

MPG 8500.1

REVISION A

EFFECTIVE DATE: November 25, 2002

EXPIRATION DATE: November 25, 2007

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# **MARSHALL PROCEDURES AND GUIDELINES**

**AD01**

## **MSFC ENVIRONMENTAL MANAGEMENT PROGRAM**

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**DOCUMENT HISTORY LOG**

| Status<br>(Baseline/<br>Revision/<br>Canceled) | Document<br>Revision | Effective<br>Date | Description  |
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| Baseline                                       |                      | 4/8/02            | This MPG replaces MPG 8870.1, "Environmental Management Program." NASA Headquarters changed the numbering system for environmental documents.  |
| Revision                                       | A                    | 11/25/02          | Deleted the reference to MWI 8540.1, "Pollution Prevention," in Section P.4. Added pollution prevention and recycling information to Section 3.6. Replaced AD02 with AD60 in 3.14.2. |
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## PREFACE

### **P.1 PURPOSE**

This Directive provides general procedures and guidelines for the Marshall Space Flight Center (MSFC) environmental management program. The MSFC environment includes the soil, water, air, and natural habitat within and around MSFC boundaries. This Directive defines and establishes the responsibilities of the Environmental Engineering Department (EED) and MSFC user organizations for managing and conducting environmental activities. This Directive also ensures the cooperation and support of all MSFC user organizations in an effort to achieve the environmental goals of the National Aeronautics and Space Administration (NASA) and MSFC and to meet Federal, State, and Local environmental regulatory requirements.

### **P.2 APPLICABILITY**

This Directive applies to all MSFC user organizations and on-site contractors.

### **P.3 AUTHORITY**

- a. NPD 8500.1, "NASA Environmental Management"
- b. MPD 8500.1, "MSFC Environmental Management"
- c. Alabama Department of Environmental Management (ADEM) Administrative Code 335

### **P.4 APPLICABLE DOCUMENTS**

- a. AD10-OWI-001, "Consolidated Environmental Response Plan"
- b. AD20-OWI-012, "MSFC Digging Permits"
- c. Executive Order (EO) 13101, "Greening the Government through Waste Prevention, Recycling, and Federal Acquisition"
- d. EO 13123, "Greening the Government through Efficient Energy"
- e. EO 13148, "Greening the Government through Leadership in Environmental Management"
- f. EO 13149, "Greening the Government through Federal Fleet and Transportation Efficiency"

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- g. Field Manual of Threatened and Endangered Species Potentially Occurring at MSFC
- h. MPD 1840.3, "MSFC Respiratory Protection Program"
- i. MPD 1860.1, "Laser Safety"
- j. MPD 1860.2, "Radiation Safety Program"
- k. MPD 8570.1, "MSFC Energy Management Program"
- l. MPG 1040.3, "MSFC Emergency Plan"
- m. MPG 1800.1, "Bloodborne Pathogens"
- n. MPG 1840.3, "MSFC Hazardous Chemicals in Laboratories Protection Program"
- o. MPG 8715.1, "MSFC Safety, Health, and Environmental (SHE) Program"
- p. MSFC Title V Operating Permit
- q. MWI 8540.2, "Affirmative Procurement Program for Environmentally Preferable Products"
- r. MWI 8550.1, "Waste Management"
- s. MWI 8550.2, "Storm Water Management"
- t. MWI 8550.3, "Wastewater Compliance"
- u. MWI 8550.4, "Air Emissions Compliance"
- v. MWI 8550.5, "Hazardous Materials Compliance"
- w. MWI 8621.1, "Close Call and Mishap Reporting and Investigation Program"
- x. NASA Headquarters Environmental Management Reference Manual
- y. NPG 8580.1, "Implementing the National Environmental Policy Act and Executive Order 12114"

**P.5 REFERENCES**

- a. AD10-OWI-001, "Consolidated Environmental Response Plan"
- b. "MSFC Pollution Prevention Plan Update," 31 August, 2001

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- c. MSFC Site Management Plan
- d. NASA/MSFC State Industrial Discharge (SID) Permit issued by ADEM
- e. National Pollutant Discharge Elimination System (NPDES) Permit
- f. Title V Permit Application, Clean Air Act (CAA)

**P.6 CANCELLATION**

MPG 8500.1 Baseline dated April 8, 2002

Original signed by  
Axel Roth for

A. G. Stephenson  
Director

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## DOCUMENT CONTENT

### 1. DEFINITIONS

#### 1.1 Acronyms

- 1.1.1 ACHP. Advisory Council on Historic Preservation
- 1.1.2 ACM. Asbestos-Containing Material
- 1.1.3 ADEM. Alabama Department of Environmental Management
- 1.1.4 AD01. Organization code for MSFC Center Operations Directorate
- 1.1.5 AD10. Organization code for MSFC Environmental Engineering Department
- 1.1.6 AST. Above Ground Storage Tank
- 1.1.7 BMP. Best Management Practice
- 1.1.8 CAA. Clean Air Act
- 1.1.9 CEQ. Council of Environmental Quality
- 1.1.10 CERCLA. Comprehensive Environmental Response, Compensation, and Liability Act
- 1.1.11 CERP. Consolidated Environmental Response Plan
- 1.1.12 CFR. Code of Federal Regulations
- 1.1.13 CWA. Clean Water Act
- 1.1.14 DI. Deionized
- 1.1.15 DOT. Department of Transportation
- 1.1.16 EED. MSFC Environmental Engineering Department
- 1.1.17 EO. Executive Order
- 1.1.18 EPA. Environmental Protection Agency
- 1.1.19 EPCRA. Emergency Planning and Community Right-to-Know Act
- 1.1.20 ESC. Environmental Support Contractor

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- 1.1.21 FED. Facilities Engineering Department
- 1.1.22 FIFRA. Federal Insecticide, Fungicide, and Rodenticide Act
- 1.1.23 FFA. Federal Facilities Agreement
- 1.1.24 HAP. Hazardous Air Pollutant
- 1.1.25 HAZWOPER. Hazardous Waste Operations and Emergency Response
- 1.1.26 HWSF. Hazardous Waste Storage Facility
- 1.1.27 IDW. Investigation-Derived Waste
- 1.1.28 IWTF. Industrial Wastewater Treatment Facility
- 1.1.29 LH2. Liquid Hydrogen
- 1.1.30 LUC. Land Use Control
- 1.1.31 MACT. Maximum Achievable Control Technology
- 1.1.32 MOA. Memorandum of Agreement
- 1.1.33 MPD. Marshall Policy Directive
- 1.1.34 MPG. Marshall Procedures and Guidelines
- 1.1.35 MSDS. Material Safety Data Sheet
- 1.1.36 MSFC. Marshall Space Flight Center
- 1.1.37 MWI. Marshall Work Instruction
- 1.1.38 NAAQS. National Ambient Air Quality Standards
- 1.1.39 NASA. National Aeronautics and Space Administration
- 1.1.40 NEPA. National Environmental Policy Act
- 1.1.41 NESHAP. National Emission Standards for Hazardous Air Pollutants
- 1.1.42 NHB. NASA Handbook
- 1.1.43 NMFS. National Marine Fisheries Service

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- 1.1.44 NPD. NASA Policy Directive
- 1.1.45 NPDES. National Pollutant Discharge Elimination System
- 1.1.46 NRHP. National Register of Historic Places
- 1.1.47 NSPS. New Stationary Pollutant Sources
- 1.1.48 ODS. Ozone Depleting Substance
- 1.1.49 OI. Organizational Issuance
- 1.1.50 OMEHS. Occupational Medicine and Environmental Health Services
- 1.1.51 OSHA. Occupational Safety and Health Administration
- 1.1.52 P2. Pollution Prevention
- 1.1.53 PCB. Polychlorinated Biphenyl
- 1.1.54 POC. Point of Contact
- 1.1.55 RCRA. Resource Conservation and Recovery Act
- 1.1.56 RMP. Risk Management Program
- 1.1.57 SAA. Satellite Accumulation Area
- 1.1.58 SID. State Industrial Discharge
- 1.1.59 SMP. Site Management Plan
- 1.1.60 TSCA. Toxic Substances and Control Act
- 1.1.61 USACE. U.S. Army Corps of Engineers
- 1.1.62 USFWS. U.S. Fish and Wildlife Service
- 1.1.63 UST. Underground Storage Tank
- 1.1.64 UXO. Unexploded ordnance

## 1.2 Definitions

1.2.1 Air Releases. Release of substances to the air that are known to cause, or reasonably anticipated to cause, death, injury, or serious adverse effects to human health or the

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environment.

1.2.2 Biohazardous Sharps Waste. Devices capable of cutting or piercing that are contaminated with biohazardous waste. Examples include contaminated hypodermic needles, scalpels, razor blades, and X-acto blades.

1.2.3 Bio-hazardous Waste. Waste (including animal carcasses) contaminated with infectious agents known to cause human illness and not contaminated with radioactive materials or hazardous chemicals.

1.2.4 Controlled Waste. Waste streams not classified as hazardous (according to regulation) but that require specific processing, handling, or disposal different from other solid wastes.

1.2.5 Dangerous Spill. A spill of materials or waste that may be a threat to human health or the environment if not contained and controlled.

1.2.6 Debris. Solid material exceeding a 60-millimeter particle size, intended for disposal, and is a manufactured object, or plant or animal matter, or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in 40 CFR, Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludge, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75 percent of their original volume. A mixture of debris that has not been treated to the standards provided by 40 CFR 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

1.2.7 Empty Acutely Toxic Container. A container or inner liner removed from a container that has held an acutely hazardous waste is empty if the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate. ("Triple rinse" refers to containers that have been flushed three times, each time using a volume of diluent at least equal to 10 percent of the capacity of the container. This solution should be collected in a properly labeled container.)

1.2.8 Empty Compressed Gas Cylinder. A container that has held a hazardous material that is a compressed gas is empty when the

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pressure in the container approaches atmospheric pressure.

1.2.9 Empty Container. A container or an inner liner removed from a container that held any hazardous material/waste, except a compressed gas or a container that is identified as an acute hazardous waste is empty if all removable materials have been removed using the practices commonly employed to remove materials from that type container (e.g., pouring, pumping, and aspirating); no more than one inch of residue may remain on the bottom of the container. Note: Empty containers can be hazardous.

1.2.10 Environmental Activities. Includes all projects, studies, analyses, monitoring, and operational involvement of Center elements where the objective is pollution abatement and/or improvement of environmental quality. Included are such activities as environmental assessments, environmental impact statements, construction and operational permits, air and water quality modeling and monitoring systems, ecological baselining, plant operations, effluent monitoring, sanitary landfill, pesticides applications, and flight impact studies (e.g., sonic boom, risk, and meteorology assessments).

1.2.11 Hazardous Material. Any material defined as hazardous under 29 CFR 1910.120(c) and includes material presenting health and/or physical hazard; such material has one or more toxic, flammable, corrosive, or reactive properties.

1.2.12 Hazardous Waste. A waste or combination of wastes that can pose a substantial or potential hazard to human health or the environment when not properly managed; possesses at least one of four characteristics (ignitable, corrosive, reactive, or toxic) or appears on special EPA lists; includes toxic waste, spilled materials, and unused chemicals.

1.2.13 Hazardous Waste Generator. Organization that creates hazardous waste byproducts.

1.2.14 Investigation-Derived Waste (IDW). Waste generated during well drilling (soil cuttings), purged water from monitoring wells, rinse waters, etc., from investigations of potentially contaminated sites.

1.2.15 Maximum Achievable Control Technology. Technology required for major sources of listed hazardous air pollutants, reflecting maximum degree of emission reductions achievable, taking into account availability, cost, and other factors.

1.2.16 Medical Waste. Bio-hazardous waste, bio-hazardous sharps

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waste, and pathology waste.

1.2.17 Noncompliance Activities. Areas where environmental activities are not in compliance with Federal, State, and local environmental laws and regulations.

1.2.18 Pathology Waste. Recognizable human anatomical parts and fixed human surgery specimens and tissues.

1.2.19 Recycling. The diversion of materials from the solid waste stream and the beneficial reuse of such materials.

1.2.20 Small Spill. Any spill that is not dangerous and can be properly cleaned up by the personnel responsible for the spill.

1.2.21 Solid Waste. Garbage, refuse, sludge, and other discarded solid materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities; but does not include solid or dissolved materials in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial wastewater effluents, dissolved materials in irrigation return flows, or other common water pollutants.

1.2.22 Special Waste. A waste that does not fall into the categories of hazardous or nonhazardous waste. Examples are spray on foam insulation, media blasting, batteries, universal waste, used oil.

1.2.23 Storm Water. Any runoff water or contained water resulting from rain.

1.2.24 Underground Storage Tank (UST). A storage tank and its integral piping system that has greater than 10 percent of its storage capacity in contact with the ground.

1.2.25 Unexploded Ordnance. Chemical and conventional military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or other cause.

1.2.26 Universal Waste. Those wastes that would normally be regulated as hazardous wastes, but that have been classified as "universal wastes" with alternative management standards. Examples include batteries, pesticides, mercury-containing thermostats, and lamps.

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1.2.27 Used Oil. Any oil that has been refined from crude oil or synthetic oil, will no longer be used for its original purpose, and must be disposed of or recycled.

## **2. RESPONSIBILITIES**

2.1 The MSFC Director is responsible for all environmental compliance activities of the Center, including its component installations (i.e., Michoud Assembly Facility, etc.).

2.2 The Center Operations Directorate, under the delegated authority of the MSFC Director, is responsible for the MSFC Environmental Compliance Program.

2.3 The EED has overall environmental responsibilities as the Center focal point for environmental activities. Under the delegated authority of the Director, Center Operations Directorate, the EED provides continuous surveillance, review, evaluation, and assurance of environmental activities at all levels throughout the Center. Under this authority, the EED has control for approval or cessation of all phases of acquisition and operation of hazardous or potentially hazardous facilities, systems, or equipment that may result in noncompliance with regulatory standards.

2.4 All Center Organizations, through the Directors/Managers of basic organizations, shall ensure that internal organizational plans and procedures are maintained to implement and comply with the Federal, State, and Local environmental laws and regulations.

## **3. PROCEDURES**

### **3.1 Personnel Training and Certification.**

As required to meet Federal, State, and NASA regulations, ordinances, and guidelines, all personnel involved in hazardous waste operations and transportation, chemical inventory, storm water management, asbestos, lead, and PCB abatement activities, emergency and chemical spill activities are required to undergo a training and certification program. Supervisors are responsible for ensuring that their employees complete the appropriate training.

3.1.1 Hazardous Waste Operations and Emergency Response (HAZWOPER) (29 CFR 1910.120). Employees designated to participate in emergency response operations or site remediation must be trained and certified before taking part in actual emergency operations and must receive annual refresher training.

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Annual refresher training is provided by the EED and meets OSHA 29 CFR 1910.120 requirements. Records of training and certification shall be retained by the employer for at least 5 years.

3.1.2 Hazardous Waste Personnel Training (ADEM Rule 335-14-6-.02(7)). Training and certification must be given to all hazardous waste operations personnel working at the MSFC Hazardous Waste Storage Facility (HWSF, Building 4640). This training must occur within six months of being hired, with employees not working in an unsupervised capacity until they are trained. Training must be renewed every 365 days. The employer shall retain records of training and certification for at least 5 years.

3.1.3 Hazardous and Controlled Waste Generator Training (ADEM Rule 335-14-5-.02(7)). Training must be given to personnel who utilize accumulation sites. This training must occur within six months of being hired or of assuming new duties that are associated with hazardous waste, with employees not working in an unsupervised capacity until they are trained. Training must be renewed annually. This training is provided by the EED.

3.1.4 Chemical Inventory Reporting Training. All personnel using hazardous chemicals must attend this training. This training is necessary for MSFC to maintain an accurate chemical inventory for reporting purposes. The Chemical Inventory Training Manual is available online at:

[http://eemo.msfc.nasa.gov/environmental/haz\\_mat/](http://eemo.msfc.nasa.gov/environmental/haz_mat/)

3.1.5 Incident Command Training. Employees designated to manage emergency response operations must be trained and certified and must receive annual refresher training. Annual refresher training is provided by the EED and meets 29 CFR 1910.120 requirements. The employer shall retain records of training and certification for at least 5 years.

3.1.6 Storm Water Inspection Training. All personnel involved in storm water inspections shall attend an annual training class provided by the EED to ensure that inspections are being carried out regularly and correctly.

3.1.7 Pollution Prevention Training. All personnel shall have access to voluntary pollution prevention training provided by the EED. This training will be self-paced, self-explanatory, and will increase employee awareness of pollution prevention goals and opportunities.

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3.1.8 Air Compliance Awareness Training. Operators of Title V Permit significant, insignificant, and trivial sources shall be trained in basic essentials in equipment maintenance, source inspection, and record keeping.

3.1.9 Spill Prevention, Control, and Countermeasures Training. All above ground storage tank (AST) and UST users and operators shall attend an annual spill prevention briefing provided by the EED. These briefings will cover the following: loading and unloading procedures; site drainage; spill response procedures; applicable pollution control laws and regulations; known spill events or failures, malfunctioning storage components, and precautionary measures.

3.1.10 Affirmative Procurement Training. The training will consist of informing personnel of the current list of designated items on EPA Comprehensive Procurement Guidelines program, process for waiver and acceptable reasons and any proposed designated items. Personnel should complete this training if they purchase any items from the following product categories: construction, landscaping, office products, paper and paper products, park and recreations products, transportation, vehicular.

3.1.11 Environmental Essentials for Construction Contractors. The training will provide basic principles of understanding for construction contractors for waste management, chemical management, threatened and endangered species, and wetland locations.

### 3.2 Waste Management.

The broad goals set by Resource and Conservation Recovery Act (RCRA) include protecting human health and the environment from the hazards posed by waste disposal; conserving energy and natural resources through waste recycling and recovery; reducing or eliminating the amount of waste generated; and managing wastes to protect human health and the environment.

Solid waste compliance includes activities pertaining to hazardous waste, controlled waste, special waste, universal waste, used oil, and debris. The programs under RCRA focus on three waste categories:

- Subtitle C – This hazardous waste program regulates hazardous waste from origination to its ultimate disposal.
- Subtitle D – This solid waste program includes minimum Federal

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technical standards and guidelines for State solid waste plans.

- Subtitle I – This UST program regulates underground tanks that contain petroleum or hazardous substances (as defined under CERCLA).

3.2.1 Responsibilities of the EED. The EED shall:

3.2.1.1 Ensure proper management and disposal of hazardous and controlled wastes in accordance with applicable regulations.

3.2.1.2 Provide guidance and instruction to MSFC user organizations regarding hazardous and controlled waste management and disposal.

3.2.1.3 Provide training for organization personnel.

3.2.1.4 Properly dispose of waste materials in accordance with MWI 8550.1, "Waste Management."

3.2.1.5 Provide guidance and instructions to MSFC user organizations regarding universal wastes and other materials to be recycled.

3.2.1.6 Obtain one-time written and signed notice from used oil burner prior to shipping any off-specification used oil fuel to used oil burner.

3.2.1.7 Report to State and Federal agencies as needed.

3.2.2 Responsibilities of MSFC User Organizations. Each organization using or generating hazardous and controlled wastes shall:

3.2.2.1 Ensure that waste materials generated are properly managed as listed in MWI 8550.1, "Waste Management."

3.2.2.2 Appoint one Point of Contact (POC) and two alternates for each container collecting waste area and ensure that the personnel attend the hazardous and controlled waste generator training.

3.2.2.3 Maintain hazardous material/waste tanks and containers to ensure structural integrity.

3.2.2.4 Maintain proper identification and labeling of all hazardous material/waste in the area.

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3.2.2.5 Turn in chemicals with expired shelf life, unneeded, or obsolete.

3.2.2.6 Ensure employees attend training sessions.

3.2.2.7 Identify all expected waste-producing processes prior to beginning the process and submit the MSDS and MSFC Form 4072 to the EED. See MPG 1840.2, "MSFC Hazard Communication Program," for proper distribution of MSDS.

### 3.2.3 Guidelines.

3.2.3.1 Specific instructions for waste management are listed in MWI 8550.1, "Waste Management," and cover the following: New or existing hazardous waste streams, medical waste, chemical product disposal, unknown chemical disposal, empty container management, and debris disposal.

3.2.3.2 Handling of medical waste or other potential infectious materials will be in accordance with MPG 1800.1, "Bloodborne Pathogens."

3.2.3.3 Training of employees with potential occupational exposure is the responsibility of each MSFC user organization/contractor involved in the generation of controlled waste and must be provided at the time of initial assignment and as required thereafter.

3.2.3.4 If the waste material is a recyclable item (e.g., drums, pallets, white paper, cardboard, toner cartridge, oil, tires), ensure that the item is recycled by placing it in the appropriate recycle bin or by contacting the Center Recycling Coordinator.

3.2.3.5 Regular trash shall be placed in regular garbage cans/dumpsters.

### 3.3 Hazardous Materials Compliance.

The EPCRA of 1986 establishes requirements regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. Section 311 requires facilities that have MSDSs for chemicals held above certain quantities to submit either copies of their MSDSs or a list of MSDS chemicals to the State Emergency Response Commission, the local emergency planning committee, and the local fire department.

MSFC maintains an inventory of chemicals used/stored on-site for reporting the annual chemical inventory and toxic release

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inventory to EPA, ADEM, and other regulatory agencies.

3.3.1 Responsibilities of the EED. The EED shall:

3.3.1.1 Ensure proper tracking and reporting of hazardous materials. This reporting is maintained in accordance with the EED Records Plan.

3.3.1.2 Maintain a chemical inventory database of all hazardous materials used at MSFC. See Section 4 for records disposition.

3.3.1.3 Report, as required, to Agencies about hazardous chemicals at MSFC.

3.3.2 Responsibilities of MSFC User Organizations. MSFC user organizations shall: (a) appoint at least one hazardous material POC for each office/department within the organization; (b) accurately report hazardous material stored and used per chemical inventory requirements; and (c) keep all lists up to date.

3.3.3 Guidelines for Hazardous Materials Compliance. Specific procedures are documented in MPG 1840.3, "MSFC Hazardous Chemicals in Laboratories Protection Program," and MWI 8550.5, "Hazardous Materials Compliance," for each laboratory facility, and shall be followed.

3.4 Chemical Spills.

Under EPCRA, facilities must immediately notify the local emergency planning committee (Redstone Arsenal Emergency Planning Committee) and the State Emergency Response Commission if there is a release into the environment of a hazardous substance that is equal to or exceeds the minimum reportable quantity set in the regulations. This requirement covers 356 extremely hazardous substances and more than 700 hazardous substances subject to the emergency notification requirements under CERCLA Section 103(a)(40 CFR 302.4). A written follow-up notice must be submitted to the local emergency planning committee and the State Emergency Response Commission as soon as practicable after the release. The follow-up notice must update information included in the initial notice and provide information on actual response actions taken and advice regarding medical attention necessary for citizens exposed.

3.4.1 Responsibility of the EED. The EED shall:

3.4.1.1 Respond to any spill when requested or when notified by a 911 emergency call.

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3.4.1.2 Provide direction in proper cleanup of chemical spills.

3.4.1.3 Notify ADEM and EPA of all reportable quantity spills, as required, and provide written follow-up, as needed in accordance with AD10-OWI-001, CERP.

3.4.2 Responsibility of MSFC User Organizations. Each organization shall:

3.4.2.1 Evaluate whether the spill can be cleaned up internally.

3.4.2.2 Begin immediate cleanup of small spills of known type and quantity; call 544-3919 for assistance, if necessary.

3.4.2.3 Call 911 for all other spills, including small spills of unknown type, all dangerous chemical spills, and all large spills. Organizations shall implement MPG 1040.3, "MSFC Emergency Plan," Environmental HAZMAT/Radiological/Ordnance Normal-Duty and After-Duty Hours section to include notifications/activations and the steps/actions to be taken.

3.4.2.4 Clean up spill and ensure proper disposal of waste materials from small spills. Notify EED of all spills regardless of size, such that a determination will be made whether the spill exceeds a reportable quantity as defined in 40 Code of Federal regulations 300.

3.4.2.5 Submit a Mishap Report per MWI 8621.1, depending on the severity of the spill.

3.4.3 Guidelines.

All chemical spills shall be cleaned up immediately after occurrence to ensure the safety of employees and to protect the environment.

3.5 Ordnance.

MSFC is committed to ensuring that human health, environmental, and safety concerns are addressed in the event that unexploded ordnance (UXO) is discovered. To address these concerns, MPG 1040.3, "MSFC Emergency Plan," addresses the discovery of UXO.

3.5.1 Responsibility of the EED. The EED maintains a current map of known UXO in coordination with the U.S. Army. This map is maintained by the EED Geographic Information System (GIS) database.

3.5.2 Responsibility of MSFC User Organizations. Organizations

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shall implement MPG 1040.3, "MSFC Emergency Plan," Environmental HAZMAT/Radiological/Ordnance Normal-Duty and After-Duty Hours section to include notifications/activations and the steps/actions to be taken.

### 3.5.3 Guidelines.

EED must sign off on all dig permits obtained through the Facilities Engineering Department in accordance with AD20-OWI-012, "MSFC Digging Permits."

### 3.6 Pollution Prevention (P2).

P2 is the most cost-effective approach to environmental management. By reducing the use of toxic chemicals, P2 improves worker health and safety, protects the environment, helps maintain facility compliance with environmental regulations, and saves money. The MSFC goal is to meet Federal requirements to reduce the release and off-site transfer of toxic chemicals without jeopardizing its mission.

P2 includes source elimination or reduction, material replacement or substitution, affirmative procurement, recycling, and conservation of fuel, energy, and water. As a Federal agency, NASA is expected to comply with specific Executive Orders (EOs) regarding P2. Applicable EOs are listed and described in Table 3.6.

Table 3.6 Summary of Executive Orders

| Executive Order   | Description  |
|---|--|
| EO 13101 "Greening the Government through Waste Prevention, Recycling, and Federal Acquisition" | Affirmative procurement of environmentally preferable products containing recycled or recovered material |
| EO 13123 "Greening the Government through Efficient Energy"                                     | Reduce greenhouse gas emissions from facility energy use by 30% by 2010                                  |
| EO 13148 "Greening the Government through Leadership in Environmental Management"               | Emphasize pollution prevention as a means to both achieve and maintain environmental compliance          |
| EO 13149 "Greening the Government through Federal   | Reduce the MSFC vehicle fleet annual petroleum consumption by  |

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Table 3.6 Summary of Executive Orders

| Executive Order                      | Description |
|--------------------------------------|-------------|
| Fleet and Transportation Efficiency" | 20% by 2005 |

Per EO 13148, MSFC has developed a new "Pollution Prevention Plan." MSFC employees and contractors should review this Plan to understand the goals and requirements of the EOs listed in Table 3.6, and to understand the requirements for MSFC organizations and contractors. The Plan may be viewed on the Web at

[http://eemo.msfc.nasa.gov/environmental/activities/p2/P2\\_Plan\\_2002.pdf](http://eemo.msfc.nasa.gov/environmental/activities/p2/P2_Plan_2002.pdf)

3.6.1 Responsibilities of the EED. The EED shall:

3.6.1.1 Develop and annually update a MSFC P2 Plan and pursue the goals set forth in the P2 Plan in accordance with the EED Records Plan. The P2 Coordinator is the custodian of the MSFC P2 Plan.

3.6.1.2 Ensure that MSFC complies with applicable EOs regarding pollution prevention.

3.6.1.3 Appoint a P2 Coordinator within EED to develop, implement, and maintain the MSFC P2 Plan.

3.6.1.4 Distribute copies of the P2 Plan to Directorate and Office managers, to those involved in P2 projects and activities, and to others as requested.

3.6.1.5 Establish and maintain a MSFC P2 Team as necessary to accomplish P2 goals and objectives. This team will be led by the P2 Coordinator.

3.6.2 Responsibility of the Manager, FED, and the Energy Manager. The Manager, FED, shall appoint an Energy Manager to implement the MPD 8570.1, "MSFC Energy Management Program." The Energy Manager shall implement MPD 8570.1 and EO 13123.

3.6.3 Responsibilities of MSFC User Organizations. Organizations shall:

3.6.3.1 Use less hazardous or less toxic materials when and where feasible.

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3.6.3.2 Actively seek and use less hazardous chemicals instead of hazardous chemicals.

3.6.3.3 Provide a representative to the MSFC P2 Team, if requested by the EED. Current P2 Team participants are listed in the MSFC P2 Plan.

3.6.3.4 Perform life-cycle costing when evaluating new processes and/or modifications to ensure cost-effective considerations.

3.6.3.5 Whenever possible, purchase products containing recycled material in accordance with EO 13101 and MWI 8540.2, "Affirmative Procurement Program for Environmentally Preferable Products."

#### 3.6.4 Guidelines for Recycling.

3.6.4.1 White office paper should be placed into the labeled blue recycle containers provided in offices and reproduction rooms throughout Center buildings for paper recycling. Acceptable paper items include:

- Computer paper, shaded (14-7/8" wide)
- White computer paper (8-1/2" wide)
- White bond paper (e.g., typing paper)
- White tablet paper
- *Marshall Star*
- Old documents on white bond paper
- Envelopes (white, without address window)
- White letterhead stationery

3.6.4.2 Items that cannot be recycled with white office paper include:

- Manila file folders
- Colored paper
- Newspapers, phonebooks
- Carbon paper, blueprints
- Self-stick removable notes
- Glossy, slick paper
- Food coverings (paper containing foil, wax, etc.)
- Adding machine tape
- Poster stock
- Tissues, napkins, etc.
- Magazines or catalogs

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3.6.4.3 Corrugated cardboard should be placed near normal trash collection locations within the building and designated as "trash." Custodial personnel will periodically collect and transport the boxes to the cardboard recycle facility.

- Moving boxes should not be recycled, as they will be re-used by the furniture movers. Contact the logistics contractor to coordinate collection of moving boxes.
- Care shall be taken to ensure that corrugated cardboard staged for collection and recycling does not interfere with building traffic flow or block emergency exit routes.
- Contact the custodial contractor to request special pickups of unusually large quantities of cardboard, or guidance on safe and proper staging of these materials.

3.6.4.4 Recycle plastic bottles by placing them in the appropriately labeled recycle containers, typically located near vending machines containing 20-ounce bottled drinks. If there is not a container in your area, call the Recycling Coordinator to request one.

3.6.4.5 Recycle aluminum cans by placing them in the appropriately labeled recycle containers located in high traffic areas of MSFC buildings. Empty cans before placing them into recycle containers to minimize odor, insect and animal pests, and potential health concerns.

3.6.4.6 Recycle toner cartridges by placing them in the appropriately labeled recycle containers generally located in building hallways. Contact the logistics contractor to coordinate pick-up of used toner cartridges.

3.6.4.7 Recycle telephone books during the publicized annual recycling campaign by depositing them in the specially marked telephone book recycle containers placed in high traffic areas of MSFC buildings.

3.6.4.8 Recycle lead cell batteries by calling the hazardous waste contractor for pickup.

3.6.4.9 Recycle fifty-five-gallon drums by calling the hazardous waste contractor for turn-in of unused drums. The hazardous waste contractor will determine which drums may be recycled.

3.6.4.10 Recycle used motor oil by calling the hazardous waste contractor for pickup.

3.6.4.11 Recycle engine coolant by calling the hazardous waste

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contractor for pickup.

3.6.4.12 Recycle scrap metal by placing all scrap metal in the scrap metal dumpsters provided. Material other than scrap metal should not be placed in these dumpsters.

3.6.4.13 Recycle wooden pallets by placing all wooden pallets in the designated collection area for wooden pallets.

3.6.4.14 Personnel should not bring items from home to recycle at MSFC.

3.6.4.15 Personnel may recommend new items to consider for recycling by contacting the Recycling Coordinator.

### 3.7 Air Compliance.

CAA is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect health and the environment. The goal of the act was to set and achieve NAAQS in every state by 1975. The setting of maximum pollutant standards and New Source Performance Standards was coupled with directing the States to develop State Implementation Plans applicable to industrial sources in the State.

The act was amended in 1977 primarily to set new goals for achieving NAAQS because many areas of the country failed to meet the deadlines. In addition, the Prevention of Significant Deterioration program was added. The 1990 amendments to CAA in large part were intended to meet unaddressed or insufficiently addressed problems such as acid rain, ground-level ozone, State permitting programs (Title V), stratospheric ozone depletion, and air toxins.

MSFC is a Title V air major source under the CAA Amendments of 1990. As such, emission sources such as paint booths, sandblast facilities, fuel-burning equipment, boilers, fuel tanks, generators, and degreasers that initially require individual construction permits are included in a Title V permit issued by ADEM. MSFC policy is to comply with all CAA laws and regulations enforced by EPA and ADEM.

#### 3.7.1 Responsibilities of the EED. The EED shall:

3.7.1.1 Provide guidance as necessary to those organizations responsible for processes that produce air emissions, in order to stay within the MSFC air permit guidelines or regulated emissions

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standards.

3.7.1.2 Develop and maintain a Risk Management Program (RMP) for MSFC, as needed, in accordance with Section 112(r) of the CAA Amendments of 1990, 40 CFR 68.

3.7.1.3 Ensure that MSFC complies with all EPA and ADEM air permitting and RMP requirements as described in MWI 8550.4, "Air Emissions Compliance." The Title V Air, Operating Permit is renewed at 5-year intervals. The significant and insignificant source lists are updated semiannually or as needed based on new sources.

3.7.1.4 Maintain a current copy of the Title V Permit and significant and insignificant source links at the following hyperlink:

<http://eemo.msfc.nasa.gov/environmental/activities/air/default.shtm>

3.7.1.5 Initiate necessary corrective action as required by the EPA and/or ADEM in the event of noncompliance.

3.7.2 Responsibilities of MSFC User Organizations. Each organization shall:

3.7.2.1 Implement air permitting compliance activities as listed in MWI 8550.4, "Air Emissions Compliance."

3.7.2.2 Replace regulated substances with nonregulated substances, where possible. This includes paints, solvents/cleaning solutions, and any other Hazardous Air Pollutant (HAP) or Ozone Depleting Substance (ODS).

3.7.2.3 Notify the EED of new or replacement air emission sources as listed above.

3.7.2.4 Notify the EED of any changes in quantities of liquid hydrogen, liquefied natural gas, or propane stored on-site for which the organization is responsible. As processes are added that use one of these chemicals, the organization shall notify the EED immediately.

3.7.2.5 If an RMP is needed at MSFC as determined by the EED, provide information to the EED in support of the development and implementation of the RMP.

3.7.3 Guidelines.

None.

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### 3.8 Storm Water and Wastewater Compliance.

CWA is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The law gave EPA the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters. CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the act.

The 1977 amendments focused on toxic pollutants. In 1987, CWA was reauthorized and again focused on toxic substances, authorized citizen suit provisions, and funded sewage treatment plants (publicly owned treatment plants) under the Construction Grants Program. CWA provides for the delegation by EPA of many permitting, administrative, and enforcement aspects of the law to State governments.

MSFC maintains a water quality compliance program to achieve and maintain compliance with CWA and EPA and State water quality requirements. The NPDES and the SID permits regulate MSFC Wastewater Management, which includes storm water runoff and industrial waste discharge. These permits are issued by ADEM and are renewed at 5-year intervals.

#### 3.8.1 Responsibility of the EED. The EED shall:

3.8.1.1 Provide contractor storm water inspector(s) to regularly inspect designated storm water inspection sites at designated intervals as described in MWI 8550.2, "Storm Water Management."

3.8.1.2 Provide training as described in paragraphs 3.1.6 and 3.1.9 for personnel required to implement the Best Management Practices (BMPs) and retain documentation of such training, which shall be made available for inspection by an ADEM or EPA official.

3.8.1.3 Identify potential sources of storm water and wastewater pollution. Storm water sources are listed in AD10-OWI-001, "Consolidated Environmental Response Plan."

3.8.1.4 Notify the user of new sources identified within the user's designated area of responsibility and provide oversight and guidance for making sewer connections pursuant to MWI 8550.3, "Wastewater Compliance."

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3.8.1.5 Control the discharge of industrial wastewater and ensure compliance with the NPDES and SID permits as described in MWI 8550.3, "Wastewater Compliance."

3.8.2 Responsibilities of MSFC User Organizations. Each organization shall:

3.8.2.1 Comply with all NPDES and SID permit conditions as described in MWI 8550.3, "Wastewater Compliance." Failure may result in fines, civil or criminal penalties, or other legal enforcement actions.

3.8.2.2 Cooperate with the EED storm water inspector(s).

3.8.2.3 Train organization personnel regarding the proper operation of equipment and processes associated with the following sources: USTs and ASTs, hazardous waste/material storage areas, IDW, storage yards, construction activities, erosion, sandblasting, materials handling/fueling areas, equipment parking and maintenance areas/mobile equipment, vehicle washing and maintenance activities, painting and paint removal operations, aboveground pipelines, and buried pipelines.

3.8.2.4 Identify potential sources of storm water and wastewater pollution to the EED.

3.8.2.5 Design proper sewer connections for appropriate activities and discharges as described in MWI 8550.3, "Wastewater Compliance."

3.8.2.6 Notify the EED of any additions or deletions to the list of storm water inspection sites in the user's area. This list is maintained in accordance with AD10-OWI-001, "Consolidated Environmental Response Plan."

3.8.2.7 Notify the EED whenever changes occur at the facility that could affect storm water quality.

3.8.3 Guidelines.

Only the contractor storm water inspector is authorized to release storm water from containment areas.

3.9 Toxic Substance Management.

The Toxic Substances and Control Act (TSCA) of 1976 was enacted by Congress to give EPA the ability to track the 75,000 industrial chemicals currently produced by or imported into the United States. EPA repeatedly screens these chemicals and can

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require reporting or testing. TSCA supplements other Federal statutes, including CAA and the Toxic Release Inventory under EPCRA.

MSFC addresses the applicable regulations regarding asbestos, lead, and Polychlorinated Biphenyl (PCB) management to prevent illness to employees and damage to the environment from the use, removal, and disposal of toxic substances.

3.9.1 Responsibilities of the EED. The EED shall:

3.9.1.1 Support the OMEHS as necessary regarding asbestos, lead, PCBs, etc., and their effect on the environment.

3.9.1.2 Provide guidance on the requirements of Federal, State, and Local environmental regulations.

3.9.1.3 Provide guidance and oversight on the disposal of asbestos-containing material (ACM), lead, and PCBs, as well as air, water, or soil pollution issues.

3.9.1.4 Ensure proper disposal of lead and PCB wastes.

3.9.2 Responsibilities of the Facilities Engineering Department. The Facilities Engineering Department shall:

3.9.2.1 Maintain a tracking system of asbestos and lead abatement or encapsulation projects and maintain records on each abatement project including location, cost, ADEM notifications, and asbestos landfill receipts. This tracking system is maintained by the MSFC Facilities support contractor.

3.9.2.2 Ensure that building occupants and employers are properly notified in advance of, during, and following the completion of asbestos abatement work or any activity that disturbs ACM.

3.9.2.3 Ensure notification of scheduled asbestos abatement to facility occupants, the Building Manager, and/or the Organizational Safety Representatives as applicable.

3.9.2.4 Ensure that ACM that may be disturbed in any renovation and maintenance activities is identified through support from OMEHS in the scope of work and removed only by qualified asbestos abatement or maintenance workers.

3.9.2.5 Coordinate approval of abatement projects with the Occupational Medicine and Environmental Health Services (OMEHS).

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3.9.3 Responsibilities of the OMEHS. The OMEHS shall:

3.9.3.1 Verify that asbestos related work is performed in accordance with all applicable regulations such as work site barriers and posting of warning signs.

3.9.3.2 Verify that all contractor employees have completed necessary training including any specialized asbestos and lead abatement training as specified by OSHA and perform 10-day notifications to the State as required.

3.9.3.3 Review and approve job-specific procedures for all abatement projects for compliance with applicable regulations.

3.9.3.4 Manage and administer a medical surveillance program for applicable civil service and on-site contractor personnel.

3.9.3.5 Provide training, fit testing, and certification of personnel requiring the use of respiratory protection equipment in accordance with MPD 1840.3, "MSFC Respiratory Protection Program."

3.9.3.6 Provide applicable air monitoring, air/bulk sample collection, identification, and analysis, including transmission electron microscopy, of potential ACM as required and for asbestos-related projects performed by onsite contractors, and maintain asbestos bulk and air monitoring results.

3.9.3.7 Provide monitoring, as needed, during abatement projects to ensure compliance with regulations.

3.9.3.8 Provide oversight to asbestos-related activities performed by offsite contractors.

3.9.3.9 Provide guidance on the requirements of Federal, State, and Local occupational and environmental health regulations.

3.9.3.10 Perform clearance inspections and monitoring following abatement activities.

3.9.4 Responsibility of MSFC Organizations. Each organization shall immediately report environmental concerns related to asbestos, lead, PCBs, etc., to the Occupational Medicine and Environmental Health Services Office.

3.9.5 Guidelines.

Lead coatings on scrap metal are acceptable for salvage at recycling centers.

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### 3.10 CERCLA.

Congress enacted CERCLA, commonly known as Superfund, on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

CERCLA also enabled the revision of the National Contingency Plan (NCP), which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. The Superfund Amendments and Reauthorization Act amended CERCLA on October 17, 1986.

The guiding principal of the MSFC CERCLA program is the protection of human health and the environment. The program consists of actions that address: (a) potential releases that may contribute to off-site migration, primarily through ground water; (b) on-site releases that may have a potential for exposure to on-site workers; and (c) the most environmentally sensitive areas at MSFC. The goals are as follows:

- Investigate and eliminate risks to human health and the environment.
- Protect and satisfy the public.
- Use public funds responsibly.
- Meet regulatory requirements.
- Minimize adverse effects on the NASA mission.

The implementation of these goals is managed through the program's Site Management Plan (SMP).

#### 3.10.1 Responsibilities of the EED. The EED shall:

##### 3.10.1.1 Ensure MSFC compliance with CERCLA and the Federal

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Facilities Agreement (FFA).

3.10.1.2 Maintain a current copy of the SMP.

3.10.1.3 Identify CERCLA sites, determine appropriate methods of remediation, and initiate the remediation process.

3.10.1.4 Review construction design drawings to ensure proposed construction is appropriate for the site as determined by the Memorandum of Agreement (MOA) for Land Use Control (LUC) for 22 MSFC CERCLA sites and allowable access as determined by CERCLA.

3.10.1.5 Ensure that proper spill reporting has been completed.

3.10.2 Responsibilities of MSFC User Organizations. Each organization shall:

3.10.2.1 Notify the EED of any potentially contaminated site(s). The Environmental Protection Agency maintains the list of contaminated sites at MSFC.

3.10.2.2 Coordinate construction of facilities at locations of CERCLA sites with the EED.

3.10.2.3 During construction activities, notify the EED of unidentified odors, discoloration, or any suspected areas of contamination. Call 911 for reporting suspected dangerous situations.

3.10.2.4 Notify the EED of spills so that reporting requirements can be evaluated.

3.10.3 Guidelines for Access to Superfund Sites. Personnel requiring access to Superfund site shall:

3.10.3.1 Have 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) certification.

3.10.3.2 Obtain EED approval (call 4-4246) prior to disturbing or removing potentially contaminated materials from the site (i.e., soil, groundwater, building materials). These sites are identified on a Superfund map maintained by EED. The current map of areas of concern is at the following link:

[http://eemo.msfc.nasa.gov/environmental/maps/luc\\_msfc\\_swmu.pdf](http://eemo.msfc.nasa.gov/environmental/maps/luc_msfc_swmu.pdf)

3.11 National Environmental Policy Act (NEPA).

NEPA was one of the first laws written (1969) that establishes a

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broad national framework for protecting the environment. Under NEPA, all Federal agencies have a continuing responsibility to minimize adverse environmental impacts and to preserve and enhance the environment as a result of implementing Federal plans and programs.

Before an action is taken, NEPA requires NASA to consider environmental values in the planning of Agency actions and activities that may have an impact upon human health and the environment. NEPA directs that NASA consider alternatives to its proposed activities and requires that environmental factors be considered alongside the technical and economic considerations that are normally incorporated into NASA decision making. NEPA also requires that the information be available to NASA decision makers in a timely manner to enable examination of the environmental consequences of the proposed action or activity being considered, and that those environmental considerations be available to the public as well as to other Federal, State, and Local agencies.

3.11.1 Responsibilities of the EED. The EED shall:

3.11.1.1 Ensure MSFC compliance with NEPA and the Council of Environmental Quality (CEQ).

3.11.1.2 Ensure that all actions (e.g., program, project, construction) are considered for environmental impacts prior to decisions.

3.11.1.3 Recommend and assist in the implementation of a plan of action for satisfying NEPA requirements specified in 14 CFR 1216, NASA Environmental Quality.

3.11.2 Responsibilities of MSFC User Organizations. Each organization shall:

3.11.2.1 Be responsible for compliance with NEPA and Council on Environmental Quality (CEQ).

3.11.2.2 At the onset of a program or project complete the environmental Evaluation Checklist (contact EED to obtain the latest version) and submit to EED.

3.11.2.3 Consult with EED to determine appropriate requirements to meet NEPA regulations and NPG 8580 (pending), "Implementing the Provisions of the National Environmental Policy Act and Executive Order 12114."

3.11.3 Guidelines.

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At the onset of a program or project, program management shall consult with the EED for guidance in satisfying NEPA requirements. Refer to NASA Headquarters Environmental Management Reference Manual

<http://eemo.msfc.nasa.gov/environmental/cabinet/emrm2.pdf>

### 3.12 Threatened and Endangered Species.

The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and their habitats. The U.S. Fish and Wildlife Service (USFWS) of the Department of the Interior maintains the list of endangered species and threatened species. Species include birds, insects, fish, mollusks, reptiles, mammals, crustaceans, flowers, grasses, and trees. The law prohibits any action, administrative or real, that results in a "taking" of a listed species or that adversely affects habitat.

MSFC seeks to protect threatened and endangered species, both flora and fauna. When proposing a project, MSFC will consult with the USFWS and the Alabama Department of Conservation and Natural Resources regarding the potential to affect threatened and endangered species.

#### 3.12.1 Responsibility of the EED. The EED shall:

3.12.1.1 Ensure that threatened and endangered species are protected.

3.12.1.2 Provide awareness training as necessary to designers, construction, and maintenance personnel.

3.12.1.3 Obtain biological assessments and opinions as required to support construction/maintenance activities at MSFC. This process typically takes 90 days.

3.12.1.4 Maintain a "Field Manual of Threatened and Endangered Species Potentially Occurring at MSFC" and make available via the Internet. The following hyperlink provides the field manual:

[http://eemo.msfc.nasa.gov/environmental/activities/critical/field\\_manual.pdf](http://eemo.msfc.nasa.gov/environmental/activities/critical/field_manual.pdf)

3.12.1.5 Implement formal consultation process to obtain regulating agency approval for actions with potential impact to threatened and endangered species.

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3.12.2 Responsibility of MSFC User Organizations. Each organization shall:

3.12.2.1 Ensure that the "Field Manual of Threatened and Endangered Species Potentially Occurring at MSFC" is made available to personnel responsible for design, construction, and maintenance activities.

3.12.2.2 Notify the EED immediately if threatened or endangered species are encountered during construction and/or maintenance activities and immediately suspend activities.

3.12.2.3 Avoid site construction activities, if practicable, in areas known to contain threatened and endangered species.

3.12.3 Guidelines.

None.

3.13 Wetland Permitting Procedures.

Two types of permits are administered by the U.S. Army Corps of Engineers (USACE) Section 404 program under CWA: (1) Individual and (2) General (Nationwide or Predischarge Notification). The type of permit and the length of internal review depend on the nature of the projects and the type and extent of wetlands affected.

For projects involving potentially significant impacts, authorization usually must be sought through an application for an individual permit. The individual permit requires detailed information about the project and its potential effects on the environment. The information in the permit application is reviewed by several regulatory agencies including the USFWS and the National Marine Fisheries Service (NMFS). In addition to the regulatory review, the individual permit application undergoes a public notice review that is scheduled for 30 days but may be longer if comments are significant.

The nationwide permit is the type of general permit used for common, minor construction projects that will occur in a localized area but are similar in scope throughout the nation, such as the construction of an underground pipeline that crosses wetlands, construction of road crossings through wetlands, and discharges into wetlands located above headwaters.

3.13.1 Responsibilities of the EED. The EED shall:

3.13.1.1 Ensure that construction projects and/or maintenance

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activities impacting wetlands are permitted.

3.13.1.2 Determine whether a general permit or individual permit must be obtained from the USACE.

3.13.1.3 Review, approve, and submit permit applications for the MSFC.

3.13.1.4 Maintain wetland maps and include with MSFC Master Plans. The wetland map can be accessed at:

<http://eemo.msfc.nasa.gov/environmental/maps/wetlands.pdf>

3.13.1.5 Ensure that all requirements in a wetland permit are effectively implemented.

3.13.2 Responsibilities of MSFC User Organizations. Each organization shall:

3.13.2.1 Ensure that construction projects and/or maintenance activities are identified to the EED in a timely manner so that permits can be obtained to meet established schedules. (Typically, the EED will require 120 days advance notice to meet construction/maintenance schedules.)

3.13.2.2 Implement any required mitigation specified in a wetland permit.

3.13.2.3 Provide necessary data as requested by the EED for the wetland permit application.

3.13.3 Guidelines.

3.13.3.1 If less than 0.1 acre of wetlands will be impacted, the action may be covered under the nationwide permit.

3.13.3.2 If greater than 0.1 acre and less than 0.5 acre of wetlands will be impacted, the EED shall coordinate with regulating agency before proceeding with action.

3.13.3.3 If greater than 0.5 acre of wetlands will be impacted, the EED shall proceed with obtaining permit.

3.14 Pesticides.

The primary focus of Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) is to provide Federal control of pesticide distribution, sale, and use. EPA was given authority under FIFRA to study the consequences of pesticide usage and to

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require users (farmers, utility companies, and others) to register when purchasing pesticides. Through later amendments to the law, users also must take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by EPA. Registration ensures that pesticides will be properly labeled and that if used in accordance with specifications, will not cause unreasonable harm to the environment.

MSFC maintains safe, effective, and environmentally sound pest management pursuant to FIFRA to prevent or control pests that may adversely impact the health of personnel or damage structures or property.

3.14.1 Responsibility of the EED. The EED shall:

3.14.1.1 Inspect the pesticide storage facilities to verify that the pesticides are stored properly, to verify that equipment is in working order, to review where chemicals are mixed, and to confirm that records on pesticide management and use are maintained.

3.14.2 Responsibilities of Facilities Engineering Department and Integrated Customer Support Department (AD60). These organizations shall:

3.14.2.1 Maintain MSDSs for the pesticides used at MSFC.

3.14.2.2 Exercise oversight and review of pest management activities throughout MSFC.

3.14.2.3 Conduct onsite reviews of the MSFC pest control program on an annual basis.

3.14.2.4 Provide management support, resources, and a professionally qualified licensed pest management staff sufficient to ensure effective implementation of pest management.

3.14.2.5 Ensure that all pesticide applications are made only by properly trained and licensed personnel.

3.14.2.6 Ensure that all pest control is performed in accordance with Federal, State, and Local environmental laws and regulations. The Contractor shall maintain on-site all application records and these records shall be available for inspection by Government and other environmental inspectors at all times.

3.14.3 Guidelines.

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To ensure good air quality, employees shall not use pesticides for indoor office plants.

### 3.15 Historic Preservation.

The National Historic Preservation Act of 1966 provides the mechanism through which historically or culturally significant buildings, structures, and other objects are protected and preserved. The act established a National Register of Historic Places and the Advisory Council on Historic Preservation (ACHP).

Federal agencies are required to consider the effects of their undertakings on historic resources and to give ACHP a reasonable opportunity to comment on those undertakings. The NPG 8580, "Implementing the Provisions of the National Environmental Policy Act and Executive Order 12114," guidelines include specific procedures for the evaluation of potentially historic sites and structures within NASA property.

#### 3.15.1 Responsibilities of the Facilities Engineering Department. The Facilities Engineering Department shall:

3.15.1.1 Appoint a Historic Preservation Officer.

3.15.1.2 Evaluate the potential eligibility of sites within a project planning area for historical significance through direct contact with the State Historic Preservation Officer, published lists of the National Register of Historic Places (NRHP), public records, or other organizations with historical and cultural experience.

3.15.1.3 In instances where it is unclear whether cultural resources would be affected, initiate a study before construction of land-disturbing activities begins.

3.15.1.4 Initiate a request for determination of eligibility from the Secretary of the Interior in conjunction with the ACHP when a potential affected property meets the criteria of the NHPA.

3.15.1.5 Ensure that MSFC cultural resources will be properly managed.

3.15.2 Responsibility of MSFC User Organizations. Organizations shall comply with cultural resources requirements as identified by FED.

3.15.3 Guidelines.

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None.

### 3.16 Radiation.

The Occupational Medicine and Environmental Health Services (OMEHS) shall implement the Radiation/Laser Safety Program per MPD 1860.1, "Laser Safety," and MPD 1860.2, "Radiation Safety Program."

## **4. RECORDS**

4.1 Hazardous Waste Personnel Training records shall be maintained by the employer for at least 5 years then disposed.

4.2 Hazardous and Controlled Waste Generator Training records for contractors shall be maintained by EED for 2 years then disposed. Civil service personnel training records will be maintained in ADMINSTAR.

4.3 HAZWOPER Training records of training and certification shall be maintained by the employer for at least 5 years. Civil service personnel records will be maintained in ADMINSTAR.

4.4 Incident Command Training records shall be maintained by the employer for at least 5 years. Civil service personnel records will be maintained in ADMINSTAR.

4.5 Storm Water Training records shall be maintained by EED for 3 years. Civil service personnel records will be maintained in ADMINSTAR.

4.6 Storm water inspection records shall be maintained by EED for 3 years, then destroyed.

4.7 Chemical Inventory Training records shall be maintained by EED for 2 years. Civil service personnel records will be maintained in ADMINSTAR.

4.8 Air Compliance Awareness Training records shall be maintained by EED for 3 years. Civil service personnel records will be maintained in ADMINSTAR.

4.9 Affirmative Procurement Training records shall be maintained by EED for 3 years. Civil service personnel records will be maintained in ADMINSTAR.

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4.10 Spill Prevention, Control, and Countermeasures Training records shall be retained by EED for 3 years. Civil service personnel records will be maintained in ADMINSTAR.

4.11 Asbestos and lead abatements records shall be maintained by Facilities Engineering Department permanently.

4.12 Chemical inventory database is maintained by the on-site environmental services contractor. Records are maintained for at least 3 years, then disposed.

**5. FLOW DIAGRAM**

None.