section 3-303- Acquisition and Procurement Goals																
Strategy establishes or calls for a plan and goals for eliminating or reducing unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Strategy establishes or calls for a plan and goals for voluntary reductions in manufacturing, processing, and use of extremely hazardous substances and toxic chemicals	●	●	●	●	●	●		●	●	●	●		●	●	●	●

*Denotes an Executive Order recommendation

Overview of Agency Pollution Prevention Strategies

	Central Intelligence Agency	Department of Agriculture	Department of Defense	Department of Energy	Department of Health & Human Services	Department of the Interior	Department of Justice	Department of Transportation	Department of Treasury	Department of Veterans Affairs	Environmental Protection Agency	General Services Administration	National Aeronautics & Space Administration	Smithsonian Institute	Tennessee Valley Authority	U.S. Postal Service
Section 3-303- Acquisition and Procurement Goals (Cont.)																
Strategy includes a commitment to review standardized documents to identify opportunities to eliminate or reduce the use of extremely hazardous substances and toxic chemicals	●	●	●	●	●	●		●		●	●	●	●	●	●	
Strategy includes a commitment to make all appropriate revisions to specifications	●	●	●	●	●	●		●		●	●		●		●	
Strategy includes a commitment to develop and test innovative pollution prevention technologies to encourage the development of strong markets for such technologies*			●	●	●				●	●	●	●			●	●
Strategy calls for the creation of partnerships with others to assess and deploy innovative environmental technologies for domestic use and markets abroad*			●	●	●				●		●	●			●	●
Section 3-304- Toxics Releases Inventory/Pollution Prevention Act Reporting																
Strategy includes a commitment to comply with EPCRA Section 313, PPA Section 6607, and all implementing regulations and future amendments	●	●	●	●	●	●	●	●	●		●	●	●	●	●	

*Denotes an Executive Order recommendation

Overview of Agency Pollution Prevention Strategies

	Central Intelligence Agency	Department of Agriculture	Department of Defense	Department of Energy	Department of Health & Human Services	Department of the Interior	Department of Justice	Department of Transportation	Department of Treasury	Department of Veterans Affairs	Environmental Protection Agency	General Services Administration	National Aeronautics & Space Administration	Smithsonian Institute	Tennessee Valley Authority	U.S. Postal Service
Section 3-305- Emergency Planning and Right-to- Know Responsibilities																
Strategy indicates agency compliance with EPCRA Section 302 (Substances and Facilities Covered and Notification)	●	●	●	●	●		●	●	●	●	●	●	●	●	●	
Strategy indicates agency compliance with EPCRA Section 303 (Comprehensive Emergency Response Plans)	●		●	●	●		●	●	●	●		●	●	●	●	
Strategy indicates agency compliance with provisions of EPCRA Section 304 (Emergency Notification)	●	●	●	●	●		●	●	●	●	●	●	●	●	●	
Strategy indicates agency compliance with EPCRA Section 311 (MSDS) Reporting)	●	●	●	●	●		●	●	●	●	●	●	●	●	●	
Strategy includes a commitment to comply with EPCRA Section 312 (Emergency and Hazardous Chemical Inventory Forms)	●	●	●	●	●		●	●	●	●	●	●	●	●	●	

*Denotes an Executive Order recommendation

CENTRAL INTELLIGENCE AGENCY (CIA)

Summary of Pollution Prevention Strategy

The CIA's Pollution Prevention Strategy provides a policy statement affirming CIA's compliance with EO 12856 and outlines the CIA's strategy to achieve the EO's pollution prevention goals.

The CIA's Pollution Prevention Strategy:

- Sets a goal of a 50 percent reduction in direct and indirect releases of toxic chemicals to the environment by December 31, 1999.
- Establishes source reduction as the primary means of achieving pollution prevention goals, as well as achieving and maintaining compliance with applicable Federal, state, and local environmental requirements, where practicable.
- Contains an objective to incorporate pollution prevention into existing policy and management practice by:
  - Revising acquisition and procurement policy and merging pollution prevention into the procurement process.
  - Reviewing production processes, material specifications, and inventory control procedures to eliminate unnecessary acquisition of materials that produce wastes that contain toxic chemicals.
  - Applying environmental life-cycle cost analysis and total cost accounting principals to all major projects.
  - Developing procedures that will minimize possible adverse impacts on the environment during facility acquisition, development, operation, and maintenance.
- Contains an objective to provide a program that will achieve pollution prevention results within a reasonable time, including conducting waste stream assessments, identifying pollution prevention opportunities, and developing facility pollution prevention action plans.
- Establishes the CIA's Environmental Safety Group, Office of Medical Services as responsible for oversight of the CIA's compliance with EO 12856 and developing strategies for achieving pollution prevention program goals.
- Establishes facility environmental coordinators as responsible for ensuring compliance with community right-to-know requirements of EO 12856.

"A successfully implemented pollution prevention plan will result in a healthier and safer workforce and will contribute to the health and environmental quality of the community in which we live."

Agency Commitments Beyond EO 12856

The CIA's Pollution Prevention Strategy includes:

- A commitment to reduce releases of extremely hazardous substances to the environment in addition to the 50 percent toxic chemicals reduction goal required by EO 12856, where feasible.

Number of Covered Facilities

The total number of Central Intelligence Agency (CIA) facilities covered under Executive Order 12856 is two: The CIA Headquarters Compound and the National Photographic Interpretation Center.

DEPARTMENT OF AGRICULTURE (USDA)

Summary of Pollution Prevention Strategy

USDA's Pollution Prevention Strategy establishes the commitment of all USDA offices and agencies to using source reduction to prevent pollution and as the method of choice for complying with Federal, state, and local environmental requirements. The Strategy also states that USDA offices and agencies with covered facilities will comply with all applicable Emergency Planning and Community Right-to-Know Act (EPCRA) requirements. All agencies and facilities are encouraged to participate in state and local EPCRA planning and response efforts. The USDA's strategy is the unifying "umbrella" for pollution prevention within the Department. It serves as a guidance document and baseline for USDA agencies wishing to develop pollution prevention strategies tailored to the unique organizational characteristics or goals. The USDA Strategy states that each Agency Strategy should include:

- A policy statement.
- A voluntary goal of reducing toxic chemical/pollutant releases by 50 percent by December 31, 1999.
- Descriptions of reduction goals and implementation strategies.
- A timeline of EO milestones and USDA's strategy for meeting them.
- A list of responsibilities and authorities for developing and implementing the Strategy.
- A plan to assist facility managers in developing pollution prevention plans.
- A plan, goals, and list of methods to reduce unnecessary acquisition, manufacturing, and use of products containing extremely hazardous substances and toxic chemicals.
- Procedures and responsibilities for preparing annual progress reports.
- Procedures and guidance for involving the public.
- Procedures and guidance for securing, using, and assessing the effectiveness of resources and funds for activities related to EO 12856 implementation.

"Where pollution prevention/source reduction activities are discretionary, USDA and its agencies are to minimize acquisition, procurement, use, and disposal of extremely hazardous substances and toxic chemicals. Where source reduction is impractical, USDA and USDA agencies are to follow the hierarchy of pollution prevention specified in Section 6602(b) of the Pollution Prevention Act, namely environmentally safe recycling, treatment, and, as a last resort, environmentally responsible disposal or other release to the environment."

As part of the Strategy, USDA commits to place a high priority on securing funding for pollution prevention activities, explicitly integrating pollution prevention into Department Manual 5600-1, Environmental Pollution, Prevention, Control, and Abatement Manual (DM 5600-1), and to look for opportunities and systems to eliminate or reduce unnecessary acquisition, manufacture, or use of products containing extremely hazardous substances and toxic chemicals.

Agency Commitments Beyond EO 12856

The Pollution Prevention Strategy submitted by USDA includes fully-developed Pollution Prevention Strategies that have already been developed by four USDA agencies (Animal and Plant Health Inspection Service, Agricultural Research Service, Food Safety and Inspection Service, and Forest Service). The Animal and Plant Health Inspection Service also includes a Pollution Prevention Plan for one of its facilities.

USDA's Pollution Prevention Strategy contains a number of elements not included in EO 12856, such as:

- Encouraging USDA offices and agencies with no covered facilities to develop and implement Pollution Prevention Strategies and plans consistent with the USDA Strategy.
- Encouraging USDA offices and agencies to report reductions in releases or offsite transfers of toxic chemicals/pollutants that exceed the voluntary goals.
- Encouraging USDA offices and agencies to locally publicize their facilities' Pollution Prevention Plans and accomplishments.
- Committing to comply with the environmental justice requirements of EO 12898.
- Providing a mechanism for agencies to publicly report significant pollution prevention activities and toxics reductions from their non-TRI and non-covered facilities in the USDA annual report under EO 12856.

Number of Covered Facilities

The total number of Department of Agriculture (USDA) facilities covered under Executive Order 12856 is 191. This figure includes covered facilities for the following agencies: Agricultural Research Service (17 facilities); Animal and Plant Inspection Service (two facilities); Food Safety and Inspection Service (four facilities); Forest Service (167 facilities); and Soil Conservation Service (one facility). These facilities are located throughout the United States and include research stations and laboratories, district and supervisor's offices, ranger stations, National Forests, work centers, logging camps and log transfer facilities, air tanker bases, airports, and fire stations.

DEPARTMENT OF DEFENSE (DoD)

"Protecting our national security in the post-Cold War era includes integrating the best environmental practices into all Department of Defense activities."

Dr. William J. Perry, Secretary of Defense

Summary of Pollution Prevention Strategy

DoD's Pollution Prevention Strategy begins with a vision statement to "effectively promote the national policy of pollution prevention (as defined in the Pollution Prevention Act of 1990) through education, training and awareness, acquisition practices, facilities management, energy conservation, and the use of innovative pollution prevention technologies."

DoD's Strategy is organized around four main objectives:

1. To effectively promote and instill the pollution prevention ethic through comprehensive education, training and awareness in all mission areas.

2. To incorporate pollution prevention into all phases of the acquisition/procurement process.

3. To achieve and preserve environmental quality for all activities, operations, and installations through pollution prevention.

4. To develop, demonstrate, and implement innovative pollution prevention technologies.

For each objective, the Strategy identifies several sub-objectives and establishes specific achievement goals. The Strategy, signed by the Secretary of Defense, identifies the offices with primary responsibility for each objective. DoD components have developed detailed milestone plans to meet the Strategy's objectives.

Agency Commitments Beyond EO 12856

DoD's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Requiring all DoD facilities (whether covered under the EO or not) to develop pollution prevention plans.

- Conducting comprehensive education and training in all mission areas to promote pollution prevention.

- Strengthening working relationships with environmental regulators at all levels.

- Fostering partnerships with local communities and industry.

- Encouraging and recognizing outstanding individual, team, and installation pollution prevention contributions through both existing and new awards/incentives programs.
- Identifying and developing environmental life-cycle cost estimating tools.
- Providing contracting incentives to stimulate markets for environmentally preferable products and services.
- Developing and implementing affirmative procurement programs in accordance with the Resource Conservation and Recovery Act (RCRA) (42 USC 6962) and EO 12783.
- Assuring that all Defense Components comply with the Energy Policy Act of 1992 (P.L. 102-486) and EO 12902 to achieve energy and water conservation and increased use of renewable energy sources.
- Establishing and promoting efficient material/energy-use practices through conservation, reutilization, materials substitution, recycling, affirmative procurement and the creation of markets for recycled materials.
- Conducting pollution prevention planning and investment strategies to consider environmental justice concerns in accordance with EO 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."
- Implementing integrated pest management throughout DoD to reduce pesticide risk.
- Identifying, quantifying, integrating, and prioritizing DoD component environmental security technology user requirements and leverage and integrate DoD's pollution prevention Research, Development, Testing, and Evaluation (RDT&E) programs with those of other government agencies, academia, and private industry.

Number of Covered Facilities

The total number of Department of Defense (DoD) facilities covered under Executive Order 12856 is 714. This figure includes covered facilities for the following components: Defense Logistics Agency (27 facilities); Defense Mapping Agency (two facilities); National Security Agency (three facilities); Air Force (156 facilities); Army (436 facilities, including 104 Corps of Engineers facilities and 124 Corps of Engineers - Civil Works facilities); Marine Corps (four facilities); and Navy 86 facilities. These DoD facilities are located throughout the United States.

DEPARTMENT OF ENERGY (DOE)

"The Department of Energy embraces pollution preventionas its strategy to reduce the generation of all waste streams and thus minimize the impact of departmental operations on the environment, as well as improving safety of operations and energy efficiencies. I expect the Department to continue the leadership shown by our voluntary compliance with the emergency planning and community Right-to-Know Act and our participation in the Environmental Protection prevention as 33/50 program which focuses on near-term pollution prevention efforts of 17 priority toxic chemicals."

Summary of Pollution Prevention Strategy

DOE's Pollution Prevention Strategy begins with a policy statement that "DOE embraces pollution prevention as its strategy to reduce the generation of all waste streams and thus minimize the impact of departmental operations on the environment, as well as improving safety of operations and energy efficiencies." The Strategy establishes the Deputy Secretary of Energy as the senior manager responsible for coordinating the Department's pollution prevention efforts. The Strategy also provides background discussion of DOE's longstanding commitment to implementing the principles of EO 12856.

DOE's Pollution Prevention Strategy is organized around six main objectives:

1. To effectively institutionalize the pollution prevention ethic through training and awareness in all mission areas.
2. To reduce releases and on-site transfers of toxic chemicals to the environment.
3. To incorporate pollution prevention policy into the acquisition process.
4. To achieve emergency planning and community right-to-know reporting.
5. To address other environmental quality issues and pollution prevention focus areas.
6. To develop, transition, and apply innovative pollution prevention technologies.

For each objective, the Strategy identifies several sub-objectives and establishes specific achievement goals. The Strategy also identifies the offices with primary responsibility for each objective.

DOE's longstanding commitment to implementing the principles contained in the Executive Order has included:

- Complying with the Emergency Planning and Community Right-to-Know Act (EPCRA) since its passage in 1986, including providing guidance and training on EPCRA requirements and Toxic Release Inventory (TRI) reporting.

- Participating voluntarily in EPA's 33/50 program and, in 1993, one year prior to Executive Order 12856, initiating TRI reporting at DOE facilities that met the reporting criteria.

- Developing and implementing pollution prevention programs and activities, including voluntary participation in EPA's 33/50 program,

requiring facility-specific pollution prevention plans under DOE Order 5400.1, General Environmental Protection Program, and involving staff at all levels in pollution prevention activities.

- Issuing a Waste Minimization/Pollution Prevention Crosscut Plan in 1994.
- Developing a program to identify and implement pollution prevention projects that can produce successful results in the near-term.
- Establishing a pollution prevention funding mechanism through a Department-wide Environment, Safety, and Health Management Plan.

Agency Commitments Beyond EO 12856

DOE's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Conducting comprehensive education and training in all mission areas to promote pollution prevention.
- Strengthening working relationships with environmental regulators at all levels.
- Fostering partnerships with local communities and industry.
- Encouraging and recognizing outstanding individual, team and installation pollution prevention contributions through both existing and new awards/incentives programs.
- Addressing the requirements of EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."
- Promoting water conservation, energy efficiency, and use of renewable energy technologies as required by EO 12902, "Energy Efficiency and Water Conservation at Federal Facilities."
- Complying with the requirements of EO 12873, "Federal Acquisition, Recycling, and Waste Prevention" by optimizing the use of environmentally preferable products in the planning, construction, and maintenance of facilities and establishing and promoting efficient material/energy-use practices through conservation, reutilization, materials substitution, recycling, affirmative procurement, and the creation of markets for recycled materials.
- Complying with the requirements of the National Environmental Policy Act by incorporating pollution prevention principles, techniques, and mechanisms into all planning and decision-making processes.
- Coordinating with other Federal agencies on information exchange.

Number of Covered Facilities

The total number of Department of Energy (DOE) facilities covered under Executive Order 12856 is 72. These facilities include power plants, substations, engineering centers, laboratories, accelerator centers, test facilities, motor pools, reserve offices, remedial action projects, operations centers, technology centers, and site restoration operations. DOE covered facilities are located throughout the United States.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

"HHS is committed to the inclusion of cost-effective environmental stewardship in all of its activities...The head of each OPDIV/STAFFDIV will encourage each individual within the organization to identify opportunities to reduce waste generation and to adopt the facility's pollution prevention policy in day to day operations."

Summary of Pollution Prevention Strategy

The HHS Pollution Prevention Strategy includes a pollution prevention policy statement that reflects the Department's commitment to incorporate pollution prevention through source reduction in facility management and acquisition.

HHS's Pollution Prevention Strategy:

- Designates the Occupational Safety and Health Manager as responsible for coordinating HHS's pollution prevention efforts and the head of each OPDIV/STAFFDIV as responsible for ensuring that all actions are taken to prevent pollution at their facilities, and for ensuring compliance with pollution prevention and community right-to-know requirements. OPDIV/STAFFDIV heads also are responsible for the development of facility pollution prevention plans (including goals related to reductions in releases, acquisition, manufacture, processing, and use of toxic chemicals).

- Commits HHS to utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all applicable Federal, state, and local environmental requirement.

- Establishes a framework for the development of voluntary goals to reduce by 50 percent by December 31, 1999, the Department's total releases of toxic chemicals or toxic pollutants to the environment and to reduce off-site transfers of such toxic chemicals or toxic pollutants for treatment and disposal from facilities covered by EO 12856.

- Commits HHS to revise environmental policies and procedures contained in Part 30 of the General Administrative Manual to incorporate the Pollution Prevention Strategy and the requirements of EO 12856.

- Presents a plan and goals for eliminating or reducing the unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals and a plan for voluntarily reducing manufacturing, processing, and use of extremely hazardous substances and toxic chemicals.

- Includes a requirement for all HHS covered facilities to comply with all applicable reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and Section 6607 of the Pollution Prevention Act.

- Includes a requirement for all HHS covered facilities to comply with the provisions of Section 301 through 312 of EPCRA.

Agency Commitments Beyond EO 12856

HHS's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- A commitment to revise HHS's environmental policies and procedures to reflect the requirements of EO 12873.
- Encouragement of HHS facilities not covered by EO 12856 to reduce the use of toxic chemicals and emissions of toxic pollutants.
- Encouragement for OPDIVs/STAFFDIVs to comply with all state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws is not otherwise already mandated.

Number of Covered Facilities

The total number of Department of Health and Human Services (HHS) facilities covered under Executive Order 12856 is 30. These include 16 National Institutes for Health facilities, ten Social Security Administration facilities, three Centers for Disease Control facilities, and one Indian Health Service facility. These facilities are located in California, Florida, Georgia, Illinois, Maryland, New Mexico, and North Carolina.

DEPARTMENT OF THE INTERIOR (DOI)

Summary of Pollution Prevention Strategy

DOI's Pollution Prevention Strategy commits DOI to pursuing a hierarchical approach to pollution prevention, beginning with source reduction. Part 518 of the Departmental Manual, "Comprehensive Waste Management," dated March 3, 1994, identifies pollution prevention as the primary means for managing DOI's waste activities on all Departmentally-managed lands and facilities. DOI's primary pollution prevention objectives are as follows:

- Where feasible, substitute non-toxic hazardous materials in the production, acquisition, and/or use of materials.
- Redesign products, processes, and practices to reduce environmental impacts.
- Reuse or recycle materials and wastes.
- Reduce the release or transfer of toxic chemicals and pollutants.
- Practice conservation of, or increase the efficiency in, the use of energy, water, raw materials, and other natural resources.

DOI's Pollution Prevention Strategy establishes the Director of the Office of Environmental Policy and Compliance of DOI as the senior agency manager responsible for coordinating pollution prevention efforts, including compliance with EO 12856. Each Departmental bureau and office will be responsible for compliance with the requirements of the EO, including developing a baseline for measuring reductions in toxic chemicals (using base data no later than 1994), developing facility plans by December 31, 1995, complying with EO 12856 reporting requirements, reviewing and revising specifications, acquisition procedures, and other standardized documents to reduce the purchase and use of toxic materials, and disseminating information about pollution prevention techniques and approaches. The Strategy directs each covered DOI facility to report releases and off-site transfers as part of the Toxics Release Inventory (TRI) by July 1, 1995 and commits DOI to voluntarily reduce, by 1999, releases and transfers of toxic chemicals as specified in Section 313 of EPCRA.

"The Department of the Interior is committed to a leadership role in preserving our Nation's heritage. This commitment is based upon the public trust, requiring the use of scientific, cost-effective, and innovative techniques to better manage and restore our lands and facilities."

Bruce Babbitt,
Secretary of the Interior

Agency Commitments Beyond EO 12856

DOI's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Committing DOI to consider public involvement, community awareness, and environmental justice in the development of the DOI Pollution Prevention Strategy and in meeting EO 12856 requirements.
- Developing "DOI General Guidance and Resource Documents on Pollution Prevention, Recycling, and "Green" Acquisition." (To be published soon.)

Number of Covered Facilities

The total number of Department of Interior (DOI) facilities covered under Executive Order 12856 is 108. This figure includes covered facilities for the following agencies: Bureau of Reclamation (48 facilities); National Park Service (29 facilities); U.S. Fish and Wildlife Service (28 facilities); Bureau of Land Management (two facilities); and U.S. Geological Survey (one facility). These facilities are located throughout the United States and include water quality laboratories, fisheries research centers and hatcheries, wildlife refuges, treatment and pumping plants, irrigation districts, dams, national parks, national recreation areas, and field offices.

DEPARTMENT OF JUSTICE (DOJ)

"This strategy establishes a Departmental framework and commitment to intensify its efforts to develop methods to complete its varied missions in an environmentally sound manner."

Summary of Pollution Prevention Strategy

DOJ's Pollution Prevention Strategy:

- Contains a policy statement that commits DOJ to intensify its efforts to carry out its mission in an environmentally sound manner. The statement acknowledges the need for internal coordination and commitment at all levels of management and personnel (including environmental management, health and safety, procurement, and facility management). The policy statement establishes source reduction as the key to pollution prevention and commits DOJ to comply with Emergency Planning and Community Right-to-Know Act (EPCRA) requirements, such as providing information to Local Emergency Planning Committees (LEPCs).

- Presents a structure for implementing the Strategy, including coordination by the Department's Environmental Program Administrator. Bureau heads will be responsible for implementation of EO 12856 at facilities under their jurisdiction and a Bureau Environmental Manager will be designated at each Bureau to facilitate EO compliance.

- Commits to reduce releases and transfers of EPCRA Section 313 chemicals by 50 percent. A schedule for achieving this reduction also is established, with Calendar Year 1994 as the baseline against which future reductions will be measured.

- Commits to comply with all of the reporting requirements of EO 12856.

- Commits to prepare facility pollution prevention plans in accordance with EPA's *Pollution Prevention in the Federal Government Guide.*

Agency Commitments Beyond EO 12856

DOJ's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Direction to DOJ program offices to comply with EO 12873, "Acquisition, Recycling, and Waste Prevention."

- A commitment to conduct surveys on at least a bi-annual basis at facilities not covered by EO 12856.

- Encouragement for facilities that will not meet EPA threshold requirements to develop internal plans and approaches that encompass pollution prevention objectives in EO 12856.

- Plans for the Department's Environmental Program Administrator to provide information to Bureau Environmental Managers on pollution prevention techniques, and on training opportunities sponsored by private organizations and EPA.

- To the extent permitted by law and national security provisions, a commitment to provide public access to all EO 12856 strategies, plans, and reports developed by DOJ and involve the public in developing facility pollution prevention plans.

Number of Covered Facilities

The total number of Department of Justice (DOJ) facilities covered under Executive Order 12856 is 84. These facilities include Federal Prison Camps, Federal Correctional Institutes, Federal Detention Centers, U.S. Penitentiaries, Metropolitan Detention Centers, and Metropolitan Correctional Centers. These facilities are located throughout the United States.

DEPARTMENT OF TRANSPORTATION (DOT)

"The Department of Transportation has the opportunity and responsibility to act as a leader and role model in pollution prevention. DOT is committed to a comprehensive pollution prevention policy."

Summary of Pollution Prevention Strategy

DOT's Pollution Prevention Strategy commits DOT to a comprehensive policy of pollution prevention for its facilities and acquisitions. DOT's primary pollution prevention objectives are as follows:

- To ensure that all DOT activities and facilities incorporate pollution prevention concepts and approaches by promoting and instilling a pollution prevention ethic through education and training.
- To implement acquisition and procurement policies and life-cycle costing practices that promote pollution prevention.
- To significantly reduce the quantity and toxicity of pollutants released and wastes generated by DOT facilities and make pollution prevention through source reduction an overriding factor in all environmental management decisions.
- To develop technical solutions and foster technology transfer among the operating administrations within DOT and between public and private sectors with the aim of addressing pollution prevention needs and enhancing competitiveness in markets for environmentally friendly goods and services.

DOT's organizational approach to compliance with EO 12856 calls for the Office of the Secretary of Transportation to coordinate DOT compliance with EO 12856 requirements and to provide guidance and training for DOT facilities. The Deputy Assistant Secretary for Administration has overall responsibility for the compliance of all operating administrations with the requirements of the EO. The head of each DOT operating administration is responsible for implementation and evaluation of DOT EO activities.

DOT's Pollution Prevention Strategy:

- Provides detailed tables summarizing the applicability, major requirements, and key deadlines of EO 12856, as well as responsible DOT offices.
- Establishes a voluntary goal of achieving a 50 percent reduction in releases of listed toxic chemicals to the environment by the end of 1999.
- Directs each operating administration to develop reduction goals for each of its covered facilities so that the total combined reduction in releases is 50 percent or higher by the end of 1999 compared with

a baseline year of 1994. This includes: developing a facility hazardous material management system; developing plans for TRI data collection and tracking; preparing and submitting TRI Form R reports to EPA; and submitting annual reports on progress towards meeting release reduction goals.

- Directs each covered facility to develop a facility-specific pollution prevention plan to include: facility-specific goals for toxic chemical release reductions; an inventory of products used and waste streams containing extremely hazardous substances and listed toxic chemicals; evaluation and selection of pollution prevention alternatives; procedures and a schedule for implementation, communication and training needs; considerations for involving the community; and procedures for measuring success.

- Commits to establish goals for reducing or eliminating the unnecessary acquisition of products containing extremely hazardous substances or listed toxics chemicals. This includes: identifying products used by facilities that meet Emergency Planning and Community Right-to-Know Act (EPCRA) reporting thresholds; integrating pollution prevention considerations when developing mission needs and revising acquisition procurement documentation; reviewing standardized documents; identifying environmental life-cycle cost tools; reviewing the FAR to identify clauses that present barriers to the reduction or elimination of the use of products containing extremely hazardous substances or listed toxic chemicals; and specifying requirements for the purchase of environmentally preferable products and services.

- Identifies specific steps to be taken in complying with EPCRA Sections 302, 304, 311, and 312 reporting requirements.

- Commits DOT to develop an integrated education and training program.

- Commits DOT to foster partnerships with local communities and industry.

Agency Commitments Beyond EO 12856

DOT's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Identifying the typical missions or activities of various DOT facilities, the types of chemical products that may be used, and estimates of quantities of the types of chemicals that may contain quantities of EPCRA-regulated extremely hazardous substances, CERCLA hazardous substances, or listed toxic chemicals.

- Encouraging and recognizing outstanding pollution prevention contributions through both existing and new award and incentive programs. DOT also will participate in the Federal Government Environmental Challenge Program.

Number of Covered Facilities

There are 564 Department of Transportation facilities covered under Executive Order 12856. Of these facilities, 457 are Federal Aviation Administration facilities (primarily due to fuel storage tanks for emergency power for air navigation), 101 are U.S. Coast Guard facilities, five are Maritime Administration facilities, and the Saint Lawrence Seaway Development Corporation has one covered facility. These facilities are located throughout the United States as well as the Commonwealth of Puerto Rico.

DEPARTMENT OF TREASURY (TREASURY)

Summary of Pollution Prevention Strategy

Treasury's Pollution Prevention Strategy begins with a policy statement that commits Treasury to become a leader and set an example in the field of pollution prevention through the management of its facilities, its acquisition practices, and its support to the development of innovative pollution prevention programs and technologies that make a significant contribution to protecting the public health and our environment.

The Strategy assigns the Deputy Assistant Secretary (Departmental Finance and Management) as the Departmental Environmental Executive with responsibility for the overall implementation of Treasury's EO 12856 Strategy. The Office of Real and Personal Property Management (ORPPM) is given oversight responsibilities for the management and direction of the pollution prevention and right-to-know program. The Deputy Assistant Secretary (Administration), Bureau Heads, and the Inspector General are responsible for implementing and ensuring compliance with EO 12856.

"Treasury is committed to implementing Executive Order 12856 efficiently, and without duplicating efforts by sharing resources, expertise and capabilities with its Treasury partners where possible. It will require the complete cooperation and commitment to pollution prevention by Facility Managers; Bureaus Environmental Executives; Program, Project and Product Managers; and Contractors."

The Department of the Treasury's Pollution Prevention Strategy:

- Commits to develop voluntary toxic chemical reduction goals to achieve a 50 percent reduction in toxic pollutants by December 31, 1999.
- Commits Treasury to establish a plan and goals for eliminating or reducing the unnecessary acquisition, manufacturing, processing, and use of products containing extremely hazardous substances or toxic chemicals and encourage partnerships to assess and deploy innovative environmental technologies.
- Contains a commitment to ensure compliance with Toxic Release Inventory (TRI)/Pollution Prevention Act reporting requirements.
- Commits to compliance with Sections 301 through 312 of the Emergency Planning and Right-to-Know Act (EPCRA).
- Commits Treasury to provide technical advice and assistance, if requested, to Local Emergency Planning Committees (LEPCs).
- Establishes that a high priority will be placed on obtaining funding and resources needed for implementing all aspects of the EO.

- Commits Treasury to conduct internal reviews and audits, and to take such other steps, as may be necessary, to monitor compliance with EO 12856.

- Contains a commitment to provide public access to all EO 12856 strategies, plans, and reports developed by the Department.

Agency Commitments Beyond EO 12856

Treasury's Pollution Prevention Strategy includes the following elements not required by EO 12856:

- Encouraging Bureaus to comply with state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is not otherwise mandated.

- Commiting Treasury to participate, to the extent that resources permit, in the Federal Government Environmental Challenge Program.

Number of Covered Facilities

The total number of Department of Treasury (Treasury) facilities covered under Executive Order 12856 is three. These facilities are the Bureau of Engraving and Printing Main and Annex buildings in the District of Columbia, the Western Currency facility in Texas, and the Federal Law Enforcement Training Center in Georgia.

DEPARTMENT OF VETERANS AFFAIRS (VA)

Summary of Pollution Prevention Strategy

The Strategy commits the VA to environmental leadership and preventing pollution by reducing the use of hazardous materials, as well as reducing releases of environmental pollutants to as low as is reasonably achievable.

The VA's Pollution Prevention Strategy:

- Requires VA facilities to continue to participate with Federal, state, and local officials in emergency planning and community right to know activities.
- Requires VA facilities to reduce the use of toxic and hazardous substances and the resulting generation of waste by reviewing facility operations, procedures, and unit processes to determine the potential for source reduction.
- Directs VA facilities to include pollution prevention in the development of facility guidance, policy, and operating procedures.
- Directs VA facilities to develop and implement methods to identify and quantify releases and off-site transfers of toxic and hazardous chemicals.
- Requires the development and maintenance of facility-specific comprehensive inventories of toxic chemicals, extremely hazardous substances, and hazardous chemicals.
- Commits VA facilities to promote pollution prevention awareness through training and education, or outreach/awareness programs.
- Directs VA facilities to implement acquisition and procurement polices and lifecycle costing practices that promote pollution prevention, reduce waste, minimize effects on natural resources and encourage economically efficient market demands for items using recovered material.
- Directs VA facilities to purchase environmentally preferable products, when possible.

The Pollution Prevention Strategy also includes specific actions to be implemented by Veterans Health Administration organizations (including Construction Management, Operations and Environmental Management Service), VA Regional Offices, Acquisition and Material Management, National Cemetery System, and Veterans Health Administration.

"VA is committed to environmental leadership and preventing pollution by reducing the use of hazardous materials. Additionally, VA is committed to reducing the release of pollutants to the environment to as low as is reasonably achievable."

Agency Commitments Beyond EO 12856

VA's Pollution Prevention Strategy includes two elements not included in EO 12856. These are:

- A plan to review the use of certain pesticides to prevent pollution that could result from these chemicals and establish an annual goal to reduce the use of toxic pesticides in the National Cemetery System.
- A commitment to evaluate the effectiveness of alternative sterilants to ethylene oxide (ETO) and, if appropriate, establish and implement a plan to reduce the use of ETO at VA Medical Centers and other health care facilities.

Number of Covered Facilities

There are no Department of Veterans Affairs (VA) facilities covered under Executive Order 12856.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

"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."

Carol Browner, Administrator
December 1994

Summary of Pollution Prevention Strategy

EPA has set a goal that Federal workers build environmental considerations into their daily routines, including decision-making processes, programs, policies, and operating principles. EPA commits to fulfill both the letter and spirit of EO 12856 and to serve as a catalyst for change within EPA and across the Federal government.

EPA's Pollution Prevention Strategy:

- Includes a policy statement that incorporates source reduction in facility management and acquisition programs, endorses the pollution prevention hierarchy, and calls for EPA leadership in pollution prevention. This includes: reviewing the current activities of facilities to assess the availability and feasibility of source reduction opportunities; developing facility pollution prevention plans; reducing purchases of products containing toxic chemicals; and moving towards less hazardous products and chemicals that pose less risk to manufacture, process and use, and treat and dispose.

- Commits EPA to achieve pollution prevention through source reduction, where practicable, as the primary means of complying with all applicable Federal, state, and local environmental requirements.

- Establishes goals for reducing releases and transfers of Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 chemicals and other toxic pollutants by filing Toxic Release Inventory (TRI) Form Rs.

- Contains a plan to develop a baseline for measuring and evaluating release and transfer reduction using 1994 TRI data. EPA will establish and publish a baseline for non-TRI chemicals and hazardous waste with its first program report. EPA also will develop a second baseline to examine the most common uses of chemicals at EPA facilities to determine opportunities for revising laboratory standards to be more environmentally friendly.

- Provides a timetable for EPA compliance with EO 12856 requirements.

- Includes plans for disseminating pollution prevention techniques and approaches internally through training and externally by making pollution prevention reports, strategies, and plans available to the public.

- Designates EPA's Environmental Executive, Assistant Administrator for the Office of Administration and Resources Management, to coordinate EPA's EO 12856 efforts.

- Identifies internal organizations with specific responsibilities for developing, implementing, and evaluating EPA's Pollution Prevention Strategy.

- Outlines provisions for public involvement.

Pollution Prevention Strategy Elements Beyond EO 12856 Compliance

EPA's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Applying pollution prevention approaches to reduce the environmental impacts stemming from activities other than chemical usage (such as aggressively reducing energy and water use and the generation of solid waste).

- Providing a detailed listing of EPA facilities, chemicals used, and estimated use volumes.

- Committing to waive the laboratory exemption and applying a lower, more stringent threshold to reduce transfers and releases of EPCRA Section 313 chemicals and other toxic pollutants.

Number of Covered Facilities

The total number of Environmental Protection Agency (EPA) facilities covered under Executive Order 12856 is 31. These facilities include laboratories, research stations, and other research facilities located throughout the United States.

"GSA is committed to ensuring that pollution prevention is an integral part of all its operations."

Summary of Pollution Prevention Strategy

GSA's Pollution Prevention Strategy begins with a policy statement which commits GSA to complying with all applicable requirements of EO 12856 and to provide the education and the resources necessary to reduce or eliminate pollution in operations.

GSA's Pollution Prevention Strategy:

- Establishes GSA's Environmental Executive as the individual responsible for coordinating GSA's pollution prevention efforts and discusses its pollution prevention task force (which includes representatives from GSA Services, staff offices, and the local regional office) that developed GSA's Pollution Prevention Strategy.
- Discusses the GSA Central Office's effort to distribute guidance to regional offices to enable them to develop facility pollution prevention plans and manage their covered facilities.
- Establishes each regional office as responsible for complying with the requirements of the EO 12856 by developing and implementing their regional strategies.
- Identifies the GSA Central Office as responsible for tracking GSA's compliance with EO 12856 requirements and routinely submitting a progress report to the GSA Administrator.
- Commits GSA to reduce its total releases and off-site transfers of toxic chemicals (where quantities exceed the reportable quantity) by 50 percent by December 31, 1999 using source reduction as the primary means to achieve the reduction.
- Commits GSA to reduce or eliminate products purchased for other agencies or used within GSA that contain hazardous chemicals by reviewing and updating specifications and by using new technologies that promote pollution prevention. GSA also commits to evaluate the inventory of products that contain hazardous chemicals and are stockpiled at each supply distribution center, and if necessary, to work with inventory managers to reduce inventories.
- Commits GSA to comply with Sections 301 through 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA), including requiring covered facilities to report to Local Emergency Planning Committees (LEPCs), State Emergency Response Commissions (SERCs), and local fire departments regarding chemicals stored on site.

Agency Commitments Beyond EO 12856

GSA's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Working with client agencies that are housed in GSA space to follow all applicable EO requirements.
- Fulfilling the requirements of the National Environmental Policy Act, under which GSA is required to document the consideration of environmental factors in its decision making.
- Conducting community-wide environmental conferences, which will include model programs and demonstrations on effectively implementing EO 12856 at covered facilities.
- Establishing the New Item Program (NIP) as an avenue to promote awareness of pollution prevention technologies, and to maximize opportunities for its customers to choose environmentally beneficial products and services.
- Conducting a pilot study with cleaning products to identify and encourage the use of cleansers that are environmentally beneficial, and examining materials used in the operation of Federal buildings to identify and establish priorities in the replacement of hazardous materials.
- Instituting an Integrated Pest Management (IPM) program.
- Phasing out the use of ozone-depleting refrigerants in the toxic chemicals inventory list in accordance with Title VI of the Clean Air Act Amendments of 1990.
- Establishing a regional-level "pre-fire planning" program, where a local fire department is invited to tour GSA buildings to become familiar with the buildings and prepare pre-fire plans.
- Registering underground storage tanks with state and local regulating agencies and promptly reporting all releases, regardless of amount, to the state authorities.
- Directing facilities that meet or exceed the threshold quantities to submit annual hazardous chemical inventory forms (Tier I or Tier II forms).

Number of Covered Facilities

The total number of General Services Administration (GSA) facilities covered under Executive Order 12856 is 232. These facilities are covered due primarily to the presence of storage tanks and include Federal buildings, courthouses, customs houses, border stations, garages, and supply centers located throughout the United States.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

"NASA will continue as a world leader in space exploration and aeronautics while maintaining environmental excellence and implement an integrated management approach to minimize environmental contamination and pollution."

Summary of Pollution Prevention Strategy

NASA's Pollution Prevention Strategy is encompassed in an implementation guidance document for NASA facilities. The purpose of this guidance is to help NASA facility managers comply with the requirements of EO 12856 and other recent executive orders. The guidance "is provided to foster consistency by setting definitions" and acknowledges that "consistency is critical as NASA works to implement the requirements of EO 12856 and reduce toxic chemical releases by 50 percent."

NASA's Pollution Prevention Strategy:

- Delineates NASA's policy to prevent or reduce pollution at the source whenever possible.
- Presents an overview of EO 12856 requirements by section and includes key deadlines, responsible NASA elements, and specific action items.
- Commits to reviewing and revising specifications to reduce the use of products containing extremely hazardous substances and toxic chemicals consistent with safety and reliability requirements.
- Commits to advocating the use of life cycle cost analysis and source reduction potential as criteria in determining program/project priority.
- States that NASA will establish a 1994 baseline for toxic chemical releases and attain a minimum of 50 percent reduction from that baseline by the turn of the century. To the maximum extent possible, NASA commits to achieve this goal by using source reduction practices.
- Contains a commitment to prepare and implement a written pollution prevention plan at all Field Installations by December 31, 1995. These pollution prevention plans will address the facility's approach to meeting NASA's 50 percent toxic chemicals release reduction goal.
- States that NASA will provide appropriate emergency release information from any accidental reportable releases, or emergencies, to all concerned parties.
- Commits NASA to submit emergency planning notification, emergency response plans, materials safety data sheets or lists, and/or

hazardous chemical inventory forms to the appropriate agencies, for Field Installations that meet the EPCRA thresholds.

- Contains a commitment to evaluate progress annually by comparison of tonnage and percent of toxic chemical release reduction from 1994 baseline by calendar year.

- Provides facility-level implementation guidance for major EO 12856 requirements.

Agency Commitments Beyond EO 12856

NASA's Pollution Prevention Strategy provides specific guidance to NASA facilities in meeting the goals of the EO. The Strategy provides facilities with an in-depth discussion of topics, particularly Toxic Release Inventory (TRI) requirements and definitions.

NASA's Strategy addresses the requirements of a number of other recent EOs, such as:

- Requiring all NASA installations (whether covered under the EO or not) to develop pollution prevention plans.

- Establishing a goal for recycling to be achieved by the year 1995 (as required under EO 12873, Section 601).

- Procuring materials that contain recycled content and are environmentally preferable (as required under EO 12873).

- Purchasing computer equipment that meets EPA Energy Star requirements (as required under EO 12845).

- Increasing purchases of alternatively fueled vehicles (as required under 12844).

- Minimizing the procurement of ozone-depleting substances (ODS) in anticipation of the phaseout of ODS production (as required under EO 12943).

Number of Covered Facilities

The total number of National Aeronautics and Space Administration (NASA) facilities covered under Executive Order 12856 is 12. These include research centers, space centers, field laboratories, test facilities, and assembly facilities. These facilities are located in Alabama, California, Florida, Louisiana, Maryland, Mississippi, New Mexico, Ohio, Texas, and Virginia.

"The Smithsonian Institution (SI) is committed to ensuring full compliance with Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements. The SI takes seriously its responsibilities for improving its internal policies and procedures, for assisting all SI managers and staff in attaining greater knowledge and understanding of the priority and scope of pollutio prevention activities, and in developing measurable goals to reduce chemical acquisitions, potential chemical releases, and transfers of toxic chemicals."

Summary of Pollution Prevention Strategy

The Smithsonian Institution's Pollution Prevention Strategy reaffirms its commitment to ensure full compliance with EO 12856 and using pollution prevention and/or source reduction as the primary means to achieve and maintain compliance with all Federal, state, and local environmental requirements.

The Smithsonian Institution's Pollution Prevention Strategy:

- Contains a commitment to develop comprehensive procedural guidelines to comply with EO 12856 and ensure that these guidelines are fully understood and adopted by all Smithsonian personnel.
- Identifies the Director of the Office of Environmental Management and Safety (OEMS) as responsible for the implementation and maintenance of the Smithsonian's comprehensive environmental management program.
- Describes the "Smithsonian Staff Handbook;" which outlines a commitment to comply fully with all regulatory requirements and contains comprehensive codifications of SI policies and procedures related to safety, fire protection, occupational health, and environmental management.
- Describes the routine inspections of environmental management programs and all facilities that use or store hazardous chemicals during annual Management Evaluations and Technical Reviews (METRS) and describes how these reviews present an opportunity to educate staff on environmental issues, including pollution prevention.
- Commits to strive to reduce by 50 percent the amount of toxic chemicals used in each of its facilities.
- Commits to actively pursue the reduction of hazardous and toxic chemicals as a key element of its long-term commitment to the environment. This long-term commitment contains several elements including:
  - Developing and implementing facility-specific pollution prevention plans for each "covered" facility.
  - Encouraging the elimination of virgin material requirements for processes.

- Adopting policies and procedures that encourage the reuse of chemical products.

- Promoting and continuing the agency-wide recycling program.

- Promoting the use of "environmentally-friendly" products.
- Promoting the acquisition and use of less toxic materials.

- Discouraging the practice of stockpiling chemical products.

- Conducting comprehensive inventory evaluations to document chemical use.

- Commits to establish voluntary reduction goals to reduce potential releases and transfers of toxic chemicals (in addition to reducing potential toxic pollutants) and provide TRI forms to designated officials to ensure compliance with Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313.

- Agrees to provide required information pertaining to the on-site storage of chemicals to Local Emergency Planning Committees (LEPCs), State Emergency Response Commissions (SERCs), and local fire departments.

Agency Commitments Beyond EO 12856

The Smithsonian Institution's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Conducting the annual Secretary's Safety Awards program, in which facilities with exemplary environmental management programs, including those that have had success in reducing hazardous waste inventories and those that have consistently strived to increase staff awareness and participation in the promotion of viable programs, are recognized during a formal awards ceremony.

- Implementing an Integrated Pest Management (IPM) program.

- Initiating a long-term planning program for installation/modification of heating, ventilating, and air-conditioning (HVAC) equipment in all buildings, which incorporates refrigerants that are less harmful to the ozone layer.

Number of Covered Facilities

The total number of Smithsonian Institution facilities covered under Executive Order 12856 is ten. These include museums and zoological parks, support centers, research centers, and an observatory.

TENNESSEE VALLEY AUTHORITY (TVA)

Summary of Pollution Prevention Strategy

TVA's Pollution Prevention Strategy delineates TVA's approach to achieving the requirements of EO 12856. TVA's Strategy describes an "initial" strategy that is expected to be modified in subsequent years as TVA gains experience in the early stages of implementation, better technologies become commercially available, and non-toxic substitutes for today's toxic chemicals and hazardous substances become available.

TVA's Strategy contains a commitment to meet or exceed the voluntary 50 percent toxic chemicals reduction requirements of EO 12856 by December 31, 1999, exclusive of air emissions from fossil-fuel electric generating stations (which currently are covered under the Clean Air Act and are subject to a required 50 percent reduction in sulfur dioxide emissions by the year 2000).

TVA's Pollution Prevention Strategy:

- Embraces pollution prevention in all aspects of TVA operations (placing a priority on source reduction).
- Commits TVA to demonstrate environmental leadership in pollution prevention through the management of its facilities by supporting the development of innovative pollution prevention programs.
- Commits TVA to develop goals and targets aimed at pollution prevention and develop and implement individual facility action plans (using pollution prevention opportunity assessments of each facility).
- Establishes TVA's Vice President and Senior Scientist, Environmental Research Center as responsible for coordinating TVA's Pollution Prevention Strategy implementation and evaluation.
- Contains a commitment to review the purchase, use, manufacture, and processing of toxic chemicals and extremely hazardous substances to determine if there are acceptable substitutes and voluntarily set a goal to achieve reductions.
- Contains a commitment to review standardized procurement documents by August 1995 to identify opportunities to eliminate or reduce the use of extremely hazardous substances and toxic chemicals wherever feasible and make all appropriate revisions by the end of 1999.

"Each of us is only a temporary steward of the water and land and forest that really belong to the future. These are eternal gifts, and we hope future generations will thank us for preserving their inheritance."

Craven Crowell
Chairman of the Board,
Tennessee Valley Authority

- Commits TVA to continue to comply with Emergency Planning and Community Right-to-Know Act (EPCRA) Sections 301 through 312.

- Commits TVA to submit an annual corporate progress report to EPA beginning October 1, 1995.

Agency Commitments Beyond EO 12856

TVA's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- A commitment to use its unique position among Federal agencies to demonstrate leadership in testing innovative pollution prevention technologies. TVA's membership in the Electric Power Research Institute (EPRI) allows a portion of TVA's dues to be redirected back (if matched) to TVA for undertaking such projects.

- Detailed descriptions of TVA pollution prevention projects currently underway, including: The Waste Minimization Project, The Agricultural Research and Practices Project, The Biotechnology Project, The Business Development Project, The Waste Management and Remediation Project, The Retired Professional Assistance in Waste Reduction Projects in Region IV, The Facilities Services Waste Reduction Project, The Environmentally Sustainable Architecture Project, and The Stratospheric Ozone Project.

Number of Covered Facilities

The total number of Tennessee Valley Authority (TVA) facilities covered under Executive Order 12856 is 229. These facilities include 46-kV, 69-kV, 161-kV, and 500-kV substations, hydroelectric plants, nuclear plants, fossil plants, service centers, office complexes, research centers, maintenance facilities, and microwave stations. These facilities are located in Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia.

UNITED STATES POSTAL SERVICE (USPS)

UNITED STATES POSTAL SERVICE™

"The United States Postal Service will foster the sustainable use of natural resources by promoting pollution prevention, reducing waste, reusing and recycling materials."

Summary of Pollution Prevention Strategy

USPS's Pollution Prevention Strategy begins with an environmental policy statement that commits the Postal Service to conduct its activities in a manner that is protective of human health and the environment. The Strategy outlines a number of guiding principles that underscore USPS's commitment to environmental protection (including meeting or exceeding all applicable environmental laws and regulations and promoting pollution prevention, waste reduction, recycling, and materials reuse). The USPS also will conduct a program of pollution prevention opportunity assessments and waste stream inventories and will develop and implement site-specific pollution prevention plans.

The document also includes a pollution prevention policy statement that commits the Postal Service to the reduction of waste and pollutants at the source of generation and directs all Postal Service managers to participate in waste reduction. The Postal Service's Vice President of Engineering serves as USPS's Chief Environmental Officer and is designated as the Pollution Prevention Principal with overall responsibility for developing and coordinating the Pollution Prevention Strategy.

The USPS Strategy sets several pollution prevention goals for the Postal Service, including:

- Reducing solid and hazardous waste by 50 percent by December 1995.
- Reducing the use of the 17 33/50 Program hazardous chemicals by 50 percent over the next 2 years.
- Continuing and expanding the use of innovative technologies for waste minimization.
- Continuing and expanding the program to evaluate and use non-hazardous chemicals.
- Continuing and expanding reuse and recycling of all waste streams.
- Identifying specific waste minimization and recycling goals and activities.

The Postal Service also commits to give purchasing preference to products containing recycled materials and to incorporate pollution prevention into standards and specifications for materials, equipment, products, and processes. USPS also will encourage the use of non-polluting technologies and waste minimization in the development of equipment, products, and operations. The Pollution Prevention Strategy commits the Postal Service to develop and provide pollution prevention outreach (including training programs, Postal Bulletins, advertising plans, participation in private industry partnerships and initiatives and Federal, state, and local pollution prevention programs).

Agency Commitments Beyond EO 12856

USPS's Pollution Prevention Strategy includes a number of elements not included in EO 12856, such as:

- Establishing that the Postal Service has developed strategies and actions that not only will ensure compliance with the law, but also will establish the USPS as a leader in environmental issues.
- Establishing an employee rewards program for environmental cost avoidance and revenue generation as a result of pollution prevention initiatives.
- Committing the Postal Service to reduce the amounts of energy consumed by implementing monitoring and control programs in accordance with the Energy Policy Act of 1992.
- Committing the Postal Service to develop and establish information systems to measure progress against Postal Service pollution prevention targets.

UNITED STATES POSTAL SERVICE™

Number of Covered Facilities

The total number of United States Postal Service (USPS) facilities covered under Executive Order 12856 is 189. These facilities are all vehicle maintenance facilities (VMFs) located throughout the United States.

Appendix A: Federal Agency Pollution Prevention Strategies

This Appendix contains the text of the sixteen Federal agency pollution prevention strategies. While every effort has been made to ensure that the text is the same as each agency's original strategy, tables and other graphics have been omitted to keep the size of this document manageable. Further, these strategies are "living documents." For a formal copy of an agency strategy, please contact the agency.

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CIA COMPLIANCE WITH EXECUTIVE ORDER 12856

I. Executive Order 12856 issued in August 1993 requires Federal Agencies to comply with community right-to-know and pollution prevention laws. The purpose of this document is to provide a policy statement affirming compliance with these statutes and to outline the strategy by which the Central Intelligence Agency (CIA) will achieve the pollution prevention goal as stated.

II. Accordingly, it is the policy of the CIA to fully comply with the community right-to-know and pollution prevention (P2) laws and to implement a P2 program. The P2 program will have as its goal a 50% reduction in the direct and indirect releases to the environment of toxic chemicals by 31 December 1999. In the spirit of the executive order and where feasible, the P2 program will also mark for reduction the releases of extremely hazardous substances in addition to toxic chemicals.

III. The primary means of achieving the P2 goal will be source reduction, i.e., Any managerial or technical innovation that results in a reduction or elimination of a toxic chemical before it is generated. Where practicable, source reduction will also be the primary means for achieving and maintaining compliance with all applicable Federal, State, and local environmental requirements. Pollution that cannot be prevented will be recycled; that which cannot be recycled will be treated; and that which cannot be treated will be disposed of in an environmentally safe manner.

IV. The Agency's P2 strategy includes two objectives. The first objective is to incorporate P2 into existing policy and management practice. Completion of the following actions by management tasking is essential to attaining this objective.

A. Revise acquisition and procurement policy including contract language and merge P2 into the procurement process. Beneficial results will include a focus on P2 alternatives by initiators of procurement actions, acquisition officials, and vendors alike.

B. Review production processes, material specifications, and inventory control procedures for the purpose of eliminating unnecessary acquisition of materials that produce waste containing toxic chemicals. Process reconfiguration, product substitution, just-in-time procurement, fees for prolonged storage, and waste removal charge backs are some of the solutions to be considered if problems are identified during the review process.

C. Apply environmental life cycle analysis and total cost accounting principals to all major projects. This should help clarify the economic benefits of P2 solutions that otherwise would not be considered because of associated cost.

D. Develop procedures that will minimize possible adverse impacts on the environment during facility acquisition, development, operation, and maintenance. Consideration will be given to efficient use of natural resources, minimizing the use of pesticides and fertilizers, and the use of native plants for landscaping.

V. The second objective is to provide a program that will achieve P2 results within a reasonable time. Currently, Agency facilities are identifying the volume of each toxic chemical discharged in facility waste streams as well as the responsible activities, processes and products. A review of this data will help identify P2 opportunities and potential goals. The data review will also establish the 1994 baseline against which P2 success will be measured.

VI. Once component P2 goals are prioritized, facilities will complete a written P2 action plan and establish a timetable by November 1995. A periodic review of these plans will ensure management accountability as well as the success of the overall Agency's P2 program. Project officers will meet as an advisory group to provide status reports, address problems, and identify resource requirements.

VII. Facility environmental coordinators or their representatives are members of this advisory group. In this role they ensure compliance with community right-to-know requirements of the Executive Order by notifying state and local emergency planning authorities of products in inventory that contain substances in excess of thresholds. In addition, facility environmental coordinators are providing installation spill contingency plans to the local emergency planning committees and fire departments for informational purposes.

VIII. The Agency's Environmental Safety Group (ESG), Office of Medical Services, has oversight responsibility for compliance with the executive order. ESG also develops strategies for achieving the Agency's P2 program goal. In response, Agency facilities provide inventory information to the appropriate Federal, State, and local emergency planning authority, identify and prioritize P2 opportunities, set goals and provide status reports to ESG.

POLLUTION PREVENTION STRATEGY

POLICY

The policy of the United States Department of Agriculture (USDA) is to incorporate pollution prevention (P2), energy and water conservation, life-cycle cost analysis, and total cost accounting concepts and considerations into:

- design, construction, management, and maintenance of its facilities;
- design and execution of programs, missions, and mission-related activities;
- demand for, acquisition, procurement, and use of equipment, materials, services, and supplies;
- acquisition, procurement, use, and release to the environment of extremely hazardous substances and toxic chemicals; and
- disposal or offsite transfer of wastes resulting from procurement and use of toxic chemicals at USDA and USDA-supported operations and facilities to the maximum possible extent.

USDA offices and agencies are committed to using source reduction (SR) as the means of choice for P2 and compliance with applicable Federal, State, and local environmental requirements. Where P2/SR activities are discretionary, USDA and its agencies will strive to minimize acquisition, procurement, use, and disposal of extremely hazardous substances and toxic chemicals. Where SR is impractical, USDA and USDA agencies will follow the hierarchy of P2 specified in Section 6602(b) of the Pollution Prevention Act, namely environmentally safe recycling, treatment, and, as a last resort, environmentally responsible disposal or other release to the environment.

In carrying out this policy, USDA offices and agencies with covered facilities (i.e., in accordance with Executive Order (E.O.) 12856, facilities subject to Sections 302, 304, 311/312, and/or 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA), as modified by Section 3-304(b) of E.O. 12856) will establish policies, assign responsibilities, delegate authority, and monitor progress in developing, implementing, managing, monitoring, and evaluating P2/SR strategies and plans within that organization. All other USDA offices and agencies are encouraged to develop and follow P2/SR plans to achieve the goals of this strategy. A single individual will normally be designated as the overall coordinator for P2/SR efforts within each USDA office or agency.

At both the agency and USDA office levels, high priority will be given to efforts to secure funding for and to carry out P2/SR activities and projects.

GOALS

The goals of the USDA P2/SR program are to prevent pollution of the environment and to conserve natural resources. These goals are to be achieved by:

- minimizing the generation of waste and hazardous waste at USDA facilities;
- eliminating, minimizing, mitigating, or preventing environmentally damaging use, storage, disposal, discharge, release, or offsite transfer of oil, petroleum products, and hazardous and toxic chemicals, substances, and wastes; and
- conserving energy and water.

USDA has set a goal of achieving a 50 percent reduction in releases and offsite transfers from its aggregate baseline. This aggregate baseline will be built up from individual agency and office baselines and reduction goals that are consistent with E.O. 12856. Accordingly, at a minimum, each USDA agency or office will establish the goal of achieving a 50 percent reduction in releases and offsite transfers of toxic chemicals or

toxic pollutants from its covered facilities, as defined in Sections 1-102 and 3-302 of E.O. 12856, by December 31, 1999.

STRATEGY

The strategy for implementing E.O. 12856 within USDA is as follows:

Existing Departmental policies and procedures. By March 31, 1995, USDA will review and, if necessary, revise or supplement Departmental Manual 5600-1, Environmental Pollution, Prevention, Control, and Abatement Manual (DM 5600-1) to include aspects of E.O. 12856 not already incorporated. All USDA offices and agencies will be given an opportunity to contribute to and comment on DM 5600-1 revisions or supplements.

Individual plans for agencies and offices having covered facilities. Each office and agency with one or more covered facilities will develop, implement, manage, monitor, and annually report (beginning in 1995 for the 1994 reporting year) on the accomplishments and effectiveness of an office- or agency-specific P2/SR strategy/plan to implement applicable provisions of E.O. 12856 and to carry out this USDA P2/SR policy. As provided in Section 3-304(b) of E.O. 12856, Standard Industrial Classification (SIC) codes will not be used to exclude otherwise covered facilities. The strategies/plans of USDA agencies and offices having one or more covered facilities are annexes to this strategy.

Each strategy will include the following elements:

1. A policy statement that:

   A. commits the office or agency to USDA policy and to using P2/SR, where practicable, as the primary means of P2 and compliance with applicable Federal, State, and local environmental requirements;

   B. commits the office or agency to incorporating P2/SR concepts and methods in all aspects of its mission(s) and facility management; and

   C. designates an overall coordinator for that office or agency's P2/SR efforts.

2. Establishment of the voluntary goal of reducing by 50 percent by December 31, 1999 the office- or agencywide release and offsite transfer of toxic chemicals from the aggregate baseline quantity of releases and offsite transfers from all its covered facilities.

   (At their discretion (e.g., to demonstrate leadership or to enhance their chances of winning a Federal challenge award for P2/SR achievements), USDA offices and agencies are encouraged to set more ambitious reduction goals for toxic pollutants and/or facilities that are not covered facilities and which are not subject to Toxic Release Inventory (TRI) reporting under Section 313 of EPCRA, as provided in E.O. 12856. USDA will establish a mechanism for public reporting of these discretionary reductions.)

3. Identification of the type of reductions goal (i.e., toxic chemicals or toxic pollutants), the scope of the reductions program (i.e., only facilities subject to TRI, all covered facilities, or all facilities), the baseline year and quantity, and the accounting approach and methods that will be used to identify covered facilities subject to reporting and to document actual reductions achieved each year. (USDA will provide a standard format for reporting reductions in toxic chemicals at non-TRI and non-covered facilities.)

4. A timeline showing the milestones in the Executive Order and the agency's strategy for meeting them.

5. A list of responsibilities and authorities for designing, implementing, managing, monitoring, and evaluating P2/SR strategy/plan implementation within the office or agency.

6. A preliminary listing and description of methods, approaches, and timeframes that will be used or followed in pursuit of the reductions goal. Examples in the SR category are pollution prevention opportunity assessment (PPOA), substituting less toxic materials, and inventory controls. Non-SR examples include recycling and onsite treatment.

7. Guidance, or a process to provide timely guidance, to assist the managers of covered facilities in developing their written pollution prevention plans by December 31, 1995.

8. A plan, set of goals, preliminary listing of methods, and preliminary schedule for eliminating or reducing unnecessary acquisition, manufacturing, processing, and use of products containing extremely hazardous substances and toxic chemicals by, for, or in support of the office or agency.

9. Procedures, including a list of responsibilities, for preparing the annual progress reports due each October 1, beginning in 1995.

10. Procedures, responsibilities, and guidance for meeting the provisions of the Executive Order regarding public participation, public information, and environmental justice (E.O. 12898).

11. Procedures, responsibilities, and guidance for securing, using, and assessing the effectiveness of resources and funds for activities related to implementing provisions of the Executive Order.

Individual plans for agencies and offices having no covered facilities. Offices and agencies having no covered facilities are strongly encouraged to develop and implement P2/SR strategies and plans consistent with the USDA strategy, as well as to monitor and annually report on the accomplishments and effectiveness of their P2/SR programs. The Department will provide a standard format for publicly reporting such accomplishments and will, if possible, count such reductions towards the USDA reductions goal.

Coordination within USDA. At the Departmental level, overall coordination of implementation of E.O. 12856 resides in the office of the Hazardous Waste Program Manager within the office of the Assistant Secretary for Administration. That coordination entails:

- providing guidance to, and reviewing the P2/SR strategies and reports of, USDA offices and agencies having covered facilities, especially facilities subject to TRI reporting;
- encouraging offices and agencies without covered facilities to reduce acquisition and use of toxic chemicals and extremely hazardous substances, and to monitor those reductions;
- consolidating the annual reports from the P2/SR coordinators in the individual offices and agencies into a single USDA report, which will be used for public reporting of reductions by non-TRI facilities;
- providing technical assistance and advice on P2/SR and related subjects to USDA offices and agencies, State or local emergency planning commissions, and others on request; and
- conducting periodic oversight visits within USDA agencies having covered facilities.

Reporting of reductions subject to the voluntary goal. Each USDA agency or office with covered facilities will annually report on reductions achieved towards the reductions goal. A consolidated annual report on all reductions from the aggregated toxic-chemical and/or toxic-pollutant baseline(s) within USDA will be assembled from the individual USDA-agency reports. The USDA report is due to EPA by October 1 each year, beginning in 1995 for the previous year. Agency reports will be due to the Department not later than August 31.

Reporting of reductions exceeding the voluntary goal. To the extent such information is available, USDA agencies and offices are encouraged to report reductions in release or offsite transfer of toxic-chemicals and/or toxic-pollutants that would not normally be creditable towards the reductions goal stated in this strategy. USDA will provide a standard format for reporting such reductions and will consider developing and implementing a system for public reporting of such reductions.

Eliminating or reducing unnecessary acquisition, manufacturing, processing, and use of products containing extremely hazardous substances and toxic chemicals. USDA offices and agencies will look for opportunities and systems to eliminate or reduce in these areas, primarily using PPOA and EPA guidance, such as Pollution Prevention in the Federal Government (EPA 300-B-94-007). For the Department level, primary responsibility for this effort resides with the Office of Operations. Within the individual agencies, primary and supporting responsibilities are as specified in the individual P2/SR strategies/plans.

Public participation, public information, and environmental justice (E.O. 12898). USDA offices and agencies will follow EPA guidance on implementing these aspects of the Executive Order. Because of their usefulness in setting examples for other agencies and positive public relations value, USDA agencies and offices are strongly encouraged to locally publicize their facilities' P2/SR plans and accomplishments.

Funding for implementing E.O. 12856. USDA offices, agencies, and facilities will identify and request funding needed to carry out their P2/SR activities. The Office of Management and Budget (OMB) Circular A-106 process will be used as a planning tool in conjunction with OMB Circular A-11 and other normal budgeting channels to request and allocate needed resources. Whenever feasible, USDA offices and agencies will maintain financial and other records that allow determination of amounts spent on P2/SR, consistency of such expenditures with Department or agency P2/SR strategies and plans, and savings resulting from such expenditures.

Other provisions. The individual USDA offices and agencies are responsible for identifying and complying with other provisions of the Executive Order applicable to their facilities and programs. Departmental Administration will review activities in this regard during oversight visits.

Measurement of progress. The primary mechanism for monitoring P2/SR progress and accomplishments within USDA offices and agencies will be TRI and standardized agencywide and USDA annual reports. In addition, USDA will strive to recognize and reward outstanding individual, facility, and organizational P2/SR achievements internally and to gain external recognition for such effort through the challenge program established under the Executive Order.

Periodic review. USDA policy and this P2/SR strategy/plan will be reviewed and updated annually through 1998.

DEPARTMENT OF DEFENSE

POLLUTION PREVENTION STRATEGY

VISION STATEMENT:

Effectively promote the national policy of pollution prevention[1] through education, training and awareness, acquisition practices, facilities management, energy conservation, and the use of innovative pollution prevention technologies.

OBJECTIVE 1. EFFECTIVELY PROMOTE AND INSTILL THE POLLUTION PREVENTION ETHIC THROUGH COMPREHENSIVE EDUCATION, TRAINING AND AWARENESS IN ALL MISSION AREAS.

Sub-objective 1. Develop an environmentally aware and knowledgeable DoD community (including military and civilian personnel) through integrated education and training in pollution prevention.

- Equip our work force with the skills and knowledge to accomplish the mission while minimizing the production and introduction of pollutants into the environment.
- Institutionalize and continually improve pollution prevention training for our personnel at all grades and organizational levels.

Sub-objective 2. Promote pollution prevention awareness through multimedia outreach/awareness programs and partnerships.

- Strengthen working relationships with environmental regulators at all levels.
- Foster partnerships with local communities and industry by:
  - participating in comprehensive community planning and public affairs;
  - enhancing the coordination and effectiveness of emergency planning and response capabilities;
  - promoting the elimination of hazardous substances and the reduction of the generation of waste;
  - encouraging affirmative procurement, reuse, and recycling.

Sub-objective 3. Encourage and recognize outstanding individual, team and installation pollution prevention contributions through both existing and new awards/incentive programs.

OSD OFFICES OF PRIMARY RESPONSIBILITY : Under Secretary of Defense (Personnel and Readiness) for training policy; Deputy Under Secretary of Defense (Environmental Security) and Director, Acquisition Education and Training for implementation and oversight.

OBJECTIVE 2: INCORPORATE POLLUTION PREVENTION INTO ALL PHASES OF THE ACQUISITION/PROCUREMENT PROCESS.

Sub-objective 1. Integrate pollution prevention and other environmental concerns into the entire life-cycle[2] of acquisition programs from concept development to final disposal.

GOAL: Identify and/or develop environmental life-cycle cost estimating tools.

GOAL: By January 1995, put into effect revised Military Standard 499B, Systems Engineering, which mandates that environmental effects receive equal treatment with other system requirements of acquisition programs.

Sub-Objective 2. Establish and execute an aggressive program to identify and reduce or eliminate toxic chemicals[3] and extremely hazardous substances[4] procurement generated through the use of specifications and standards.

GOAL: By 3 August 1995, review standardization documents (as defined by the Department of Defense Index of Specifications and Standards (DoDISS)) identifying opportunities to eliminate and reduce the use of toxic chemicals and extremely hazardous substances; and complete all revisions by 1999.

Sub-objective 3. Integrate environmental considerations into acquisition documentation, strategies, plans, and in the planning and awarding of contracts.

GOAL: Establish a plan and goals for eliminating or reducing the acquisition of products containing extremely hazardous substances and toxic chemicals.

GOAL: Establish a plan and goals for reducing the manufacture of extremely hazardous substances and toxic chemicals.

GOAL: By August 3, 1995, submit any FAR revisions necessary to implement this strategy to the Civilian Agency Acquisition Council.

GOAL: Issue clarifying guidance for content and documentation of the Programmatic Environmental Analysis described in DoD 5002.M, Part 4, Section F.

GOAL: Assure that significant environmental costs are included in the life-cycle cost estimates of major defense acquisition programs.

Sub-objective 4. Provide contracting incentives to stimulate markets for environmentally preferable[5] products and services.

Sub-objective 5. Specify requirements for the purchase of environmentally preferable products and services.

GOAL: Meet or exceed the following minimum materials content standards when purchasing or causing the purchase of printing and writing paper:

(a) For high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, and white woven envelopes, the minimum content standard shall be no less than 20 percent postconsumer materials beginning December 31, 1994. This minimum content standard shall be increased to 30 percent beginning on December 31, 1998.

(b) For other uncoated printing and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock, the minimum content standard shall be 50 percent recovered materials, including 20 percent postconsumer materials beginning on December 31, 1994. This standard shall be increased to 30 percent beginning on December 31, 1998.

(c) As an alternative to meeting the standards in goal (a) and (b), for all printing and writing papers, the minimum content standard shall be no less than 50 percent recovered materials that are a waste material byproduct of a finished product other than a paper or textile product which would otherwise be disposed of in a landfill, as determined by the State in which the facility is located.

Sub-objective 6. Develop and implement affirmative procurement programs in accordance with the Resource Conservation and Recovery Act (42 USC §6962) and Executive Order 12783.

OSD OFFICES OF PRIMARY RESPONSIBILITY : Director , Acquisition Program Integration; Director , Defense Procurement; Assistant Secretary of Defense (Economic Security); Deputy Under Secretary of Defense (Acquisition Reform); Deputy Under Secretary of Defense (Environmental Security); and Director, Program Analysis & Evaluation.

OBJECTIVE 3: ACHIEVE AND PRESERVE ENVIRONMENTAL QUALITY FOR ALL ACTIVITIES, OPERATIONS, AND INSTALLATIONS THROUGH POLLUTION PREVENTION.

Sub-objective 1. Develop, maintain, and implement pollution prevention plans at each installation and facility. These plans should include baselines, pollution prevention assessments and investment strategies.

- Develop and implement methods to identify and quantify releases and off-site transfers of toxic chemicals to all media (i.e. air, water, soil, surface and ground water).

Sub-objective 2. Minimize the use of hazardous materials[6] in all activities.

Sub-objective 3. Implement cost-effective waste reduction[7] at all installations and facilities to include government owned-contractor operated (GOCO) or leased facilities.

Sub-objective 4. Minimize releases and off-site transfers of toxic chemicals through the use of pollution prevention practices.

GOAL: By 1999, achieve a 50% reduction of total releases and off-site transfers of toxic chemicals from the 1994 Toxic Reduction Inventory baseline.

Sub-objective 5. Ensure that installations comply with the Emergency Planning and Community Right-To-Know Act of 1986 (42 USC §§11001-11050) to the maximum extent possible.

- Develop and maintain a comprehensive inventory of toxic chemicals, extremely hazardous substances and hazardous chemicals[8], and the processes, systems, and management practices that use these chemicals.
- Operate, maintain and upgrade existing facilities to conserve water and energy when cost-effective to do so. Incorporate renewable energy technologies into existing facilities when cost-effective.

Sub-objective 6. Support the Department's energy resource management programs to assure all Defense Components comply with the Energy Policy Act of 1992 (P.L. 102-486) and Executive Order 12902 to achieve energy and water conservation and increased use of renewable energy sources.

- Implement a comprehensive program to accomplish cost effective conservation in all existing installations and energy systems.
- Develop and apply incentive programs such as gain sharing, shared energy performance contracting and utility demand side management programs.
- Design and construct new facilities to minimize the life-cycle cost of the facility by utilizing energy and efficiency techniques and renewable energy technologies.

GOAL: By 2005, identify and accomplish all energy and water conservation actions which pay back in ten years or less

GOAL: By 2000, achieve a reduction in facilities energy consumption, as measured in MTBUs/1000SqFt, by 20% from the 1985 baseline.

GOAL: By 2005, achieve a reduction in facilities energy consumption, as measured in MTBUs/1000SqFt, by 30% from the 1985 baseline.

GOAL: By 2005, achieve an increase in industrial facilities energy use efficiency by 20% from the 1990 baseline.

Sub-objective 7. Maximize the use of environmentally friendly materials in the planning, programming, construction and maintenance of facilities and installations.

Sub-objective 8. Establish and promote efficient material/energy-use practices through conservation, reutilization, materials substitution, recycling, affirmative procurement and the creation of markets for recycled materials.

Sub-objective 9. As appropriate, installation pollution prevention planning and investment strategies must consider environmental justice concerns in accordance with Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."

Sub-objective 10. Fully implement integrated pest management throughout DoD to reduce pesticide risk.

GOAL: By 30 September 2000, reduce the amount of pesticide applied annually, as measured in pounds of active ingredient, by 50% from the FY 1993 baseline.

OSD OFFICES OF RESPONSIBILITY: Deputy Under Secretary of Defense (Environmental Security) and Deputy Under Secretary of Defense (Logistics).

OBJECTIVE 4: DEVELOP, DEMONSTRATE AND IMPLEMENT INNOVATIVE POLLUTION PREVENTION TECHNOLOGIES.

Sub-objective 1. Identify, quantify, integrate and prioritize DoD Component environmental security technology user requirements.

- Focus pollution prevention RDT&E on developing and validating critical technologies needed for material and process modification.

Sub-objective 2. Based on the annual "DoD-Wide Environmental Technology Requirements Strategy," develop and support a "DoD-Wide Environmental Quality Research, Development, Test and Evaluation (RDT&E) Strategic Plan" which will include sections on identifying, prioritizing, planning, programming and budgeting for pollution prevention RDT&E of materials and process modification that emphasize source reduction and cost avoidance.

Sub-objective 3. Leverage and integrate DoD's pollution prevention RDT&E programs with those of other government agencies, academia, and private industry.

- Identify material and process substitutes in Defense technologies that have Government- wide and commercial application for expedited implementation.
- Foster cooperative government-industry partnerships/alliances to solve issues of environmental significance.
- Actively demonstrate and implement off-the-shelf technologies

OSD OFFICES OF PRIMARY RESPONSIBILITY : Director, Defense Research & Engineering; Assistant Secretary of Defense (Economic Security); Deputy Under Secretary of Defense (Advanced Technology) and Deputy Under Secretary of Defense (Environmental Security).

1 "Pollution prevention" means "source reduction," as defined in the Pollution Prevention Act (PPA) of 1990, (42 USC §§13101-13109), and other practices that reduce or eliminate the creation of pollutants through: (a) increased efficiency in the use of raw materials, energy, water, or other resources; or (b) protection of natural resources by conservation. Under the PPA, the term "source reduction" means, any practice which:

- Reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal; and
- Reduces the hazards to public health and the environment associated with the release of such substances, pollutants or contaminants.

"Source reduction" includes equipment or technology modifications, process or procedures modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. "Source reduction" does include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is integral to and necessary for the production of a product or the providing of a service.

2 "Life cycle" means concept, design, development, testing, production, deployment, training, maintenance, supply management, distribution, and disposal/demilitarization.

3 Toxic chemical is a list of substances defined by 40 CFR 372.3 and is updated periodically by the Environmental Protection Agency (EPA).

4 Extremely Hazardous Substance is a list of substances defined by 40 CFR 355.20 and is updated periodically by EPA.

5 "Environmentally preferable" means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

6 "Hazardous material" means anything that due to its chemical, physical, or biological nature causes safety, public health, or environmental concerns resulting in an elevated level of effort to manage it.

7 "Waste reduction" means preventing or decreasing the amount of waste being generated through source reduction, recycling, or purchasing recycled and environmentally preferable products.

8 Hazardous chemical means any hazardous chemical as defined by 29 CFR 1910.1200(c)

DEPARTMENT OF ENERGY

POLLUTION PREVENTION STRATEGY

POLICY STATEMENT:

"The Department of Energy (DOE) embraces pollution prevention as its strategy to reduce the generation of all waste streams and thus minimize the impact of departmental operations on the environment, as well as improving safety of operations and energy efficiencies. I expect the Department to continue the leadership shown by our voluntary compliance with the Emergency Planning and Community Right-to-Know Act (EPCRA) and our participation in the Environmental Protection Agency's 33/50 program which focuses on near-term pollution prevention efforts of 17 priority toxic chemicals.

...Recognizing that pollution prevention is the Department's preferred approach to meeting its environmental responsibilities, I am directing that Cognizant Secretarial Offices, working in conjunction with the Pollution Prevention Executive Board, identify, plan, and allocate funds for field implementation of waste minimization and pollution prevention activities during the departmental budget review process. This information will be used to provide an identified budget each year dedicated to pollution prevention activities."

Secretary Hazel R. O'Leary, 12/28/93

RESPONSIBLE INDIVIDUAL:

DOE is committed to ensuring the success of its pollution prevention goals. Because of this commitment, the Department has designated Deputy Secretary of Energy William H. White as the senior manager responsible for coordination of the Department's efforts in pollution prevention. Mr. White may designate another individual to act on his behalf should the need arise.

BACKGROUND:

The Department of Energy has had a longstanding commitment to implementing the principles contained in Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements." DOE facilities have been active in complying with EPCRA since its passage in 1986. The Department has provided guidance and training materials on the general requirements of EPCRA, and specific guidance and training on Toxics Release Inventory (TRI) reporting. In fact, the Department has led the Federal sector in TRI reporting by voluntarily committing to report TRI releases prior to the issuance of the Executive Order, and has worked closely with EPA during 1992 and 1993 on resolving issues of Federal facility TRI reporting.

The Department has also been a leader in the development and implementation of pollution prevention programs and activities, including voluntary participation in EPA's 33/50 program. In 1988, 12 DOE facilities filed Form R reports with EPA as sites which used or stored chemicals to be reported under TRI. Since then, DOE facilities have met, ahead of schedule, the Department's goal of a 50 percent reduction in TRI releases and transfers of the seventeen priority toxic chemicals covered by the EPA 33/50 program. In addition, facility-specific pollution prevention plans are required under DOE Order 5400.1, General Environmental Protection Program, and the Department has issued guidance to its facilities on the preparation of those plans. DOE has actively involved nearly all Departmental organizations in pollution prevention activities at the staff level through the Waste Reduction Steering Committee, and at the senior management level through the Pollution Prevention Executive Board, chaired by the Deputy Secretary of Energy.

The combined effort of these groups produced the Department's 1994 Waste Minimization/Pollution Prevention Crosscut Plan, as well as a program to identify and implement pollution prevention projects which can produce successful results in the near-term. In addition, the Department has established a pollution prevention funding mechanism through the Department-wide Environment, Safety and Health Management Plan. This will ensure that pollution prevention programs are funded that reduce toxic emissions and waste generation in a cost effective manner.

Every effort has been, and will continue to be, made to involve the public and other stakeholders in monitoring the Department's progress in meeting the requirements of Executive Order 12856.

The attached bibliography details past Departmental efforts to implement pollution prevention through Secretarial memoranda, guidance documents, and planning documents. The objectives and goals which follow build upon the previous efforts and upon the Department's other pollution prevention successes to date.

OBJECTIVE 1. EFFECTIVELY INSTITUTIONALIZE THE POLLUTION PREVENTION ETHIC THROUGH TRAINING AND AWARENESS IN ALL MISSION AREAS

DOE OFFICES OF RESPONSIBILITY: All Cognizant Secretarial Offices

Sub-objective 1.1 Develop an environmentally aware DOE community through education and training in pollution prevention so that all personnel understand the DOE commitment to utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all applicable Federal, State, and local environmental regulations.

- Equip our work force with the pollution prevention skills to accomplish DOE's missions while protecting the environment.
- Institutionalize and continually improve appropriate pollution prevention training for our personnel.
- Integrate pollution prevention measures into all operations.

Sub-objective 1.2 Promote pollution prevention through multimedia outreach/awareness programs and partnerships.

- Strengthen working relationships with regulators at all levels.
- Foster partnerships with stakeholders and industry by:
  - participating in local community emergency planning;
  - enhancing the coordination and effectiveness of local emergency response capabilities;
  - providing communities with information on toxic chemical use and release by reporting under TRI;
  - promoting the elimination of the use of hazardous substances, a reduction in toxic emissions, and a reduction in the generation of hazardous waste and DOE facilities; and
  - encouraging affirmative procurement of non hazardous chemicals and materials and products with recycled content, and the reuse and recycling of materials when possible.
- Demonstrate innovative leadership in and commitment to pollution prevention.
- Disseminate information on pollution prevention technologies throughout the DOE complex.
- Work with other Federal agencies on information exchange.

Sub-objective 1.3 Encourage and recognize outstanding pollution prevention efforts through existing and new awards/incentive programs.

OBJECTIVE 2: REDUCE RELEASES AND OFF-SITE TRANSFERS OF TOXIC CHEMICALS TO THE ENVIRONMENT

DOE OFFICES OF RESPONSIBILITY: All Cognizant Secretarial Offices

Sub-objective 2.1 Minimize releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals. To the maximum extent possible, such reductions shall be achieved through source reduction.

GOAL: By December 31, 1999, achieve a Department-wide 50 percent reduction of total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals from the baseline year (DOE will determine the baseline year after further study).

Sub-objective 2.2 Establish site-specific goals to reduce the generation and use of radioactive and other hazardous materials to the extent practicable.

Sub-objective 2.3 Develop, maintain, and implement pollution prevention plans at each major facility. These plans may include baselines, pollution prevention opportunity assessments, and investment strategies.

Sub-objective 2.4 Implement cost-effective pollution prevention at all DOE facilities.

Sub-objective 2.5 Submit annual reports to the EPA Administrator regarding progress made toward achievement of the above goal, as well as progress made in complying with all other aspects of Executive Order 12856.

OBJECTIVE 3: INCORPORATE POLLUTION PREVENTION POLICY INTO THE ACQUISITION PROCESS

DOE OFFICES OF RESPONSIBILITY: All Cognizant Secretarial Offices

Sub-objective 3.1 Integrate environmental considerations into acquisition strategies, plans, and the source selection process. Employ life cycle analyses and total cost accounting principles in procurements, as appropriate.

GOALS:
1. Establish a Department-wide plan, with goals, to eliminate or reduce unnecessary acquisitions of hazardous substances or toxic chemicals.
2. Establish a Department-wide plan, with goals, to reduce DOE manufacture, process, and use of extremely hazardous substances and toxic chemicals.

Sub-objective 3.2 Integrate pollution prevention considerations when developing mission needs and when developing and revising acquisition documentation.

GOAL: By August 3, 1995, review DOE standards and specifications to identify opportunities to eliminate or reduce unnecessary acquisitions of hazardous or toxic substances, and complete all necessary revisions by December 31, 1998.

OBJECTIVE 4: ACHIEVE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW REPORTING

DOE OFFICES OF RESPONSIBILITY: All Cognizant Secretarial Offices

Sub-objective 4.1 Develop and maintain a comprehensive inventory of toxic chemicals, extremely hazardous substances, and hazardous chemicals at each DOE facility.

Sub-objective 4.2 Ensure that each facility fulfills all EPCRA reporting responsibilities, including:

- Emergency planning notification.
- All other information needed for local emergency planning.

- Chemical inventory information to local emergency planning committees..
- Emergency notification to local emergency response teams.
- TRI reporting.

OBJECTIVE 5: ADDRESS OTHER ENVIRONMENTAL QUALITY ISSUES AND POLLUTION PREVENTION FOCUS AREAS

Sub-objective 5.1 Address the requirements of Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," signed by the President on February 11, 1994. This Executive Order focuses on achieving environmental justice by promoting non-discrimination in DOE's programs that affect human health and the environment.

Sub-objective 5.2 Promote water conservation, energy efficiency, and use of renewable energy technologies, as required by Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities."

- Minimize life cycle costs by utilizing energy efficiency, water conservation, and renewable energy resources in the design and construction of new facilities, as well as in the modification of existing facilities.

GOALS:1. By December 31, 2004, achieve a 30 percent Department-wide reduction in energy consumption from the 1985 baseline.

2. By December 31, 2004, increase Department-wide energy efficiency by at least 20 percent from the 1990 baseline.

Sub-objective 5.3 Optimize the use of environmentally preferable materials in the planning, construction, and maintenance of facilities. Establish and promote efficient material/energy-use practices through conservation, reutilization, materials substitution, recycling, affirmative procurement, and the creation of markets for recycled materials, as required by Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention."

Sub-objective 5.4 Incorporate pollution prevention principles, techniques, and mechanisms into all planning and decision making processes. Evaluate and report those efforts in documentation required by the National Environmental Policy Act.

OBJECTIVE 6: DEVELOP, TRANSITION, AND APPLY INNOVATIVE POLLUTION PREVENTION TECHNOLOGIES

DOE OFFICES OF RESPONSIBILITY: All Cognizant Secretarial Offices

Sub-objective 6.1 Develop and support a DOE Strategic Plan to identify and prioritize research, development, demonstration, testing, and evaluation (RDDT&E) needs.

- Focus pollution prevention RDDT&E on developing and implementing critical technologies needed for source reduction.
- Encourage user participation in formulating requirements.

Sub-objective 6.2 Identify and fund high priority RDDT&E programs.

- Identify, develop, and implement a RDDT&E plan.

Sub-objective 6.3 Coordinate DOE's pollution prevention RDDT&E programs with those of other Federal agencies, academia, and private industry.

- Identify material and process substitutes in DOE technologies that have government-wide as well as commercial application for expedited implementation.
- Foster cooperative interagency, Federal-State, and government-industry partnerships to solve pollution prevention issues.
- Actively demonstrate and implement "off-the-shelf" technologies that ensure the mission capability of DOE facilities.
- Integrate pollution prevention measures into all appropriate operations.

Sub-objective 6.4 Encourage the development of strong domestic and foreign markets for DOE-developed, innovative pollution prevention technologies.

- Develop, demonstrate, test, evaluate, and implement innovative pollution prevention technologies at DOE facilities.
- Forge partnerships with environmental technology firms abroad to export DOE-developed pollution prevention technologies.

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POLLUTION PREVENTION STRATEGY

STATEMENT OF POLLUTION PREVENTION POLICY

HHS is committed to incorporating pollution prevention through source reduction in facility management and acquisition. Pollution prevention methods and procedures will be incorporated into the design, implementation, and operation of all HHS programs. OPDIVS/STAFFDIVS shall utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all applicable Federal, state, and local environmental requirements.

HHS is committed to the inclusion of cost-effective environmental stewardship in all of its activities. The key elements of the department's environmental stewardship strategy are to be given consideration in the department's program planning and major assessment process, such as nepa and multi-year planning.

It is HHS policy that pollution be prevented or reduced at the source. OPDIVS/STAFFDIVS shall give first priority to avoiding or reducing the generation of hazardous substances, pollutants, and contaminants at the source.

Pollution that cannot be prevented must be recycled or reused in an environmentally safe manner. Pollution that cannot be prevented or recycled must be treated in an environmentally safe manner to reduce volume, toxicity, or mobility.

Only as a last resort should disposal or other release into the environment be employed, and such disposal or release must be conducted in an environmentally safe manner.

HHS will reduce the use of energy and the related environmental impacts by promoting the use of energy efficiency and renewable energy technologies.

The foregoing HHS pollution prevention policy shall be fully integrated into program guidance and other guidance issued for administration and operations in HHS. Guidance for implementing this policy is found in this strategy and in the HHS General Administrative Manual, Chapters 30-07 through 30-10.

CONTENTS

This document sets forth departmental strategy to reduce pollution at all covered HHS facilities, in accordance with Executive Order 12856. The HHS pollution prevention strategy consists of the following elements:

1. Pollution Prevention Policy Statement. The HHS Pollution Prevention Strategy contains a pollution prevention policy statement that reflects the department's commitment to incorporate pollution prevention through source reduction in facility management and acquisition.

2. Responsibilities. The HHS Pollution Prevention Strategy designates principal responsibilities for development, implementation, and evaluation of the strategy. The strategy also identifies an individual responsible for coordinating the department's efforts in pollution prevention.

3. Source Reduction Commitment. The HHS Pollution Prevention Strategy indicates a commitment by the department to utilize pollution prevention through source reduction, where practicable, as the primary

means of achieving and maintaining compliance with all applicable Federal, state, and local environmental requirements.

4. Executive Order 12856 Achievement Plan. The HHS Pollution prevention strategy contains a plan for achieving the requirements specified in sections 3-302 through 3-305 of Executive Order 12856.

5. Toxic Chemical Release Reduction Goals. The strategy contains a framework for opdivs/staffdivs to develop voluntary goals to reduce the department's total releases of toxic chemicals or toxic pollutants to the environment and off-site transfers of such toxic chemicals or toxic pollutants for treatment and disposal from facilities covered by Executive Order 12856 by 50 percent by December 31, 1999, utilizing, to the maximum extent practicable, source reduction practices.

6. Revision of General Administrative Manual, Part 30. The department's environmental policies and procedures contained in part 30 of the General Administrative Manual will be revised to incorporate this strategy and the requirements of Executive Orders 12856 and 12873.

7. Acquisition and Procurement Goals and Plans. The strategy contains a plan and goals for eliminating or reducing the unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals and a plan and goal for voluntarily reducing manufacturing, processing, and use of extremely hazardous substances and toxic chemicals.

8. Toxic Chemical Release Inventory and Pollution Prevention Act Reporting. This strategy requires all covered facilities to comply with the provisions in Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. § 11023) and Section 6607 of the Pollution Prevention Act (42 U.S.C. § 13106) and all implementing regulations.

9. Emergency Planning and Community Right-to-Know Reporting. This strategy requires all covered facilities to comply with the provisions set forth in Sections 301 through 312 of EPCRA (42 U.S.C. §§ 11001-11022) and all implementing regulations.

10. Other HHS Facilities. HHS facilities that are not covered by Executive Order 12856 are encouraged to take steps necessary to reduce the use of toxic chemicals and emissions of toxic pollutants.

BACKGROUND

Executive Order 12856. Executive Order 12856, August 3, 1993 (58 FR 41981) encourages the Federal government to be a leader in the field of pollution prevention through the management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies. The order seeks to ensure that all Federal agencies conduct their facility management and acquisition activities so that, to the maximum extent practicable:

- The quantity of toxic chemicals entering any wastestream, including any releases to the environment, is reduced as expeditiously as possible through source reduction;
- Waste that is generated is recycled to the maximum extent practicable; and
- Any wastes remaining are stored, treated or disposed of in a manner protective of public health and the environment.

Emergency Planning and Community Right-to-Know Act. Executive Order 12856 requires Federal agencies to comply with the requirements of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. §§ 11001-11050) and the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. §§ 13101-13109). Epcra establishes programs to provide the public with important information on the hazardous and toxic chemicals in their communities and emergency planning and notification requirements to protect the public in the event of release of extremely hazardous substances. The order requires Federal agencies to

report in a public manner toxic chemicals entering any wastestream from their facilities, including any releases to the environment, and to improve local emergency planning, response, and accident notification. Facilities that are subject to EPCRA are required to provide information and reports to EPA and state and local groups. Five distinct reporting requirements are contained in EPCRA. Each of these reporting requirements and other facility responsibilities under EPCRA and Executive Order 12856 are described in HHS Administrative Manual, Part 30, Chapters 30-07 and 30-09.

Pollution Prevention Act. The PPA establishes national policy that pollution is to be prevented or reduced at the source. The act also requires the reporting of efforts to reduce toxic chemical releases through source reduction and recycling. The PPA reporting requirement and other facility responsibilities under the PPA and Executive Order 12856 are described in HHS General Administrative Manual, Part 30, Chapter 30-08.

Other requirements. Executive Order 12856 also places other responsibilities on Federal agencies that are not contained in EPCRA or PPA. It requires Federal agencies to develop voluntary goals to reduce total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals for treatment and disposal; a pollution prevention strategy and plan; a plan and goals for eliminating or reducing the unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals; and a plan and goals for voluntarily reducing agency manufacturing, processing, and use of extremely hazardous substances and toxic chemicals. These additional responsibilities under Executive Order 12856 are described in the HHS General Administrative Manual, Part 30, Chapter 30-09.

Executive Order 12873. Executive Order 12873 requires Federal agencies to strive to increase the procurement of products that are environmentally preferable or that are made with recovered materials and to set annual goals to maximize the number of recycled products purchased, relative to non-recycled alternatives. Each agency is to establish goals for solid waste prevention and for recycling to be achieved by the year 1995 and to annually progress in attaining the goals.

Each executive agency is to initiate a program, compatible with state and local requirements, to promote cost effective waste prevention and recycling of reusable materials in all of its facilities. Federal agencies are also to consider cooperative ventures with state and local governments to promote recycling and waste reduction in the community. The order directs that in acquisition planning and in the evaluation and award of contracts, agencies are to consider, among other factors, use of recovered materials, life cycle costs, and recyclability.

Each executive department and major procuring agency must establish model facility demonstration programs that include comprehensive waste prevention and recycling programs and emphasize the procurement of recycled and environmentally preferable products and services using an electronic data interchange (EDI) system. A government-wide award will be presented annually by the White House to the best, most innovative program implementing the objectives of Executive Order 12873 to give greater visibility to these efforts so that they can be incorporated government-wide.

The order creates a Federal environmental executive and establishes high-level environmental executive positions within each agency to be responsible for expediting the implementation of the order and statutes that pertain to the order.

RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 (RCRA)

1. National Policy. One of the objectives of the Resource Conservation and Recovery Act of 1976 (RCRA (42 U.S.C. §§ 6901-6991) is to minimize the generation of hazardous waste and the land disposal of hazardous waste "by encouraging process substitution, materials recovery, properly conducted recycling and reuse, and treatment." 42 U.S.C. § 6902(a)(6). RCRA states that it is national policy that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.

42 U.S.C. § 6902(b). The national policy statement emphasizes two ideas: **(1)** the reduction or elimination of waste; and **(2)** management of waste in a manner that minimizes any threat to human health and the environment.

2. Waste Minimization Plan. RCRA contains a "self-certification" program that is designed to encourage waste generators to reduce voluntarily the quantity and toxicity of hazardous waste. A large quantity waste generator must certify on the manifest that accompanies the transport of hazardous waste off site that it has a "program in place to reduce the volume or quantity and toxicity of waste to the degree determined by the generator to be economically practicable." 42 U.S.C. § 6922(b)(2).

Large quantity hazardous waste generators must also certify that any proposed method of treatment, storage, or disposal of waste is that "practicable method currently available" to the generator which minimizes the present and future threat to human health and the environment. 42 U.S.C. §6922(b)(1). The same self-certifications are a condition for on-site storage treatment, or disposal facility permits. 42 U.S.C. § 6922(b)(1).

Small quantity generators (less than 1,000 kg of hazardous waste generated per site per month) have to certify on the manifest that they have made a good faith effort to minimize their waste generator and selected the best waste management method available o them that they can afford.

EPA has published draft guidance that is designed to address the "program in place" certification requirement in RCRA, articulates six elements of a waste minimization program: (1) top management support; (2) characterization of waste generation and waste management costs; (3) periodic waste minimization assessments; (4) appropriate cost allocation; (5) encouragement of technology transfer, and (6) program implementation and evaluation. 58 FR 31114 (1993).

3. Affirmative Procurement Program. Executive Order 12783 requires Federal agencies to comply with the sections of RCRA that cover Federal procurement of recycled products. Section 6002(c)(1) of RCRA (42 U.S.C. § 6962(c)(1)) imposes a duty on Federal agencies to procure items "composed of the highest percentage of recovered materials practicable . . . , consistent with maintaining a satisfactory level of competition. . . ." The administrator of the Environmental Protection Administration (EPA) is required by Section 6002 to develop guidelines that designate those items which are or can be produced with recovered materials and set forth recommended practices with respect to the procurement of recovered materials and items containing such materials. To assist procuring agencies in complying with the requirements of Section 6002, EPA has issued guidelines for the Federal procurement of building insulation products containing recovered materials, cement and concrete containing fly ash, paper and paper products containing recovered materials, lubricating oils containing re-refined oil, and retread tires (see 40 CFR Parts 248-250, 252, 253).

RCRA 6002 also requires each procuring agency to develop an affirmative procurement program which will assure that items composed of recovered materials will be purchased to the maximum extent practicable and which is consistent with applicable provisions of Federal procurement law.

OFPP Policy Letter 92-4. RCRA § 6002 (42 U.S.C. § 6962) requires the Office of Federal Procurement Policy (OFPP) to issue coordinated policies to maximize Federal use of recovered material. Executive Order 12873 requires Federal agencies, consistent with policies established by OFPP Policy Letter 92-4, to comply with executive branch policies for the acquisition and use of environmentally preferable products and services and to implement cost-effective procurement preference programs favoring the purchase of these products and services. OFPP Policy Letter 92-4, (57 FR 53362 (1992)) establishes executive branch policies for the acquisition and use of environmentally-sound, energy-efficient products and services. The OFPP Policy Letter also provides guidance to be followed by executive agencies in implementing Section 6002 of RCRA.

The OFPP Policy Letter requires the implementation of cost-effective procurement preference programs for the purchase of environmentally-sound, energy-efficient products and services. It applies to Federal executive agencies and state and local government agencies that use appropriated Federal funds for procurement purposes. The Policy Letter provides direction for developing affirmative procurement programs and

for the procurement of paper containing post consumer waste. The letter also implements the energy policy and conservation act, 42 U.S.C. §§ 6201-6422 and two executive orders.

Policy Letter 92-4 directs executive agencies to consider energy conservation and efficiency factors in the procurement of property and services. It also requires Federal agencies to give preference in their procurement programs to practices and products that conserve natural resources and protect the environment. Energy conservation and efficiency data are to be considered, along with estimated cost and other relevant factors, in the development of purchase requests, invitations for bids and solicitations for offers. In addition, with respect to the procurement of consumer products, as defined under Part b, Title iii of the Energy Policy and Conservation Act, agencies shall consider energy use/efficiency labels (42 U.S.C. 6294) and prescribed energy efficiency standards (42 U.S.C. 6295) in making purchasing decisions.

The Policy Letter is intended to apply to all products and services. There are differing requirements for the guideline items than for other items.

EPA Pollution Prevention Strategy. The PPA requires the U.S. Environmental Protection Agency (EPA) to "develop and implement a strategy to promote pollution prevention." EPA published the strategy on February 24, 1991 (56 FR 7849 (1991)). It presents EPA's blueprint for a comprehensive national pollution prevention strategy.

APPLICABILITY OF HHS POLLUTION PREVENTION STRATEGY

Covered Facilities. Executive Order 12856 is applicable to all OPDIVS/STAFFDIVS that either own or operate a "facility" as that term is defined in EPCRA Section 329(4) (42 U.S.C. § 11049(4)), if such facility meets EPCRA's threshold requirements for compliance. Each of the threshold requirements for EPCRA compliance are discussed in Chapter 30-07. The statutory definition of "facility" is:

> *All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person). For purposes of [emergency release notification], the term includes motor vehicles, rolling stock, and aircraft.*

EPA regulations revise the statutory definition of facility to include "manmade structures in which chemicals are purposefully placed or removed through human means such that it functions as a containment structure for human use." (40 CFR §§ 355.20, 370.2). The purpose of the revision was to clarify that the definition applies to certain subsurface structures.

Each OPDIV/STAFFDIV must apply all of the provisions of Executive Order 12856 to each of its covered facilities, including those facilities which are subject, independent of the Executive Order, to the provisions of EPCRA (e.g., certain government-owned/ contractor-operated facilities (GOCO's)).

Executive Order 12856 does not apply to Federal agency facilities outside the customs territory of the United States. EPA may be consulted to determine the applicability of Executive Order 12586 to particular opdiv/staffdiv facilities.

Preliminary List of Covered Facilities. The secretary was required by Executive Order 12856 to provide the EPA administrator by December 31, 1993 with a preliminary list of facilities that potentially meet the requirements for reporting under the threshold provisions of EPCRA, PPA, and Executive Order 12856. The preliminary list contained certain facilities of the U.S. Public Health Service, including facilities of the center for disease control and the national institutes of health. It is anticipated that additional facilities will be added to the list.

RESPONSIBILITIES

Responsible Coordinator. The occupational safety and health manager is responsible for coordinating the department's efforts in pollution prevention.

OPDIVS/STAFFDIVS. The head of each OPDIV/STAFFDIV is responsible for ensuring that all necessary actions are taken for the prevention of pollution with respect to that agency's activities and facilities, and for ensuring compliance with the appropriate pollution prevention and emergency planning and community right-to-know provisions of the PPA and EPCRA. To the maximum extent practicable, the head of each OPDIV/STAFFDIV shall strive to comply with the purposes, goals, and implementation steps set forth in Executive Order 12856.

The head of each OPDIV/STAFFDIV with facilities covered by the Executive Order must ensure that the agency develops, consistent with the HHS pollution prevention strategy:

1. Voluntary goals to reduce the organization's total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals for treatment and disposal from facilities covered by Executive Order 12856;
2. A written pollution prevention plan;
3. A plan and goals for eliminating or reducing the unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals;
4. A plan and goals for voluntarily reducing manufacturing, processing, and use of extremely hazardous substances and toxic chemicals.

The head of each OPDIV/STAFFDIV with facilities covered by the Executive Order is responsible for assuring compliance with the provisions set forth in Sections 301 through 312 of EPCRA (42 U.S.C. §§ 11001-11022). Procedures for complying with these requirements are contained in General Administrative Manual, Part 30, Chapter 30-07.

The head of each OPDIV/STAFFDIV with facilities covered by the Executive Order is responsible for assuring compliance with the reporting requirements set forth in EPCRA Section 313 (42 U.S.C. § 11023) and PPA Section 6607 (42 U.S.C. § 13106). Procedures for complying with these reporting requirements are contained in Chapters 30-07 and 30-08 of the General Administrative Manual. In accordance with Executive Order 12856, each OPDIV/STAFFDIV shall comply with these reporting requirements without regard to the standard industrial classification (SIC) delineations that apply to the Federal agency's facilities, and such reports shall be for all releases, transfers, and wastes at such Federal agency's facility without regard to the SIC code of the activity leading to the release, transfer, or waste.

Each OPDIV/STAFFDIV shall submit progress reports, conduct internal reviews and audits, and take such other steps as may be necessary to monitor compliance with the requirements of this strategy and Executive Order 12856. The head of each OPDIV/STAFFDIV with facilities covered by the Executive Order shall also place high priority on obtaining funding and resources needed for implementing all aspects of Executive Order 12856.

The head of each OPDIV/STAFFDIV is encouraged to institute plans for reduction of toxic chemicals and emissions of toxic pollutants at facilities that are not covered by the Executive Order.

All OPDIVS/STAFFDIVS shall be responsible for making every employee aware of the HHS pollution prevention policy and pollution prevention strategy, appropriate executive orders, EPCRA, and the PPA. OPDIVS/STAFFDIVS shall provide training to employees to enable them to comply with the foregoing pollution prevention requirements. Where possible, all opdivs and staffdivs shall share resources, expertise, and capabilities in order to implement Executive Order 12856 without duplicating efforts.

DEFINITIONS

Executive Order 12856 incorporates by reference all definitions found in EPCRA and PPA and implementing regulations (except the term "person", as defined in Section 329(7) (42 U.S.C. § 11049(7)) of EPCRA, also includes Federal agencies). The following definitions are used in this strategy.

1. **Extremely Hazardous Substance.** An "extremely hazardous substance" is defined in EPCRA Section 329(3) (42 U.S.C. § 11049(3)) and EPA regulations in 40 CFR § 355.20 to mean a substance that is listed in appendices a (in alphabetical order) and b (by case number) of 40 CFR part 355.

2. **Pollution Prevention.** Pollution prevention is defined in Section 2-203 of Executive Order 12856 to mean "source reduction," as defined in the PPA, and other practices that reduce or eliminate the creation of pollutants through:

   - Increased efficiency in the use of raw materials, energy, water, or other resources; or
   - Protection of natural resources by conservation.

EPA has issued a statement of definition of pollution prevention that is identical to the definition in Executive Order 12856 (memorandum from F. Henry Habicht II, Deputy Administrator, Environmental Protection Agency, subject: EPA Definition of "Pollution Prevention", to All EPA Personnel (May 28, 1992)). The statement of definition explains that recycling, energy recovery, treatment, and disposal are not included within EPA's definition of pollution prevention. In distinguishing between prevention of pollution and recycling, EPA includes "in-process recycling" within the definition of "pollution prevention." "out-of-process recycling" is part of recycling and is not part of the definition of the definition. The statement of definition also comments that recycling that is conducted in an environmentally sound manner shares many of the advantages of prevention—it can reduce the need for treatment or disposal, and conserve energy and resources.

3. **Source Reduction.** "source reduction" is defined in PPA Section 6603(5) (42 U.S.C. § 13102(5)) to mean any practice that:

   - Reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal; and
   - Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

The term "source reduction" does not include any practice that alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity that is not integral to and necessary for producing a product or providing a service.

4. **Toxic Chemical.** Toxic chemical means a substance on the list described in Section 313(c) of EPCRA (42 U.S.C. § 11023(c)) and contained in 40 CFR § 372.65 (see 30-07-70).

5. **Toxic Pollutants.** The term "toxic pollutants" includes, but is not necessarily limited to, those chemicals at an HHS Federal facility subject to the provisions of Section 313 of EPCRA as of December 1, 1993 (see 30-07-70). OPDIVS/STAFFDIVS may choose to include releases and transfers of other chemicals, such as:

   - An "extremely hazardous substance" as defined in Section 329(3) of EPCRA (42 U.S.C. § 11049(3)) and listed in 40 CFR Part 355, Appendices A & B (see HHS General Administrative Manual, Sections 30-07-20 and -30);

- A "hazardous waste" under Section 3001 of RCRA (42 U.S.C. §§ 6921) as defined in 40 CFR § 261.3 (see HHS General Administrative Manual, Section 30-00-30); or
- A "hazardous air pollutant" listed under Section 112(b) of the clean air act (42 U.S.C. § 7412(b)) (see HHS General Administrative Manual, Section 30-00-30).

For the purposes of establishing the OPDIV/STAFFDIV baseline under the Section entitled "Toxic Chemical Reduction Goals," such "other chemicals" are in addition to (not instead of) the EPCRA Section 313 chemicals. The term "toxic pollutants" does not include hazardous waste subject to remedial action generated prior to August 3, 1993.

TOXIC CHEMICAL REDUCTION GOALS

OPDIV/STAFFDIV Toxic Chemical Release Reduction Goals. Each OPDIV/STAFFDIV having facilities covered by Executive Order 12856 shall develop voluntary goals to reduce total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals for treatment and disposal by 50 percent by December 31, 1999. To the maximum extent practicable, such reductions shall be achieved by implementation of source reduction practices.

Baseline Measurement. The baseline for measuring reductions for purposes of achieving a 50 percent reduction goal is the first year in which releases of toxic chemicals to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported. The baseline amount to which the 50 percent reduction goal applies is the aggregate amount of toxic chemicals reported in the baseline year for all of an OPDIV'S/STAFFDIV'S covered facilities. In no event shall the baseline be later than the 1994 reporting year.

Alternate Toxic Pollutants Reduction Goal. As an alternative to a 50 percent reduction goal for toxic chemicals, an OPDIV/STAFFDIV may choose to achieve a 50 percent reduction goal for toxic pollutants. In such event, the OPDIV/STAFFDIV shall delineate the scope of its reduction program in its written pollution prevention plan. The baseline for measuring reductions for purposes of achieving the 50 percent reduction requirement for each OPDIV/STAFFDIV shall be the first year in which releases of toxic pollutants to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported for each of that OPDIV'S/STAFFDIV's facilities encompassed by its pollution prevention plan. In no event shall the baseline year be later than the 1994 reporting year. The baseline amount as to which the 50 percent reduction goal applies shall be the aggregate amount of toxic pollutants reported by the OPDIV/STAFFDIV in the baseline year. For any toxic pollutants included by the OPDIV/STAFFDIV in determining its baseline under this paragraph, in addition to toxic chemicals under EPCRA, the OPDIV/STAFFDIV shall report on such toxic pollutants annually as part of its toxic chemical release inventory report (see HHS General Administrative Manual, Section 30-07-70), if practicable, or through a report that is made available to the public.

POLLUTION PREVENTION PLAN

Pollution Prevention Plan Elements and Schedule. The head of each OPDIV/STAFFDIV shall ensure that each of its covered facilities develops a written pollution prevention plan no later than December 31,1995. Each facility pollution prevention plan will contain a realistic schedule and clear goals and commit adequate personnel, budget, training, and materials on a continuous basis to ensure the facility's program objectives are met.

The facility pollution prevention plan will consist of the following minimum elements:

1. Top management support
2. Program organization
3. Pollution prevention goals
4. Pollution prevention awareness programs
5. Accurate waste accounting;
6. Accurate cost accounting and appropriate cost allocation;

7. Periodic pollution prevention opportunity assessments;
8. Information exchange and technology transfer,
9. Program implementation and evaluation.

Top Management Support. Top management support is crucial to a pollution prevention program. Only top management support can provide adequate personnel, budget, training, and materials to ensure program success.

Top management support is best demonstrated by:

- Establishing clear program direction through a written policy statement;
- Supporting the policy statement with program goals;
- Providing the resources necessary to implement the program goals.

The head of each OPDIV/STAFFDIV will issue a formal, written policy statement stating a personal commitment to the prevention of pollution by emphasizing source reduction, material substitution, and environmentally sound recycling over treatment, control, and disposal of wastes. The policy statement will be distributed to all organizations and individuals.

Each OPDIV/STAFFDIV head will, in the written policy statement, commit to implementing recommendations identified through pollution prevention opportunity assessments, pollution prevention program evaluations, and other pollution prevention program mechanisms.

Program Organization. Each OPDIV/STAFFDIV will designate a pollution prevention coordinator for each covered facility who be responsible for facilitating effective implementation, monitoring, and evaluation of the pollution prevention program. OPDIV/STAFFDIV heads will also consider whether to establish self-managing pollution prevention teams chosen from a broad spectrum of facility line and staff operations that can be used to identify, evaluate, and implement pollution prevention opportunities.

Pollution Prevention Goals. Each facility pollution plan shall set forth the facility's contribution to the OPDIV/STAFFDIV's toxic chemical reduction goals.

Pollution Prevention Awareness Programs. Personnel involvement is a fundamental characteristic of successful pollution prevention programs. Pollution prevention awareness serves as the vehicle to incorporate the pollution prevention ethic into the daily work activities of all HHS employees.

The head of each OPDIV/STAFFDIV will encourage each individual within the organization to identify opportunities to reduce waste generation and to adopt the facility's pollution prevention policy in day to day operations.

Facility pollution prevention awareness programs will be designed to:

- Recognize individual and team accomplishments and reward employees that identify cost-effective pollution prevention opportunities.
- Train employees on the waste-generating impacts that result from the way they conduct their work procedures and ways waste can be reduced and pollution prevented;. general environmental activities and hazards at the site and pollution prevention program requirements, goals, and accomplishments; and their responsibilities in pollution prevention.
- Integrate pollution prevention awareness into the general orientation program for all HHS employees.
- Include pollution prevention activities in the development of employee performance standards and in annual evaluations.
- Include pollution prevention goals and milestones in the evaluation of an operating contractor's job performance, including incentives for cost-plus-award fee contracts.

Accurate Waste Accounting. Each covered facility will maintain a waste accounting system to track the types and amounts of wastes as well as the types and amounts of the hazardous constituents in those wastes. And generate reports required by Executive Order 12856 and Federal and state environmental laws.

OPDIVS/STAFFDIVS will consider establishing systems that:

- Permit the tracking of hazardous materials from point-of-entry onto the site to final disposition (cradle-to-grave);
- Collect data on input materials, material usage, type of waste, volume, hazardous constituents, generating system, generation date, waste management costs, and other relevant information;
- Track materials that are being recycled or reclaimed and volumes of wastes eliminated due to pollution prevention efforts;
- Provide a procurement control system;
- Provide feedback on the progress of pollution prevention efforts;
- Identify program resource requirements and report cost savings realized form prevention projects; and
- Provide data for internal and external (Federal and state) reporting requirements.

Accurate Cost Accounting and Appropriate Cost Allocation. Covered facilities will develop an accurate and current cost accounting system that accounts for the "true cost" of waste generation and management, recycling, treatment, and disposal. Both volume and toxicities of generated hazardous waste will be taken into account.

The system must calculate the short-and long-term cost arising from:

- Underutilization of raw materials found in the waste stream,
- Management of the wastes that are generated,
- Waste disposal, and
- Third-party liabilities if the waste is improperly disposed of.

"True costs" that are associated with the generation and management of waste may include: the costs of regulatory oversight compliance; paperwork and reporting requirements; loss of production potential; costs of materials found in the waste stream; transportation/treatment/storage/disposal costs; employee exposure and health care; third party liabilities; and possible future RCRA or superfund corrective action costs. Where practical and implementable, covered facilities should appropriately allocate the true costs of waste management to the activities responsible for generating the waste (e.g., Identifying specific operations that generate the waste, rather than charging the waste management costs to "overhead"). Cost allocation can properly highlight the parts of the organization where the greatest opportunities for pollution prevention exist. Without allocating costs, pollution prevention opportunities can be obscured by accounting practices that do not clearly identify the activities generating the hazardous wastes.

PERIODIC POLLUTION PREVENTION OPPORTUNITY ASSESSMENTS.

The heart of a pollution prevention program is the pollution prevention opportunity assessment (oa). The oa accomplishes the goals of a pollution prevention program by:

- Highlighting how materials and technologies, individually and collectively, affect waste generation;
- Systematically analyzing current process operations; and
- Identifying those processes that cause waste and, therefore, must be targeted in a pollution prevention plan.

Most successful pollution prevention assessments have common elements that identify sources of waste and calculate the true costs of waste generation and management. Each organization should decide the best method to use in performing a pollution prevention assessment that addresses these two general elements:

- Identify opportunities at all points in a process where materials can be prevented from becoming a waste (for example, by using less material, recycling materials in the process, finding substitutes that are less toxic and/or more easily biodegraded, or making equipment/process changes). Individual processes or facilities should be reviewed periodically. In some cases, performing complete facility material balances can be helpful.

- Analyze pollution prevention opportunities based on the true costs associated with waste management and cleanup. Analyzing the cost effectiveness of each option is an important factor to consider, especially when the true costs of treatment, storage and disposal are considered.

Information Exchange and Technology Transfer. Information exchange is the most effective vehicle for sharing leading edge knowledge on materials, processes, and procedures. More simply, information exchange is an opportunity to share lessons learned.

Any resource that provides pollution prevention information can help to significantly reduce the time necessary for development and analyses, technical and economic evaluations, prioritization, and implementation of any proposed minimization option. Many useful and equally valid techniques have been evaluated and documented that are useful in a pollution prevention program.

Each facility pollution prevention plan will encourage employees to seek or exchange technical information on pollution prevention with other employees and organizations within the facility, Federal agencies, private industry, trade associations, professional consultants, and university or government (including government-funded) technical assistance programs.

Program Implementation and Evaluation. Facility pollution prevention plans will establish a mechanism for implementing recommendations identified by the pollution prevention opportunity assessment process and by HHS employees. OPDIV/STAFFDIVS shall conduct periodic reviews of their pollution prevention programs to provide feedback and identify potential areas for improvement.

ACQUISITION AND PROCUREMENT PLANS AND GOALS

Plans and Goals

1. Toxic chemical acquisition reduction plan and goals. Each OPDIV/STAFFDIV shall establish a plan and goals for eliminating or reducing the unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals.

2. Toxic chemical use reduction plan and goal. Each OPDIV/STAFFDIV shall establish a plan and goal for voluntarily reducing its own manufacturing, processing, and use of extremely hazardous substances and toxic chemicals.

Specifications and Standards Review. By August 3, 1995, OPDIV/STAFFDIVS shall also review (in coordination with GSA, EPA, and other Federal agencies where appropriate) their standardized documents, including specifications and standards, and identify opportunities to eliminate or reduce the use of extremely hazardous substances and toxic chemicals, consistent with the safety and reliability requirements of their missions. All appropriate revisions to these specifications and standards shall be made by 1999.

Coordination with EPA. Each OPDIV/STAFFDIV shall establish priorities for implementing this Section in coordination with EPA.

Innovative pollution prevention technologies. OPDIV/STAFFDIVS are encouraged to develop and test innovative pollution prevention technologies at their facilities in order to encourage the development of strong

markets for such technologies. Partnerships should be encouraged between industry, Federal agencies, government laboratories, academia, and others to assess and deploy innovative environmental technologies for domestic use and for markets abroad.

PUBLIC AVAILABILITY OF INFORMATION

To the extent permitted by law, and unless such documentation is withheld pursuant to Section 6-601 of Executive Order 12856, the public shall be provided ready access to all strategies, plans, and reports required to be prepared by the department or an OPDIV/STAFFDIV under Executive Order 12856. OPDIVS/STAFFDIVS are encouraged to provide such strategies, plans, and reports to the state and local authorities where their facilities are located for an additional point of access to the public.

COMPLIANCE

Scope of Compliance. Executive Order 12856 provides that compliance with EPCRA and PPA means compliance with the same substantive, procedural, and other statutory and regulatory requirements that would apply to a private person.

Internal Reviews. OPDIV/STAFFDIVS shall conduct internal reviews and audits, and take such other steps as may be necessary, to monitor compliance with the requirements of this chapter and Executive Order 12856, including conducting assessments of their facilities to ensure development of facility pollution prevention plans and pollution prevention programs.

ANNUAL PROGRESS REPORTS

1. HHS annual report to EPA. The secretary will submit annual progress reports to the EPA administrator beginning on October 1, 1995. These reports will include a description of the progress that has been made in complying with all aspects of Executive Order 12856, including pollution reduction requirements. This reporting requirement expires after the report due on October 1, 2001. All OPDIV/STAFFDIVS must institute systems that will permit timely progress reporting by OPDIV/STAFFDIV facilities and the gathering of information for the secretary's report.

2. EPA annual report to president. Executive Order 12856 requires EPA to submit an annual report to the president on Federal agency compliance with toxic chemical release inventory reporting under EPCRA Section 313 and toxic chemical source reduction and recycling reporting under PPA Section 6607 (see HHS General Administrative Manual, Chapters 30-07 and 30-08). All OPDIV/STAFFDIVS must institute systems that will permit timely progress reporting to EPA for its report to the president.

Contractor Reporting Responsibilities. To facilitate compliance with Executive Order 12856, OPDIVS/STAFFDIVS shall provide, in all future contracts between the agency and its relevant contractors, for the contractor to supply to the agency all information that the OPDIV/STAFFDIV deems necessary for it to comply with the order. In addition, to the extent that compliance with Executive Order 12856 is made more difficult due to lack of information from existing contractors, OPDIVS/STAFFDIVS shall take practical steps to obtain the information needed to comply with the order from such contractors. Although Executive Order 12856 does not alter the obligations which goco's have under EPCRA and PPA independent of the order or subjects such facilities to EPCRA or PPA if they are otherwise excluded, the releases and transfers from all such facilities are to be included when meeting all of the OPDIV'S/STAFFDIV'S responsibilities under Executive Order 12856.

Technical Assistance from EPA. OPDIVS/STAFFDIVS are encouraged to request technical advice and assistance from EPA in order to foster full compliance with Executive Order 12856 and this strategy.

Technical Assistance to Local Emergency Planning Committees. OPDIVS/STAFFDIVS shall provide technical assistance, if requested, to local emergency planning committees in their development of emergency response plans and in fulfillment of their community right-to-know and risk reduction responsibilities (see HHS General Administrative Manual, chapter 30-07).

EPA Review. Executive Order 12856 provides that the administrator of EPA, in consultation with the secretary, may conduct such reviews and inspections as may be necessary to monitor compliance with HHS responsibilities under EPCRA (see HHS General Administrative Manual, chapter 30-07) and the PPA (see HHS General Administrative Manual, chapter 30-08). OPDIVS/STAFFDIVS are to cooperate fully with the efforts of the administrator to ensure compliance with Executive Order 12856. Should the administrator notify an OPDIV/STAFFDIV that it is not in compliance with an applicable provision of Executive Order 12856, the OPDIV/STAFFDIV shall achieve compliance as promptly as is practicable.

State and Local Right-to-Know Requirements. OPDIVS/STAFFDIVS are encouraged to comply with all state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is not otherwise already mandated.

Exemption for Particular Federal Facilities. Section 6-601 of Executive Order 12856 provides that the head of a Federal agency may request from the president, in the interest of national security, an exemption from complying with the provisions of any or all aspects of the order for particular Federal agency facilities, provided that the procedures set forth in cercla Section 120(j)(1) (42 U.S.C. § 9620(j)(1)) are followed.

FUNDING AND RESOURCES

Each OPDIV/STAFFDIV shall place high priority on obtaining funding and resources needed for implementing all aspects of Executive Order 12856, including the pollution prevention strategies, plans, and assessments required by Executive Order 12856, by identifying, requesting, and allocating funds through line-item or direct funding requests. OPDIV/STAFFDIVS are to make such budget requests as required in the Federal agency pollution prevention and abatement planning process and through agency budget requests as outlined in office of management and budget (OMB) Circulars A-106 and A-11, respectively. OPDIV/STAFFDIVS should apply, to the maximum extent practicable, a life cycle analysis and total cost accounting principles to all projects needed to meet the requirements of Executive Order 12856.

DEPARTMENT OF THE INTERIOR (DOI)

A STRATEGY FOR POLLUTION PREVENTION AND RIGHT-TO-KNOW IN THE U.S. DEPARTMENT OF THE INTERIOR

POLICY

The Department of the Interior (DOI) will pursue a hierarchical approach to overall pollution prevention (P2) starting with source reduction to reduce the amount of pollutants entering the waste stream. Where feasible, DOI will: substitute non-toxic hazardous materials in the production, acquisition and/or use of materials; redesign products, processes and practices to reduce environmental impacts; reuse or recycle materials and wastes; reduce the release of and transfer of toxic chemicals and pollutants; and, practice conservation of, or increase the efficiency in, the use of energy, water, raw materials and other natural resources and comply with those community right-to-know regulations as outlined in Executive Order 12856.

RESPONSIBILITIES

In Part 518 of the Departmental Manual, Chapter 1, "Comprehensive Waste Management", dated March 3, 1994, the Secretary of the Interior identifies pollution prevention as the primary means for managing DOI's waste activities on all Departmentally-managed lands and facilities and supports the adoption of the following environmental protection hierarchy:

- Pollution should be prevented or reduced at the source.
- Pollution that cannot be prevented, reused or recycled should be treated in an environmentally safe manner.
- Disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

The Director, Office of Environmental Policy and Compliance of DOI, is the senior agency manager responsible for coordinating pollution prevention efforts, including compliance with, and oversight of, Executive Order 12856.

The Office of Environmental Policy and Compliance, coordinates the Department's recycling, "green" acquisition, pollution prevention and applicable community right-to-know activities as required by Executive Order 12873, and coordinates the implementation of Departmental programs with other Federal agencies.

The Office of Acquisition and Property Management is responsible for all policy aspects of Departmentwide administrative and management functions related to acquisition and Federal assistance, real and personal property, energy conservation, and fleet management.

Each Departmental Bureau and Office is responsible for compliance with the requirements of Executive Order 12856, including the development of facility plans, reporting requirements, toxic reductions, review of specifications and other standardized documents, and changes in acquisition procedures.

Each EPCRA-defined Facility is responsible for reporting releases and off-site transfers as part of the Toxic Release Inventory (TRI) by July 1, 1995, and develop a pollution prevention plan by December 31, 1995.

Each Departmental Bureau and Office will develop a baseline for measuring reductions in toxic chemicals or pollutants using base data in 1994. If 1994 base data are not available, base data for 1995 may be used.

Each Departmental Bureau and Office is responsible for outlining plans for disseminating pollution prevention techniques and approaches internally through training, and externally in making pollution prevention reports, strategies, and plans available to the public. Individual facilities are responsible for implementing their respective bureau/office pollution prevention plans.

GOALS

DOI is committed to voluntarily reducing by 1999, releases and transfers of toxic chemicals, as specified in section 313 of the Community Right-to-Know Act (EPCRA), and to reducing the generation of solid wastes. Bureaus and Offices are responsible for setting internal timetables to reach these goals.

DOI is committed to both public involvement, community awareness and environmental justice considerations in the development of its pollution prevention strategy in meeting the requirements of Executive Order 12856.

RESOURCE POINTS

Primary resources for guidance on Executive Order 12856 are:

"Pollution Prevention in the General Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond" EPA 300-B-94-007, April 1994. Copies are available at each bureau headquarters environmental office.

"Federal Facility Pollution Prevention Planning Guide" EPA-300-B-94-013, December 1994. Copies provided to every bureau headquarters environmental office and each DOI "EPCRA-defined" facility.

"DOI General Guidance on Pollution Prevention and Right-to-Know Recycling and "Green" Acquisition" Copies are available at each bureau headquarters environmental office.

For additional information contact:

U.S. Department of the Interior
Office of Environmental Policy and Compliance (PEP)
MS 2340, Main Interior Building
1849 "C" Street, N.W.
Washington, D.C. 20240
Phone: 202/208-7877, or FAX: 202/208-6970

U.S. Department of the Interior
Office of Acquisition and Property Management (PAN)
MS 5512, Main Interior Building
1849 "C" Street, N.W.
Washington, D.C. 20240
Phone: 202/208-3433, or FAX: 202/208-6301

DEPARTMENT OF JUSTICE (DOJ)

OVERVIEW

Executive Order (EO) 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements" requires each agency to adopt a strategy or plan to manage, monitor and coordinate environmental activities to ensure compliance with applicable right-to-know and pollution prevention laws. This plan, based on the framework established in the Environmental Protection Agency (EPA) document "Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond." establishes the Department of Justice (DOJ) commitment to utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all Federal, State and local environmental requirements. The following establishes the framework for such compliance.

1. Policy Statement

- The Department must intensify its efforts to develop methods to complete its mission in an environmentally sound manner. This will require commitment from all levels of management and personnel in key functions, such as environmental management, health and safety, procurement, and facility management. This commitment includes the realization that pollution prevention must begin at the source.

- The DOJ will work closely with the public and local emergency planning committees (LEPC) to provide requisite information for the protection of the public and local communities. Information regarding hazardous substances and toxic chemicals, with the exception of information withheld in the interest of national security, will be available for public scrutiny.

- All attempts must be made to reduce pollution at the source of generation. In the event that this is not feasible, pollution should be recycled in an environmentally safe manner. If the pollution cannot be reduced or recycled, it should be treated and/or disposed of in an environmentally safe manner.

- This plan also is applicable to procurement officials. Contracts should be reviewed to ensure that environmentally safe products are purchased whenever practicable.

- Bureaus will cooperate and share resources wherever practicable to reduce pollution prevention costs and to ensure a greater level of compliance.

- As with the installation of energy efficient products, life-cycle costing should be utilized to determine viable pollution prevention measures.

2. Structure

Implementation of this plan will be coordinated by the Department's Environmental Program Administrator (DEPA):

Warren Oser, Acting DEPA
Office of the Deputy Assistant Attorney General Law and Policy
Justice Management Division
Room 1111, Main Justice Building
10th and Constitution Avenue, NW
Washington, DC 20530
Phone: (202) 514-0458
FAX: (202) 514-1778

Bureau heads are responsible for ensuring compliance with applicable environmental laws, regulations, and executive orders in facilities under their supervision. For purposes of this plan, the Offices, Boards, and Divisions of the Department collectively are considered a Bureau, and the Assistant Attorney General for Administration its Bureau head.

Each Bureau head must designate a Bureau Environmental Manager (BEM) to facilitate the Bureau's activities to achieve compliance with Executive Order 12856. BEMs, working within each Bureau's unique organizational structure, will ensure that the appropriate program experts will be involved, as needed, to meet the requirements of the EO. These may include facility managers, as well as, environmental, health, safety, and procurement officials. BEMs shall also provide the DEPA with any information necessary to reflect the status of Departmental compliance with the EO.

3. Goal/Baseline

In order to demonstrate the Department's commitment to pollution prevention, a goal of reducing releases and transfers of Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 toxic chemicals by 50 percent shall be adopted. Figure 1* displays the timeline for achieving this goals by December 31, 1999.

Calendar Year 1994 will be the first year that many Department components will be submitting data under the requirements of EPCRA; therefore, CY 1994 will be the baseline against which the 50 percent goal will be measured. Each following year, as exhibited by Figure 1, will require a 10 percent reduction to achieve the overall goal.

4. Compliance

The DEPA will ensure that requirements and deadlines of the EO are met and that BEMs will receive notice of these items in a timely fashion. BEMs, in turn, will do the same for their officials involved in compliance activities. Compliance under this plan shall include:

- Reporting Requirements

Figure 2 outlines the reporting deadlines of EO 12856. Some reports involve submission of data from facilities directly to local emergency planning committees (LEPC); others will require coordination between facility managers or their designees, BEMs and the DEPA to submit Department-wide responses.

Timely and accurate reports are necessary to ensure compliance with this EO. Data submitted by the Bureaus will eventually determine the Department's baseline and provide a measure of success in achieving a 50 percent pollution reduction.

To ensure that all reporting requirements and deadlines are met, Bureau components submitting information directly to an LEPC must provide a courtesy copy to the BEM. For items requiring a comprehensive submission involving numerous facilities (e.g., the facilities preparation of pollution prevention plans by 1995), the BEM should provide the DEPA a summary of the Bureau's actions. Maintaining this level of communication will facilitate efforts to meet the requirements of the EO.

- Pollution Reduction/Coordination

We anticipate Bureau heads will assign primary responsibility for a majority of the implementation and compliance activities to local facility managers. In turn, facility managers will likely enlist the support of their BEM and different facility or Bureau program experts in a team effort to achieve required environmental compliance. As a part of this overall effort, facility managers or their designees, are required to be in contact and provide required information to their LEPC.

*Figures are not included in this document.

Facility pollution prevention plans must be prepared as outlined in EPA's Pollution Prevention in the Federal Government Guide. Each plan will profile necessary actions that must be undertaken to reduce pollution. The plan should focus on methods to reduce pollution at the source. This includes any practice that reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream or otherwise released into the environment prior to recycling, treatment or disposal. A copy of the plan should be forwarded to the BEM for review.

- Procurement

A mechanism already is in place to ensure the procurement of environmentally friendly products. On April 9, 1992, the Department's Procurement Executive issued Policy Directive 92-1, the Department's Affirmative Procurement Program (APP) for Recovered Materials. The APP requires each program office initiating an acquisition to determine if recovered materials could be included in the specifications for a contract. Procurement offices are responsible for notifying program offices which normally require "EPA-designated items" of the requirement to include recovered materials specifications in their contracts to the maximum extent practicable.

EO 12873, "Acquisition, Recycling, and Waste Prevention," also requires Federal agencies to purchase products that are environmentally sound and/or contain recovered materials (waste materials and by-products that have been recovered or diverted from the solid waste stream). Program offices should apply the same methodology outlined in the APP for purchasing environmentally friendly, non-toxic products, as it does for the purchase of recovered items.

For each procurement, the program office should explore the feasibility of inserting specifications for environmentally sound products/services. The same limitations (e.g., lower cost alternatives, inadequate performance of alternative products/services) set forth in the APP should also apply in this instance. Finally, life-cycle cost methodology should be utilized to the maximum extent practicable.

- Miscellany

In order to maintain compliance with this EO and prevent future violations, Bureaus must:

- Work closely with LEPCs, providing information as requested
- Provide information requested from the public in a timely manner
- Maintain good recordkeeping for accurate reporting purposes
- Conduct surveys at least on a bi-annual basis at facilities that have been determined not to be affected by the EO. Surveys should include reviews of contracts and purchases to verify that new purchases, changes in missions, or modifications to structures have not changed previously reported chemical amounts. Changes in chemical amounts could very well place a facility under the requirements of the EO by surpassing a threshold as designated by EPA.

  Although many of the Department's facilities will not meet EPA threshold requirements which subject them to the reporting requirements of the EO, such facilities are encouraged to develop internal plans and approaches which encompass the pollution prevention objectives in the EO.

5. Dissemination of Information

The DEPA shall provide information to BEMs on pollution prevention techniques, training opportunities sponsored by private organizations and the EPA, and new requirements of the EO. BEMs should establish methods to ensure that their facility managers and other program officials receive this same information.

The DEPA shall coordinate all Department-wide requests for information under this EO, making available to the public pollution prevention reports, strategies and plans. BEMs, facility managers, and other involved program officials shall be responsible for requests for information regarding specific Bureaus and facilities.

6. Public Involvement

To the extent permitted by law and unless such documentation is withheld pursuant to the national security provisions of section 6-601 of the EO, the public shall have ready access to all strategies, plans, and reports required to be prepared by the Department under the EO.

Facilities should consider involving the public when developing pollution prevention plans. At a minimum, facilities should submit these plans to LEPCs so that the public has immediate access to information on chemical inventories and plans.

CONCLUSION

This plan is another important step for the Department to comply with nationwide environmental laws. A strong level of commitment is necessary to provide a safe environment for Department personnel and the public.

DEPARTMENT OF TRANSPORTATION (DOT)

INTRODUCTION

This pollution prevention strategy has been prepared by the United States Department of Transportation (DOT) in accordance with Executive Order (EO) 12856. The purpose of the plan is to outline DOT's strategy for meeting the pollution prevention and emergency planning and community right-to-know requirements mandated in the EO. The general requirements of EO 12856 are presented in Table 1 on page A-1.

This pollution prevention strategy document is proposed to be a working document that will evolve over time as more is learned about activities that cause pollution and opportunities for preventing pollution within DOT.

ORGANIZATIONAL APPROACH

DOT consists of individual administrations that operate under the central management of the Office of the Secretary of Transportation (OST). The operating administrations are organized generally by mode of transportation (i.e., air, sea, etc.). A list of the operating administrations is presented in Table 2 on page A-2, along with a definition of the primary missions of each administration. An organizational chart of DOT is presented in Figure 1 on page A-4.

The pollution prevention strategy and policy statement presented in this plan apply to the OST and all operating administrations of DOT. The OST and the operating administrations will function as a single Federal agency and will set departmentwide goals and specific policies. The OST will act as coordinator for DOT and, together with the operating administrations, will provide guidance and training for the DOT facilities. The OST's responsibility will be to ensure that pollution prevention goals, strategies, and facility plans are consistent with each other, the overall DOT "Pollution Prevention Policy Statement," and the requirements of the EO, and that the deadlines presented in the EO are met.

Overall responsibility for the compliance of all operating administrations with the requirements of the EO rests with the Assistant Secretary for Administration. The implementation of the various aspects of the pollution prevention strategy and the evaluation of the strategy's effectiveness are the responsibility of the head of each operating administration. For the OST, the responsibility rests with the Assistant Secretary for Administration.

VOLUNTARY GOAL FOR THE REDUCTION OF TOXIC-CHEMICAL RELEASES

DOT has established a voluntary goal of achieving a 50 percent reduction in releases of listed toxic chemicals by the end of 1999, in accordance with the goal of EO 12856. The goal will apply to the combined releases for all Dot facilities meeting the reporting thresholds of the emergency planning and community right-to-know act (epcra), section 313. The baseline for measuring reductions for achieving the 50 percent reduction goal for DOT is 1994, which is the first year in which releases of toxic chemicals to the environment and offsite transfers of such chemicals for treatment and disposal will be publicly reported.

COMPLIANCE WITH REQUIREMENTS OF EO 12856

This section discusses DOT's strategy for meeting the requirements of EO 12856. The specific requirements of the EO are presented, and the goals are defined. General strategies are outlined for achieving the defined goals, and the people responsible for implementing the strategies are identified. For purposes of

* Tables referenced in text not included in this document

this strategy, the facility manager means the person at a facility who is ultimately responsible for that facility's missions, operations, and activities.

EO 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, requires Federal agencies to develop and implement comprehensive strategies for pollution prevention that are designed to incorporate source reduction into facility management and acquisition. In addition, the EO requires Federal agencies with facilities that reach specific reporting thresholds to set and attain reduction goals for toxic chemicals, prepare facility-specific pollution prevention plans, review acquisition and procurement procedures, and comply with the reporting provisions of EPCRA and the Pollution Prevention Act (PPA).

APPLICABILITY

The applicability and requirements of the various sections of EO 12856 are presented in Table 3 on page A-5. The general strategies for meeting the requirements of the EO and the people responsible for implementing the strategies are discussed below. The strategies for implementation presented here assume that the applicability of the various requirements of EO 12856 has already been determined for each facility. Guidance on determining applicability was given to each of DOT's operating administrations in the form of a ``Call for data" issued in June 1994. Applicability is based primarily on exceeding EPCRA reporting thresholds. The thresholds specify quantities of certain types of chemical compounds imported, used, stored, manufactured, or released at a facility (see Table 3).

Table 4 on page A-7, contains information that helps provide a preliminary indication of whether the requirements of EO 12856 apply to a facility. The first column of Table 4 identifies typical missions or activities of various DOT facilities. The second column identifies types of chemical products that may be used to conduct the missions and activities at the facilities listed in the first column. For some types of facilities, such as office buildings, it is unlikely that any chemicals would be used that would trigger applicability of the EO. Facilities in this category are to be dropped from further consideration. The expectation is that a majority of DOT's facilities fall into this category. For facilities whose missions fall into categories where chemical products are used as shown in the table, additional data on storage and use quantities and practices would be collected.

The third column of Table 4 presents estimates of quantities of the types of chemical products listed in the second column that may contain EPCRA-regulated quantities of extremely hazardous substances (EHSs), CERCLA hazardous substances, or listed toxic chemicals. The column can be used as a guide for determining if the quantities of chemical products used at a particular facility warrant further study.

HAZARDOUS MATERIALS MANAGEMENT SYSTEM

At the core of all of the requirements of EO 12856 is the need to develop a system for accurately monitoring the types and quantities of hazardous materials and wastes imported, stored, generated, released, and otherwise used at each of the facilities that meet any of the EPCRA reporting thresholds. The term ``hazardous materials" may refer to any of the categories of chemicals applicable to EPCRA, such as EHS, CERCLA hazardous substances, hazardous chemicals, and listed toxic chemicals. The complexity of a hazardous materials management system (HMMS) will vary from facility to facility and will depend on which of the reporting requirements of EPCRA the facility must meet. A facility that meets only the storage reporting thresholds of EPCRA sections 311-312 may need only a relatively simple inventory system, while a facility that must submit annual toxic-release inventory (TRI) reports under EPCRA section 313 will have to use a more sophisticated system to track listed toxic chemical usage throughout the facility.

The implementation strategy for an HMMS will vary, depending on the type of system needed. General steps for implementing HHMS to meet the various requirements of EPCRA and the PPA are discussed in the following sections.

REDUCTION IN RELEASE OF TOXIC CHEMICALS

The following steps will be taken to meet the goal of 50 percent reduction in releases of listed toxic chemicals from facilities that meet the reporting thresholds of EPCRA, Section 313 (EPCRA-313 facilities).

- Each operating administration with one or more EPCRA-313 facility will develop an HMMS to consolidate TRI data from each of its EPCRA-313 facilities.
- Each operating administration will develop reduction goals for toxic chemicals for each of its EPCRA-313 facilities so that the total combined reduction in releases for the operating administration is 50 percent or higher by the end of 1999 compared with a baseline year of 1994.
- Each EPCRA-313 facility will develop a facility-specific pollution prevention plan that outlines specific methods for the required reduction in releases of toxic chemicals by December 1995. Facility pollution prevention plans are discussed in greater detail in the following section.

The responsibility for implementing the necessary steps to meet the requirements of EO 12856 for reduction in releases of toxic chemicals will rest with the facility managers, the heads of the operating administrations, and the Assistant Secretary for Administration.

FACILITY POLLUTION PREVENTION PLANS

Each facility within DOT that meets any of the reporting thresholds for EPCRA 302, 311-312, or 313 will prepare a facility-specific pollution prevention plan. Each facility's plan will contain the following:

- A statement of management commitment to pollution prevention.
- Facility-specific goals for toxic-chemical release reductions if that facility meets the reporting threshold of EPCRA 313, and an explanation of how the reductions will fit into the overall operating administration-wide and DOT-wide goal of 50 percent reduction by the end of 1999.
- An inventory and ranking, by quantity-used, of each product and waste stream containing EHS and listed toxic chemicals at the facility.
- A summary of the results of an assessment identifying opportunities and options for instituting pollution prevention measures.
- An evaluation and selection of pollution prevention alternatives. Criteria will be developed for ranking the opportunities identified and the options developed and selecting projects for funding. Typical criteria include costs (life-cycle costs will be considered wherever possible), liability, regulatory compliance, implementation, feasibility, and environmental impacts. The facility plan will explain the criteria used and present the results of the ranking. Generally, priority for implementation will be given to projects having a payback period of 3 years or less.
- Procedures and a schedule for implementing the selected pollution prevention projects.
- Communication and training needs.
- Considerations for community involvement in setting goals and selecting pollution prevention methods.
- Procedures for measuring success.

In accordance with EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and where practicable and appropriate, the plan will include procedures to be used for collecting and analyzing data on race, national origin, income level, and other readily accessible and appropriate information on areas surrounding the facility.

The OST and the responsible operating administration will provide guidance to help each facility develop plans that are complete and consistent with the overall DOT pollution prevention policy and the requirements of EO 12856.

The responsibility for developing facility-specific pollution prevention plans will rest with the facility manager and the head of each operating administration.

ACQUISITION AND PROCUREMENT PROCEDURES

DOT will establish goals for reducing or eliminating the unnecessary acquisition of products containing EHS or listed toxic chemicals. The goals will be established and met by implementing the following steps for reviewing and revising DOT's acquisition and procurement procedures and product specifications:

- The OST and each operating administration will identify products used by their facilities meeting EPCRA reporting thresholds that contain EHS and listed toxic chemicals.
- The OST and each operating administration will integrate pollution prevention considerations when developing mission needs and developing and revising acquisition procurement documentation.
- The OST and each operating administration will review standardized documents, such as specifications and standard operating procedures, and will identify opportunities for eliminating and reducing the use of products containing EHS and listed toxic chemicals.
- The OST and each operating administration will identify environmental life-cycle cost tools.
- The OST and each operating administration will review the Federal Acquisition Regulation (FAR) and identify clauses that present barriers to the reduction or elimination of the use of products containing EHS or listed toxic chemicals. Suggestions for revisions will be submitted to the Civilian Agency Acquisition Council.
- The OST and each operating administration will specify requirements for the purchase of environmentally preferable products and services. ``Environmentally preferable" means products or services that have a lesser or reduced adverse effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service.

The responsibility for implementing the steps necessary to meet the acquisition and procurement goals will rest with the facility manager, program manager, the head of the operating administration, and the Assistant Secretary for Administration.

TOXIC RELEASE INVENTORY (EPCRA 313) AND POLLUTION PREVENTION ACT REPORTING

The following steps will be taken to meet the requirements of EPCRA 313 and the PPA once it has been determined that a facility meets the TRI reporting thresholds for listed toxic chemicals:

- Each facility will develop a facility HMMS to identify and record all products that contain listed toxic chemicals.
- Each facility will develop plans for TRI data collection and tracking to meet reporting requirements. The plans will involve identifying and analyzing all processes that use products or generate wastes containing listed toxic chemicals, performing process mass balances, and evaluating and quantifying releases.
- Each facility will prepare and submit TRI Form R reports to EPA and the appropriate state or tribal government by July 1 of each year. The initial report on the 1994 calendar year is due on July 1, 1995. Copies of TRI Form R reports should be submitted to heads of operating administrations.
- Each operating administration with EPCRA-313 facilities will submit an annual report on their progress toward meeting the 50 percent reduction goal and their acquisition goals by August 15 of each year. OST will prepare a departmentwide report for submittal to EPA by October 1 of each year, beginning in 1995.

The responsibility for implementing the necessary steps to meet the requirements of EPCRA 313 will rest with the manager of each facility.

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW REPORTING

EPCRA 302 Reporting
The following steps will be taken to meet the requirements of EPCRA 302 once it has been determined that a facility meets the reporting threshold for EHS:

- Each facility will notify the State Emergency Response Commission (SERC) and the Local Emergency Planning Committee (LEPC).
- Each facility will designate a facility coordinator to work with the LEPC to develop emergency response plans.
- Each facility will set up an HMMS to institutionalize procedures for reviewing new products for EHS constituents and for annually reviewing and validating storage quantities and the accuracies of notifications on file with the SERC and the LEPC.
- Each facility will revise its processes for eliminating or minimizing the use of products containing EHS.

The responsibility for implementing the steps necessary to meet the requirements of EPCRA 302 will rest with the facility manager.

EPCRA 304 Reporting
The following steps will be taken to meet the requirements of EPCRA 304 once it has been determined that a facility stores EHS or CERCLA hazardous substances in quantities that may result in a release meeting the reportable quantity (RQ):

- Each facility will update its existing emergency response plan or, if one does not exist, will prepare an emergency response plan that includes notification of the SERC and the LEPC in case of a release that exceeds the reportable quantity (RQ) of an EHS or a CERCLA hazardous substance.
- In the event of a spill, each facility will notify the SERC and the LEPC.
- Each facility will retain copies of all spill case files reported by the facility.

The responsibility for implementing the steps necessary to meet the requirements of EPCRA 304 will rest with the facility manager.

EPCRA 311 and 312 Reporting
The following steps will be taken to meet the requirements of EPCRA 311 and 312 once it has been determined that a facility meets the storage thresholds for hazardous chemicals and EHS:

- Each facility will notify the SERC, the LEPC, and the local fire department of all hazardous chemical and EHS that exceed storage thresholds.
- Where possible, each facility will revise procedures for reducing the need to store large quantities of hazardous chemicals and EHS.
- Each facility will specify maximum storage quantities where onsite storage is close to the EPCRA threshold and will establish an HMMS to ensure that the storage quantity is not exceeded.
- Each facility will establish HMMS procedures for annually identifying the products at a facility that meet storage thresholds.
- Each facility will institutionalize annual reporting procedures for submitting Emergency and Hazardous Chemical Inventory Tier II reports to the SERC, the LEPC, and the local fire department as required.

The responsibility for implementing the steps necessary to meet the requirements of EPCRA 311 and 312 will rest with the facility manager.

BUDGET REVIEW

Heads of operating administrations will identify pollution prevention projects in their annual updates of the Pollution Abatement Plan required by Office of Management and Budget (OMB) Circular A-106. Pollution abatement plans are due to OST on June 1 of each year.

ANNUAL PROGRESS REPORTING

DOT will submit annual progress reports to EPA beginning on October 1, 1995. The reports will include the status of DOT's strategy and facility plans, progress toward the 50 percent reduction goal and acquisition goals, progress in reviewing and revising specifications and standardized documents, a sampling of new and innovative pollution prevention technologies, and TRI chemical releases reported for the previous year.

AWARDS AND CHALLENGE PROGRAM

DOT will encourage and recognize outstanding pollution prevention contributions through both existing and new award and incentive programs. DOT's internal award program will be established in the DOT Environmental and Natural Resources Program Manual, DOT Order M-5640.ID. The program will reward the most innovative environmental programs.

DOT also will participate in the Federal Government Environmental Challenge Program established by the U.S. Environmental Protection Agency to recognize and reward outstanding environmental management performance at Federal agencies and facilities. This program challenges Federal agencies to:

- Agree to a code of environmental principles that emphasize pollution prevention, sustainable development, and state-of-the-art environmental management programs
- Submit applications to EPA for individual Federal agency facilities for recognition as ``model installations."

POLICY DISSEMINATION

Internal Training

DOT will develop an environmentally aware and knowledgeable community through integrated education and training in pollution prevention. The goal of the internal education and training program will be as follows:

- Equip the DOT work force with the skills and knowledge for accomplishing their missions while protecting the environment.
- Institutionalize and continually improve pollution prevention training for DOT personnel at all grades and organization levels.
- Integrate pollution prevention measures into all operations.

Public Involvement

DOT will foster partnerships with local communities and industry in the following ways:

- Participate in comprehensive community planning and public affairs.
- Enhance the coordination and effectiveness of emergency response capabilities.
- Respond to public requests for information on facility pollution prevention activities and goals, and annual progress in achieving these goals.
- Promote the elimination of the use of hazardous substances and the generation of waste.
- Encourage affirmative procurement, reuse, and recycling.

COMPLIANCE SCHEDULE AND DEADLINES

Table 5 presents a schedule outlining the specific requirements of EO 12856 and the corresponding compliance deadlines.

DEPARTMENT OF THE TREASURY

March 3, 1995
MEMORANDUM FOR ASSISTANT BUREAU HEADS FOR ADMINISTRATION/MANAGEMENT
FROM: W. Scott Gould
Deputy Assistant Secretary
(Department Finance and Management)
SUBJECT: Pollution Prevention Policy Statement

POLICY

Executive Order 12856, "Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements" dated August 3, 1993, requires the Department of the Treasury (Treasury) to redefine its environmental focus away from traditional pollution treatment and disposal controls, to pollution prevention. Thus, the Department's policy requires that:

- pollution be prevented or reduced at the source;
- pollution that cannot be prevented should be recycled in an environmentally safe manner;
- disposal or other release into the environment should be employed only as a last resort; and
- to the maximum extent practicable life cycle analysis and total cost accounting principles will be applied to all projects.

This policy should be included in bureau pollution policy statements and guidance documents.

Treasury is committed to implementing Executive Order 12856 efficiently, and without duplicating efforts by sharing resources, expertise and capabilities with its Treasury partners where possible. It will require the complete cooperation and commitment to pollution prevention by Facility Managers; Bureaus Environmental Executives; Program, Project and Product Managers; and Contractors.

PROGRAM

Treasury's program includes a commitment to disseminate pollution prevention techniques and approaches internally through training, and externally in making pollution prevention reports, strategies, and plans available to the public. Internally, Treasury environmental personnel are expected to build environmental considerations into their daily decision-making processes, programs, and policies. Each Treasury Bureau will make every employee aware of what they need to do to comply with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The Office of Real and Personal Property Management will assist the Bureaus in developing systems to facilitate the collection and processing of data needed to comply with EPCRA.

Externally, Treasury will cooperate fully with the Environmental Protection Agency (EPA), other applicable departments, and state and local regulators to ensure maximum use of their expertise and resources. Treasury will work closely with the Public and Local Emergency Planning Committees (LEPCs) in compliance with EPCRA, to provide them with the information they need both to protect the public, and inform the public about toxic and hazardous chemicals and hazardous substances used by, and stored at Treasury facilities in their communities. Additionally, the public will be afforded ready access to all strategies, plans, and reports that individual facilities and bureaus are required to prepare under this order, except when such documentation is withheld because of a national security exemption. Treasury also will research, develop, and test and evaluate innovative pollution prevention technologies through partnerships among Industry, Federal Agencies, Government Laboratories, Academia, and others. Each Treasury Bureau will establish a plan and goals for eliminating or reducing the unnecessary acquisition, manufacture, process, and use of products containing extremely hazardous substances or toxic chemicals.

RELATED PROGRAMS

Treasury is committed to purchasing environmentally preferable products and services that have a lesser or reduced effect on the natural environment or on human health as directed in Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention" dated October 20, 1993.

Treasury will reduce the use of energy and the related environmental impacts by promoting the use of energy efficiency products and programs, and renewable energy technologies. Treasury will reduce water use by promoting the use of water efficiency products and programs, and beneficial landscape practices as defined in Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities" dated March 8, 1994.

Energy efficiency will be further enhanced in Treasury by only purchasing Energy Star Computers that are designed to automatically enter a low-power, standby state when they are inactive as required by Executive Order 12845, "Requiring Agencies To Purchase Energy Efficient Computer Equipment" dated April 21, 1993.

All Treasury Bureaus will begin immediately to minimize acquisition of the most potent (Class 1) ozone-depleting substances, and to maximize the use of safe alternatives. Treasury Bureau facilities will modify specifications and contracts that require the use of ozone-depleting substances, and maximize the use of safe alternatives in compliance with Executive Order 12843, "Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances" dated April 21, 1993.

Finally, Treasury will reduce air pollution, release U.S. demand for foreign oil, and encourage technological leadership by requiring Treasury Bureaus to include Alternative Fuel Vehicles as part of its new vehicle acquisitions in alignment with The Energy Policy Act and Executive Order 12844, "Federal Use of Alternative Fueled Vehicles" dated April 21, 1993.

TREASURY DIRECTIVE 75-08

DATE:

Sunset Review:
Expiration Date:

SUBJECT: Compliance with Right-to-Know Laws and Pollution Prevention Requirements

1. PURPOSE. This Directive establishes policies and assigns responsibilities for implementing Executive Order (E.O.) 12856, "Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements."

2. POLICY. It is the policy of the Department of the Treasury to be a leader and set an example in the field of pollution prevention in the management of its facilities, its acquisition practices and through its support for the development of innovative pollution prevention programs and technologies which contribute significantly to protecting the public health and our environment by:

a. preventing or reducing pollution at the source;

b. recycling in an environmentally safe manner pollution that cannot be prevented;

c. disposing or releasing to the environment pollution as a last resort; and

d. applying to the maximum extent practicable, life cycle and total cost accounting principles to all projects.

3. RESPONSIBILITIES.

a. The Deputy Assistant Secretary (Departmental Finance and Management) is the Departmental Environmental Executive and is responsible for the establishment of the overall policy and guidelines to carry out E.O. 12856 in the Department.

b. The Director, Office of Real and Personal Property Management (ORPPM), has oversight responsibilities for the management and direction of the pollution prevention and right-to-know program, and shall develop:
(1) the program and evaluate its performance; and
(2) procedures for:
(a) identifying and correcting program compliance weaknesses through management reviews, internal control reviews and other appropriate means; and
(b) assisting the bureaus with pollution prevention efforts.

c. The Departmental Environmental Programs Officer, ORPPM, under the general guidance of the Director, ORPPM, shall:
(1) provide program support to the Deputy Assistant Secretary (Departmental Finance and Management) in carrying out the requirements of the pollution prevention and right-to-know-laws, Government pollution prevention and right-to-know policy and this Directive;
(2) prepare the Department's Pollution Prevention Strategy;
(3) conduct oversight activities to assure that an effective pollution prevention program is implemented throughout the Department, including development and management of a system to allow for trading of pollution control credit among bureaus to meet the Department's goal of a 50 percent reduction in the release of toxic chemicals by December 31, 1999;
(4) coordinate the annual submission of the pollution prevention and right-to-know report to the Environmental Protection Agency (EPA) and the Office of Management and Budget by October 1 each year through the year 1999; and
(5) assist in resolving pollution prevention and right-to-know related problems associated with Departmental actions, activities or programs undertaken to comply with E.O. 12856.

d. The Deputy Assistant Secretary (Administration), Heads of Bureaus and the Inspector General, as it relates to their respective bureaus and offices, shall:

(1) implement and fully fund a program to ensure compliance with E.O. 12856 and all Federal, State and local environmental requirements specified in Section 3-301 of E.O. 12856;

(2) develop voluntary toxic chemical reduction goals, utilizing source reduction and other techniques, to assist the Department in meeting its 50 percent reduction goal for toxic chemical releases by December 31, 1999, and develop written pollution prevention plans for each covered facility by the end of 1995, as required by Section 3-302 of E.O. 12856;

(3) establish a plan and goals for eliminating or reducing the unnecessary acquisition, manufacturing, processing, and use of products containing extremely hazardous substances or toxic chemicals, and encourage partnerships to assess and deploy innovative environmental technologies as required by Section 3-303 of E.O. 12856;

(4) ensure compliance with Toxics Release Inventory/Pollution Prevention Act reporting, without regard to the Standard Industrial Classification (SIC) delineations, as set forth in Section 3-304 of E.O. 12856;

(5) comply with the provisions set forth in Sections 301 through 312 of Emergency Planning and Community Right-to-Know (EPCRA) as required by Section 3-305 of E.O. 12856;

(6) submit annual progress reports of compliance with E.O. 12856 to ORPPM by September 15 each year through the year 1999, as required by Section 4-402 of E.O. 12856;

(7) provide technical advice and assistance, if requested, to Local Emergency Planning Committee (LEPC's) as described in Section 4-403 of E.O. 12856;

(8) place high priority on obtaining training, funding, and resources needed for implementing all aspects of E.O. 12856 as outlined in Section 4-404 of E.O. 12856;

(9) participate, to the extent that resources permit, in the Federal Government Environmental Challenge Program developed by EPA under Section 405 of E.O. 12856;

(10) provide ORPPM with a preliminary list of facilities that potentially meet the requirements for reporting under the threshold provisions of EPCRA, Pollution Prevention Act (PPA) and E.O. 12856 within 90 days of the date of this Directive;

(11) ensure that all necessary actions to prevent pollution and comply with the provisions of EPCRA and PPA are met in accordance with Section 5-502 of E.O. 12856;

(12) conduct internal reviews and audits, and take such other steps, as may be necessary to monitor compliance with Sections 3-304 and 3-305 of E.O. 12856;

(13) comply with State and Local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is not otherwise already mandated, as specified in Section 5-505 of E.O. 12856;

(14) ensure that whenever the EPA Administrator notifies a bureau that it is not in compliance with an applicable provision of E.O. 128556, the bureau shall achieve compliance as promptly as is practicable. Bureaus will provide ORPPM with a copy of any such notices;

(15) afford the public ready access to all strategies, plans, and reports required by Section 5-508 of E.O. 12856;

(16) request, as appropriate, an exemption from complying from the President as provided by Section 6-601 of E.O. 12856;

(17) prepare and submit to ORPPM, as needed, within 180 days of the date of this Directive, a written bureau specific pollution prevention strategy to supplement this Directive to achieve the requirements of E.O. 12856.

4. DEFINITIONS. All definitions found in EPCRA, PPA and the EPA implementing regulations are incorporated by reference, with the following exception: for the purpose of E.O. 12856, the term "person", as defined in section 329(7), of EPCRA, also includes Federal agencies.

5. REPORTING REQUIREMENTS.

a. The Bureau Environmental Executive, as applicable, shall submit to the Deputy Assistant Secretary (Departmental Finance and Management), within 90 days of the date of this Directive, if they have not already done so, the following:

(1) File emergency planning notification with the appropriate LEPC under Section 302 of EPCRA as defined in Section 3-305(a) of E.O. 12856.

(2) Provide a list of reporting facilities to ORPPM as defined in Section 5-501 of E.O. 12856.

(3) Submit Emergency Notification of Releases of an Extremely Hazardous Substance under Section 304 of EPCRA as defined in Section 3-305(d) of E.O. 12856.

b. Provide information for the preparation of Comprehensive Emergency Response Plans to the applicable LEPC as outlined in Section 3-305(b) of E.O. 12856.

c. To the extent a bureau facility is required, submit Material Safety Data Sheets to the appropriate LEPC, the State Emergency Response Commission (SERC), and the Fire Department with jurisdiction over the facility, as defined in Section 3-305(c) of EO 12856.

d. Within 90 days of the date of this Directive, the bureau, as applicable, shall submit to the appropriate LEPC, SERC, and the Fire Department with jurisdiction over the facility, the Emergency and Hazardous Chemical Inventory Form under Section 312 of EPCRA and Section 3-305(c) of E.O. 12856.

e. Within 90 days of the date of this Directive and by each July 1st thereafter, the bureau, as applicable, shall submit to the EPA and the designated State official, Toxic Release Inventory Reports under Section 313 of EPCRA and Section 6607 of PPA as defined in Section 3-304 of E.O. 12856.

f. Beginning on September 15, 1995, and on each September 15th through 1999, each bureau, subject to the requirements, shall submit annual progress reports to ORPPM as outlined in Section 4-402 of E.O. 12856.

6. AUTHORITIES.

a. E.O. 12856, "Federal Compliance With Right to Know Laws and Pollution Prevention Requirements," dated August 3, 1993.

b. Emergency Planning and Community Right-to-Know Act, Sections 313, 329(3), and 329(7).

c. Pollution Prevention Act of 1990, Section 66607.

d. 40 CFR Parts 302, 355 and 372.

7. REFERENCES.

a. Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for E.O. 12856 and Beyond (EPA 300-B-94-007).

b. Title III List of Lists: Consolidated List of Chemicals Subject to Reporting Under The EPCRA (EPA 560/4-92-001, 500-B-92-002).

c. Pollution Prevention Information Exchange System (PIES) (EPA 600-R-92-213).

d. Federal Facility Pollution Prevention Planning Guide (EPA 300-B-94-013).

e. Office of the Under Secretary of Defense's memorandum on Implementing Guidance for Executive Order 12856, "Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements."

8. EXPIRATION DATE. This Directive expires three years after the date of issuance unless cancelled or superseded by that date.

9. OFFICE OF PRIMARY INTEREST. Office of Real and Personal Property Management, Office of the Deputy Assistant Secretary (Departmental Finance and Management), Office of the Assistant Secretary (Management) & Chief Financial Offices (CFO).

George Munoz
Assistant Secretary (Management) & CFO

DEPARTMENT OF VETERANS AFFAIRS

VA DIRECTIVE POLLUTION PREVENTION PROGRAM STRATEGIC GOAL

1. PURPOSE

The purpose of this Directive is to have Department of Veterans Affairs (VA) facilities and organizations promote the use of pollution prevention practices in accordance with the Executive Order (E.O.) 12856, "Federal Compliance with Right to Know Laws and Pollution Prevention Requirements."

2. DEFINITIONS

a. Pollution Prevention. For the purposes of implementing pollution prevention at VA facilities, "pollution prevention" means "source reduction," as defined in the Pollution Prevention Act (PPA) and other practices that reduce or eliminate the creation of pollutants through: increased efficiency in the use of raw materials, energy, water, or other resources; or protection of natural resources by conservation.

b. Source Reduction. As defined by the PPA, "source reduction" means any practice which both reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment or disposal; and the hazards to public health and the environment associated with the release of such hazardous substances, pollutants or contaminants. Source reduction includes: equipment or technology modifications; process or procedure modifications; reformulation or redesign of products; substitution of raw materials; and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not include practices such as incineration which alter the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant or contaminant through a process or activity which itself is integral to and necessary for the production of a product or the providing of a service.

c. EPCRA. "EPCRA" refers to the Emergency Planning Community Right to Know Act (SARA Title III). Compliance with EPCRA is defined by criteria set out in the EPA Code of Regulations 40 CFR Part 372. VA has had a written Circular since 1992 calling for VA facilities to comply with the intent of EPCRA. E.O. 12856 now mandates that Federal facilities comply with this Act. Attachment A summarizes the content of this Circular and should be referred to by VA facilities to determine applicable EPCRA requirements.

3. BACKGROUND

a. On August 3, 1993, President Clinton signed the E.O. 12856 entitled "Federal Compliance with Right To Know Laws and Pollution Prevention Requirements". This E.O. combines requirements of EPCRA with those of the Pollution Prevention Act (PPA) of 1990.

b. VA issued VA Circular 00-92-5, "Emergency Planning and Community Right to Know Act" in 1992. As a result of this circular, VA has voluntarily complied with many of the requirements of the Emergency Planning and Community Right to Know Act (EPCRA) even though Federal facilities were not required by law at that time to comply with EPCRA.

4. POLICY

VA is committed to environmental leadership and preventing pollution by reducing the use of hazardous materials. Additionally, VA is committed to reducing the release of pollutants to the environment to as low as is reasonably achievable. VA's goal is to accomplish pollution prevention and reduce the generation of wastes through a hierarchy of actions. These actions range from the most preferred choice of source reduc-

tion, to recycling, then treatment, and disposal, as a last resort. To build a strong pollution prevention program, this hierarchy of actions must be fully integrated into day-to-day VA operations.

5. ACTION

a. VA facilities shall:

(1) Continue to participate with local, state and Federal officials in emergency planning and community right to know activities in accordance with the "Emergency Planning and Community Right to Know Act" as required by VA Circular 00-92-5. Attachment A summarizes the content of this Circular and includes EPCRA requirements applicable to VA facilities.

(2) Promote reducing the use of toxic and hazardous substances and the resulting generation of waste by reviewing facility operations, procedures and unit processes. To the maximum extent feasible implement source reduction measures including, but not limited to, the substitution of materials that are less hazardous and/or of reduced toxicity.

(3) Promote the development of a VA pollution prevention ethic by addressing pollution prevention goals and actions in the development of facility guidance, policy and operating procedures.

(4) Develop and implement methods to identify and quantify releases and off-site transfers of toxic and hazardous chemicals to all environmental media (i.e., air, soil, surface and ground water).

(5) Develop and maintain a comprehensive inventory of toxic chemicals, extremely hazardous substances and hazardous chemicals.

(6) Promote pollution prevention awareness through training, education, and outreach/awareness programs.

(7) Include significant environmental costs in life-cycle or other cost estimating done in conjunction with acquisition or construction.

(8) Purchase environmentally preferable products, when possible. Environmentally preferable products include, but are not limited to, products having recycled content, products that can be recycled after use, products that substitute less toxic or hazardous components, products that are energy efficient and products that otherwise protect the environment.

b. VA Central Office and Regional organizations shall implement pollution prevention actions as specified below:

(1) Promote pollution prevention awareness through training, education, and outreach/awareness programs.

(2) Incorporate pollution prevention goals and actions when appropriate in the development of guidance, policy and procedures.

(3) Purchase environmentally preferable products, when possible.

(4) Cognizant offices will require that new heating, ventilating, air conditioning (HVAC) and refrigeration equipment associated with projects for which they are responsible use chemicals that do not contain chloroflurocarbons (CFCs). Additionally, when technically and economically feasible, such offices will require the use of equipment that does not contain CFCs for HVAC and refrigeration renovation projects.

c. Veterans Health Administration organizations at VA Central Office shall set pollution prevention goals and take specific actions as listed below:

(1) Construction Management shall:
   (a) Incorporate pollution prevention requirements in specifications for construction and construction related building systems.

(2) Environmental Management Service shall:
   (a) Develop policy and program guidance to implement integrated pest management using pollution prevention techniques.
   (b) Establish an annual goal to reduce the use of toxic pesticides by a specific percentage by the year 2000.

(3) Operations/Engineering Management and Field Support shall:
   (a) Ensure that pollution prevention considerations are taken into account in the construction of Non-Recurring Maintenance and Minor projects.
   (b) Incorporate pollution prevention considerations into guidance, policy and standard procedures related to facility operations and building system maintenance.

d. National Cemetery System shall:

(1) Incorporate pollution prevention into grounds keeping operation, e.g., substitute less toxic/hazardous or non-toxic/hazardous materials for use as pesticides or fertilizers.
(2) Establish an annual goal to reduce the use of toxic pesticides by a specific percentage by the year 2000.

e. Acquisition and Materiel Management shall:

(1) Incorporate pollution prevention and other environmental considerations into all phases of the acquisition/procurement process including, but not limited to: requests for proposals, evaluations of proposals, contract documents and contract performance.

(2) Revise the VA Acquisition Regulations (VAR) as necessary to implement this strategy.

(3) Evaluate the effectiveness of alternative sterilants to ETO and, if appropriate, establish and implement a plan to reduce the use of ETO by VAMCs and other VA health care facilities.

(4) Implement acquisition and procurement policies and lifecycle costing practices that promote pollution prevention, reduce waste, minimize effects on natural resources and encourage economically efficient market demand for items using recovered material.

f. The VA Environmental Executive will serve as coordinator for implementation of the VA Pollution Prevention Strategic Goal.

6. REFERENCES

a. Executive Order 12856 "Federal compliance with Right to Know Laws and Pollution Prevention Requirements"
b. VA Circular 00-92-5 "Emergency Planning and Community Right to Know Act" 1992

7. FOLLOW-UP RESPONSIBILITY: DIRECTOR, ENGINEERING MANAGEMENT AND FIELD SUPPORT OFFICE (138).

8. RESCISSIONS: THIS DIRECTIVE SHALL EXPIRE

VA DIRECTIVE
ATTACHMENT A

SUMMARY OF THE EPCRA REQUIREMENTS AS THEY IMPACT THE VA

A summary of the EPCRA requirements as they impact the VA is as follows:

1. Section 301-303 of the Act (Emergency Planning)

a. Appoint an ERC (Emergency Response Coordinator) as a point of contact for the LEPC (Local Emergency Planning Committee). The ERC should either be someone familiar with environmental and safety concerns, such as the facility Industrial hygienist or Safety Official, or should work closely with these individuals to accomplish the tasks listed below.

b. Determine if any chemicals at the VA facility which are listed as "extremely hazardous" have a potential for release into the environment in such a manner as to be a threat to the safety and health of the community.

(1) Research and hospital laboratories are exempt from the reporting requirements of Section 302 of EPCRA, the "hazardous chemicals" list. VAMCs would be required to report non-laboratory storage of bulk chemicals that are stored in quantities of 10,000 pounds or more; however, it is unlikely that VAMCs store more than 10,000 pounds of any of the chemical on the "hazardous chemicals" list.

(2) Research and hospital laboratories are not exempt from the reporting requirements for chemicals on the "extremely hazardous chemicals" list (Sections 311 and 312 of EPCRA) if the quantities of these chemicals stored at a facility equal 500 pounds or more, or exceed the TPQ (Threshold Planning Quantity) for a specific chemical, whichever is less. There are a few pesticides that have a TPQ of 1 pound or less. VA plans to review the use of these listed pesticides and use suitable substitutes when feasible. This will reduce pollution that could result from use of these chemicals. It would also reduce the reporting requirements that may be associated with storage of these chemicals.

(3) Ethylene oxide (ETO) is used as a sterilant at most VAMCs. The Reportable Quantity (RQ) for an accidental release of ETO is 10 pounds. Routine releases of ETO when used as a sterilant do not have to be reported under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regulations (40 CFR 302.8(b)). Most medical centers have permits to discharge ETO or have installed devices to prevent discharge into the atmosphere, and are, therefore, exempt from reporting this chemical.

(4) The toxic chemical release reporting requirement (Section 313 of EPCRA) has a reporting requirement that is based on the use of chemicals on the "toxic chemical" list in quantities of 10,000 pounds or more of any one chemical. There are no VA facilities that store or use such quantities of toxic chemicals.

c. Provide to the LEPC a list of those chemicals which may be a potential threat and be prepared to provide MSDS (Material Safety Data Sheets) for chemicals upon request.

2. Section 302 and 303 of the Act (Storage Reporting Requirements). The ERC will provide the LEPC with the location of the bulk chemical storage (indicated on a map of the facility with building numbers and roads) of "extremely hazardous" chemicals to be reported to the LEPC in the event of a release.

3. Section 304 of the Act (Release Reporting Requirements - Emergency Notification)

a. The VA ERC shall report to the State Emergency Response Commission and the LEPC uncontrolled releases of listed "extremely hazardous" chemicals:

(1) That exceed the agreed upon reportable amount for the chemical and leave the physical boundaries of the installation, or

(2) May represent an imminent or substantial endangerment to public health or the environment.

b. Chemicals subject to this requirement are substances on the list of "extremely hazardous" chemicals and substances subject to the emergency notification requirements under the CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) Section 103 (a).

NOTE; *The National Response Center must also be notified for releases exceeding the reportable quantity for substances listed under CERCLA Section 103 (A) even if the substances do not leave the physical boundaries of the facility.*

c. Information to be immediately provided in the emergency notification is as follows:

(1) The chemical name or identity of any substances involved in the release.

(2) An indication of whether the substance is on the SARA title III (Superfund Reauthorization Act) title III list of "extremely hazardous" chemicals

(3) An estimate of the quantity of release into the environment.

(4) The time and duration of the release.

(5) The environmental medium (air, water, land) into which the release occurred.

(6) Any known or anticipated acute or chronic health risks associated with the emergency, and where appropriate, advice regarding medical attention necessary for exposed individuals.

(7) Proper precautions to be taken as a result of the release (such as evacuation).

(8) Name and phone number of the contact person.

d. Follow-up written emergency notice after the release shall include the following information:

(1) Update of information included in the initial notice.

(2) The actual response actions taken.

(3) Any known or anticipated data or chronic health risks associated with the release.

(4) Advice regarding medical attention necessary for exposed individuals.

4. Section 311 of the Act: Material Safety Data Sheets, (Community-Right-to-Know). Provide MSDS information on the nature, amount, and location of "extremely hazardous" substances used or stored within the confines of our facilities, if requested by the LEPC.

5. Section 312 of the Act; Emergency and Hazardous Chemical Inventory Forms, (Community-Right-to-Know). This section applies to hazardous chemicals stored at or above 10,000 pounds and "extremely hazardous" substances at or above 500 pounds or the Threshold Planning Quantity (TPQ), whichever is less (40 CFR 370.20, 370.21, 370.40). VA facilities are unlikely to meet the 10,000 pound or the 500 pound threshold of the listed chemicals with the exception of some pesticides which have a TPQ lower than 500 pounds, and may be used in NCS or VAMCs.

6. Section 313 of the Act: Toxic Chemical Release Forms. Applies to the manufacturing and or importing, or processing of 25,000 pounds per year, or otherwise using 10,000 pounds per year of one or more listed toxic chemicals. (40 CFR 372.25). VA facilities are not required to fill out and submit EPA Form 9350-1 "Toxic Chemical Release Inventory Reporting form," since VA facilities do not meet the chemical quantity criteria of this section.

7. Compliance With State and Local Right-to-Know and Pollution Prevention Requirements. E.O. 12856 states that "Federal agencies are further encourages to comply with all state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is otherwise already mandated."

ENVIRONMENTAL PROTECTION AGENCY

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

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, Jon Cannon, Assistant Administrator for the Office of Administration and Resources Management, 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.

APPENDICES (Not Included in this document)

A. Pollution Prevention Opportunities for EPA Facilities
B. Pollution Prevention Policy Statement
C. EPA Facility Contact and Chemical Usage Information
D. Executive Order 12856
E. 1993 Earth Day Statement by Carol Browner

POLLUTION PREVENTION OPPORTUNITIES FOR EPA FACILITIES

There are many opportunities for pollution prevention at EPA facilities, some of which are already being implemented and others that need to be explored. Pollution prevention opportunities are available at all phases of a laboratory's operation. EPA has developed guidance on pollution prevention relevant to EPA laboratories, including Alternative Fuels: Health and Safety Considerations (EPA/200-F-94-007) and Lighting Fixtures Management Options (EPA/200-F-94-008).

Pollution prevention options that should be considered during the opportunity assessment include the following:

- Performing operating practices efficiently
- Reducing the scale of laboratory experiments
- Increasing the use of instrumentation
- Eliminating the use of oil-based paints, where possible
- Revising procurement and acquisition requirements
- Increasing efficiency in use of water and energy
- Improving housekeeping measures.

Areas of reduction that might require long-term planning include:

- Eliminating the use of suspected carcinogenic chemicals, such as benzene and chloroform, that are currently required in some standard test procedures
- Improving inventory control utilizing computerized tracking and inventory systems
- Retrofitting equipment currently using ozone depleting substances (ODS) to environmentally preferred chemicals, or purchasing ODS-free new equipment
- In-process recycling and reusing spent solvents.

Administrative opportunities include:

- Implementing a centralized purchasing program to eliminate duplicative purchases which result in excess quantities
- Implementing a centralized inventory system that can track chemicals from cradle to grave, noting or charting shelf life, and notifying staff to rotate chemical stock
- Developing a running inventory of unused chemicals for use by other departments and establishing a central posting area for this inventory which is accessible by all laboratory employees
- Implementing philosophical changes in procurement practices (e.g., ordering reagent chemicals in exact amounts instead of bulk ordering that can lead to a significant amount of waste)
- Forming cooperative partnerships with chemical suppliers to become responsible partners (e.g., modify packaging to minimize waste)
- Clearly identifying chemicals and wastes on all containers
- Forming an affirmative procurement team to recommend procedures to encourage purchase of environmentally preferable products. Design specifications and guidelines will need to be revised
- Changing organization and structure (e.g., appointment of chemical procurement managers, and creation of centers of excellence for various aspects of pollution prevention in laboratories and other operating units).

Technological changes include:

- Modifying standard operating practices for the capture, distillation, and reuse of solvents in the laboratory
- Replacing solvent cleaners with biodegradable aqueous or detergent cleaners
- Developing a matrix of methodologies that promote the use of non-solvent-based extractions (e.g., supercritical fluid extractions and solid phase extraction)

- Increasing the use of instrumentation, such as chromatography, mass spectrophotometry, and x-ray diffraction analyzers, substitution of "dry chemistry" in lieu of "wet chemistry" methods
- Scaling down the volumes of chemicals used in research laboratory experiments, and reducing the volume of material collected during enforcement activities to the minimum required for effective analysis
- Reducing or eliminating the use of highly toxic chemicals in laboratory experiments without jeopardizing the laboratory's mission
- Replacing freon in the analysis of oil and grease
- Recovering metal from catalysts (e.g., platinum, palladium, rhodium)
- Treating or destroying hazardous waste products in the last step of experiments
- Replacing ODSs in refrigeration and fire suppression equipment
- Investigating opportunities for recovering and recycling mercury and silver from broken thermometers and barometers with an outside vendor
- Replacing oil-based paints with water-based paints where possible
- Modifying paint-spraying techniques in order to minimize the use of volatile organic compounds.

GENERAL SERVICES ADMINISTRATION

POLICY STATEMENT.

The General Services Administration (GSA) is committed to complying with all applicable requirements of Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, and will provide education and the resources necessary, as stated in Section 4-404, to reduce or eliminate pollution in its operations. GSA will adhere to the applicable requirements of E.O. 12856 in the management of its facilities, in its acquisition and disposal practices, and by supporting the development of innovative pollution prevention programs and technologies. GSA will conduct facility management and acquisition activities at all of its covered facilities so that, to the maximum extent practicable, the quantity of hazardous chemicals entering any waste stream is reduced quickly through source reduction; that waste generated is recycled to the maximum extent practicable; and that any wastes remaining are stored, treated, or disposed of in a manner protective of public health and the environment.

As the manager of real property assets, GSA is committed to working with client agencies that are housed in GSA space. Client agencies with covered facilities (see glossary) must follow all applicable requirements (e.g., submit reports, develop strategies) of E.O. 12856.

In addition, GSA is committed to fulfilling the requirements of the National Environmental Policy Act (NEPA). Under NEPA, GSA is required to document the consideration of environmental factors in its decisionmaking. Under NEPA, GSA actions that may have major impacts on the environment require written statements known as environmental assessments (EA's) or environmental impact statements (EIS's). GSA's implementing guidance for compliance with NEPA is designed to help prevent, eliminate, or minimize environmental degradation. Pursuant to the policy goals in NEPA Section 101, and the procedural requirements in NEPA Section 102, GSA will take every opportunity to include pollution prevention strategies in the early planning and decisionmaking processes for its actions, and, where appropriate, will document those strategies in any EIS's or EA's prepared for those actions. Including pollution prevention strategies in our NEPA documents will aid GSA in fully informing the public and in determining the best solution for preventing pollution from GSA actions.

RESPONSIBILITIES.

GSA is developing, implementing, and evaluating its pollution prevention and community right-to-know program. GSA's Environmental Executive is the individual responsible for coordinating GSA's pollution prevention efforts. GSA has also established a task force that has developed the GSA pollution prevention strategy. This task force included representatives from GSA Services, Staff Offices, and the local regional office. In addition, GSA is represented on the Environmental Protection Agency's (EPA's) Executive Order 12856 workgroup.

Through the task force, GSA has identified its facilities that are potentially covered by E.O. 12856. GSA contacted its regional offices and affected Services and obtained a list of those facilities that may meet the reportable quantities (see glossary). The list indicated that nearly all of the GSA facilities covered by E.O. 12856 are covered because of the presence of underground and aboveground storage tanks. Additional facilities are covered due to the storage and use of hazardous chemicals.

EDUCATION.

GSA educates its employees of covered facilities so they are able to implement the requirements of E.O. 12856 effectively. In 1993, GSA Central Office began to distribute guidance to its ten regional offices to enable them to develop their facility pollution prevention plans and to manage their covered facilities. The

guidance provides GSA policy and regulatory requirements while allowing each region the flexibility to use the information to meet its specific needs. GSA distributed additional guidance in February and March of 1994, which provided its regional offices with a summary of E.O. 12856 and supplemental information such as timelines, EPA points of contact, and exemptions. GSA Central Office will continue to distribute information, as necessary, including EPA's guide on Pollution Prevention in the Federal Government (EPA 300-B-94-007).

GSA will conduct community-wide environmental conferences which will include model programs and demonstrations on effectively implementing E.O. 12856 at covered facilities. The conferences will allow GSA and other agencies to share their pollution prevention successes and lessons learned, and to provide any additional pollution prevention guidance.

REVIEWS AND AUDITS.

To evaluate compliance with Section 3-304, Toxic Release Inventory/Pollution Prevention Act Reporting, and with Section 3-305, Emergency Planning and Community Right-to-Know Reporting Responsibilities, of Executive Order 12856, GSA conducts internal reviews and audits. Each regional office is responsible for complying with the requirements of E.O. 12856 by developing, implementing, and evaluating their regional strategies according to Section 3-301. GSA Central Office will track compliance by maintaining a list of regional contacts with covered facilities, and a list of the date of each annual report submission to EPA or the local authorities. In addition, GSA Central Office will routinely submit a progress report to the GSA Administrator.

REDUCTION GOALS.

Toxic Chemicals.

Although GSA does not manufacture or process toxic chemicals, it does use and transfer toxic chemicals offsite. GSA is committed to achieving the 50 percent toxic chemical reduction goal by December 31, 1999 by reducing the agency's total releases and offsite transfers of toxic chemicals. This reduction is to be measured on an agency wide basis in accordance with Section 3-302 of E.O. 12856. The reduction will be achieved utilizing the pollution prevention management hierarchy, which places source reduction first, followed by recycling, treatment, and disposal only as a last resort.

Hazardous Chemicals.

GSA is committed to reducing or eliminating products it purchases for other agencies or uses itself that contain hazardous chemicals by reviewing and updating its specifications, and by using new technologies that promote pollution prevention. GSA contracts for commercial products and services, which it provides to Federal agencies through the supply programs listed below (see glossary for definitions):

- Wholesale stock program
- Retail stock program (see definition for customer supply center)
- Federal Supply Schedules program
- Special order program

GSA's Commodity Centers (see glossary) develop specifications for products under their management responsibility. Currently, each commodity center has begun to review its specifications to determine if hazardous substances can be eliminated from products and/or replaced with industry recognized chemical alternatives.

GSA manages major supply distribution centers (see glossary) that receive, store, and ship products that contain hazardous substances to customers. In accordance with the Occupational Safety and Health Administration's regulations, material safety data sheets (MSDS's) are maintained for all products stocked at each supply distribution center and are shipped with the products when they are sent to customers. In addition, GSA inputs information into a Hazardous Material Information System (HMIS) that is maintained by

the Department of Defense (DOD). This enables MSDS information for GSA material to be readily available to any DOD installation, and to many civil agencies.

GSA will evaluate the inventory of products that contain hazardous chemicals and are stocked at each supply distribution center. If this evaluation reveals that significant quantities of hazardous chemicals are stored onsite, GSA will work with commodity centers to reduce inventories. The commodity centers will process direct vendor deliveries where possible, which helps reduce the amount of hazardous chemicals on a GSA site. In addition, GSA considers the hazardous nature of a product when determining how it will be supplied to Government agencies. Products considered significantly hazardous are not placed in the wholesale stock program.

In addition to acting as a purchasing agent for the Federal Government, GSA uses products that contain hazardous chemicals to carry out its mission. GSA uses hazardous substances in facility management applications (e.g., operation of storage tanks, cleaning operations, renovations), during new construction and vehicle maintenance. However, GSA is currently using several technologies that eliminate or reduce pollution in its operational activities. Reformulated paints, preservatives and cleaning agents, refrigerant recovery units, parts cleaner recovery units, and closed loop vehicle wash systems that recycle the remaining water after it is separated from the wash solution are examples of items that GSA uses to reduce pollution.

INNOVATIVE TECHNOLOGIES.

GSA has an established means to introduce new and improved products and services, namely the New Item Program (NIP). The NIP is an avenue by which GSA promotes an awareness of pollution prevention technologies and maximizes opportunities for its customers to choose environmentally beneficial products and services.

GSA has conducted a pilot study with cleaning products that identifies and encourages the use of cleansers that are environmentally beneficial. In November 1993, GSA and EPA signed a Memorandum of Understanding and Agreement to examine materials used in the operation of Federal buildings. GSA will continue to work with EPA to identify and establish priorities in the replacement of hazardous materials.

GSA has instituted an Integrated Pest Management program (IPM). IPM is a modern philosophy of pest control that uses many tactics to keep pests below an acceptable level, while minimizing harmful impacts on the environment. IPM coordinates several property management functions that identify, control and reduce, or eliminate the causes of pest infestion with the least toxic treatment. The elimination of food, water, and shelter which sustain pest infestations is an essential part of the IPM concept. GSA is implementing the IPM program nationwide with training, changes in desk guides, and changes in contract specifications and requirements for pest control in GSA's buildings and grounds.

GSA will continue to implement the latest proven technologies for pollution prevention as they become available and are necessary to carry out its mission. GSA will complete this task through methods such as pilot test programs, benchmarking, and forming cooperative agreements with other agencies.

EPCRA SECTION 313/POLLUTION PREVENTION ACT SECTION 6607.

As required by Executive Order 12856, GSA will comply with Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). GSA regional offices will provide to EPA, or to the designated State official, a toxic chemical release inventory (TRI) form annually (on July 1) relating to any facility that exceeds or has exceeded the EPA threshold quantity for reporting. The reporting requirement applies to facilities that manufacture, process, use, or transfer offsite listed toxic chemicals in excess of the specified threshold quantities. As mentioned before, GSA does not manufacture or process toxic chemicals, but it will submit reports for the toxic chemicals released or transferred offsite above the reportable quantities.

CFCS.

GSA uses some of the ozone depleting refrigerants in the toxic chemical inventory list. However, GSA is phasing out these refrigerants in accordance with Title VI, Stratospheric Ozone Protection, of the Clean Air Act Amendments of 1990. Since 1992, it has been GSA's policy not to use chlorofluorocarbons (CFC's) in new chillers. In 1992, GSA also developed its Refrigerant Management Plan to help GSA-owned facilities develop a plan for the phaseout of the ozone-depleting CFC refrigerants.

GSA's phaseout of CFC's has a significant impact on building air-conditioning equipment because of its large inventory of CFC chillers. GSA will economically select, efficiently use, recover, recycle, and reclaim the ozone-depleting refrigerants, and safely handle, store, and dispose of them. Through an accelerated procurement process, GSA will replace its old, inefficient ozone-depleting CFC refrigerants in chillers with environmentally preferred products and through improvements in its operations and maintenance practices. This will substantially reduce the global warming and ozone-depletion impact on the environment.

In addition to phasing out CFC's in GSA's air-conditioning systems, vehicles acquired in model year 1995 and thereafter by the Interagency Fleet Management System will be CFC free. These vehicles' air-conditioning systems will be produced to operate with the new substitute refrigerant HFC-134A.

EPCRA Sections 301-312.

In accordance with E.O. 12856, GSA will comply with the provisions of Sections 301 through 312 of EPCRA. These sections provide pertinent information that GSA (and other Federal agencies) must follow regarding emergency planning and reporting.

GSA covered facilities will inform the local emergency planning committee (LEPC), the State emergency response commission (SERC), and the local fire department, of the chemicals stored onsite. Each facility will designate an emergency response coordinator to participate in the local emergency planning process. The facility emergency response coordinator will also supply inventories, MSDS's and other requested information to the LEPC, SERC, and the local fire department.

At the regional level, there is a program in place for "Pre-Fire Planning" where the local fire department is invited to tour GSA buildings to prepare pre-fire plans and to become familiar with the buildings. The plans include the locations of utilities, chemical storage areas, tanks, fire alarm control panels, and annunciator panels. They give firefighters an indication of what they may encounter during an emergency.

At GSA facilities that are covered due to the presence of underground storage tanks, new and existing tanks are registered with the State and local regulating agency. GSA facilities promptly report all releases, not just releases of reportable quantities, to the State authorities.

Facilities that meet or exceed the threshold quantities are also required to submit annual hazardous chemical inventory forms (Tier I or Tier II Forms). The Tier I or Tier II hazardous chemical inventory forms (see glossary) will include information about extremely hazardous substances at the threshold level or exceeding 500 pounds, whichever is less. All other hazardous chemicals at or exceeding 10,000 pounds will also be reported on the Tier I or Tier II forms. The Tier I or Tier II forms can both be provided to the proper authorities. If only the Tier I information is submitted, however, the Tier II information will be provided to the local committee, State commission, or local fire department upon request. The Tier I or Tier II information must be submitted to an EPA regional office and designated State/local officials no later than March 1 of each year. The first report for GSA (and other Federal agencies) is due March 1, 1995.

SUMMARY.

GSA is committed to ensuring that pollution prevention is an integral part of all its operations. GSA follows the hierarchy of pollution prevention, which is to reduce at the source, recycle, treat, and dispose only if

necessary. GSA educates and provides the resources necessary to reduce or eliminate pollution. GSA pursues purchasing alternative products that do not contain or have reduced amounts of hazardous chemicals. GSA will continue to adhere to the requirements of E.O. 12856 by eliminating or reducing the amount of pollution entering the environment, submitting the required inventories, and supporting the use of innovative technologies.

GLOSSARY.

Business service centers - The "front door" to contracting opportunities with GSA. Located in each of GSA's regions, business service centers are the first point of contact for firms desiring to do business with the Federal Government.

CFC's - Chlorofluorocarbons are chemical compounds composed of carbon, chlorine, and fluorine. Related to the CFC's are two different chemical classes used as refrigerants: hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and halon, which is used in fire suppression.

Commodity centers - FSS has established commodity centers to efficiently manage its products and services.

- Automotive Commodity Center
- Services Acquisition Center
- Office and Scientific Equipment Commodity Center
- Office Supplies and Paper Products Commodity Center
- General Products Commodity Center
- Paints and Chemicals Commodity Center
- Tools and Appliances Commodity Center
- Furniture Commodity Center

These commodity centers have responsibility for the total management of related commodities and services, including procurement, inventory management, engineering, and requisition-processing functions for assigned Federal Supply Classes/Groups.

Covered facility - A facility that stores, uses, releases, manufactures, or produces hazardous chemicals, extremely hazardous substances, or toxic chemicals equal to or above the threshold quantities. The threshold quantities range from 1 to 25,000 pounds depending on the chemical.

Customer supply centers (Retail stock) - Facilities that serve small-quantity, immediate-supply requirements of Federal customers. CSC's provide easy, fast, one-stop shopping for daily common office, administrative, and industrial supplies.

EPCRA or SARA Title III - Emergency Planning and Community Right-to-Know Act, or Superfund Amendments and Reauthorization Act Title III. The Act establishes requirements for Federal, State and local governments and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals.

Federal supply schedules programs - Provides Governmentwide contracts for commercial goods and services that enable Federal agencies to order directly from contractors at previously negotiated, volume-buying, discount prices.

Federal Supply Service (FSS) - Provides for the procurement, management, and worldwide distribution of supplies, services, and personal property. Also manages approximately 25 percent of the Federal Government's non-tactical vehicles fleet and provides direction and coordination of Federal travel and transportation needs.

LEPC - Local Emergency Planning Committees. Appointed by SERC, LEPC's main responsibility is to develop an emergency response plan in October 1988 and review it at least annually.

MSDS - Material Safety Data Sheet. Provides specific ingredients in a product, and health precautions to take while using the product and during an emergency. In many cases, the ingredients are hazardous chemicals.

Pollution prevention plan - Document developed by each facility with hazardous chemicals, extremely hazardous substances, or toxic chemicals that exceed the EPA reportable quantities.

Public Buildings Service - Manages the real property assets of GSA. It is the Government's chief buildings planner, developer, owner, and manager.

Reportable quantity - The amount of chemicals (i.e., toxic chemicals, extremely hazardous substances, CERCLA hazardous substances, hazardous chemicals, or OSHA-listed hazardous chemicals) that must be reported to the appropriate authorities if met or exceeded. The amount ranges from 1 pound to 25,000 pounds.

SERC - State Emergency Response Commission. SERC is responsible for supervising and coordinating the activities of the LEPC, for establishing procedures for receiving and processing public requests for information collected under other sections of SARA Title III, and for reviewing local emergency plans.

Special order program - Commodities which are not commonly used and/or cannot be economically stocked in distribution facilities; provides for the placement of orders with GSA, as with the Wholesale Stock program. Deliveries, however, come directly from the vendors.

TIER I Form - The inventory form used to report hazardous chemicals and extremely hazardous substances of reportable quantities to EPA or the State.

TIER II Form - The more detailed form used to report specific hazardous chemicals and extremely hazardous substances of reportable quantities to EPA or the State.

TRI Form - Toxic Chemical Release Inventory Form (Form R). The form used to report toxic chemicals manufactured, processed, used or transferred offsite of reportable quantity.

Wholesale stock program (Stock Program) - FSS-operated distribution facilities through which commercial commodities are received, stored, and issued to Federal agencies.

GUIDANCE FOR IMPLEMENTATION OF ENVIRONMENTAL EXECUTIVE ORDER 12856

FEDERAL COMPLIANCE WITH RIGHT–TO–KNOW LAWS AND POLLUTION PREVENTION REQUIREMENTS AND RELATED ENVIRONMENTAL EXECUTIVE ORDERS

INTRODUCTION

This guide was developed cooperatively by Code JE, the headquarters Program Offices and NASA installations. It is provided to foster consistency by setting definitions. Consistency is critical as NASA works to implement the requirements of Executive Order 12856 and reduce toxic chemical releases by 50 percent. This guide is not intended to direct implementation methods, as they will naturally vary depending on center needs. This guide should be used in conjunction with the Agency environmental strategy, Environmental Excellence for the Twenty First Century (enclosure 1),* the Agency Environmental Policy Letter, Pollution Prevention EPL XX.YY (working draft, enclosure 2), and the NASA Management Instruction 8800.13 (enclosure 3).

Executive Order 12856 as well as the other recent executive orders (Attachment D) have expanded Federal Agency requirements in the environmental, safety, energy, procurement and personnel arenas. These new and/or expanded requirements need to be integrated into NASA installations' existing plans and procedures. If you have any questions please contact the headquarters Environmental Management Division, Code JE on (202)358–0230.

Executive Order 12856 requires NASA facilities to report releases and off–site transfers of toxic chemicals. Releases include air emissions, waste waters, underground injections of wastes, off–site waste disposal, and wastes disposed of in on–site landfills. Examples of off– site disposal of wastes include solid waste sent to landfills or incinerators, hazardous waste sent to landfills or incinerators, and waste waters discharged to a publicly owned treatment works (POTW). For more specific definitions and examples of releases and off–site transfers, see 40 CFR 372 or call NASA Headquarters, code JE.

A Federal facility must meet two criteria in order to report toxic chemical release information. These criteria are:

- The facility must have at least ten full–time employees.
- The facility must exceed specific thresholds for manufacturing, processing, or otherwise using a toxic chemical.

Federal facilities in order to implement this requirement have to define their operations in terms used by private industry. For NASA this means that our business has to be defined in terms of "manufacture, process or otherwise use".

* Enclosures, attachments and exhibits are not included in this document.

DEFINITIONS

MANUFACTURE – To make from raw materials by hand or machinery, including import. (The toxic chemical is used for on–site use or processing, for sale or distribution, or the toxic chemical is produced as a byproduct.)

PROCESS – A series of actions or operations conducing to an end. (The toxic chemical is used as a reactant; as a formulation component – ie. additives, solvents, lubricants, etc.; as an article component; and/or in repackaging – transfer of materials from a bulk container.)

OTHERWISE USED – Everything else that occurs in the facility that does not fit the manufacture or process definitions. (The toxic chemical is used as a chemical processing aid – ie. catalyst, process solvents, solution buffers, etc.; as a manufacturing aid – ie. coolants, metalworking fluids, process lubricants, refrigerants, etc.; and in an ancillary or other use manner – ie. cleaners, degreasers, fuels, etc..)

PILOT PLANT SCALE – Serving as a guiding device, a trial apparatus or operation, and/or a site in which processes planned for full–scale operation are tested in advance to eliminate problems. (Full scale component testing that fit this definition would be reportable).

RESEARCH AND DEVELOPMENT (R&D) – To investigate or experiment aimed at the discovery and interpretation of facts, revision of accepted theories or laws in light of new facts, or practical application of such new or revised theories or laws and to make them available or usable. (In NASA activities such as sounding rockets launches and related operations, shuttle launches and related operations, and satellite launches and related operations are processes and do not qualify for the R&D laboratory exemption.)

NOTE: Toxic chemicals that are present in a mixture or trade name product above the de minimis concentrations must be counted towards threshold determinations and reported if threshold is quantities are reached. Dilution of these products below the de minimis concentrations is considered to be other wise use of the chemical and must be counted/reported.

A facility must report a toxic release inventory (TRI) if it manufactures or processes 25,000 pounds of a given chemical in a year or if it otherwise uses 10,000 pounds of a given toxic chemical in a year. These threshold values are for all quantities of a given chemical at a facility even if the chemical is not all used in one location or for one use. The aggregate amount of a chemical manufactured, processed, or used over a year determines whether the facility must report toxic releases of that chemical.

A complete list of the specific chemicals for which releases must be reported for the 1994 calendar year is presented in Attachment A to this document. This list is also published at 40 CFR 372.65 with additional chemicals added for 1994 reporting found at 58 FR 63496– 500. Environmental Protection Agency (EPA) periodically adds new chemicals to the list through the formal rulemaking process. These new chemicals will be published in the Federal Register as the rulemakings are promulgated.

The information on toxic releases is submitted on EPA Form R (EPA Form 9350–1 and subsequent revisions). A facility submits a separate Form R for each toxic chemical that exceeds the thresholds determination. Information required by the Form R includes:

- Identifying information for the facility.
- The name and Chemical Abstract Service (CASE) number of the toxic chemical.
- A description of how the chemical is used at the facility.
- Estimates of the quantity of chemical stored.
- Estimates of the quantity of chemical released.
- Estimates of the quantity of chemical transferred off–site.
- A description of any waste treatment activities for the chemical.
- Identifying information for the facility receiving off–site transfers.

Each NASA facility must submit the Form R annually, as appropriate, on or before July 1, beginning with July 1, 1995. The report due on July 1, 1995 covers toxic chemical releases for calendar year 1994. NASA facilities must submit a completed Form R to EPA Headquarters and to the appropriate state agency. Each Form R must be signed by the facility director. For detailed instructions on how to complete the Form R see 40 CFR 372.85 or call NASA Headquarters, code JE. Form R may be obtained by writing:

Section 313 Document Distribution Center
P.O. Box 12505
Cincinnati, OH 45212

EPA has required private industry to submit Form R for toxic chemical releases since 1987. For private industry, reporting has been limited to facilities that fall under Standard Industrial Classification (SIC) codes 20 through 39. All Federal facilities that meet threshold reporting limits and have ten full–time employees must report toxic chemical release information, regardless of SIC code. NASA facilities should evaluate all of their activities to determine if the threshold has been exceeded for toxic chemical manufacture, process, and use. Emergency Preparedness and Community Right–to–Know Act (EPCRA) contains exemptions from reporting and facilities should consider these exemptions when determining if a chemical exceeds the threshold and before reporting toxic chemical releases.

In order to keep track of toxic chemicals use and release at a facility, the facility should start with available information, including EPCRA Tier One and Tier Two forms completed for emergency response planning. The list of chemicals tracked for Tier One and Tier Two is not identical to the list of chemicals for toxic release inventories, but the process used to gather the information is the same. Information on chemical inventories and chemical releases may be obtained from procurement and supply records, solid and hazardous waste manifests, waste water discharge permits, any ongoing environmental monitoring activities, and physical inventory taken at the facility. It is not necessary to conduct environmental monitoring specifically to determine chemical releases, instead facilities should determine the amount released through estimates and best engineering judgment. EPCRA defines a facility as:

> *All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person.*

Facilities are not required to report the emissions of toxic chemicals from the operation of mobile sources, such as motor vehicles, aircraft, the shuttle, or rockets. TRI reporting applies to stationary equipment at a facility. TRI reporting does not apply to releases from ancillary vehicle fueling operations or automobile exhaust. Any spill of a toxic chemical is reportable as always under CERCLA rules.

The provisions of EPCRA allow for exemption from reporting toxic chemical releases under certain conditions. These exemptions apply to evaluation of the amount of chemical manufactured, processed, or used, as well as the amount of chemical released or transferred off–site. These exemptions are divided into the following categories:

- *De minimis* concentration of a toxic chemical in a mixture
- Articles
- Uses
- Activities in laboratories
- Certain owners of leased properties
- Reporting by certain operators of establishments on leased property such as industrial parks

Each of these exemptions has specific implications for the reporting of toxic chemical releases at NASA facilities. Each facility must consider whether these exemptions apply based on the circumstances surrounding the manufacture, process, use, and release of the chemical concerned. The following examples and guidance are intended to help clarify the exemptions.

EXEMPTIONS

De Minimis Concentration of a Toxic Chemical in a Mixture

The de minimis exemption applies to activities that use mixtures in which the toxic chemical is present at less than 1 percent by weight or 0.1 percent by weight in the case of carcinogens. A toxic chemical is a carcinogen if it meets the criteria found in 29 CFR 1910.1200(d)(4). The de minimis exemption applies only to those toxic chemicals and mixtures that are processed or otherwise used at the facility. If a mixture contains a toxic chemical at a level below the de minimis concentration for that chemical, then this mixture is not included in calculations to determine if the facility has exceeded the threshold for that chemical. The de minimis exemption applies whether the toxic chemical was received from another source or the toxic chemical was produced. The exemption applies only to the quantity of the toxic chemical present in the mixture for both threshold calculations and for releases. The de minimis exemption does not apply if the chemical is brought to the facility in a high concentration and then diluted for in–house use.

An example of the application of the *de minimis* exemption can be seen in the use of a degreasing solvent at a facility. If the solvent contains less than the *de minimis* level of benzene, then the benzene in the solvent is not included in the facility's threshold calculations. The release of benzene from this de minimis mixture would not be reportable in the facility's TRI report for benzene. If the solvent contained benzene in concentrations greater than the de minimis level, then the facility must determine the amount of benzene in the solvent in pounds. This number would then be added to the threshold calculations for benzene in other manufacturing processing or uses. If the facility exceeds the activity threshold level for benzene, it must report all benzene releases from the facility excluding the de minimis concentrations. Note: Diluting a chemical waste stream to bring into the de minimis exemption is a criminal violation of Resource Conservation Recovery Act (RCRA) (treatment without a permit).

Articles

The article exemption refers to items or goods manufactured or brought on to the facility which contain toxic chemicals. The quantity of toxic chemical present in the article need not be considered as long as the use of that article does not result in the release of the toxic chemical. In general, the article exemption applies to items which are not significantly changed through use at the facility.

An example of an article exemption is the use of sheet metal to fabricate a cabinet for a piece of equipment. If the sheet metal contains toxic chemicals such as lead or chromium, the sheet metal does not count towards the determination of thresholds or releases, provided that the sheet metal is not processed in such a way that scrap metal, fumes, dust, or fines are produced. If the metal is simply cut or bent to fit the application with all pieces being used, reused, or recycled, then the use falls under the article exemption, and the sheet metal is not included in the facilities use or release of lead or chromium.

Another example of an article exemption is the storage of copper pipe at a facility. As long as the pipe is stored or used without significantly altering its form, the pipe is exempt. An example of significantly altering the form or shape of the pipe would be melting the pipe and reforming it.

Uses

The uses exemption includes several specific subcategories. These subcategories are:

- Structural component
- Routine janitorial/facility grounds maintenance
- Personal use
- Motor vehicle maintenance
- Process water, non–contact cooling water, and compressed air

In general, the use exemption allows a facility to exclude the use of certain chemicals from threshold determinations and release reporting, because the use of these chemicals is difficult to measure and does not contribute significantly to overall releases from a facility. The use exemption decreases the reporting burden for a facility by removing small volume uses and releases from threshold of release calculations.

Structural component use exemption. The first use exemption is the structural component exemption. This exemption applies to any materials that are used to construct or repair a part of the facility. The term "facility" includes all buildings, equipment, structures, and other stationary items located at a site.
One example of the structural component exemption is for paint that is used to paint a building or a piece of **stationary** equipment. Even though the paint may give off volatile toxic chemicals and may contain lead, it does not count toward a facility's toxic release inventory. Another example of a structural component exemption is found with copper pipe. If the copper pipe is taken from storage and installed in a building to bring hot water to a piece of equipment, the pipe is now exempt under the structural component use exemption. Similarly, if welding rods are used to install the pipe and the welding rods contain toxic chemicals, the weld joints are exempt because they become part of the structure. Note: The releases of toxic chemicals from the welding process itself are reportable.

Another example of a structural component use exemption is a halon fire extinguishing system. Although both halon 1211 and halon 1301 are on the list of toxic chemicals, halon systems are considered part of the building until discharged. Therefore, the halon in the system is not counted towards the threshold calculations but any halon released from the system is reportable.

Routine janitorial/facility grounds maintenance use exemption. The routine janitorial and facility grounds maintenance use exemption excludes products used to clean the facility and maintain the grounds. Examples include chlorine bleach, ammonia, fertilizer, and pesticides used in concentrations similar to consumer products. This exemption does not include oil and grease used to maintain equipment and applies specifically to janitorial activities and grounds maintenance.

Personal use exemption. The personal use exemption excludes chemicals used by employees or other persons at the facility in consumer products. This includes the personal use of toxic chemicals in a cafeteria, store, or infirmary. Examples include the use of foods, drugs, cosmetics, and office supplies. If these same items are used at the facility for reasons other than personal use, then this use must be included in threshold determinations and releases.

An example of the personal use exemption is the use of "white–out," which contains 1,1,1– trichloroethane. This use of the toxic chemical would not be counted toward threshold determinations for 1,1,1–trichloroethane for the facility. Another example is the chlorination of drinking water by a facility. If the water is chlorinated primarily to allow use by facility personnel for drinking or cooking, then this use of chlorine is exempt from TRI reporting. However, if the chlorine is added to the water to prevent the growth of algae or bacteria in process water or cooling tower water, then this use of chlorine is reportable.

Motor vehicle maintenance use exemption. The motor vehicle maintenance use exemption was designed to exclude toxic chemicals used to maintain ancillary vehicles at a facility from TRI reporting. The definition of motor vehicles includes cars, trucks, forklifts, etc.. Examples of maintenance activities that are exempt include maintenance of lead acid batteries for a forklift in a warehouse, the maintenance of a truck used at the facility, or the maintenance of a mail delivery truck. The motor vehicle maintenance use exemption covers all types of toxic chemicals used in vehicle maintenance including gasoline, diesel fuel, brake and transmission fluids, oils and lubricants, antifreeze, batteries, cleaning solutions, and paints. Note: Large maintenance operations, such as the shuttle refurbishment facility, are not exempt. This exemption is designed to cover routine fleet and ground vehicle maintenance, such as oil changes, battery maintenance, and tune–ups, not major NASA operations.

Process water, non–contact cooling water, and compressed air exemption. The final use exemption is the exemption of process water, non–contact cooling water, and compressed air. This exemption applies to water drawn from the environment or municipal water and air brought on to the facility that contains toxic chemicals. For example if the water received by a facility from a local sanitation district contains chloroform in concentrations over the *de minimis* level, then this water does not need to be included in TRI reporting. Similarly, impurities in compressed air used in a process do not require reporting of the compressed air, as long as the compressed air is drawn from outside air.

Activities in Laboratories

The laboratory activity exemption applies to listed toxic chemicals manufactured, processed, or otherwise used in a laboratory for quality control, research and development, and other laboratory activities. The laboratory activity exemption is not a blanket exemption for any facility building or operation which uses the title "laboratory." Likewise, the absence of "laboratory" in the name of a facility, building or process does not necessarily disqualify its activities from the laboratory exemption. The characteristic of activity and conditions under which it occurs determine if the toxic chemical qualifies for the laboratory exemption. As with other exemptions, each NASA installation must carefully consider the nature of its operations and activities in determining how the laboratory exemption applies.

This exemption does not apply in the following cases:

- Specialty article or chemical production.
- Manufacture, process, or use of toxic chemicals in pilot plant scale operations (see definition above).

Specialty article or chemical production refers to articles or chemicals produced in a laboratory setting that are distributed in commerce or for use other than in laboratory activities. Listed toxic chemicals made, processed, or used in a pilot–scale plant operation must also be accounted for because the scale is of sufficient magnitude that the burden of tracking and reporting is presumed to be reasonable. Activities that do not directly support research and development, sampling and analysis, or quality assurance or control must be considered for TRI reporting.

NASA facilities must carefully consider the application of the laboratory activity exemption because of the unique nature of many NASA operations. The following are a few examples of laboratory activities at NASA facilities and their exemption status:

EXEMPT FROM REPORTING

- Releases of toxic chemicals from traditional laboratories that do research and development only.
- Releases of toxic chemicals from mobile sources.
- Releases of toxic chemicals from test stands or test cells that test components or engines for the purpose of research and development of new components or engines and that are not pilot plant scale (see definitions above) or that WILL NOT BE installed on the shuttle, rockets, or aircraft.
- Releases of toxic chemicals from testing of articles or components in wind tunnels that are not pilot plant scale (see definitions above).

NOT EXEMPT FROM REPORTING

- Releases of toxic chemicals from laboratories that produce components for use at other labs or for NASA projects. For example, printed circuit board manufacturing, optics labs, machine shops, and electronics shops are not exempt if they are making a product for another lab or operation.
- Releases of toxic chemicals from plating operations/laboratories .
- Releases of toxic chemicals from photo labs, regardless of the type of film developed or used.
- Releases of toxic chemicals from test stands or test cells that test components or engines in a pilot plant scale (see definitions above) or prior to installation on the shuttle, rockets, or aircraft.

- Releases of toxic chemicals from support structures for R&D facilities such as: cooling towers for wind tunnels and laboratory buildings; air conditioning equipment; test stands' ponds/lagoons.

Each facility should consider the examples described above when reporting toxic releases. Most NASA facilities will be reporting TRI data for the first time, requiring many decisions to be made regarding which activities should be evaluated. For further information on TRI reporting, see 40 CFR 372 or call NASA Headquarters, code JE.

Certain Owners of Leased Properties

This exemption applies to owners of property that is leased to other companies or agencies and in which the owner has no business interest. In this case, the owner of the property is not required to report releases of toxic chemicals from the property. This exemption does not include government owned/contractor operated (GOCO) facilities. Federal agencies must report toxic chemical releases from GOCO facilities as part of the agencies overall inventory. This exemption applies to cases in which NASA has leased land to another Federal agency or a private concern and NASA has no business interest in that facility.

Reporting by Certain Operators of Leased Properties

This exemption allows two Federal agencies or businesses that operate at a single facility to treat their activities as two separate facilities, provided they have no common interest or concerns. This exemption does not apply to GOCOs sharing a site with a Federal agency because the GOCO shares a common interest with the Federal agency, i.e. it is producing something for the agency. This exemption does apply if NASA is leasing property from another Federal agency and the two agencies have no common interest in activities conducted at the site. In this case, each facility would calculate and report toxic chemical releases independently.

SOURCE REDUCTION AND RECYCLING REPORTING

Each NASA facility must submit a source reduction and recycling report with the Form R. This report discusses activities undertaken by the facility to reduce the generation of toxic chemical releases reported in Form R (Form R Section 8 satisfies this requirement). Section 8.11 of Form R includes additional source reduction and recycling information. Section 8.11 can include the following elements:

- The quantity of each chemical entering a waste stream.
- The quantity of each chemical recycled.
- The source reduction practices used with respect to each chemical.
- Estimates of the quantity of chemical anticipated to be generated as waste and the quantity anticipated to be recycled for the next two reporting years.
- A productivity index that estimates relative changes in production volumes since the last report.
- Techniques used to identify source reduction opportunities.
- The quantity of chemical released by catastrophic event or other releases not associated with production.
- The amount of chemical which is treated and the percentage change in this amount from the previous year.

Most facilities may not have specific information on source reduction and recycling for many chemicals. Facilities should not conduct significant activities to collect this information for past practices, but rather should begin collecting information as a part of the facility pollution prevention program. For more information on source reduction and recycling reports, see the Pollution Prevention Act of 1990 (PPA) §6607 or call NASA HQ, Code JE.

EMERGENCY PLANNING

Federal facilities must now comply with all provisions of the EPCRA. One provision of EPCRA specifically identified by E.O. 12856 is emergency planning notification. Any facility at which there is present an amount of an extremely hazardous substance in quantities greater than the threshold planning quantity (TPQ) must notify the State emergency response commission (SERC). The list of extremely hazardous substances and their TPQs is published in Appendix A of 40 CFR 355 and is also shown in Attachment B to this document.

A facility will use the maximum total amount of a substance present to determine if the TPQ has been exceeded. Facility personnel must include all quantities of the substance, regardless of where or how it is being stored, produced, or used. To calculate the total amount present for mixtures or solutions, use the weight percent of the substance. For example, if a facility has fifty drums of 5 percent aqueous formaldehyde solution distributed throughout the site, and each drum weighs 400 pounds, the approximate weight of formaldehyde at the facility is 1000 pounds [(400 pounds)(0.05)(50 drums)]. This amount exceeds the TPQ for formaldehyde (500 pounds) and so this facility must notify the SERC. Note: facilities must notify SERCs if any substance from the list of extremely hazardous substances is present in quantities over the TPQ.

Any change in the storage, production, or use of extremely hazardous substances at a facility which results in a change in the facility's status must be reported to the SERC. For example if a facility disposes of all of its extremely hazardous substances off–site so that extremely hazardous substances are no longer present, the facility must report to the SERC that it no longer has extremely hazardous substances. Similarly, if a facility which previously did not have extremely hazardous substances on–site begins to store, produce, or use such a substance in quantities over the TPQ, the facility must notify the SERC of the presence of extremely hazardous substances. All facilities must make this notification to their respective SERCs by March 3, 1994.

In addition to notifying the SERC that extremely hazardous substances are present, each facility must designate a facility emergency response coordinator. The emergency response coordinator will act as liaison to the local emergency planning committee (LEPC) and will participate in the local emergency response planning process. This individual will be chosen by the facility director and may have other responsibilities, such as preparation of the facility emergency response plan. The individual must be selected and presented to the LEPC by March 3, 1994.

Facilities will provide information to the LEPC so that the local emergency response plan reflects the extremely hazardous substances present at the NASA facility. Examples of the types of information requested include:

- Routes used for transportation of hazardous substances.
- Methods and procedures for notifying appropriate people and providing medical services to be followed in the event of a release.
- Methods for determining the occurrence of a release and the areas most likely to be affected.
- Emergency equipment available at the facility.
- Evacuation plans.
- Descriptions of training programs for emergency response and medical personnel.

This information must be provided as requested to LEPCs by August 3, 1994. For more information on emergency notification, please contact the EPA's EPCRA Hotline at 1–800– 535–0202 or NASA HQ, Code Q at (202) 358–2406.

EMERGENCY NOTIFICATION

In the event of release of a reportable quantity of an extremely hazardous substance from a NASA facility, the facility must activate their emergency response plan procedures and immediately notify the LEPC and the SERC for all localities and states that may be affected by the release. Reportable quantities for extremely hazardous substances are shown in Attachment B to this document and Appendix A of 40 CFR 355.

Immediately after the release, the facility will now also notify the LEPC and SERC and provide them with the following information:

(i) The chemical name or identity of any substance involved in the release.
(ii) An indication of whether the substance is an extremely hazardous substance.
(iii) An estimate of the quantity released into the environment.
(iv) The time and duration of the release.
(v) The medium or media into which the release occurred.
(vi) Any known or anticipated acute or chronic health risks associated with the release and, where appropriate, advice regarding medical attention necessary for exposed individuals.
(vii) Proper precautions to take as a result of the release, including evacuation.
(viii) The name and telephone number of the person or persons to be contacted for further information.

This information may be communicated by telephone, radio, or in person. As soon as practicable after the release, the facility will provide written documentation of the information described above and adding:

(ix) Actions taken to respond to and contain the release.
(x) Any known or anticipated acute or chronic health risks associated with the release.
(xi) Where appropriate, advice regarding medical attention necessary for exposed individuals.

The release of a substance which results in exposure to persons solely within the boundaries of the facility or which is otherwise exempt need not be reported. In general, releases which are federally permitted or are continuous and stable in quantity and rate are exempt. For more information on releases that are exempt from emergency notification, see 40 CFR 355.40(a)(2).

MATERIAL SAFETY DATA SHEETS

Each NASA facility must submit MSDSs or lists (whichever the local LEPC, SERC, or fire department request) for hazardous chemicals present at the facility. The facility must submit copies of the MSDS or list to the LEPC, the SERC, and/or the fire department with jurisdiction over the facility. Facilities only need to submit MSDSs or a lists for hazardous chemicals present at the facility in amounts greater than or equal to ten thousand pounds at any one time or, for extremely hazardous substances, in amounts greater than or equal to five hundred pounds or the threshold planning quantity, whichever is lower. These limits are shown in Exhibit 3. A list of extremely hazardous substances and threshold planning quantities is provided in Attachment B to this document and Appendix A of 40 CFR 355. A hazardous chemical is defined under the Occupational Safety and Health Act of 1970 and is described in 29 CFR 1910.1200(g).

If a facility submits a list of hazardous chemicals in lieu of MSDSs the list must contain the chemical or common name of each hazardous chemical, grouped according to hazard category. A comparison of EPA hazard categories and OSHA hazard categories is shown in Exhibit 4.

In the event that the information on an MSDS changes, the facility must notify the LEPC, SERC, and/or the fire department within three months after discovery of the change. Also, if a facility begins using a new chemical that requires an MSDS in sufficient quantities to merit reporting, the facility must submit an MSDS, or amend the list, for the chemical within three months. A facility must submit an MSDS for a chemical present at the facility regardless of quantity, if the MSDS is specifically requested by the LEPC. This information may also be made available to the public. Each NASA facility must submit MSDSs or lists of hazardous chemicals by August 3, 1994. For more information on reporting requirements for hazardous chemicals see

40 CFR 370 or call the EPA EPCRA Hotline at 1–800–535–0202.

EXTREMELY HAZARDOUS SUBSTANCES INVENTORY REPORTING

Under Executive Order 12856, NASA facilities must report inventories of hazardous chemicals following the guidelines of EPCRA. These inventories must follow the specific format identified in 40 CFR 370.40 – 370.41, known as Tier One and Tier Two. The Tier One form contains general information about chemical inventories at the facility, including types of hazards, rough estimates of quantities of chemicals, and storage locations. The Tier One form only requires aggregate information on chemicals grouped by hazard categories. Facilities only need to report information for those hazardous chemicals that exceed the limits shown in Exhibit 3 (i.e. 10,000 pounds for hazardous chemicals, 500 pounds or the TPQ for extremely hazardous substances). Facilities must submit Tier One forms by March 1, 1995 for chemicals present at the facility during calendar year 1994. This means that facilities should begin collecting information on hazardous chemical inventories as soon as possible if they are not already doing so. This is an annual report due on March 1 of every year.

Facilities may also be required to submit the Tier Two inventory form. Many states now require this more detailed form over the Tier One form. The Tier Two form contains specific information about hazardous chemicals present at the facility, including chemical names, CASE numbers, physical and health hazards, quantities stored, and the type and location of storage containers. Facilities can use the Tier Two forms or their emergency plans. The SERC, LEPC, or fire department may request Tier Two forms from the facility. Facilities must submit Tier Two forms within thirty days of the request. Specific instructions for completing the Tier One and Tier Two forms are published at 40 CFR 370.40 – 370.41. Attachment C is a copy of the two forms.

NASA FACILITY POLLUTION PREVENTION PROGRAM PLANNING

NASA facilities required to report must prepare written pollution prevention plans. At a minimum, this plan must describe how the facility will contribute to meeting NASA's goal of a fifty percent reduction in the release of toxic chemicals by December 31, 1999. The written facility plan must be completed by December 31, 1995. This plan should be updated annually or whenever a significant change occurs to the facility or to its personnel.

A facility pollution prevention plan is a blueprint for building a comprehensive program to prevent pollution, reduce waste, conserve energy, and preserve natural resources. Such a plan provides a strategy for reaching specific pollution prevention goals. It is also an important tool for educating facility staff and documenting environmental data. A pollution prevention plan accomplishes the following:

- Defines specific pollution prevention goals for the facility.
- Establishes a commitment to environmental protection.
- Identifies program roles and responsibilities.
- Serves as a reference guide for management and environmental personnel.
- Establishes priorities for allocating limited environmental resources.
- Measures and reports progress toward goals.

Pollution prevention plans also contain a baseline of data for the facility's waste generation, material usage, and environmental impacts. This baseline will help environmental personnel identify those processes and activities that present the greatest opportunities for waste reduction. Baselines also serve as a benchmark against which the facility can measure pollution prevention progress.

Pollution prevention plans describe how to set up and maintain a pollution prevention program at a facility. NASA Headquarters is preparing the NASA Facility Pollution Prevention Program Planning Reference Manual that will discuss the essential steps involved in setting up a successful pollution prevention program at a NASA facility in more detail.

RECYCLING

Section 601 of Executive Order 12873, *Federal Acquisition, Recycling, and Waste Prevention,* directs Federal Agencies to establish goals for solid waste prevention and recycling to be achieved by the year 1995. NASA's goal is a 25% increase in recyclable solid waste collected. This should be a part of the pollution prevention program plan required by E.O. 12856. Recycling, although not as preferable as source reduction, can play a key role in NASA's compliance with E.O. 12856, as well as E.O. 12780 and E.O. 12873. A facility can address all of these requirements with a well–written pollution prevention program plan.

Recycling is the second choice in the hierarchy of preferable environmental waste management practices. Once source reduction options have been exhausted, recycling is the next best choice. Recycling can include either reuse of materials in an industrial process, usually referred to as closed–loop recycling, or reuse of materials independent of an industrial process. Recycling at a facility includes collecting, reprocessing, marketing, and using materials that were once considered waste products. Many components of a facility's waste stream can be recycled, including metals, plastics, used oil, and office paper. The following eight steps should serve as a guide in establishing recycling programs at NASA facilities:

1. Obtain approval and support for the program from facility management and workers by having the Center Director sign a statement affirming the facility's recycling program goals.

2. Select a facility recycling coordinator.

3. Determine the types and quantities of materials in the facility's waste stream.

4. Determine space, container, and equipment needs for recycling.

5. Find a market or options for off–site receipt of the recyclables.

6. Train and educate employees to encourage participation in the program.

7. Separate the materials from the facility's waste stream and market or reuse the materials.

8. Monitor recovery rates, revenues, and costs for the program.

These steps will assist facilities in reaching their waste reduction or recycling goals.
A facility can follow the steps identified above to implement a recycling program, or the facility can combine the implementation of the recycling program with the implementation of the pollution prevention program and the affirmative procurement program and avoid duplicating efforts. For an excellent guide to implementing a recycling program, see **U.S. Postal Service Recycling Guide,** Washington D.C., U.S. Government Printing Office, 1991. Questions regarding NASAs recycling program can be directed to NASA HQ, Code JE.

AFFIRMATIVE PROCUREMENT

Executive Order 12873 requires Federal Agencies to establish an affirmative procurement program for the purchase of environmentally preferable materials as identified by EPA guidelines. The current guidelines are:

- Recycled paper products.
- Concrete containing fly ash.
- Re–refined lubricating oil.
- Retread tires.
- Insulation containing recovered materials.

The executive order also specifically identifies procurement guidelines for printing and writing paper. All printing and writing papers, including high speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white woven envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock, minimum content standard will be no less than 50 percent recovered materials. (See attachment D, E.O. 12873, Section 504 (c).)

In addition to these specific guidelines, the executive order requires Federal Agencies to meet EPA procurement guidelines with 100 percent of its purchases of the items listed above. Failure to meet these guidelines requires a written justification explaining that the product was either not available competitively within a reasonable time frame, did not meet appropriate performance standards, or was only available at an unreasonable price. Federal Agencies are to balance the additional costs of products with recycled content by implementing waste reduction practices, so that the overall costs of procurement of these items does not increase.

EPA will periodically issue guidelines for additional items. NASA has issued a NASA Management Instruction (NMI 5110.1) that deals specifically with the affirmative procurement of guideline items and the written justification described above.

PROCUREMENT OF ENERGY EFFICIENT COMPUTERS

Executive order 12845 directs NASA to ensure that all computer equipment purchased meets EPA "Energy Star" requirements for energy efficiency. Case–by–case exemptions are allowed, taking into account commercial availability, significant cost differentials, NASA's mission, and NASA's performance requirements. NASA is also directed to educate its computer users concerning the economic and environmental benefits derived from using this energy efficient low–power standby feature.

Facility managers and procurement officers should ensure that computer equipment purchased meets the EPA Energy Star requirements for energy efficiency. There are exemptions as noted above, but NASA supports this policy and will make every effort to comply. NASA IRM notices IIN 93–7 and IIN 94–1 establish Agency policy. For questions regarding the Energy Star Computers program contact the EPA, Office of Air and Radiation at (202) 233–9114.

PROCUREMENT OF ALTERNATIVE FUELED VEHICLES

Executive Order 12844 directs Federal Agencies to provide leadership in the use of alternative fueled vehicles in its vehicle fleet. This leadership will help encourage manufacture of alternative fueled vehicles, expansion of fueling station infrastructure for alternative fuels, and reduction of atmospheric pollutants. The executive order calls for Federal Agencies to increase by fifty percent the purchase of alternative fueled vehicles specified by the Energy Policy Act of 1992.

Executive Order 12844 also directs the Secretary of Energy to provide financial assistance to Federal Agencies in meeting any additional costs associated with the acquisition of alternative fueled vehicles. The General Services Administration will also provide incentives for the procurement of alternative fueled vehicles through such activities as priority processing of procurement requests and technical and administrative assistance. Although the executive order did not issue specific guidelines for implementation, it did establish a Federal Task Force to develop a Federal fleet vehicle acquisition program. NASA Headquarters has developed a five–year plan procurement and leasing of alternative fueled vehicles. For question regarding alternative fueled vehicles, Code JLG Logistics Management Office at (202)358–2464 or code JE.

OZONE–DEPLETING SUBSTANCES

Executive Order 12843 directs Federal Agencies to minimize the procurement of products containing ODSs. The executive order also requires Federal Agencies to implement policies that will reduce emissions of ODSs, promote recycling of ODSs, and cease the procurement of nonessential products containing or manufactured with ODSs. NASA facilities should take steps to meet the objectives of this executive order through management practices that include:

- Altering existing equipment and procedures to make use of safe alternatives.
- Specifying the use of safe alternatives to ODSs in new procurements.
- Amending existing contracts, to the extent permitted by law and where practicable, to require the use of safe alternatives.

EPA has established the significant new alternatives program (SNAP) to provide guidance to facilities and individuals wanting to replace ODSs with safe alternatives. The SNAP program has published a list of available alternatives to ODSs grouped according to use. For more information on SNAP, call the Stratospheric Protection Division at EPA at (202)233–9739 or the EPA's stratospheric Ozone Information Hotline at (800)296–1996 or (202)775–6677.

NOTE: EPA's regulation for the protection of stratospheric Ozone issued under Section 613, of Title VI of the CAA of 1990 complement requirements of the EO. It requires NASA to conform its procurement regulations to the policies and requirements found in the CAA and to maximize the substitution of safe alternatives for ODSs. It also requires certification to OMB by Federal agencies that their procurement regulations have been modified to accomplish this requirement. Revisions to the Federal Acquisition Regulations (FAR) are being evaluated by the FAR council in response to the EO and EPA regulations. Resulting changes to the FAR and specific NASA requirements based on these changes will be forthcoming.

POLLUTION PREVENTION STRATEGY FOR THE SMITHSONIAN INSTITUTION

SMITHSONIAN INSTITUTION COMMITMENT

The Smithsonian Institution (SI) remains committed to ensuring full compliance with Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements. The SI takes seriously its responsibilities for improving its internal policies and procedures, for assisting all SI managers and staff in attaining greater knowledge and understanding of the priority and scope of pollution prevention activities, and in developing measurable goals to reduce chemical acquisitions, potential chemical releases, and transfers of toxic chemicals by calendar year 1999. The SI will establish an effective plan for eliminating and reducing the acquisition of products containing extremely hazardous substances/toxic chemicals. The SI is committed to using pollution prevention and/or source reduction as the primary means to achieve and maintain compliance with all Federal, state, and local environmental requirements.

IMPLEMENTATION OF EXECUTIVE ORDER 12856 AND RESPONSIBILITIES

The SI will develop comprehensive procedural guidance and outreach programs to ensure that all necessary requirements for complying with the Order are fully understood and adopted by all Smithsonian personnel. The SI environmental management program is actively supported by senior-level management, and all levels of the internal infrastructure are encouraged to fully participate in all pollution prevention/reduction goals.

The Director of the SI Office of Environmental Management and Safety (OEMS) has delegated authority to implement and maintain a comprehensive environmental management program. His office works collaboratively with the SI's Office of General Counsel to ensure that all legal mandates are achieved, and that the interpretation of the various legal aspects of environmental regulations is accurate. Other SI offices having a primary role in ensuring that the SI's program is fundamentally sound include the Office of Plant Services, the office that maintains all building mechanical systems, and the Office of Design and Construction, the office responsible for designing new or modified construction projects which meet environmental regulations and policy.

The SI's commitment to ensuring full compliance with all regulatory requirements is fully outlined in Smithsonian Directive 419, Smithsonian Staff Handbook. This handbook is a comprehensive codification of Si policies and procedures related to safety, fire protection, occupational health, and environmental management. Specific policy guidance, operating procedures, responsibilities, and requirements are detailed for all levels of SI managers, supervisors, and employees. In addition, environmental standards and regulations are communicated to SI managers and employees via a comprehensive in-house training program, regularly-scheduled environmental/ hazardous waste coordinators meetings, and through the direct dissemination of information to SI museums and staff offices.

INTERNAL REVIEW PROCEDURES

The SI's environmental management programs are evaluated during routine inspections of all areas/facilities which use or store hazardous chemicals. Programs are also evaluated during annual Management Evaluations and Technical Reviews (METRs). These comprehensive evaluations identify potential programmatic problem areas within SI facilities. As part of the METR process, each SI facility's environmental management program is evaluated to determine the level of compliance with a broad range of applicable envi-

ronmental policy. The METR process also presents an opportunity to educate SI staff on various environmental issues including recycling, product substitution, use of environmentally-friendly products, and reduced costs associated with disposal of spent products. Comprehensive reports outlining specific deficiencies are submitted to the responsible facility director. Deficiencies are tracked until each has been satisfactorily abated.

EMPLOYEE INCENTIVE PROGRAMS

The Smithsonian's commitment to recognizing unit and individual success in achieving environmental compliance is further evidenced during the annual Secretary's Safety Awards Program. SI facilities with exemplary environmental management programs, including those which have demonstrated success in reducing hazardous waste inventories and those which have consistently strived to increase staff awareness and participation in the promotion of viable programs are recognized during a formal awards ceremony.

REDUCTION GOALS

To ensure compliance with EPCRA, the SI will actively pursue the reduction of hazardous and toxic chemicals in each of its facilities as a key element of its long-term commitment to eliminate and control potential releases to the environment. In meeting this goal, the SI will ensure that facility-specific pollution prevention plans are developed and implemented for each "covered" facility pursuant to EPCRA. The plans will then be used as a tool in determining the level of effort necessary to comply with the Act. The plans will also reflect the results of the comprehensive assessments that have been conducted at each facility to ensure that pollution prevention/reduction measures are adequate and feasible.

In meeting its specific reduction goals, the SI will continue to emphasize and expand its ongoing efforts to promote pollution prevention and source reduction. The SI will strive to reduce by 50% the amount of toxic chemicals used in each of its facilities. The SI will also continue in its efforts to successfully reduce off-site hazardous/chemical waste transfers for treatment and/or disposal.

Included in the SI strategy for achieving voluntary reduction goals are the following:

- Encouraging the elimination of virgin material.
- Adopting policies and procedures which encourage the reuse of chemical products.
- Promoting and continuing the SI-wide recycling program.
- Promoting the use of "environmentally-friendly" products.
- Promoting the acquisition and use of less toxic materials.
- Discouraging the practice of stockpiling chemical products.
- Conducting comprehensive inventory evaluations to document chemical use.

SI efforts currently underway to reduce the use and disposal of hazardous chemicals include:

- Implementing an Integrated Pest Management Program.
- Initiating a long-term planing program for the installation/modification of heating, ventilating, and air-conditioning (HVAC) equipment in all buildings to incorporate refrigerants that are less harmful to the ozone layer.
- Continuing to refine and broaden the comprehensive SI waste minimization program.

ACQUISITION AND PROCUREMENT GOALS

The SI remains committed to establishing guidelines and goals for reducing the acquisition of products containing extremely hazardous/toxic materials. In meeting this goal, many SI facilities have already begun reviewing the types and quantities of chemicals used, the relative toxicity of each, staff exposure potentials, and the anticipated disposal costs for wastes generated from these materials. The SI will expand this effort,

and will continue to promote its effective policy of investigating viable substitutes/alternatives for extremely hazardous products. Facility-specific pollution prevention plans will represent yet another vehicle for which to achieve this goal via the acquisition process. These collective efforts will be promoted SI-wide and will be incorporated into the overall SI effort to meet reduction goals.

TOXIC RELEASES

To ensure compliance with requirements outlined in section 3-313 of EPCRA, the SI is committed to establishing voluntary reduction goals to reduce potential releases and transfers of toxic chemicals in addition to reducing potential toxic pollutants.

The SI will provide toxic chemical release inventory (TRI) forms to designated officials to ensure compliance with Section 313 of EPCRA for all facilities that meet or exceed reporting requirements.

INFORMATION REQUIREMENTS

The SI will provide required information to local emergency planning commissions (LEPCs), state emergency response commissions (SERCs), and local fire departments pertaining to the on-site storage of chemicals. Each SI facility which uses and/or stores hazardous chemicals has completed an inventory of all products and has developed a comprehensive emergency response plan which address actions to be taken in the event of a spill or leak.

POLLUTION PREVENTION STRATEGY OF THE TENNESSEE VALLEY AUTHORITY

SECTION 1. TENNESSEE VALLEY AUTHORITY STRATEGY.

1-1. Strategy.

(a) The Tennessee Valley Authority (TVA) has prepared the pollution prevention strategy contained herein in response to Executive Order 12856 entitled "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements" signed by President William J. Clinton on August 3, 1993. The strategy delineates TVA's approach to achieving the requirements specified in sections 3-302 through 3-305 of the order. The required results are to be achieved over a perlod beginning January 1, 1994 through December 31, 1999, with an annual report due each October 1 from 1995 through 2001. Thus, the strategy described herein is an "initial" strategy and is expected to be modified, as appropriate, in subsequent years as (1) TVA gains experience in the early stages of implementation, (2) better technologies become commercially available, and(3) nontoxic materials become available which are acceptable substitutes for today's toxic chemicals and hazardous substances.

(b) TVA intends to meet or exceed the voluntary 50% toxic chemicals reduction requirements set forth in the order by the end of 1999, exclusive of air emissions from fossil-fueled electric generating stations. Air emissions are presently comprehensively regulated under the Clean Air Act (CAA), and TVA is already managing such emissions in a manner consistent with these requirements, which, among other things, require a 50% reduction in sulfur dioxide emissions by the year 2000.

1-2. Pollution Prevention Policy Statement.

(a) It shall be the corporate policy of TVA, to the extent practical, to embrace pollution prevention methods in all aspects of TVA operations, including facility management and acquisition activities. Whenever feasible, pollution should be prevented or reduced at the source. When prevention is not feasible, waste should be recycled in an environmentally safe manner. If prevention or recycling is not feasible, waste will be treated and/or disposed of in an environmentally safe manner. Further, TVA intends to demonstrate environmental leadership in pollution prevention through the management of its facilities by supporting the development of innovative pollution prevention programs and technologies.

(b) In pursuit of this strategy, TVA has set agency goals and targets aimed at pollution prevention. These goals and targets are being used as planning assumptions for annual business planning. Facility and organizational business plans will identify activities to meet the specific targets and, consequently, the agency's goals. Additionally, individual facility action plans and pollution prevention plans are being developed and implemented through organizational procedures to achieve business plan targets, and indicators have been set which will measure progress.

(c) TVA's Vice President and Senior Scientist, Environmental Research Center will be assigned the overall responsibility for coordinating TVA's implementation and evaluation of its pollution prevention strategy.

1-3. Commitment to Source Reduction. It shall be a corporate commitment of TVA to the extent practical to utilize pollution prevention through source reduction as the primary means of achieving and maintaining compliance with all applicable Federal, state, and local environmental laws and regulations.

SECTION 2. TOXIC CHEMICAL REDUCTION GOALS.

2-1. TVA Toxic Chemical Reduction Goals.

(a) As stated above in 1-1

(b) TVA intends to meet or exceed the voluntary 50 percent toxic chemicals reduction goal by the end of 1999, exclusive of stack emissions.

(c) TVA's approach for achieving these reductions will require each facility covered by EPCRA 313to develop specific and detailed plans for contributing toward the overall TVA goal of 50 percent reductions of toxic chemical releases or off-site transfers from its facilities by December 31, 1999, with reference to 1994 levels publicly reported in July 1995. Although TVA will attempt to achieve 50 percent reductions of toxic chemicals by 1999 at each of its facilities covered by EPCRA 313as a matter of policy and to demonstrate sound environmental leadership principles, it is recognized that the order allows for variations in reductions achieved at individual facilities and the flexibility of achieving the results in the aggregate of all facilities. In achieving these reductions, TVA will emphasize, to the maximum extent possible, source reduction practices.

2-2. Baseline for Measuring Reductions. The baseline for measuring TVA's progress in achieving the 50% reductions of toxic chemicals will be calendar year 1994, since this will be the first year in which all of TVA's facilities covered by EPCRA 313 will have publicly reported releases and transfers of toxic chemicals. TVA's baseline amount will be determined in calendar year 1995 based on the aggregate amount of toxic chemicals publicly reported for 1994.

2-3. Facility Pollution Prevention Plans.

(a) Each of TVA's facilities covered by EPCRA 313will prepare a written pollution prevention plan by the end of 1995 detailing its proposed contribution to TVA's overall toxic chemicals reduction goals. The pollution prevention plan goal for each facility will be addressed by that facility's annual business plans, compliance procedures, and daily activities.

(b) As part of its overall pollution prevention strategy, TVA will conduct pollution prevention opportunity assessments of its facilities, as appropriate, to assist facilities in the preparation of their pollution prevention plans and programs.

SECTION 3. ACQUISITION AND PROCUREMENT GOALS.

3-1. Acquisition and Procurement. TVA will review its purchases and use, as well as manufacturing and processing, if applicable, of toxic chemicals and extremely hazardous substances to determine if there are acceptable substitutes. TVA will voluntarily set a goal to achieve reductions of these toxic chemicals and extremely hazardous substances for calendar years 1996 and 1997 and will evaluate whether an extension to succeeding years is feasible. Also, each reporting facility will review its use of toxic chemicals and extremely hazardous substances to determine if less- or nonhazardous products can be substituted or process changes implemented that reduce the use of toxic chemicals and extremely hazardous substances. Each facility will also be responsible for monitoring its progress toward achieving these reductions by comparing subsequent year data with corresponding data from 1995.

3-2. Standardized Procurement Documents. TVA personnel, as appropriate, will review TVA's standardized procurement documents by August 1995, in order to identify opportunities to eliminate or reduce the use of extremely hazardous substances and toxic chemicals, wherever it is economically and technically feasible to do so. By the end of 1999, TVA will have made all appropriate revisions to its standardized procurement documents, if any, based on availability of acceptable substitutes, risk, and performance.

3-3. Testing of Innovative Pollution Prevention Technologies. TVA will utilize, as appropriate, its unique position among Federal agencies, by virtue of its membership in the Electric Power Research Institute (EPRI), to demonstrate leadership in this area. EPRI membership procedures allow for a portion of TVA's dues to be redirected back (if matched) to TVA for undertaking such projects as called for in this section. TVA will vigorously explore this funding arrangement where promising technologies need testing and evaluating. An example of a project utilizing such a funding arrangement is TVA's Waste Minimization Project described in Attachment 1.

SECTION 4. TOXIC RELEASE INVENTORY/POLLUTION PREVENTION ACT REPORTING.

4-1. Form R Reporting.

(a) For each of its facilities covered by EPCRA 313, TVA will collect and make information about use, processing, manufacture, transfer, and release of toxic chemicals (less stack emissions as explained in section 1-1(b)) available to the affected public. Each covered facility will submit its reports on EPA Form R to EPA Headquarters and to the appropriate state government on or before July 1, of each year beginning in 1995. Each covered facility will account for any release, off-site transfer, and pollution prevention activities involving that chemical.

(b) TVA will begin complying with the requirements of this section without regard to Standard Industrial Classifications delineations in 1994, with the first annual report to be submitted by July 1, 1995.

SECTION 5. EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW REPORTING RESPONSIBILITIES.

5-1. EPCRA Sections 301 through 312. TVA has been and will continue to comply with these sections of EPCRA as a matter of policy.

SECTION 6. TVA COORDINATION.

6-1. Annual Reporting.

(a) TVA will submit an annual corporate progress report to EPA beginning October 1, 1995. The report will include the following:

- Status of TVA's pollution prevention strategy, including any modifications.
- Status of facility pollution prevention plans.
- Progress toward the 50 percent toxic chemicals reductions goal, including how the reductions were achieved.
- Progress toward the acquisition and procurement goals, including examples of how the reductions were achieved.
- Progress in reviewing and revising standardized documents.
- Pollution prevention technologies fostered.
- Total of toxic chemicals reported by TVA for the previous year.

(b) TVA will also include in this report highlights of notable reductions of toxic chemicals, hazardous substances, and pollutant releases at any of its facilities, as well as, reductions in the manufacturing and use of such materials, particularly where such reductions go beyond the requirements of the order. Examples of such efforts already underway at TVA are described briefly in Attachment 1 to this strategy.

ATTACHMENT 1. TVA POLLUTION PREVENTION PROJECTS

Waste Minimization Project
A TVA-wide waste minimization program has been developed and is jointly funded by TVA and EPRI. The Waste Minimization team is collecting information necessary to target waste streams and establish priorities, and is initiating specific waste minimization projects on targeted waste streams at individual TVA power system facilities. The team is also standardizing waste minimization programs throughout the TVA system.

The specific objective of this project is to develop and implement a standardized, systemwide waste minimization program for TVA. The following steps are being taken to accomplish this objective:

- A Waste Minimization Team has been formed to collect information on the types and volumes of waste generated at TVA facilities, establish priorities, and target specific waste streams to be minimized.
- A video and accompanying workbook is being developed and introduced to motivate and train employees on waste minimization techniques.
- Specific waste minimization pilot projects are being conducted at various TVA facilities for eventual systemwide application.
- The many waste minimization programs throughout TVA are being standardized and generic procedures are being prepared for reducing waste at each TVA power facility.

Pilot Projects:	***Shawnee Fossil Plant*** *Minimization of oily absorbents* *Minimization of municipal waste*	***Browns Ferry Nuclear Plant*** *Painting Wastes*

Agricultural Research and Practices Project
TVA's Agricultural Research and Practices group is conducting research to provide agricultural strategies for watershed protection. Examples include:

1) Developing cost-effective strategies to intercept pollutants in transport to surface and groundwater. These include riparian zone functions and value in management of water quality, use of constructed wetlands to prevent nonpoint source pollution, and sustainability of revegetated/restored lands to reduce sediment loads in the watershed.
2) Characterizing watersheds to evaluate impact of agricultural practices on the Tennessee River drainage basin.
3) Exploring alternatives to agrichemicals for controlling aquatic plants in the Tennessee River system.4) Researching pollution prevention technologies for agricultural industries associated with marketing and use of fertilizers and agrichemicals.

Biotechnology Project Research goals of the Biotechnology group include:

1) Developing better waste-handling options.
2) Creating useful products from wastes or byproducts, thereby conserving valuable resources.
3) Harnessing emissions of gases that contribute to global climate change and recycling these gases and other products from agricultural sources.
4) Developing technologies for bioremediation of environmental pollutants.
5) Developing environmental sensors to monitor pollutant concentrations.The following are examples of technology being developed:
   - Conducting biomass research, development, and application.
   - Investigating use of microorganisms for bioremediation of polychlorinated biphenyls (PCBs) in soil.
   - Utilizing constructed wetlands technology to remediate wastewater.
   - Composting to remove objectionable traits from waste materials, such as poultry litter.
   - Researching bioremediation as a means of reducing levels of polycyclic aromatic hydrocarbons.

Business Development Project
Business Development serves as the focal point for development of new marketing strategies, information exchange, and new technology commercialization. This involves:

1) Providing economic analyses and business needs assessment, market studies, institutional linkages, and industry structure and operation expertise/background to support decisionmaking. 2) Developing communications and various mediums/forums for information exchange.
3) Providing support for visitor and community relations functions.
4) Assisting in technology commercialization.The following are some examples of Business Development activities:
   - Developing and coordinating symposiums, seminars, workshops, etc.
   - Publishing technical papers and other informational/educational materials.
   - Identifying opportunities for environmental collaboration and partnerships by interacting with the public and private sectors, including state and Federal agencies.
   - Providing opportunities to leverage resources for research and development.

Waste Management and Remediation Project
TVA's Waste Management and Remediation group is focusing its research in the following areas:
1) Improving or modifying processes to eliminate, reduce, or recycle wastes
2) Developing processes to convert wastes into useful products.
3) Determining means to detoxify hazardous wastes.
4) Developing and testing environmental technologies in support of EPA Region IV pollution prevention initiatives.Typical examples of research and development in these areas include:
   - Devising systems to monitor and prevent noxious emissions from chemical manufacturing.
   - Developing ways of using various wastes, such as plastic salvage to increase the compression strength of concrete.
   - Developing technologies for the chemical and photocatalytic destruction of chlorinated organics.
   - Utilizing advanced soil washing to remove heavy metals.

Recycling the Ultimate Resource: Retired Professional Assistance in Waste Reduction Projects in Region IV
Many states have instituted Waste Reduction Assistance (WRA) or Pollution Prevention programs to address these problems. In contrast to regulation and enforcement, the WRA approval is based on voluntary cooperation among industries, university industrial extension programs, and state and Federal agencies. Only those small industries that request to participate in these joint projects receive waste management assessments. Most of the state programs offer this assistance as free, nonregulatory, nonbinding, and confidential. It is not the threat of enforcement penalties but the opportunity for significant cost savings that motivates industries to make any changes that may be suggested.

Costs are kept low because most assessments are conducted by retired senior-level engineers, who are specially recruited and given intensive supplemental training to identify and report opportunities for waste reduction.

TVA is a regional Federal agency that assisted (along with the U.S. Environmental Protection Agency (EPA) and the university of North Carolina - Asheville) in starting the first retiree-supplemented WRA program. A significant goal of TVA's Waste Reduction Assessment and Technology Transfer (WRATT) program is to assist state and local governments in developing similar programs. The recognition the program has received in several national publications has resulted not only in many additional requests for industrial assessments but also in requests to assist state and local governments in developing and implementing similar waste reduction programs. Such programs have now been adopted not only in EPA Region IV by the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North and South Carolina, and Tennessee, but also by Iowa, New Hampshire, Vermont, and the city of Los Angeles, California. Several other state programs have either started retiree-assisted programs or are contemplating doing so.

Facilities Services Waste Reduction Project
There are three levels of teams described below that are needed to implement a waste management project in TVA's corporate offices of Knoxville, Chattanooga, and Muscle Shoals.

Level I: Solid Waste Minimization Steering Team
Members: Facilities Services personnel who represent many different functions including custodial services, facilities design and construction, building maintenance, catering, vending, environmental specialists, and printing/copiers.

Responsibilities:
- Central coordinating team that serves a liaison to management, employees, and contractors
- Develop basic waste management plan
- Coordinate initial waste audits for targeted areas
- Set goals for the entire program
- Design standard collection centers
- Establish reporting guidelines (frequency and measures)
- Develop and support city teams by making resources available and helping solve problems
- Change operating procedures as needed
- Monitor results; gather data from all teams on results and report results.
- Benchmarking

Level II: Solid Waste Minimization City Teams
Members: Facilities Services personnel who represent many different functions including custodial services, building maintenance, customer liaison, facilities design and construction. At least one steering team member is on each city team.

Responsibilities:
- Determine how waste will be collected
- Determine where collection centers will be located
- Determine frequency of pickup at each location
- Inventory onsite equipment for waste handling
- Communicate with client representatives
- Set goals for the city
- Conduct or schedule awareness training for floor teams
- Conduct publicity campaign
- Procure mugs, magnetic clips, and plastic bags for floor occupants' conversion to recycling concept
- Reward participation
- Schedule waste re-audits to monitor results
- Report results to steering team
- Develop and support floor teams

Level III: Solid Waste Minimization Floor Teams
Members: Cross-section of floor occupants

Responsibilities:
- Set goals for the floor
- Monitor quality and quantity of material collected
- Conduct or schedule awareness training for floor occupants
- Interface with participants
- Disseminate information to floor occupants
- Report results to city team
- Distribute mugs, magnetic clips, and plastic bags before program start-up

Special Spin-off Teams
Members: Selected as appropriate to eliminate or reduce unique types of waste, such as batteries and lighting tubes.
Responsibilities:
- Set specific goals for the team
- Develop basic plan
- Monitor quality and quantity of any material collected
- Interface with participants
- Disseminate information to agency personnel
- Report results to steering team

Standard features of the Waste Reduction Program on a floor include:
- No paper towels in restrooms
- Installation of hand dryers in restrooms
- No paper cups in coffee machine in vending area
- Providing nonspill coffee mugs to floor occupants
- Installation of dishwasher
- No wastebaskets in individual work spaces or conference rooms
- Continued use of ReBox for paper recycling
- Collection centers strategically placed on the floor
- Commitment to duplex documents on convenience copiers

The conference room waste stream and the catering process have been documented. A Customer Development and Services team is working with caterers to reduce waste resulting from the products used to package and deliver food. In all cases, employees are responsible for cleanup in conference rooms, in vending area, and after catered events.

In compliance with Executive Order 12873, one of Facilities Services' initiatives is to assess its procurements and increase purchases of products with recycled contents. Our goal by 1996 is for 50 percent of products purchased to have recycled content.

Special spin-off teams are looking at office supplies and converting to recycled as many of those products as possible. Others are selecting recycled paper for computers, print shops, and convenience copiers. Recycled computer and copy paper will be available on the office supply contracts.

ENVIRONMENTALLY SUSTAINABLE ARCHITECTURE PROJECT

Purpose/Objectives of the Project The purpose of this research is to examine specified materials and possible "sustainable" alternatives to such items as carpets, office furniture, ceiling tiles, and interior and exterior paints that are candidates to be incorporated in the current renovations taking place at TVA's 690,000 square feet corporate headquarters buildings in Knoxville, Tennessee. The information gathered in the process of this research will lay the foundation for the development of a "Sustainable Guideline" that will serve as a standard for renovation and new construction for all of TVA's facilities.

Materials specified in the current renovations of the corporate headquarters buildings and materials identified as "sustainable" were separated into categories using the Construction Specification Institute numbering system and analyzed based on designated criteria.

This research and application of sustainable materials on the renovation of our corporate headquarters reflects our corporate goals of becoming an environmental leader and putting our employees first. Our corporation is committed to providing a healthy workplace for our employees and to preserving and enhancing the environment for future generations.

Research Design and Methods Used in Research
The research was divided into two parts. The first was to investigate all of the materials taken out of the building during the demolition process and the second part of the research was to look at all the new materials being brought into the building for renovation purposes.

Materials Being Taken Out of the Building
The research on the materials being removed involved taking inventories of the types of materials being removed, measuring their quantities, and documenting how they were being disposed of. This was done by auditing a typical office tower floor during the process of demolition and collecting this data by segregating materials and measuring their quantities. Contractors hired to do the demolition work along with our project managers were interviewed to determine how each material was being disposed of. After this information was collected, alternative disposal methods that were more environmentally sensitive were explored and recommended.

Materials Being Brought into the Building
The research on the materials being brought into the building began by establishing criteria on which to evaluate or grade the then specified materials and possible sustainable alternatives. Eight categories were identified, upon which materials would be evaluated. A questionnaire was developed to send to manufacturers to collect data for evaluation, and these questionnaires were supplemented with telephone interviews. Furthermore, experts in the sustainable architecture field were consulted to obtain information on each of the materials. Both the materials being specified up to that time along with possible alternatives were evaluated against eight categories of criteria. The results were then plotted on a matrix for comparison. Those materials with the highest scores were recommended for use.

The research and technology in environmental Architecture is changing daily, and the guideline ensuing from this research is meant to be an evolving document, with periodic updates as new materials develop and information is gathered. Many of the environmentally sensitive products have been incorporated into current construction efforts. Research is ongoing and the sustainable effort has been expanded, within our company, to other facilities under construction or renovation, office furniture, internal recycling centers, office supply purchasing and most importantly, employee education. A long-term goal has now been set to put together and maintain a sustainable guide-line to use throughout the company for renovation and new construction.

STRATOSPHERIC OZONE PROJECT

Title VI of the 1990 Clean Air Act Amendments requires major changes in the way chlorofluorocarbons (CFCs), halons, and other ozone-depleting chemicals are used. Therefore, a TVA-wide task force has reviewed the laws and regulations and developed an initial guidance document. The purpose of the task force is to track new developments and provide additional guidance on procurement of safe alternatives, refrigerant leak minimization, recycling, disposal, reporting and training requirements, and retrofitting existing equipment, as information becomes available.

Accomplishments:
- Established a training program to prepare refrigerant technicians for EPA certification
- Issued periodic guidance on regulations implementing Title VI of the Clean Air Act
- Developed an inventory of equipment containing ozone-depleting substances
- Established a bank at Muscle Shoals for storing CFCs and halons
- Established a corporate policy for halon use in fire-suppression systems
- Some TVA organizations have developed plans to reduce the use of ozone-depleting chemicals in their facilities.

UNITED STATES POSTAL SERVICE POLLUTION PREVENTION STRATEGY

ENVIRONMENTAL POLICY STATEMENT

The United States Postal Service is committed to provide employees and customers with a safe and healthy environment. Environmental protection is the responsible thing to do and makes for sound business practices.

In performing its mission to provide prompt, reliable, and efficient postal services to all communities, the Postal Service will conduct its activities in a manner protecting human health and the environment.

GUIDING PRINCIPLES

In 1993, Postmaster General Marvin Runyon set forth seven "Guiding Principles" which underscore this commitment to environmental protection and pollution prevention. They are:

1. We will meet or exceed all applicable environmental laws and regulations in a cost-effective manner.
2. We will incorporate environmental considerations into our business planning processes.
3. We will foster the sustainable use of natural resources by promoting pollution prevention, reducing waste, recycling, and reusing materials.
4. We will expect every employee to take ownership and responsibility for our environmental objectives.
5. We will work with customers to address mutual environmental concerns.
6. We will measure our progress in protecting the environment.
7. We will encourage suppliers, vendors, and contractors to comply with similar environmental protection policies.

POLLUTION PREVENTION POLICY

The Postal Service is committed to the reduction of waste and pollutants at the source of generation. All Postal Service managers must participate in waste reduction by reducing pollution at the source and by recycling to the maximum extent possible. The Postal Service's pollution prevention policy is to:

- Encourage the use of non-polluting technologies and waste minimization.
- Protect natural resources and the environment through conservation, recycling, and reuse of materials internally and externally.
- Include environmental considerations among the criteria by which projects, products, processes and purchases are evaluated.
- Develop environmental responsibilities awareness in Postal employees
- Maintain an environmental quality assurance program.

To support the Postal Service's commitment to a strong and active pollution prevention program, we have developed strategies and identified actions that not only will ensure compliance with the law, but will establish us as a leader in environmental issues.

POLLUTION PREVENTION PRINCIPAL

William J. Dowling, Vice President, Engineering, serves as Postal Service's Chief Environmental Officer and is designated as the Pollution Prevention Principal with overall responsibility for developing and coordinating the Pollution Prevention strategy.

GOALS

- Reduction of solid and hazardous waste by 50 % from 1992 levels by December 1995.
- A 50 % reduction in the use of 17 hazardous chemicals identified by EPA's 33/50 Program over the next two years.
- Continue and expand use of innovative technologies for waste minimization.
- Continue and expand the ongoing program to evaluate and use non-hazardous chemicals
- Continue and expand reuse and recycling of all waste streams.

POSTAL SERVICE GUIDELINES

The Postal Service has issued formal Management Instructions which provide direction for implementing the Pollution Prevention Act of 1990 and provides guidance for waste reduction and hazardous waste management.

The Postal Service has also developed detailed handbooks for implementing programs for waste reduction, recycling, and hazardous waste.

WASTE MANAGEMENT HIERARCHY

All Postal Service managers and employees must participate, to the maximum extent possible, in waste reduction by reducing pollution at the source and by recycling.

Following source reduction, postal priorities are recycling, energy conservation and recovery, treatment and, as a last resort, proper waste disposal.

Policies and guidelines for pollution prevention and waste management actions have been developed and apply to all Postal Service managers, programs, projects, products, and services.

WASTE MINIMIZATION & RECYCLING

Reduce emissions of air pollutants and improve fuel efficiency of Postal Service fleet by:

- inspection and maintenance programs where needed;
- expanding the use of alternate fuel vehicles;
- continuing to maintain the nation's largest fleet of natural gas vehicles; and
- continuing programs to evaluate vehicles, carrier routes, scheduling and transportation networks.

Reduce the unnecessary handling and disposal of undeliverable bulk business mail by increasing its deliverability and developing plans and methods for increasing the amounts of undelivered bulk business mail that is recycled.

Reduce the amounts of packaging, pallets, trays, etc., to be disposed of by developing and using improved life-cycle products and by increased use of recycled and recyclable materials in products in our processing and distribution plants.

Use re-refined motor oil, closed-loop antifreeze recycling, non-hazardous parts washing systems, oil filter crushers, bio-remediation in oil/water separators, and other innovative source control and waste reduction technologies in our vehicle maintenance facilities.

Utilize double-sided copying to the extent feasible in all multi-page documents.

Use paper containing a minimum of 20% post-consumer material content paper.

ACHIEVING & SUSTAINING COMPLIANCE

Improve regulatory compliance by emphasizing pollution prevention and waste reduction as the primary means for achieving and sustaining compliance.

Improve awareness of regulatory permit requirements, e.g., air, wastewater, stormwater, hazardous waste, drinking water; including pollution prevention plans and best management practices.

Conduct waste and materials inventories.

Improve materials management programs.

Institute comprehensive employee trip reduction programs to reduce sources of emissions of air pollutants where required by regulations.

INSTILL POLLUTION PREVENTION IN THE CORPORATE CULTURE

Identify roles and responsibilities of all stakeholders.

Instill environmental roles and responsibilities in environmental and non-environmental positions.

EDUCATION, TRAINING, AND AWARENESS

Utilize postal Management Instructions, Postal Bulletins, and other communication media to successfully promote pollution prevention programs.

Develop and provide a continuing program for pollution prevention awareness training.

Develop and implement environmental communication, education, and advertising plans.

Publicize environmentally successful projects and lessons learned throughout Postal Service by written communications such as the Postal Bulletin, employee newsletters, etc., and by electronic means such as the Postal Service Environmental Bulletin Board.

Establish environmental training curriculum at the Postal Service Technical Training Center for maintenance and environmental staffs.

Incorporate environmental awareness into Management and Postmaster training programs at the Postal Service Management Academy.

INCENTIVES

Incorporate pollution prevention success measurements into processes for measurements of corporate goals for customer satisfaction, employee commitment, and revenue generation.

Give rewards for environmental cost avoidance and revenue generation as a result of pollution prevention initiatives.

OUTREACH/PARTNERING PROGRAMS

Make proactive interaction with the community and regulators a part of the basic job function of all Postal environmental coordinators.

Participate in Federal Fleet Conversion Task Force, the Federal Clean Cities Program and other state and local programs to reduce source of emissions from mobile sources.

Participate with Council on Paper Waste Management and American Paper Institute on initiatives concerning pollution prevention, waste reduction and recycling.

Participate with EPA on projects such as the pilot program Pollution Prevention Opportunity Assessment at Postal Service processing and distribution center and vehicle maintenance facility at Buffalo, New York.

Cooperate with Xerox Corporation's closed-loop program for recycling laser printer tone cartridges; and work with other private industries to develop similar programs.

Work with McDonald's Corporation in their children's environmental promotion program to design an environmental stamp.

BUYING EQUIPMENT, PRODUCTS, SERVICES

Conduct seminars for suppliers, vendors and contractors concerning Postal Service pollution prevention policies, procedures and practices.

Give preference for purchasing products containing recycled materials.

CONTRACTS

Review and amend contract clauses to include consideration for pollution prevention.

Include environmental considerations among the criteria by which projects, products, processes and purchases for services are evaluated

SPECIFICATIONS

Incorporate pollution prevention into standards and specifications for materials, equipment, products and processes.

DESIGN-FOR-THE-ENVIRONMENT

Ensure that design-responsible parties employ life-cycle design for the environment concepts for new equipment materials, products and processes.

FACILITIES

Conduct a program of Pollution Prevention Opportunity Assessments and waste stream inventories.

Implement a program of Environmental Quality Assurance Reviews to achieve and sustain compliance at Postal facilities and to foster Pollution Prevention.

Use "pilot site" concept to determine the resource impacts of pollution prevention strategy and program implementation.

Incorporate pollution prevention and environmental protection into requirements and specifications for new facilities.

Reduce the number of parts cleaners in maintenance operations.

Reduce the number of paint spray booths.

Implement Integrated Pest Management programs to reduce or eliminate the use of pesticides.

WASTE STREAM CHARACTERIZATIONS, PPOAS, PP PLANS

Conduct waste stream generation surveys and pollution prevention opportunity assessments at major and high risk facilities; develop and implement site-specific pollution prevention plans.

CONTROLS ON HAZARDOUS & TOXIC MATERIALS

Continue on-going programs to evaluate and use non-hazardous chemicals. For example, using water-activated adhesives on all stamp products for ease in recycling and use of inks in the stamp production process which meet EPA guidelines.

Reduce and then take steps to virtually eliminate the use of hazardous and toxic materials, focusing on the EPA list of 17 priority chemicals.

Eliminate, reduce or recycle ozone depleting substances at Postal facilities.

ENERGY CONSERVATION

Reduce the amounts of energy consumed by Postal Service facilities by implementing monitoring and control programs in accordance with the Energy Policy Act of 1992.

Include energy efficiency requirements in purchases of new equipment.

WATER CONSERVATION

Include water conservation devices and fixtures in requirements for new facilities and upgrades of existing facilities.

Reduce irrigation of landscaping around Postal facilities.

REAL ESTATE TRANSACTIONS

Perform expanded initial environmental investigations for real property acquisition and disposal actions.

RESEARCH & DEVELOPMENT

Encourage the use of non-polluting technologies and waste minimization in the development of equipment, products and operations.

Integrate pollution prevention into decision making for Engineering research and development programs.

Undertake projects which examine the most promising technologies and procedures that target urgent environmental needs and have paybacks with regard to cost savings and improved efficiencies.

Emphasize partnerships with private industry, trade associations, academia, public interest groups, local and state governments, Federal agencies and international organizations.

MEASURING PROGRESS IN ENVIRONMENTAL PROTECTION

Develop and establish Postal Service information systems to measure progress against pollution prevention targets.

Appendix B: Environene

ENVIROENE

THE ENVIROENE NETWORK: The Enviroene Communications Network is a **free, public,** interagency-supported system operated by EPA's Office of Enforcement and Compliance Assurance and Office of Research and Development. The Network allows regulators, the regulated community, facility managers, and the general public to share information regarding: pollution prevention and innovative technology; environmental enforcement and compliance assistance; laws, executive orders, regulations, and policies; points of contact for services and equipment; case studies; technical databases; and other related topics. The Network welcomes receipt of environmental messages, information and data from any public or private entity or organization.

CONNECTING TO THE ENVIROENE BBS VIA MODEM: Theseinstructionspertainonly to the bulletin board system (BBS) platform of the Enviroene (E$) Communications Network. They do not provide details concerning the Wide World Web (WWW) platform of Enviroene on the Internet.

CONNECTING AND REGISTERING:

- Connect to E$ via a modem, using communications software set to conventional BBS settings, by dialing:
  (703) 908-2092

- Press the RETURN/ENTER key twice if you want to get the default values for the screen.

- On successive screens, type your first name and press RETURN/ENTER; type your last name and press RETURN; and type your password **(if you have NOT registered, create a password and make a note of it)** and press RETURN/ENTER.

- Register (first time only) and immediately receive access to the BBS for 120 minutes per day;

  - Type responses to the Registration questions, and press RETURN/ENTER to begin using Enviroene.

NOTE: Enviroene instructions may be viewed in the BULLETINS section or downloaded from the UTILITIES directory (#160).

HOTLINES:
BBS: 703/908-2007
WWW: 208/526-6956

CO-MANAGERS:
BBS Platform: Louis Paley, 202/260-4640
WWW Platform: Myles Morse, 202/260-3161

WWW/INTERNET ADDRESS: http://wastenot.inel.gov/envirosense/

Appendix C:
Executive Order 12856

Federal Register
Vol. 58, No. 150
Friday, August 6, 1993

Presidential Documents

Title 3—
The President

Executive Order 12856 of August 3, 1993

Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements

WHEREAS, the Emergency Planning and Community Right-to-Know Act of 1986 (42 U.S.C. 11001–11050) (EPCRA) established programs to provide the public with important information on the hazardous and toxic chemicals in their communities, and established emergency planning and notification requirements to protect the public in the event of a release of extremely hazardous substances;

WHEREAS, the Federal Government should be a good neighbor to local communities by becoming a leader in providing information to the public concerning toxic and hazardous chemicals and extremely hazardous substances at Federal facilities, and in planning for and preventing harm to the public through the planned or unplanned releases of chemicals;

WHEREAS, the Pollution Prevention Act of 1990 (42 U.S.C. 13101-13109) (PPA) established that it is the national policy of the United States that whenever feasible, pollution should be prevented or reduced at the source, that pollution that cannot be prevented should be recycled in an environmentally safe manner; that pollution that cannot be prevented or recycled should be treated in an environmentally safe manner; and that disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner;

WHEREAS, the PPA required the Administrator of the Environmental Protection Agency (EPA) to promote source reduction practices in other agencies;

WHEREAS, the Federal Government should become a leader in the field of pollution prevention through the management of its facilities, its acquisition practices, and in supporting the development of innovative pollution prevention programs and technologies;

WHEREAS, the environmental, energy, and economic benefits of energy and water use reductions are very significant; the scope of innovative pollution prevention programs must be broad to adequately address the highest-risk environmental problems and to take full advantage of technological opportunities in sectors other than industrial manufacturing; the Energy Policy Act of 1992 (Public Law 102–486 of October 24, 1992) requires the Secretary of Energy to work with other Federal agencies to significantly reduce the use of energy and reduce the related environmental Impacts by promoting use of energy efficiency and renewable energy technologies; and

WHEREAS, as the largest single consumer in the Nation, the Federal Government has the opportunity to realize significant economic as well as environmental benefits of pollution prevention;

AND IN ORDER TO:

Ensure that all Federal agencies conduct their facility management and acquisition activities so that, to the maximum extent practicable, the quantity of toxic chemicals entering any wastestream, including any releases to the environment, is reduced as expeditiously as possible through source reduction; that waste that is generated is recycled to the maximum extent practicable; and that any wastes remaining are stored, treated or disposed of in a manner protective of public health and the environment;

Require Federal agencies to report in a public manner toxic chemicals entering any wastestream from their facilities, including any releases to the environment, and to improve local emergency planning, response, and accident notification; and

Help encourage markets for clean technologies and safe alternatives to extremely hazardous substances or toxic chemicals through revisions to specifications and standards, the acquisition and procurement process, and the testing of innovative pollution prevention technologies at Federal facilities or in acquisitions;

NOW THEREFORE, by the authority vested in me as President by the Constitution and the laws of the United Slates of America, including the EPCRA, the PPA, and section 301 of title 5, United States Code, it is hereby ordered as follows:

Section 1. *Applicability.*

1-101. As delineated below, the head of each Federal agency is responsible for ensuring that all necessary actions are taken for the prevention of pollution with respect to that agency's activities and facilities, and for ensuring that agency's compliance with pollution prevention and emergency planning and community right-to-know provisions established pursuant to all implementing regulations issued pursuant to EPCRA and PPA.

1 102. Except as otherwise noted, this order is applicable to all Federal agencies that either own or operate a "facility" as that term is defined in section 329(4) of EPCRA, if such facility meets the threshold requirements set forth in EPCRA for compliance as modified by section 3-304(b) of this order ("covered facilities"). Except as provided in section 1-103 and section 1-104 below, each Federal agency must apply all of the provisions of this order to each of its covered facilities, including those facilities which are subject, independent of this order, to the provisions of EPCRA and PPA (*e.g.*, certain Government-owned/contractor-operated facilities (GOCO's), for chemicals meeting EPCRA thresholds). This order does not apply to Federal agency facilities outside the customs territory of the United States, such as United States diplomatic and consular missions abroad.

1-103. Nothing in this order alters the obligations which GOCO's and Government corporation facilities have under EPCRA and PPA independent of this order or subjects such facilities to EPCRA or PPA if they are otherwise excluded. However, consistent with section 1-104 below, each Federal agency shall include the releases and transfers from all such facilities when meeting all of the Federal agency's responsibilities under this order.

1-104. To facilitate compliance with this order, each Federal agency shall provide, in all future contracts between the agency and its relevant contractors, for the contractor to supply to the Federal agency all information the Federal agency deems necessary for it to comply with this order. In addition, to the extent that compliance with this order is made more difficult due to lack of information from existing contractors, Federal agencies shall take practical steps to obtain the information needed to comply with this order from such contractors.

Sec. 2-2. *Definitions.*

2-201. All definitions found in EPCRA and PPA and implementing regulations are incorporated in this order by reference, with the following exception: for the purposes of this order, the term "person", as defined in section 329(7) of EPCRA, also includes Federal agencies.

2-202. *Federal agency* means an Executive agency, as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C 102, are covered under the auspices of the Department of Defense.

2-203. *Pollution Prevention* means "source reduction," as defined in the PPA, and other practices that reduce or eliminate the creation of pollutants through: (a) increased efficiency in the use of raw materials, energy, water, or other resources; or (b) protection of natural resources by conservation.

2-204. *GOCO* means a Government-owned/contractor-operated facility which is owned by the Federal Government but all or portions of which are operated by private contractors.

2-205. *Administrator* means the Administrator of the EPA.

2-206. *Toxic Chemical* means a substance on the list described in section 313(c) of EPCRA.

2-207. *Toxic Pollutants.* For the purposes of section 3-302(a) of this order, the term "toxic pollutants" shall include, but is not necessarily limited to, those chemicals at a Federal facility subject to the provisions of section 313 of EPCRA as of December 1, 1993. Federal agencies also may choose to include releases and transfers of other chemicals, such as "extremely hazardous chemicals" as defined in section 329(3) of EPCRA, hazardous wastes as defined under the Resource Conservation and Recovery Act of 1976 (42 U.S.C 6901–6986) (RCRA), or hazardous air pollutants under the Clean Air Act Amendments (42 U.S.C. 7403-7626); however, for the purposes of establishing the agency's baseline under 3-302(c), such "other chemicals" are in addition to (not instead of) the section 313 chemicals. The term "toxic pollutants" does not include hazardous waste subject to remedial action generated prior to the date of this order.

Sec. 3-3. *Implementation.*

3-301. *Federal Agency Strategy.* Within 12 months of the date of this order, the head of each Federal agency must develop a written pollution prevention strategy to achieve the requirements specified in sections 3-302 through 3–305 of this order for that agency. A copy thereof shall be provided to the Administrator. Federal agencies are encouraged to involve the public in developing the required strategies under this order and in monitoring their subsequent progress in meeting the requirements of this order. The strategy shall include, but shall not be limited to, the following elements:

(a) A pollution prevention policy statement, developed by each Federal agency, designating principal responsibilities for development, implementation, and evaluation of the strategy. The statement shall reflect the Federal agency's commitment to incorporate pollution prevention through source reduction in facility management and acquisition, and it shall identify an individual responsible for coordinating the Federal agency's efforts in this area.

(b) A commitment to utilize pollution prevention through source reduction, where practicable, as the primary means of achieving and maintaining compliance with all applicable Federal, State, and local environmental requirements.

3-302. Toxic Chemical Reduction Goals. (a) The head of each Federal agency subject to this order shall ensure that the agency develops voluntary goals to reduce the agency's total releases of toxic chemicals to the environment and off-site transfers of such toxic chemicals for treatment and disposal from facilities covered by this order by 50 percent by December 31, 1999. To the maximum extent practicable, such reductions shall be achieved by implementation of source reduction practices.

(b) The baseline for measuring reductions for purposes of achieving the 50 percent reduction goal for each Federal agency shall be the first year in which releases of toxic chemicals to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported. The baseline amount as to which the 50 percent reduction goal applies shall be the aggregate amount of toxic chemicals reported in the baseline year for all of that Federal agency's facilities meeting the threshold applicability requirements set forth in section 1-102 of this order. In no event shall the baseline be later than the 1994 reporting year.

(c) Alternatively, a Federal agency may choose to achieve a 50 percent reduction goal for toxic pollutants. In such event, the Federal agency shall delineate the scope of its reduction program in the written pollution prevention strategy

that is required by section 3-301 of this order. The baseline for measuring reductions for purposes of achieving the 50 percent reduction requirement for each Federal agency shall be the first year in which releases of toxic pollutants to the environment and off-site transfers of such chemicals for treatment and disposal are publicly reported for each of that Federal agency's facilities encompassed by section 3-301. In no event shall the baseline year be later than the 1994 reporting year. The baseline amount as to which the 50 percent reduction goal applies shall be the aggregate amount of toxic pollutants reported by the agency in the baseline year. For any toxic pollutants included by the agency in determining its baseline under this section, in addition to toxic chemicals under EPCRA, the agency shall report on such toxic pollutants annually under the provisions of section 3-304 of this order, if practicable, or through an agency report that is made available to the public.

(d) The head of each Federal agency shall ensure that each of its covered facilities develops a written pollution prevention plan no later than the end of 1995, which sets forth the facility's contribution to the goal established in section 3-302(a) of this order. Federal agencies shall conduct assessments of their facilities as necessary to ensure development of such plans and of the facilities' pollution prevention programs.

3-303. *Acquisition and Procurement Goals.* (a) Each Federal agency shall establish a plan and goals for eliminating or reducing the unnecessary acquisition by that agency of products containing extremely hazardous substances or toxic chemicals. Similarly, each Federal agency shall establish a plan and goal for voluntarily reducing its' own manufacturing, processing, and use of extremely hazardous substances and toxic chemicals. Priorities shall be developed by Federal agencies, in coordination with EPA, for implementing this section.

(b) Within 24 months of the date of this order, the Department of Defense (DOD) and the General Services Administration (GSA), and other agencies, as appropriate, shall review their agency's standardized documents, including specifications and standards, and identify opportunities to eliminate or reduce the use by their agency of extremely hazardous substances and toxic chemicals, consistent with the safety and reliability requirements of their agency mission. The EPA shall assist agencies in meeting the requirements of this section, including identifying substitutes and setting priorities for these reviews. By 1999, DOD, GSA and other affected agencies shall make all appropriate revisions to these specifications and standards.

(c) Any revisions to the Federal Acquisition Regulation (FAR) necessary to implement this order shall be made within 24 months of the date of this order.

(d) Federal agencies are encouraged to develop and test innovative pollution prevention technologies at their facilities in order to encourage the development of strong markets for such technologies. Partnerships should be encouraged between industry, Federal agencies, Government laboratories, academia, and others to assess and deploy innovative environmental technologies for domestic use and for markets abroad.

3-304. *Toxics Release Inventory/Pollution Prevention Act Reporting.* (a) The head of each Federal agency shall comply with the provisions set forth in section 313 of EPCRA, section 6607 of PPA, all implementing regulations, and future amendments to these authorities, in light of applicable guidance as provided by EPA.

(b) The head of each Federal agency shall comply with these provisions without regard to the Standard Industrial Classification (SIC) delineations that apply to the Federal agency's facilities, and such reports shall be for all releases, transfers, and wastes at such Federal agency's facility without regard to the SIC code of the activity leading to the release, transfer, or waste. All other existing statutory or regulatory limitations or exemptions on the application of EPCRA section 313 shall apply to the reporting requirements set forth in section 3-304(a) of this order.

(c) The first year of compliance shall be no later than for the 1994 calendar year with reports due on or before July 1, 1995

3-305. *Emergency Planning and Community Right-to-Know Reporting Responsibilities.* The head of each Federal agency shall comply with the provisions set forth in sections 301 through 312 of EPCRA, all implementing regulations, and future amendments to these authorities in light of any applicable guidance as provided by EPA. Effective dates for compliance shall be: (a) With respect to the provisions of section 302 of EPCRA emergency planning notification shall be made no later than 7 months after the date of this order.

(b) With respect to the provisions of section 303 of EPCRA all information necessary for the applicable Local Emergency Planning Committee (LEPC's) to prepare or revise local Emergency Response Plans shall be provided no later than 1 year after the date of this order.

(c) To the extent that a facility is required to maintain Material Safety Data Sheets under any provisions of law or Executive order, information required under section 311 of EPCRA shall be submitted no later than 1 year after the date of this order, and the first year of compliance with section 312 shall be no later than the 1994 calendar year, with reports due on or before March 1, 1995.

(d) The provisions of section 304 of EPCRA shall be effective beginning January 1, 1994.

(e) These compliance dates are not intended to delay implementation of earlier timetables already agreed to by Federal agencies and are inapplicable to the extent they interfere with those timetables.

Sec. 4–4. *Agency Coordination.*

4–401. By February 1, 1994, the Administrator shall convene an interagency Task Force composed of the Administrator, the Secretaries of Commerce, Defense, and Energy, the Administrator of General Services, the Administrator of the Office of Procurement Policy in the Office of Management and Budget, and such other agency officials as deemed appropriate based upon lists of potential participants submitted to the Administrator pursuant to this section by the agency head. Each agency head may designate other senior agency officials to act in his/her stead, where appropriate. The Task Force will assist the agency heads in the implementation of the activities required under this order.

4–402. Federal agencies subject to the requirements of this order shall submit annual progress reports to the Administrator beginning on October 1, 1995. These reports all include a description of the progress that the agency has made in complying with all aspects of this order, including the pollution reductions requirements. This reporting requirement shall expire after the report due on October 1, 2001.

4–403. *Technical Advice.* Upon request and to the extent practicable, the Administrator shall provide technical advice and assistance to Federal agencies in order to foster full compliance with this order. In addition, to the extent practicable, all Federal agencies subject to this order shall provide technical assistance, if requested, to LEPC's in their development of emergency response plans and in fulfillment of their community right-to-know and risk reduction responsibilities.

4–404. Federal agencies shall place high priority on obtaining funding and resources needed for implementing all aspects of this order, including the pollution prevention strategies, plans, and assessments required by this order, by identifying, requesting, and allocating funds through line-item or direct funding requests. Federal agencies shall make such requests as required in the Federal Agency Pollution Prevention and Abatement Planning Process and through agency budget requests as outlined in Office of Management and Budget (OMB) Circulars A-106 and A-11, respectively. Federal agencies should apply to the maximum extent practicable, a life cycle analysis and total cost accounting principles to all projects needed to meet the requirements of this order.

4–405. *Federal Government Environmental/ Challenge Program.* The Administrator shall establish a "Federal Government Environmental Challenge Program" to recognize outstanding environmental management performance in Federal agencies and facilities. The program shall consist of two components that challenge Federal agencies; (a) to agree to a code of environmental principles to be developed by EPA, in cooperation with other agencies, that emphasizes pollution prevention, sustainable development and state of-the-art environmental management programs, and (b) to submit applications to EPA for individual Federal agency facilities for recognition as "Model Installations." The program shall also include a means for recognizing individual Federal employees who demonstrate outstanding leadership in pollution prevention.

Sec 5–5. *Compliance.*

5-501. By December 31,1993, the head of each Federal agency shall provide the Administrator with a preliminary list of facilities that potentially meet the requirements for reporting under the threshold provisions of EPCRA, PPA, and this order.

5-502. The head of each Federal agency is responsible for ensuring that such agency take all necessary actions to prevent pollution in accordance with this order, and for that agency's compliance with the provisions of EPCRA and PPA. Compliance with EPCRA and PPA means compliance with the same substantive, procedural, and other statutory and regulatory requirements that would apply to a private person. Nothing in this order shall be construed as making the provisions of sections 325 and 326 of EPCRA applicable to any Federal agency or facility, except to the extent that such Federal agency or facility would independently be subject to such provisions. EPA shall consult with Federal agencies, if requested, to determine the applicability of this order to particular agency facilities.

5-503. Each Federal agency subject to this order shall conduct internal reviews and audits, and take such other steps, as may be necessary to monitor compliance with sections 3-304 and 3-305 of this order.

5-504. The Administrator, in consultation with the heads of Federal agencies, may conduct such reviews and inspections as may be necessary to monitor compliance with sections 3-304 and 3-305 of this order. Except as excluded under section 6–601 of this order, all Federal agencies are encouraged to cooperate fully with the efforts of the Administrator to ensure compliance with sections 3-304 and 3-305 of this order.

5-505. Federal agencies are further encouraged to comply with all state and local right-to-know and pollution prevention requirements to the extent that compliance with such laws and requirements is not otherwise already mandated.

5-506. Whenever the Administrator notifies a Federal agency that it is not in compliance with an applicable provision of this order, the Federal agency shall achieve compliance as promptly as is practicable.

5-507. The EPA shall report annually to tho President on Federal agency compliance with the provisions of section 3-304 of this order.

5-508. To the extent permitted by law and unless such documentation is withheld pursuant to section 6–601 of this order, the public shall be afforded ready access to all strategies, plans, and reports required to be prepared by Federal agencies under this order by the agency preparing the strategy, plan, or report. When the reports are submitted to EPA, EPA shall compile the strategies, plans, and reports and make them publicly available as well. Federal agencies are encouraged to provide such strategies, plans, and reports to the State and local authorities where their facilities are located for an additional point of access to the public.

Sec. 6-6. *Exemption.*

6–601. In the interest of national security, the head of a Federal agency may request from the President an exemption from complying with the provisions of any or all aspects of this order for particular Federal agency facilities, provided that the procedures set forth in section 120(j)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. 9620(j)(1)), are followed. To the maximum extent practicable, and without compromising national security, all Federal agencies shall strive to comply with the purposes, goals, and implementation steps set forth in this order.

Sec. 7-7. *General Provisions.*

7-701. Nothing in this order shall create any right or benefit, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

William J. Clinton

THE WHITE HOUSE,

August 3, 1993.

[FR Doc/ 93-19069

Filed 8-4-93; 4:37 pm]

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