NASA Procedures and Guidelines

NPG: 8820.3

Effective Date: **March 1, 1999**
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Pollution Prevention

Responsible Office: JE/Environmental Management Division

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Preface

P.1 PURPOSE

As a responsible environmental steward, NASA will promote the Agency strategy of Environmental Excellence for the 21st- Century strategy, consistent with the requirements of Executive Order (E.O.) 12856, "Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements." It is NASA policy to prevent or reduce pollution at the source whenever possible. The following approaches will be considered, in priority order:

1. Eliminate or reduce pollution at the source through process changes, reengineering and/or material substitution. (Pollution for this document is defined as any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment, including fugitive emissions.)

2. Recycle pollution that cannot be prevented in an environmentally safe manner, to the maximum extent possible.

3. Treat pollution that cannot be prevented or recycled in an environmentally safe manner, to the maximum extent possible. (Treated means chemically altered, incinerated, or otherwise sent to a permitted Treatment, Storage, or Disposal Facility.)

4. Dispose of waste only as a last resort and in a legal and environmentally safe manner.

Further, NASA will --

1. Review and revise NASA specifications and standards to reduce the use and acquisition of products containing extremely hazardous substances and toxic chemicals consistent with safety and reliability requirements.

2. Use life-cycle-cost analysis and source-reduction potential as criteria in evaluating program/project priority.

3. Strive for a minimum of 50-percent reduction from the established 1994 Agency baseline for toxic chemical releases by the turn of the century. To the maximum extent possible, NASA will achieve this goal by using source reduction practices.

4. Prepare and begin to implement a written pollution prevention plan at all NASA Centers and Component Facilities covered by E.O. 12856. These pollution prevention plans will address site-specific Environmental Justice issues (E.O. 12898). The plan will address the facility's approach to meeting NASA's 50-percent toxic chemicals release-reduction goal and to reducing the Centers' overall environmental impacts.

5. Provide emergency release information from any accidental reportable releases, or emergencies, to all appropriate parties.

6. Submit emergency planning notification, emergency response plans, material safety data sheets or lists, and/or hazardous chemical inventory forms to the appropriate agencies for Centers that meet the Emergency Planning and Community Right-To-Know Act (EPCRA), Toxic Release Inventory (TRI) reporting thresholds.

7. All NASA Centers will submit their annual individual pollution prevention reports (reporting began in 1995) for compliance with E.O. 12856 to Headquarters by August 1 of each year.

8. Evaluate progress annually by comparison of tonnage and percent of toxic chemical release reduction from baseline by calendar year. (Release as defined in each Center's Environmental Protection Agency Form R TRI report.)

P.2 APPLICABILITY

This NPG is applicable to NASA Headquarters and all NASA Centers, including Component Facilities, and contractor facilities where specified by contract.

P.3 AUTHORITY

a. 42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.
b. NPD 8800.16, NASA Environmental Management.

P.4 REFERENCES

a. 42 U.S.C. 11001 et seq., the Emergency Planning and Community Right-To-Know Act of 1986.
b. 42 U.S.C. 13101 et seq., the Pollution Prevention Act of 1990.
c. Executive Order 12843, “Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances,” 3 CFR (1993 Compilation).
d. Executive Order 12844, “Federal Use of Alternative Fueled Vehicles,” 3 CFR (1993 Compilation).
e. Executive Order 12845, “Requiring Agencies To Purchase Energy Efficient Computer Equipment,” 3 CFR (1993 Compilation).
f. Executive Order 12856, “Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements,” 3 CFR (1993 Compilation).
g. Executive Order 13101, “Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition,” 3 CFR (1998 Compilation).
h. Executive Order 12898, “Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations,” 3 CFR (1994 Compilation).
i. Executive Order 12902, “Federal Efficiency and Water Conservation at Federal Facilities,” 3 CFR (1994 Compilation).
j. Executive Order 12969, “Federal Acquisition and Community Right-to-Know,” 3 CFR (1995 Compilation).

k. Executive Order 13031, “Federal Alternative Fueled Vehicle Leadership,” 3 CFR (1996 Compilation).
l. NASA’s Environmental Strategy, “Environmental Excellence for the Twenty-First Century.”
m. “NASA Plan for Implementation of Executive Order 12856, Pollution Prevention and Community Right-to-Know,” dated October 1995.

P.5 CANCELLATION

1. NASA Policy letter, "NASA Policy for Pollution Prevention," dated September 13, 1995.

2. "NASA Guidance For Implementation of Environmental Executive Order 12856 - Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements and Related Environmental Executive Orders," dated December 1994.

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CHAPTER 1 INTRODUCTION

These procedures and guidelines were developed cooperatively by Code JE, the Headquarters Program Offices, and NASA Centers. They are 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. These procedures and guidelines are not intended to direct implementation methods, as they will naturally vary depending on Center needs. These guidelines should be used in conjunction with the Agency's environmental strategy, “Environmental Excellence for the Twenty-First Century” (Appendix A6), the NASA Policy Directive, "NASA Environmental Management" 8800.16 (Appendix A7) and the "NASA Plan for Implementation of Executive Order (E.O.) 12856, Pollution Prevention and Community Right-to-Know," dated October 1995 (Appendix A8).

E.O. 12856 (Appendix A4) as well as the other recent E.O.'s 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 Centers' existing plans and procedures.

EXHIBIT 1. EXECUTIVE ORDER REQUIREMENTS

Executive Order	**Section**	**Requirement**	**Date Completed/ Deadline**
E.O. 12844	§2	Procurement of alternative fueled vehicles	-
E.O. 12843	§4	Procurement of ozone-depleting substances	10/21/93
E.O. 12845	§1	Procurement of energy-efficient computers	10/21/93
E.O. 12856	§3-305(d)	Emergency notification	1/1/94
E.O. 12856	§3-305(a)	Emergency planning	3/3/94
E.O. 12856	§3-305(a)	Facility emergency response coordinator	3/3/94
E.O. 12856	§3-305(c)	Submittal of MSDS's	8/3/94
E.O. 12856	§3-305(b)	LEPC emergency response	8/3/94

		planning	
E.O. 13101	§502	Procurement of EPA guideline items	EPA to update every 2 years
E.O. 13101	§601	Establish recycling goals for the years 2000, 2005, 2010	3/13/1999
E.O. 12856	§3-305(c)	Hazardous chemical inventory reporting	3/1/95
E.O. 12856	§3-304	Source reduction and recycling reporting	7/1/95
E.O. 12856	§3-304	Toxic release inventory reporting	7/1/95
E.O. 12856	§3-302(d)	Pollution-prevention program planning	12/31/95
E.O. 12856	§3-302(a)	Fifty-percent toxic release reduction	12/31/99

EXHIBIT 2. KEY DEADLINES AND REQUIREMENTS FOR EXECUTIVE ORDER 12856

E.O. Section	**Requirement Element**	**Responsible**	**Action**	**Date Completed/ Deadline**
1-104	Develop guidance for contractors to provide information necessary to comply with the E.O.	Defense Acquisition Regulation Council and Civilian Agency Acquisition Council	Develop and publish contract language	8/1/95
3-301	Develop an Agencywide written pollution-prevention policy statement and strategy to ensure	Headquarters	Prepare documents, obtain Agency concurrence and provide to EPA	8/3/94

	compliance with Sections 3-302 to 3-305 of the E.O.			
3-302(a)	Develop Voluntary Reduction Goals: of 50 percent for total releases of toxic chemicals to the environment and off-site transfers for treatment and disposal	Headquarters/ Centers	Achieve reductions set forth in 3-302(b) or 3-302(c)	See below for details
3-302(b)	Option 1 Voluntary Reduction Goals: Reduce toxic chemical releases by 50 percent using TRI reports for 1994 as baseline [E.O. 3-304(c)]	Centers	Achieve reductions in toxic chemical release	12/31/99
3-302(c)	Option 2 Voluntary Reduction Goals: Reduce toxic pollutants by 50 percent. Note: NASA will not use this option.	Centers	Achieve reductions in toxic pollutants release	12/31/99
3-302(d)	Develop a written pollution	Centers	Prepare a facility pollution	12/31/95

	prevention plan for each covered facility consistent with section 3302(a)'s reduction goals		prevention plan	
3-303(a)	Establish a plan and goals for eliminating or reducing unnecessary acquisition of products containing extremely hazardous substances or toxic chemicals	Centers	Prepare a written plan and goals to reduce acquisition of hazardous materials	As soon as possible
3-303(a)	Establish a plan and goals for reducing Agency manufacturing, processing, and use of extremely hazardous substances and toxic chemicals	Centers	Prepare a written plan and goals to reduce use of hazardous materials	As soon as possible
3-303(b)	Review and revise specifications and standards to identify opportunities to eliminate or reduce acquisition and procurement of extremely hazardous substances or toxic chemicals	Centers	Review specifications and revise specifications	Review by 8/3/95; revise by 12/31/99

3-303(c)	Revise Federal Acquisition Regulations to comply with the E.O.	Defense Acquisition Regulation Council and Civilian Agency Acquisition Council	Publish revisions	8/3/95
3-303(d)	Encourage development and testing of innovative pollution-prevention technologies in partnership with the private sector	Headquarters Centers	None	
3-304	Compliance with Toxic Release Inventory (TRI) reporting under §313 of EPCRA and Pollution Prevention Reporting under §6607 of Pollution Prevention Act (PPA) (without regard to Standard Industrial Codes (SIC))	Centers	Prepare and submit Form R and source reduction reports to EPA	Begin data collection 1/1/94; 1994 reports due by 7/1/95
3-305	Compliance with Emergency Planning and Community Right-to-Know reporting responsibilities under §§301-312 of EPCRA	Centers	See below for details	-

3-305(a)	Submit emergency planning notification to Local Emergency Planning Committee (LEPC) and State Emergency Response Commission (SERC) as required under §302 of EPCRA	Centers	Notify LEPC's and SERC's of applicability of EPCRA to facility	3/3/94
3-305(b)	Submit information for the preparation of emergency response plans as required under §303 of EPCRA	Centers	Prepare and submit emergency response planning information	8/3/94
3-305(c)	Submit Material Safety Data Sheets (MSDS's) as required under §311 of EPCRA	Centers	Submit MSDS's to LEPCs	8/3/94
3-305(c)	Submit an Emergency and Hazardous Chemical Inventory Form as required under §312 of EPCRA	Centers	Prepare and submit inventory forms to LEPCs	Annual: start 1/1/94; reports due 3/1 of each subsequent year
3-305(d)	Submit emergency notification of release of an extremely hazardous substance as	Centers	Notify appropriate authorities upon release of EHSs	1/1/94

	required under §304 of EPCRA			
4-402	Submit annual progress reports on compliance with all aspects of the Executive Order to EPA	Headquarters	Prepare and submit progress report to EPA	Annually beginning 10/1/95 and ending 10/1/01
4-403	Provide technical assistance upon request to LEPC's developing Emergency Response Plans and satisfying their Community Right-to-Know and risk reduction responsibilities under EPCRA	Centers	Provide assistance to LEPC's as requested	-
4-404	Obtain funding and resources through the Federal Agency pollution-prevention and Abatement Planning Process (OMB A-106)	Headquarters Centers	Initiate budget requests	-
4-404	Obtain funding and resources through Agency budget requests as outlined in A-11	Headquarters	Initiate budget requests	-
4-404	Apply life-cycle analysis and total-cost	Headquarters Centers	Apply principles to projects	-

	accounting principles to the maximum extent practicable to all E.O. 12856 projects			
5-501	Provide EPA with preliminary list of facilities that potentially meet reporting requirements under EPCRA, PPA, and the Executive Order	Headquarters	Prepare and submit list of applicable facilities	12/31/93
5-505	Encourage compliance with all State and local Right-to-Know and pollution prevention requirements	Headquarters Centers	Comply with State and local laws	-
5-506	Upon receipt of EPA notice of non-compliance, compliance is required as promptly as practicable	Centers	Respond promptly to non-compliance conditions	-
5-508	Public access afforded to all strategies, plans, and reports prepared in compliance with the Executive Order	Headquarters Centers	Make E.O. information available to public	-
5-508	Distribution of strategies,	Headquarters Centers	Submit reports to State and local	-

	plans, and reports prepared in compliance with the Executive Order		authorities, as well as EPA	
6-601	Presidential exemption for national security purposes requires compliance with section 120(j)(1) of CERCLA	Headquarters Centers	Request national security exemption if necessary	-

CHAPTER 2 TOXIC RELEASE INVENTORY REPORTING

Executive Order	Requirement	Date Completed/ Deadline
E.O. 12856 §3-304	Each NASA facility that exceeds the threshold for manufacture, process, or otherwise use of toxic chemicals must annually report releases of those toxic chemicals.	7/1/95 & annually thereafter on 7/1

E.O. 12856 requires NASA facilities to report releases and offsite transfers of toxic chemicals. Releases include air emissions, waste waters, underground injections of wastes, offsite waste disposal, and wastes disposed of in onsite landfills. Examples of offsite disposal of wastes include solid waste sent to landfills or incinerators, hazardous waste sent to landfills or incinerators, and waste waters discharged to Publicly Owned Treatment Works (POTW). For more specific definitions and examples of releases and offsite transfers, see 40 CFR 372 or call NASA Headquarters, Code JE.

A Federal facility must meet the following two criteria in order to report toxic chemical release information:

1. The facility must have at least 10 full-time employees.
2. The facility must exceed specific thresholds for manufacturing, processing, or otherwise using a toxic chemical.

Federal facilities, in order to implement this requirement, must define their operations in terms used by private industry. For NASA, this means that business must be defined in terms of manufacture, process, or otherwise use.

2.1 DEFINITIONS

2.1.1 MANUFACTURE - To make from raw materials by hand or machinery, including import. (The toxic chemical is used for onsite use or processing, for sale or distribution, or the toxic chemical is produced as a byproduct.)

2.1.2 PROCESS - A series of actions or operations conducing to an end. (The toxic chemical is used as a reactant; as a formulation component, e.g., additives, solvents, or lubricants; as an article component; and/or in repackaging, i.e., transfer of materials from a bulk container.)

2.1.3 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, e.g., catalyst, process solvents, solution buffers; as a manufacturing aid,

e.g., coolants, metalworking fluids, process lubricants, refrigerants; and in an ancillary or other use manner, e.g., cleaners, degreasers, fuels.)

2.1.4 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.)

2.1.5 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. (NASA activities such as sounding rocket launches and related operations, Space 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 quantities are reached. Dilution of these products below the de minimis concentrations is considered to be otherwise use of the chemical and must be counted/reported.

2.1.6 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.

2.1.7 A complete list of the specific chemicals for which releases must be reported for the 1994 calendar year is presented in (Appendix A1) of 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. The 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.

2.1.8 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 threshold determination. Information required by the Form R includes the following:

· Identifying information for the facility.
· The name and Chemical Abstract Service (CAS) 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 offsite.

· A description of any waste treatment activities for the chemical.
· Identifying information for the facility receiving offsite transfers.

2.1.9 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 completing the Form R, see 40 CFR 372.85 or call NASA Headquarters, Code JE. Form R may be obtained by writing to the following address:

Section 313 Document Distribution Center
P.O. Box 12505
Cincinnati, OH 45212

2.1.10 The 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 10 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. The 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 begin 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 the following:

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 Space 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 offsite. These exemptions are divided into the following categories:

1. De minimis concentration of a toxic chemical in a mixture.
2. Articles.
3. Uses.
4. Activities in laboratories.
5. Certain owners of leased properties.
6. 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.

2.2 EXEMPTIONS

2.2.1 De Minimis Concentration of a Toxic Chemical in a Mixture

2.2.1.1 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.

2.2.1.2 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).

2.2.2 Articles

2.2.2.1 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.

2.2.2.2 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, or dust 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.

2.2.3 Uses

The uses exemption includes several specific subcategories as follows:

1. Structural component.
2. Routine janitorial/facility grounds maintenance.
3. Personal use.
4. Motor vehicle maintenance.
5. 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.
2.2.3.1 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 which is used to paint a building or a piece of stationary equipment. Even though the paint may emit 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.

2.2.3.2 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.

2.2.3.3 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.

2.2.3.4 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, and forklifts. 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 tuneups, not major NASA operations.

2.2.3.5 Process water, noncontact cooling water, and compressed air exemption. The final use exemption is the exemption of process water, noncontact 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.

2.2.4 Activities in Laboratories

The laboratory activity exemption applies to listed toxic chemicals manufactured, processed, or otherwise used in a laboratory for quality control, R&D, 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 Center 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:

1. Specialty article or chemical production.
2. 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 R&D, 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

1. Releases of toxic chemicals from traditional laboratories that perform R&D only.
2. Releases of toxic chemicals from mobile sources.
3. Releases of toxic chemicals from test stands or test cells that test components or engines for the purpose of R&D 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.
4. 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

1. 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.
2. Releases of toxic chemicals from plating operations/laboratories.
3. Releases of toxic chemicals from photo labs, regardless of the type of film developed, or used.
4. 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.
5. 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, Environmental Management Division.

2.2.5 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.

2.2.6 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 GOCO's 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.

CHAPTER 3 SOURCE REDUCTION AND RECYCLING REPORTING

Executive Order	Requirement	Date Completed/ Deadline
E.O. 12856 §3-304	Each NASA facility filing a toxic release form must submit a source reduction and recycling report documenting pollution prevention efforts as required by the Pollution Prevention Act (PPA).	7/1/95 & annually thereafter on 7/1

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:

1. The quantity of each chemical entering a waste stream.
2. The quantity of each chemical recycled.
3. The source reduction practices used with respect to each chemical.
4. Estimates of the quantity of chemical anticipated to be generated as waste and the quantity anticipated to be recycled for the next 2 reporting years.
5. A productivity index that estimates relative changes in production volumes since the last report.
6. Techniques used to identify source reduction opportunities.
7. The quantity of chemical, released by catastrophic event or other releases not associated with production.
8. The amount of chemical that 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, Environmental Management Division.

CHAPTER 4 EMERGENCY PLANNING

Executive Order	Requirement	Reporting Initiated On
E.O. 12856 §3-305(a)	NASA facilities that produce, store, or use extremely hazardous substances must notify their State Emergency Response Commission of this fact.	3/3/94
E.O. 12856 §3-305(a)	Each facility must designate a facility emergency response coordinator.	3/3/94
E.O. 12856 §3-305(b)	NASA facilities must provide LEPC's with the information necessary to revise local emergency response plans.	8/3/94

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 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 TPQ's is published in Appendix A of 40 CFR 355 and is also shown in Appendix A2 of 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 50 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); therefore, this facility must notify the SERC. Note: Facilities must notify SERC's, 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 that 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 offsite 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 that previously did not have extremely hazardous substances onsite 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 SERC's 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 the following:

1. Routes used for transportation of hazardous substances.
2. Methods and procedures for notifying appropriate people and providing medical services to be followed in the event of a release.
3. Methods for determining the occurrence of a release, and the areas most likely to be affected.
4. Emergency equipment available at the facility.
5. Evacuation plans.
6. Descriptions of training programs for emergency response and medical personnel.

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.

CHAPTER 5 EMERGENCY NOTIFICATION

Executive Order	Requirement	Reporting Initiated On
E.O. 12856 §3-305(d)	NASA facilities will notify the LEPC and SERC immediately upon release of an extremely hazardous substance.	1/1/94

In the event of release of a reportable quantity for 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 Appendix A2, of 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:

1. The chemical name or identity, of any substance involved in the release.

2. An indication of whether the substance is an extremely hazardous substance.

3. An estimate of the quantity released into the environment.

4. The time and duration of the release.

5. The medium or media into which the release occurred.

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

7. Proper precautions to take as a result of the release, including evacuation.

8. 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 the following:

9. Actions taken to respond and contain the release.

10. Any known anticipated acute or chronic health risks associated with the release.

11. 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).

CHAPTER 6 MATERIAL SAFETY DATA SHEETS

Executive Order	Requirement	Reporting Initiated On
E.O. 12856 §3-305(c)	NASA facilities must provide the necessary chemical information for hazardous chemicals present at the facility to the local communities. This may be in the form of Material Safety Data Sheets (MSDS) or lists.	8/3/94

Each NASA facility must submit MSDS's 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 MSDS's or a lists for hazardous chemicals present at the facility in amounts greater than, or equal to 10,000 pounds at any one time or, for extremely hazardous substances, in amounts greater than or equal to 500 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 Appendix A2 of 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).

EXHIBIT 3. REPORTING QUANTITIES FOR EPCRA §311 AND 312

Executive Order	Requirement	Reporting Initiated On
E.O. 12856 §3-305(c)	NASA facilities must provide the necessary chemical information for hazardous chemicals present at the facility to the local communities. This may be in the form of material safety data sheets (MSDSs) or lists.	8/3/94 & as changes occur

If a facility submits a list of hazardous chemicals in lieu of MSDS's, 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.

EXHIBIT 4. COMPARISON OF HAZARD CATEGORIES

EPA HAZARD CATEGORY	OSHA HAZARD CATEGORY
Fire hazard	Flammable Combustible liquid Pyrophoric Oxidizer
Immediate (acute) health hazard	Highly toxic Toxic Irritant Sensitizer Corrosive Other hazardous chemicals with an adverse effect with short term exposure
Delayed (chronic) health hazard	Carcinogens Other hazardous chemicals with an adverse effect with long term exposure
Reactive	Unstable reactive Organic peroxide Water reactive
Sudden release of pressure	Explosive Compressed gas

In the event that the information on an MSDS changes, the facility must notify the LEPC, SERC, and/or the fire department within 3 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 3 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 MSDS's 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.

CHAPTER 7 EXTREMELY HAZARDOUS SUBSTANCES INVENTORY REPORTING

Executive Order	Requirement	Reporting Initiated On
E.O. 12856 §3-305(c)	Each NASA facility must submit a hazardous chemical inventory forms to the SERC, the LEPC, and the fire department with jurisdiction over the facility	3/1/95 & annually thereafter on 3/1

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, CAS 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 30 days of the request. Specific instructions for completing the Tier One and Tier Two forms are published at 40 CFR 370.40 - 370.41. Copies of these two forms are in Appendix A3.

CHAPTER 8 NASA FACILITY POLLUTION PREVENTION PROGRAM PLANNING

Executive Order	Requirement	Date Completed
E.O. 12856 §3-302(d)	Each NASA facility will develop a written pollution prevention plan which sets forth the facility's contribution to the voluntary NASA-wide toxic chemicals reduction goal.	12/31/95
E.O. 12856 §3-302(a)	NASA will reduce their total releases of toxic chemicals by 50 percent.	12/31/99

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 50 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:

1. Defines specific pollution prevention goals for the facility.
2. Establishes a commitment to environmental protection.
3. Identifies program roles and responsibilities.
4. Serves as a reference guide for management and environmental personnel.
5. Establishes priorities for allocating limited environmental resources.
6. Annual summary report and metrics on progress to meet Agency 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, has prepared the NASA Facility Pollution Prevention Program Planning Reference Manual that discusses the essential steps involved in setting up a successful pollution prevention program at a NASA facility in more detail (Appendix A8).

CHAPTER 9 RECYCLING

Executive Order	Requirement	Reporting Initiated On
E.O. 13101 § 601	NASA will establish goals for solid waste prevention and recycling to be achieved by January 1, 2000, and by 2005 and 2010.	3/13/99

Section 601 of Executive Order 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," directs Federal agencies to establish goals for solid waste prevention and recycling to be achieved by January 1, 2000, and long-range goals to be achieved by the years 2005 and 2010. NASA has already achieved a 30-percent increase in recycling activities, using FY 91 as a baseline. This goal was achieved in FY 93. NASA's current goal is an additional 30-percent increase in recycling activities by the year 2000, using FY 93 as a baseline. 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. 13101. 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 offsite 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 NASA's recycling program can be directed to NASA HQ, Code JE.

CHAPTER 10 AFFIRMATIVE PROCUREMENT

Executive Order	Requirement	Date Initiated
E.O. 13101	NASA facilities must procure materials that contain recycled content and are environmentally preferable.	1994 (per prior E.O.)

Executive Order 13101 requires Federal agencies to establish an affirmative procurement program for the purchase of environmentally preferable materials as identified by EPA in 40 C.F.R. 247, "Comprehensive Procurement Guideline For Products Containing Recovered Materials."

The E.O. specifically identifies procurement guidelines for printing and writing paper, 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. (See Appendix A4, E.O. 13101, Section 505.)

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 timeframe, 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 NPG 8830 "NASA Procedures and Guidelines for Affirmative Procurement of Environmentally Preferable Goods and Services, " that deals specifically with the affirmative procurement of guideline items and the written justification described above.

CHAPTER 11 PROCUREMENT OF ENERGY EFFICIENT COMPUTERS

Executive Order	Requirement	Date Initiated
E.O. 12845	NASA purchases of computer equipment must meet EPA Energy Star requirements	10/21/93

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.

CHAPTER 12 PROCUREMENT OF ALTERNATIVE FUELED VEHICLES

Executive Order	Requirement	Date Initiated
E.O. 12844	NASA should increase purchases 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 E.O. also calls for Federal agencies to increase by 50-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 E.O. 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 5 year plan for 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.

CHAPTER 13 OZONE-DEPLETING SUBSTANCES

Executive Order	Requirement	Date Initiated
E.O. 12843	NASA must minimize the procurement of Ozone-Depleting Substances (ODS) in anticipation of the phaseout of ODS production.	-

Executive Order 12843 directs Federal agencies to minimize the procurement of products containing ODS's. The E.O. also requires Federal agencies to implement policies that will reduce emissions of ODS's, promote recycling of ODS's, and cease the procurement of nonessential products containing or manufactured with ODS's. NASA facilities should take steps to meet the objectives of this E.O. through management practices that include the following:

1. Altering existing equipment and procedures to make use of safe alternatives.

2. Specifying the use of safe alternatives to ODS's in new procurements.

3. 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 ODS’s with safe alternatives. The SNAP program has published a list of available alternatives to ODS’s 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, complements requirements of the E.O. 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 ODS's. 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 E.O. and EPA regulations. Resulting changes to the FAR and specific NASA requirements based on these changes will be forthcoming.

APPENDICES

Conversion of NASA P2 documentation into "NASA Procedures and Guidelines" (NPG's) APPENDICES links to internet

Appendix A1 Toxic Release Inventory Chemicals

http://www.epa.gov/swercepp/pubs.html

(Title III List of Lists self-extracting file)

Appendix A2 Extremely Hazardous Substances (40 CFR Part 355 Appendix A and B)

http://www.nvi.net/CFRS/CFR/157154037-toc.html

http://www.nvi.net/CFRS/CFR/157154038-toc.html

Appendix A3 Forms for Toxic Chemical Inventories

(Tier One and Two)

Appendix A4

Executive Order 12856

http://es.inel.gov/program/exec/12856.html

(FR Volume 58 No. 150 Friday, August 6, 1993)

Executive Order 13101

(FR Volume 63 No. 179 Wednesday, September 16, 1998)

Executive Order 12843

http://es.inel.gov/program/exec/12843.html

(FR Volume 58 No. 77 Friday, April 23, 1993)

Executive Order 12844

http://es.inel.gov/program/exec/12844.html

(FR Volume 58 No. 77 Friday, April 23, 1993)
Executive Order 12845

http://es.inel.gov/program/exec/12845.html

(FR Volume 58 No. 77 Friday, April 23, 1993)

Appendix A5 "NASA Environmental Excellence for the Twenty-First Century"

Appendix A6 NASA Policy Directive 8800.16, NASA Environmental Management.

Appendix A7 "NASA Plan for Implementation of Executive Order 12856, Pollution Prevention and Community Right-to-Know" dated October 1995

Appendix 8 “NASA Facility Pollution Prevention Program Planning Reference Manual”

Supplemental Information
Appendix A9 "Guidance for Implementation of Environmental Executive Orders Questions and Answers"