

MPG 8715.1

REVISION B

EFFECTIVE DATE: February 20, 2004

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MARSHALL PROCEDURES AND GUIDELINES

QS01

MARSHALL SAFETY, HEALTH, AND ENVIRONMENTAL (SHE) PROGRAM

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		7/10/00	The MSFC SHE Program describes the MSFC occupational safety, health, and environmental (SHE) program. Emphasis is placed on the industrial safety portion of the SHE Program, but pointers are provided to the health and environmental program documents.
Revision	A	8/23/01	This document has been rewritten in its entirety.
Revision	B	2/20/2004	Improve wording, general update, incorporate new SHE Committee arrangement, align format with OSHA's VPP elements, revise and expand goals and objectives, document requirement for including safety in personnel performance evaluations, clarify how employees are involved in SHE Program, clarify contractor SHE requirements, incorporate new SHEtrak and SSWP processes, add organization SHE award program, add organization level self-assessment and SHE employee SHE survey requirements, add annual SHE Program assessment and planning process, add baseline assessment requirements, document mishap awareness process, add work hour limitation guidelines, add disciplinary system, , update building manager rules, and add revised guideline for storage on top of furniture.

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PREFACE

P.1 PURPOSE

To set forth the Marshall Space Flight Center (MSFC) safety, health, and environmental policies, responsibilities, and procedures intended to provide employees with a safe and healthful workplace. To define the implementation of an aggressive Safety, Health, and Environmental (SHE) Program that complies with current applicable Federal, NASA, and MSFC safety, health, and environmental regulations, guidelines, and standards.

This document does not specifically address MSFC's Flight Safety Program. For information concerning that program, refer to the program-level documents (e.g., SSP 50021, "Safety Requirements Document," and NSTS 5300.4, "Safety, Reliability, Maintainability, and Quality Provisions for the Space Shuttle Program"), or contact the MSFC Safety and Mission Assurance (S&MA) Office.

P.2 APPLICABILITY

These procedures and guidelines are applicable to:

- a. All persons on MSFC property, including contractors involved in MSFC operations.
- b. All persons involved in MSFC controlled activities on or off site.
- c. All vendors, visitors, and personnel allowed access to MSFC.
- d. All ground-based activities conducted by or at MSFC.
- e. All MSFC facilities, systems, equipment, and property.

P.3 AUTHORITY

- a. Public Law 91-596, "Occupational Safety and Health Act of 1970"
- b. Executive Order 12196, dated February 26, 1980, "Occupational Safety and Health Programs for Federal Employees"
- c. 29 CFR Part 1960, "Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters"
- d. 29 CFR 1903, "Inspections, Citations, Proposed Penalties"

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- e. 29 CFR 1910, "Occupational Safety and Health Standards"
- f. 29 CFR 1926, "Safety and Health Regulations for Construction"
- g. 40 CFR, "Environmental Protection"
- h. NPD 8500.1, "NASA Environmental Management"
- i. NPD 8710.2, "NASA Safety and Health Program Policy"
- j. NPR 8715.1, "NASA Safety and Health Handbook Occupational Safety and Health Programs"
- k. NPR 8715.2, "NASA Emergency Preparedness Plan Procedures and Guidelines"
- l. NPR 8621.1, "NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Recordkeeping"
- m. NPR 8715.3, "NASA Safety Manual"

P.4 APPLICABLE DOCUMENTS

MSFC complies with all applicable local, State, Federal, and consensus codes and standards.

- a. MPG 1040.3, "MSFC Emergency Plan"
- b. MPG 1280.6, "Internal Quality Audits"
- c. MPG 1440.2, "MSFC Records Management Program"
- d. MWI 1700.3, "NASA Safety Reporting System Corrective Action Process"
- e. MPG 1800.1, "Bloodborne Pathogens"
- f. MPG 1810.1, "MSFC Occupational Medicine"
- g. MPD 1840.1, "MSFC Environmental Health Program"
- h. MPD 1840.2, "MSFC Hearing Conservation Program"
- i. MPG 1840.2, "MSFC Hazard Communication Program"
- j. MPD 1840.3, "MSFC Respiratory Protection Program"
- k. MPG 3410.1, "Training"

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- l. MWI 3410.1, "Personnel Certification Program"
- m. MPG 6700.1, "Motor Vehicle Operation"
- n. NPR 7120.5, "NASA Program and Project Management Process and Requirements"
- o. MPG 7900.1, "Aviation Accident Plan"
- p. MPD 8500.1, "MSFC Environmental Management Policy"
- q. MPG 8500.1, "MSFC Environmental Management Program"
- r. MWI 8540.2, "Affirmative Procurement Program for Environmentally Preferable Products"
- s. MWI 8550.1, "Waste Management"
- t. MWI 8550.2, "Storm Water Management"
- u. MWI 8550.3, "Wastewater Compliance"
- v. MWI 8550.4, "Air Emissions Compliance"
- w. MWI 8550.5, "Hazardous Material Management"
- x. MWI 8621.1, "Close Call and Mishap Reporting and Investigation Program"
- y. MWI 8715.2, "Lockout/Tagout Program"
- z. MWI 8715.3, "Hazard Warning Signs and Barricades"
- aa. MWI 8715.4, "Personal Protective Equipment (PPE)"
- bb. MWI 8715.6, "Hazardous Operations"
- cc. MWI 8715.8, "Operational Readiness Program"
- dd. MWI 8715.9, "Occupational Safety Guidelines for MSFC Contractors"
- ee. MWI 8715.11, "Fire Safety Program"
- ff. MWI 8715.13, "Safety Concerns Reporting System (SCRS)"
- gg. MWI 8715.15, "MSFC Safety Assessment Program"

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- hh. MWI 8715.16, "Supervisor Safety Visits"
- ii. NPR 8831.2, "Facilities Maintenance Management"
- jj. MPD 1150.1, Charter MC-12, "MSFC Safety, Health, and Environmental (SHE) Committee"
- kk. Data Requirement Document (DRD) STD/SA-SHPon

P.5 REFERENCES

- a. American National Standards Institute (ANSI) - All Standards as applicable
- b. ASTM-MANL-36, "Manual for Safe Use of Oxygen Systems: Guidelines for Oxygen System Design, Materials Selection, Operations, Storage, and Transportation"
- c. Compressed Gas Association (CGA) - All applicable standards
- d. NPD 1800.2, "NASA Occupational Health Program"
- e. MPD 1800.1, "MSFC Smoking Policy"
- f. MPG 1840.1, "MSFC Confined Space Entries"
- g. MPG 1840.3, "MSFC Hazardous Chemicals in Laboratories Protection Program"
- h. MPG 1860.1, "MSFC Radiation Procedures and Guidelines"
- i. MPD 1860.1, "Laser Safety"
- j. MPD 1860.2, "Radiation Safety Program"
- k. MPG 6410.1, "Handling, Storage, Packaging, Preservation, and Delivery (H.S.P.P.&D.)"
- l. MWI 6410.1, "Packaging, Handling, and Moving Program Critical Hardware"
- m. MWI 6430.1, "Lifting Equipment and Operations"
- n. MWI 7900.1, "Management and Operation of MSFC Mission Management Aircraft"
- o. MWI 8715.1, "Electrical Safety"

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- p. MWI 8715.10, "Explosives, Propellant, and Pyrotechnics Program"
- q. MPG 8823.2, "Pressure Systems Guidelines and Certification Requirements"
- r. National Fire Protection Association (NFPA) National Fire Codes (NFC)
- s. NASA FAR Supplement (NFS) 1823.70, "Safety and Health"
- t. NASA-STD-8719.7, "Facilities System Safety Guidebook"
- u. NASA-STD-8719.9, "Standard for Lifting Devices and Equipment"
- v. NASA-STD-8719.11, "Safety Standard for Fire Protection"
- w. NSS-1740.12, "Safety Standard for Explosives, Propellants, and Pyrotechnics"
- x. NASA-STD-8719.13, "Software Safety"
- y. NSS-1740.16, "Safety Standard for Hydrogen and Hydrogen Systems Guidelines for Hydrogen System Design, Materials selection, Operations, Storage and Transportation"

P.6 CANCELLATION

MPG 8715.1A dated August 23, 2001

Original signed by
Axel Roth for

David A. King
Director

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DOCUMENT CONTENT

1. DEFINITIONS

The terms defined below represent the most common safety terms used throughout the safety program. Additional definitions are provided in the applicable safety and health Centerwide instructions (e.g., MWIs and MPGs).

1.1 Area Manager. Individual responsible for a given area of MSFC controlled property, who assures Building Managers are appointed for buildings in his/her area.

1.2 Assistant Building Manager. Individual assigned responsibility to aid the building manager in assuring that their assigned buildings and surrounding areas are safe, healthful, and in compliance with housekeeping rules.

1.3 Building Manager. Building managers are individuals assigned by and responsible to the respective area manager to assure that their assigned buildings and surrounding areas are safe, healthful, and in compliance with housekeeping rules. This is normally a collateral duty. If possible, the building manager is selected from employees located in the assigned building.

1.4 Close Call. An occurrence in which there is no injury, no equipment/property damage equal to or greater than \$1,000, and no significant interruption of productive work, but which possesses a high-severity potential for any of the mishaps defined as Types A, B, or C Mishaps, Mission Failure, or Incident. A close call is not considered a mishap, but the mishap reporting, investigation, and recordkeeping guidelines will be followed.

1.5 Employee. Any person (civil servant or contractor) that works on MSFC controlled property, or any civil servant that works for MSFC at any location.

1.6 Hazard. A condition that could cause injury, illness, or death, or that could result in damage to property or loss of equipment, or impact to the environment.

1.7 Hazard Assessment. The systematic identification and evaluation of existing and potential hazards and the recommended mitigation for the hazard sources found, based on risk assessment.

1.8 Job Hazard Analysis (JHA). A method or process used to determine hazards associated with a specific job/task and their

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elimination or control.

1.9 Marshall Team Meeting (MTM). The MTM is a monthly meeting of top-level Center managers and support contractor managers at which SHE metrics, issues, and initiatives, and other Centerwide topics are discussed. The meeting is chaired by the Center Director.

1.10 Mishap. A mishap is an unexpected occurrence, event, or sequence of events that results in injury or death to employees or visitors or damage to NASA equipment or property. See MWI 8621.1 for detailed definitions of the mishap classifications.

1.11 Occupational Safety and Health Administration (OSHA). The organization established under the US Department of Labor to administer the Occupational Safety and Health Act as documented in Part 29 of the Code of Federal Regulations (CFR).

1.12 Potentially Hazardous Operations or Facilities. Any operation, process, facility, or equipment that has a potential to result in serious injury or death to personnel or damage and/or destruction of property. These operations may involve explosives, propellants, high energy, high pressure, oxidizers, corrosives, high elevations, cryogenics, hostile atmosphere, flammables, material handling operations (e.g., crane and forklift operations), high-electrical energy, radiation, noise, hyperbaric or hypobaric environment, toxic material, critical hardware, etc.

1.13 Risk. As it applies to safety, exposure to the chance of injury or loss. It is a function of the possible frequency of occurrence of an undesired event, the potential severity of resulting consequences, and the uncertainties associated with the frequency and severity.

1.14 Safety Deviation. A request for the departure from a particular safety requirement where the intent of the requirement is being met through alternate means that provides an equal or greater level of safety.

1.15 Shall. The word "shall" indicates that the rule is mandatory. Noncompliance with a "shall" statement requires approval of a variance. Use of the word "shall" is preferred when writing mandatory NASA safety requirements; however, the words "will" and "must" are used at times to indicate mandatory requirements and have the same interpretation as "shall."

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1.16 SHEtrak. SHEtrak is a MSFC web-based electronic database maintained by S&MA for documenting and tracking to closure hazards identified in the workplace.

1.17 Should. The word "should" indicates that the rule is a recommendation, the advisability of which depends on the facts in each situation. Implementation of a "should" statement is at the discretion of the local officials.

1.18 Supervisor. For the purpose of this document the term supervisor means a company or Government representative whose duties include directing employees and approving employee evaluations.

1.19 Variance. Documented and approved permission to perform some act contrary to established requirements.

1.20 Waiver. A request for the departure from a specific safety requirement where an increased level of risk has been accepted.

2. RESPONSIBILITIES

The NASA Administrator is the senior person responsible for Agencywide safety. NPD 8710.2 establishes the NASA Designated Safety and Health Official (DASHO) pursuant to Executive Order 12196, Section 1-102, to serve as the coordinator of the Occupational Safety and Health Programs.

At MSFC, the final authority and responsibility for safety rests with the Center Director. The Center Director has designated the Director, S&MA, as the Center Safety Official and the Occupational Health Officer as the Center Health Official. Each director and supervisor is responsible for the safety of personnel and property under his/her control, with timely monitoring, surveillance, and support provided by the S&MA Office. Safety responsibilities are listed below. Additional responsibilities concerning specific activities are listed in the related safety, health, and environmental documents.

2.1 The Center Director:

2.1.1 Guides and directs the safety program for MSFC.

2.1.2 Establishes, publicizes, and monitors progress in achieving Center SHE goals and objectives.

2.1.3 Addresses safety issues/concerns to MSFC employees as needed.

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2.1.4 Conducts monthly safety meetings with employees who report directly to him or her, and assures supervisors at all levels conduct monthly safety meetings with their employees.

2.1.5 Conducts walk-through Safety Visits of activity areas and assures supervisors at all levels conduct Safety Visits of their respective areas in accordance with MWI 8715.16.

2.1.6 Ensures controls for safety issues and concerns are integrated into the total management system.

2.1.7 Evaluates the safety performance of employees (direct reports) using the performance appraisal process.

2.1.8 Approves Annual SHE Program Plan.

2.1.9 Promotes safety by setting a positive example.

2.2 Managers of Program/Project Offices:

2.2.1 Develop program/project safety requirements in accordance with NPR 7120.5, "NASA Program and Project Management Processes and Requirements."

2.2.2 Establish or adopt program/project SHE goals and objectives.

2.2.3 Include safety, health, and environmental requirements in contracts as specified in MWI 8715.9, "Occupational Safety Guidelines for MSFC Contractors," and NFS (e.g., Subpart 1823.70, "Safety and Health").

2.2.4 Coordinate with technical disciplines to ensure adequate review of program/project safety, health, and environmental-related activities.

2.2.5 Allocate adequate resources and delegate authority to ensure an effective SHE Program for their respective program/project.

2.3 Directorate/Office Directors:

2.3.1 Apply the SHE Program to assigned areas of functional responsibility.

2.3.2 Establish organization safety goals and objectives to support achievement of the Center's SHE goals and objectives.

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2.3.3 Conduct monthly safety meetings with employees (direct reports).

2.3.4 Conduct walk-through Safety Visits of work areas within their area of responsibility in accordance with MWI 8715.16.

2.3.5 Support the SHE Committee, including providing a designated representative.

2.3.6 Evaluate SHE performance of employees (direct reports) using the performance appraisal system.

2.3.7 Ensure reporting and investigation of mishaps in accordance with MWI 8621.1.

2.3.8 Ensure all personnel, including visitors, contractors, and researchers working in their area of functional responsibility, comply with the requirements of this document.

2.3.9 Ensure that facilities are operated in accordance with all applicable requirements, the intended design, and the requirements of this document, and that the facility's safety integrity is not compromised with non-approved facility additions or modifications.

2.3.10 Assures actions identified in Annual SHE Program Plan are appropriately implemented within their respective organization.

2.3.11 Promote safety by setting positive example.

2.3.12 Ensure SHE issues and actions in responsible area are worked in a timely manner.

2.4 Department/Office Managers and Group Lead (Supervisor) responsibilities are listed in Appendix A.

2.5 Employee responsibilities are listed in Appendix B.

2.6 Personnel who are not contractors, yet allowed access to MSFC facilities to conduct individual research under grants or other auspices, shall comply with all the requirements of the MSFC SHE Program, including:

2.6.1 Taking safety training in accordance with MPG 3400.1.

2.6.2 Submitting a written Safety, Health and Environmental Plan in accordance with DRD STD/SA-SHPon to S&MA for approval prior to

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starting work if their activities are potentially hazardous to personnel or property. The NASA organization responsible for the work area of these personnel is responsible for ensuring compliance.

2.6.3 Reporting mishaps and other safety data in accordance with MWI 8621.1.

2.7 Organization Specific Responsibilities

2.7.1 Safety and Mission Assurance (S&MA)

2.7.1.1 Director, S&MA Office:

- a. Serves as the Designated Safety Official for MSFC; the designated MSFC Authority Having Jurisdiction (AHJ) for safety (NASA-STD 8719.11, paragraph 102.6(11)).
- b. Implements the MSFC Industrial Safety Program in compliance with applicable Federal, NASA, and MSFC safety policies, regulations, and standards.
- c. Provides independent assessment of safety issues and concerns.
- d. Develops and propagates safety policies, standards, and procedures to implement OSHA and NASA requirements.
- e. Establishes and maintains safety standards, instructions, and guidelines applicable to MSFC operations and makes them available for employees to review.
- f. Provides technical assistance to line and staff managers to assist in accomplishing safety-related goals and objectives.
- g. Measures, analyzes, and maintains records of safety trends and general status of the MSFC Industrial Safety Program.
- h. Supports SHE Committee.
- i. Consults with employee representatives in the implementation of the MSFC Safety Program (29 CFR 1960.12).
- j. Maintains records and submits reports to OSHA of occupational injuries and illnesses, and posts annual summaries (29 CFR 1960, Subpart I).
- k. Posts safety and health program information (29 CFR 1960.12).

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- l. Performs comprehensive evaluations of safety programs for MSFC basic organizations and contractors.
- m. Provides continuous overview and surveillance of potentially hazardous activities at the Center.
- n. Receives and resolves reports of unsafe or unhealthful working conditions, and maintains a log of these reports (29 CFR 1960.28).
- o. Provides and implements a plan for industrial safety and fire prevention training for managers, supervisors, employees, employee representatives, and safety and collateral duty safety personnel.
- p. Reviews safety plans, written hazardous operations procedures, and other safety sensitive documents and drawings.
- q. Performs comprehensive OSHA and NASA compliance inspections of all Marshall facilities. This includes construction sites and any onsite or offsite facilities occupied by Marshall employees.
- r. Ensures facility safety tasks are performed at each phase of the facility life cycle, including concept development, design, procurement, construction, activation, operation, and disposal. NASA STD-8719.7 will be utilized as a guide for implementing a facility safety program to meet the requirements of NPR 8715.3.

2.7.2 Occupational Medicine and Environmental Health Services:

2.7.2.1 Implements the Occupational Medicine and Environmental Health Services Program per MPG 1810.1 and MPD 1840.1.

2.7.2.2 Ensures compliance with applicable health policies, regulations, and standards.

2.7.3 Environmental Engineering Department:

2.7.3.1 Implements the MSFC Environmental Program per MPG 8500.1.

2.7.3.2 Ensures compliance with applicable environmental policies, regulations, and standards.

2.7.4 Facilities Engineering Department:

2.7.4.1 Ensures that facilities are designed, constructed, operated, and maintained in accordance with the applicable

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documents, National standards, including ANSI/ASME, NFPA, and international standards as applicable. Where conflicting requirements exist, the most stringent is used. Obtains waivers/variances to code requirement in accordance with this document.

2.7.4.2 Ensures that construction work is performed in accordance with OSHA, 29 CFR 1926.

2.7.4.3 Ensures that facilities are maintained in accordance with the applicable codes and standards and the requirements of this document.

2.7.5 SHE Committee: The SHE Committee's responsibilities are listed in the Committee's Charter, MPD 1150.1, MC-12.

2.8 SHE Committee Members (In addition to SHE Committee responsibilities):

2.8.1 SHE Committee Organization Representative Members communicate SHE Committee activities and actions to their respective organizations; monitor SHE actions, initiatives, and program effectiveness within their respective organizations; and report status to the SHE Committee. The representatives provide monthly summary reports to the Committee on the SCRS; SHEtrak safety findings; mishaps and close calls; environmental findings; and occupational health issues for their organization.

2.8.2 SHE Committee Subcommittee Representative Members lead their respective subcommittees in developing and initiating improvements in their related subject matter programs and report status to the SHE Committee. The subcommittees provide advice, offer suggestions, and serve on investigative teams in their special fields as requested.

2.9 Area Manager and Building Manager responsibilities are listed in Appendix C.

2.10 Contractors are considered part of the MSFC Team and play a critical role in the MSFC SHE Program. At a minimum, they follow the same safety rules and regulations as MSFC civil service employees as described in Appendix B. Contractor management and employee responsibilities should be very similar to the civil service team responsibilities above. They shall be documented in the contractor's Safety and Health Plan approved by MSFC. Their companies may impose additional rules.

3. PROCEDURE

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The MSFC SHE Program has five Core Program Requirements (CPRs) (see Appendix D). These CPRs are outlined below:

3.1 CPR 1 - Management Leadership and Employee Involvement:

3.1.1 Management Commitment and Leadership:

3.1.1.1 SHE Policy:

a. Safety: MSFC will strive to prevent human injury and occupational illnesses and ensure the safety of all operations and products.

b. Health: MSFC will strive to promote and maintain the physical and mental well being of its employees.

c. Environmental: MSFC will strive to protect, preserve, and enhance the quality of the environment while conducting their primary mission activities.

3.1.1.2 Goals and Objectives:

a. Center SHE Goals:

- 1) Center Safety Goal: "Help Establish NASA as a World Class Leader in Safety."
- 2) Center Health Goal: "Help Establish NASA as a World Class Leader in Health."
- 3) Center Environmental Goal: "Enable Marshall's Mission through Environmental Compliance and Stewardship."

b. Center Safety and Health Objectives:

- 1) Zero lost-time mishaps
- 2) No OSHA-recordable violations
- 3) No safety-related property damage

c. Center Environmental Objectives:

- 1) Promote environmental awareness and accountability throughout MSFC
- 2) Create an innovative attitude that achieves compliance and beyond

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3) Advocate sustainable development and operations in Center programs

d. Sub-organization Goals and Objectives: Each directorate/office will strive to help the Center fulfill this policy, plus may establish additional internal SHE goals and objectives for its organization.

3.1.1.3 MSFC is committed to meeting and maintaining OSHA's Voluntary Protection Program (VPP) requirements for "Star" certification.

3.1.1.4 This directive and referenced applicable documents establish the MSFC SHE management system. Approval of this document signifies management's commitment to safety, health and environmental protection.

3.1.1.5 Managers and supervisors are held accountable for meeting the SHE Program responsibilities through implementation of a performance evaluation system. All performance plans include a safety element that is reviewed semiannually between employees and their immediate supervisor.

3.1.1.6 Supervisor Involvement in the Safety Program. Supervisors play a key role in SHE Program implementation as indicated by the supervisors' safety responsibilities listed in Appendix A. In addition, Section 3.1.8 provides supervisors' guidelines for conducting safety meetings and rewarding employees for safety, health, and environmental accomplishments.

3.1.2 Employee Involvement in the SHE Program. Employee participation is another key ingredient in MSFC's SHE Program as indicated by the employee responsibilities listed in Appendix B. Each MSFC employee is encouraged to actively participate in the Center's SHE Program in at least three meaningful, constructive ways. Avenues for employee involvement include membership on appropriate SHE Committees or teams (e.g. Marshall Safety Action Team (MSAT), participating in SHE audit, supervisor safety visit, mishap investigation and Job Hazard Analysis (JHA)); use of the suggestion program; building manager or assistant; and, providing safety meeting presentations, SHE training, or personal or team safety initiatives.

3.1.3 Contractors. On site contractor employees shall be provided with levels of safety and health protection equivalent to those described in this document.

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3.1.3.1 All contractor employees must follow the SHE rules established by this document.

3.1.3.2 MSFC's contractor oversight and management system is described in MWI 8715.9.

3.1.3.3 MSFC's on-site contractors are encouraged to participate in the Contractor Safety Forum, the SHE Committee and the SHE Subcommittees.

3.1.4 Building Manager Program. The Building Manager Program functions to maintain and improve safety, health, and the environment throughout the Center. Instructions in this section apply to both civil service and contractor building managers and assistant building managers. The area manager, building manager, and assistant building manager responsibilities are listed in Appendix C.

3.1.5 Authority and Resources. Authority and resources are provided by responsible managers to abate hazardous conditions, or to implement interim controls when hazards cannot be corrected in a reasonable time. When more than 30 days are required to abate a hazard, an abatement plan must be submitted to S&MA via SHEtrak (NPR 8715.1).

3.1.6 Professional Safety and Health Staff. The S&MA Office and Center Operations Directorate include safety and health professionals who provide services to all Center employees as needed. Contractor organizations may also include professional safety and health staff members, where required by contract or MSFC-approved Safety and Health Plan.

3.1.7 Accountability for Safety. All MSFC civil service managers, supervisors, and employees are accountable for MSFC safety. The degree and specific areas are addressed in MSFC Form 4282, "NASA Employee Performance Communication System (EPCS)," MSFC Form 2938, "Position Description Amendment," and in the responsibility section of this Directive. Contractors shall implement a similar accountability process as defined in their MSFC approved Safety and Health Plan.

3.1.8 Safety Meetings. Supervisors at all levels shall:

3.1.8.1 Conduct and document monthly safety meetings with those employees that report directly to them. The safety meeting must address the required SHE focus topics listed in the Supervisor Safety Web Page (SSWP), if any, and may be incorporated into a regular staff meeting, or be combined with a manager's or other

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supervisor's meeting. In cases where employees are assigned in an organization remote from their official supervisor, the employees may attend the equivalent safety meetings of that remote organization.

NOTE: Typical safety meeting content includes:

- Discussion of results of SHE inspection findings and necessary corrective actions.
- Discussion of recent mishaps, including close calls and corrective actions.
- Discussion of current safety issues and concerns, including subjects identified at other levels of the organization. Discussion of any assigned SHE program corrective actions.
- Presentation of SHE topics relevant to the work or home, including as a minimum any required topics listed on the Supervisor Safety Web Page (SSWP).
- Recent safety bulletins or other information posted on SHE Web Page.
- Specific SHE Training required for work area(s) or process(es).

3.1.8.2 Assure record of the safety meeting is posted on the SSWP

3.1.9 Safety Awards.

3.1.9.1 Employee and Employee Team Awards. MSFC is committed to continued improvement of safety in all operations. The presentation of awards is considered appropriate for recognizing outstanding safety-related contributions and is an effective means of encouraging safety excellence. MSFC's Space Flight Safety Awards Program is described on the "MSFC Space Flight Awareness" Web page. Nomination criteria and forms are also listed at this site. Awards are available to recognize individuals/teams who have contributed to MSFC's Safety Program:

Silver Snoopy Award	Honoree Award
Team Award	Leadership Award
Flight Safety Award	Safety Excellence Award

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3.1.9.2 Organization Awards. On-site organizations that meet or exceed the MSFC benchmark for the peak elapsed time or cumulative exposure hours without significant mishap, or make other special achievements, may be recognized with presentation of an award described in the table below. These awards are presented at the civil service directorate/office level or prime contractor level:

Achievement	Award
Every 1,000,000 Hours or 5 Years (whichever comes first) Without Lost Time or Property Damage Mishap Exceeding \$25,000	Plaque Presented by Center Director at Marshall Team Meeting
5,000,000 Hours or 10 Years (whichever comes first) Without Lost Time or Property Damage Mishap Exceeding \$25,000	Plaque Presented by Center Director at Special Ceremony for All Organization Employees. Memento for each employee.
10,000,000 Hours or 20 Years (whichever comes first) Without Lost Time or Property Damage Mishap Exceeding \$25,000	Trophy Presented by NASA Administrator (if possible) or Center Director at Special Ceremony for All Organization Employees. Memento for each employee.
Prime Contractor with a verified Annual Average Self-Evaluation Score of 36 or Higher and LTIR at Least 50% less than National SIC Average	Plaque Presentation by Center Director at Marshall Team Meeting

3.1.10 SHE Program Annual Evaluation.

3.1.10.1 Sub-organization Self-Assessments. Each organization shall conduct an annual self-assessment of their SHE Program. The self-assessment shall at a minimum include all supervisors completing the S&MA administered Self-Assessment Checklists posted on the SSWP, and if applicable updating the Inventory of Hazardous Operations (IHOPS) database and the associated hazardous operations checklist. Each organization shall establish corrective action plans for issues identified in their respective organization. S&MA shall assure that corrective actions for generic cross-center issues are included in the Annual SHE Program Plan.

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3.1.10.2 Each year S&MA shall conduct an employee survey to obtain feedback on the effectiveness and root level understanding of the SHE Program. The NASA wide Performance Evaluation Profile (PEP) survey may be used for this purpose. Individual organizations shall establish corrective action plans for issues identified in their specific organization. S&MA shall include corrective actions for generic cross-center issues in the Annual SHE Program Improvement Plan.

3.1.10.3 Annual SHE Program Assessment and Report. Each year with the support of Center Operations and Customer and Employee Relations (CaER), S&MA shall assure the MSFC SHE Program is evaluated and the evaluation documented in a written report. This report shall encompass a critical review and assessment of the effectiveness of each element and sub-element of the SHE Program. The report will document significant accomplishments and/or areas for improvement by individual element, and the status of, and action taken for, the previous year's Improvement Plan's targets. It shall address any Centerwide issues identified in sub-organization self-assessments, employee surveys, and external assessments of the MSFC SHE program conducted during the year. S&MA, CaER, and Center Operations directors will approve and sign the report. S&MA will assure the approved report is presented to the SHE Committee and to Center management at the Marshall Team Meeting no later than their regular March meeting of the following year.

3.1.10.4 Annual SHE Program Plan. Each year with the support of Center Operations and CaER, S&MA will prepare a SHE Program Plan for the coming year. The SHE Program Plan shall address the current status of each element and sub-element of the SHE program. All findings from SHE assessments conducted during the preceding year (i.e., annual SHE Program assessment, sub-organization self-assessment generic issues, external assessments, employee survey generic issues, etc.) and all open findings not closed in the previous years Annual SHE Program Plan are documented in the SHE Program Plan. The plan shall list by element the actions for correction of any findings and/or for improvement of the SHE Program along with the assignee and the target completion date for each. The Plan shall be presented for approval to the SHE Committee and Center Management at the MTM no later than the regular March meeting. The Center Director shall approve and sign the Plan.

3.1.11 Safety Variance Process. To seek a deviation to or waiver of NASA Federal, or Industry requirement, the procedures in NPR 8715.3, Chapter 1.19, and MPG 8715.1, Appendix G, shall be

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followed. Approved variances from MSFC SHE-related directives (MPDs, MPGs, and MWIs) shall be requested using the process defined in Appendix G. Operations will be halted until the deviation/waiver is approved, or the problem is corrected and regulatory compliance is achieved.

3.2 CPR 2 - System and Worksite Analysis:

3.2.1 Safety Assessment. Each organization shall assure that safety assessments for facilities, equipment, operations, processes, tasks, and jobs at MSFC are performed in accordance with MWI 8715.15.

3.2.1.1 Baseline Assessment. A documented baseline assessment that identifies potential hazards, and identifies the SHE assessment tool(s) used, shall be completed prior to activation, use, or implementation of new and modified hazardous and potentially hazardous facilities, equipment, chemicals, and/or operations, in accordance with MWI 8715.15.

3.2.1.2 High risk operations shall undergo independent reviews to ensure all safety issues are effectively addressed, in accordance with MWI 8715.8.

3.2.1.3 Operations designated as hazardous shall be assessed in accordance with the special requirements defined in MWI 8715.6.

3.2.2 Routine Self-Inspections. Supervisors and managers, area and building managers, and safety and health professionals shall conduct regular safety and health inspections.

3.2.2.1 Supervisor's and Manager's Safety Visits. Supervisors and managers shall conduct, document, and report safety visits in accordance with MWI 8715.16.

3.2.2.2 Area and Building Manager Inspections. Area and Building Managers or their designated alternates shall inspect the common areas of assigned facilities and grounds at least once monthly and initiate appropriate corrective action for potentially unsafe conditions and actions. Inspection findings shall be documented and tracked to closure using the online SHEtrak database application.

3.2.2.3 Professional Safety Inspections

a. New, refurbished, or leased facilities shall be inspected by S&MA prior to NASA employee occupancy. For leased facilities, a safety inspection shall be conducted prior to signing a lease

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agreement. The purpose of these inspections is to identify and resolve issues and potential hazards related to employee occupancy or planned use of the facility. All safety issues shall be documented and satisfactorily resolved prior to occupancy.

b. S&MA shall conduct annual comprehensive safety inspection of all MSFC facilities, including those in an inactive status; semi-annual inspections of all hazardous facilities and operations; and, weekly construction site safety inspections; in accordance with 29 CFR 1960.26 and NPR 8715.1.

c. Inspections shall be performed by qualified inspectors, as defined in 29 CFR 1960.2 and NPR 8715.1, Section 4.2.

d. Findings shall be documented and tracked to closure in the online SHEtrak database. Records shall be maintained for a minimum of 5 years.

3.2.2.4 When an "Imminent Danger" condition is identified, the responsible organization(s) shall undertake immediate abatement or cease operations and withdraw exposed personnel to a safe location.

3.2.2.5 Upon receipt of any unsafe or unhealthful working condition report, building managers or their assistants shall immediately, , ensure a notice is posted at or near each place where the condition exists or existed. Each notice shall remain posted until the condition is abated or for 3 working days, whichever is later (NPR 8715.3).

3.2.2.6 If immediate correction of unsafe conditions is not feasible, interim controls shall be put in place. The installation of signs, safety tags and/or barricades as described in MWI 8715.3 is an example of interim control.

3.2.2.7 To close a safety finding, the building manager or responsible organization shall enter a short description of the completed corrective action in SHEtrak and close the finding. Closure requires the unsafe condition to be corrected; submitting a work order is not considered a closure. S&MA will review the closure. If correction is not satisfactory, S&MA will reopen the finding and notify the affected parties.

3.2.2.8 If more than 30 days will be required to abate the identified condition, the building manager or responsible organization shall ensure an abatement plan is submitted via SHEtrak to S&MA within 30 days following notification of the

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safety finding.

3.2.2.9 S&MA will review safety finding closure status and present closure status charts to the SHE Committee and the employee representatives (NPR 8715.1).

3.2.3 Unsafe Condition Reporting System for Employees. The Center's Safety Concerns Reporting System (SCRS) is described in MWI 8715.13, "Safety Concerns Reporting System (SCRS)." The reporting precedence for reporting a unsafe condition is described in Appendix H.

3.2.4 Industrial Hygiene (IH) Program. MSFC's IH program is documented in MPD 1840.1, "MSFC Environmental Health Program."

3.2.5 Mishaps/Close Calls Investigated and Hazards Corrected. All mishaps and close calls shall be reported, investigated, and hazards addressed by appropriate corrective and/or preventive action, as described in MWI 8621.1, "Close Call and Mishap Reporting and Investigation Program." Aircraft accidents follow the procedures in MPG 7900.1, "Aviation Accident Plan." Government-owned or leased motor vehicle accidents are investigated per MPG 6700.1, "Motor Vehicle Operations," instructions.

3.2.6 S&MA shall inform Center workers of recent mishap and close call descriptions and causes by posting information on the SHE Web Page and/or distributing intranet e-mail messages. If the mishap or close call identified lessons learned for the general population, Centerwide Bulletins are issued. S&MA assures that responsible organizations present type C (reference MWI 8621.1) or worse mishap and significant close-call reports to the SHE Committee and the MTM. These reports include a description of the incident, the causes identified, and the proposed corrective action(s). Employees may contact S&MA to obtain additional information concerning specific recurrence control measures implemented.

3.2.7 Injury, Illness, and Close Call Trend Analysis. S&MA analyzes injury, illness, and close call data, and identify any significant trends in accident experience. Trend analysis data is presented to the SHE Committee and Center management at the MTM regularly, and posted on the SHE Website. Trend analysis results are used to guide planning of accident prevention strategies and programs. S&MA also posts the OSHA summary reports at key locations throughout the Center and on the SHE Web Page.

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3.3 CPR 3 - Hazard Prevention and Control

3.3.1 Certified Professional Resources. MSFC maintains a staff of on-site safety and health professionals and licensed health care professionals with support from professionals located at NASA Headquarters and other NASA sites.

3.3.2 Hazard Elimination and Control Methods. The type of hazards employees are exposed to, the severity of the hazard, and the risk the hazards pose to employees and property shall be considered in determining methods of hazard prevention, elimination, and control. The requirements for elimination and control are documented in MWI 8715.6.

3.3.2.1 Hazard Mitigation Hierarchy. Identified hazards will be mitigated in the following order of precedence:

- a. Eliminate the hazard
- b. Design for minimum hazard
- c. Incorporate safety devices
- d. Provide caution and warning devices
- e. Develop administrative procedures and training

3.3.2.2 Administrative Controls. Center instructions that address SHE administrative controls include:

- a. Appendix I, "Maximum Work Hour Guidelines"
- b. MPD 1800.1, "MSFC Smoking Policy"

3.3.2.3 Work Practices. Center SHE work practices instructions include:

- a. Appendix E, "MSFC Sitewide Safety Rules." These rules represent a minimum set of safety rules for the Center and apply to all personnel on MSFC property. Supervisors shall add safety rules specific to hazardous operations for which they are responsible.
- b. Appendix F, "Minimum Housekeeping Guidelines." Supervisors shall define and post housekeeping guidelines in their area of responsibility.
- c. NPR 8831.2, "Facilities Maintenance Management"

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3.3.3 Hazard Control Programs.

3.3.3.1 Center instructions that address hazard controls include:

- a. MWI 8715.2, "Lockout/Tagout Program"
- b. MWI 8715.3, "Hazard Warning Signs and Barricades"
- c. MWI 8715.4, "Personal Protective Equipment (PPE)"
- d. MWI 8715.6, "Hazardous Operations"
- e. MWI 8715.1, "Electrical Safety"
- f. MWI 8715.10, "Explosives, Propellants, and Pyrotechnics Program"
- g. MWI 6430.1, "Lifting Equipment and Operations"
- h. MPG 1840.2, "MSFC Hazard Communications Program"
- i. MPD 1840.3, "MSFC Respiratory Protection Program"
- j. MPD 1840.1, "MSFC Environmental Health Program"
- k. MPG 1810.1, "MSFC Occupational Medicine"
- l. MPG 1800.1, "Bloodborne Pathogens"
- m. MPD 1840.2, "MSFC Hearing Conservation Program"
- n. MPD 1860.1, "Laser Safety"
- o. MPD 1860.2, "Radiation Safety Program"
- p. MWI 3410.1, "Personnel Certification Program"

3.3.3.2 Managers of hazardous facilities/operations shall establish any additional site or job specific controls necessary to assure personnel, visitor, and property safety.

3.3.4 Occupational Health Care Program.

3.3.4.1 The occupational health care program is described in MPG 1810.1, "MSFC Occupational Medicine."

3.3.4.2 Emergency medical services are provided by on-site ambulance service during normal working hours. After normal working hours the Redstone Arsenal Fire Department serves as the first responders until an offsite ambulance arrives. For off-site facilities in the Huntsville area, emergency medical services are available by calling 911. In addition, employees are trained in cardiopulmonary resuscitation (CPR) on a voluntary basis. Automated External Defibrillators (AEDs) are also available in some strategically located areas.

3.3.5 Facility and Equipment Maintenance. Facility and equipment maintenance shall be conducted to help prevent mishaps. Critical maintenance items shall be identified by the facility and equipment owners and tracked to ensure maintenance schedules

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are maintained. The maintenance program shall comply with requirements of NPR 8831.2.

3.3.6 Disciplinary System. Employees may be disciplined for violations of the safety and health policies, procedure, and rules. For Civil Service employees, the disciplinary system is described in DG-03, "NASA Desk Guide for Table of Disciplinary Offences and Penalties." A current copy of this document is maintained on the SHE Web Page for employee awareness. For Contractor employees, disciplinary systems are described in their respective company policies.

3.3.7 Emergency Preparedness and Response

3.3.7.1 The MSFC emergency program is described in MPD 1040.3, "MSFC Emergency Program."

3.3.7.2 The MSFC fire evacuation drill requirements are described in MWI 8715.11.

3.3.7.3 Emergency/Evacuation plans for specific buildings are posted in common areas on each floor of the respective buildings.

3.3.7.4 Managers of hazardous facilities/operations shall ensure emergency plans are prepared for these facilities/operations and ensure that they are:

- a. Maintained
- b. Provided (a copy) to the MSFC Emergency Operations Center
- c. Discussed with the affected personnel
- d. Exercised periodically

3.4 CPR 4 - Safety and Health Training

MSFC's Safety and Health Program is dependent on employees and supervisors who have the basic skills necessary to identify and control hazards and the specialized skills to perform their jobs in a safe manner. Safety training is outlined in MPG 3410.1, "Training," and below, while safety certification requirements are provided in MWI 3410.1, "Personnel Certification Program." S&MA and the Employee and Organizational Development Department (EODD) coordinate the MSFC Safety Training Program. Safety training is mandatory for all MSFC employees, supervisors, and managers. The type of courses required is dependent on the employee's assigned duties.

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3.4.1 Employee

3.4.1.1 At a minimum, the supervisor shall ensure each employee is trained about:

- a. Safety rules applicable to the worksite.
- b. How to recognize and report a hazard in the worksite.
- c. Center and worksite-specific emergency procedures.
- d. How to recognize signs and symptoms of workplace-related illnesses, and to obtain medical services (e.g., Building 4249, MSFC Medical Center).
- e. Specific job-related hazards and safety procedures. If PPE is required, this shall include why it is required, its limitations, how to use it, and maintenance.
- f. Employees rights under OSHA 29 CFR 1960.

3.4.1.2 Training records shall be maintained in accordance with MPG 3410.1.

3.4.1.3 Specialized safety training and certification is addressed in MWI 3410.1.

3.4.2 Supervisors and Managers

Supervisors and managers are trained in their specific roles and responsibilities in the MSFC SHE Program.

3.4.3 Building Managers and Assistant Building Managers

Building managers and assistant building managers attend "The Building Manager Training Program." Building managers/assistant building managers attend refresher training every 3 years. Records shall be maintained in accordance with MPG 3410.1.

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3.5 CPR 5 - Environmental Compliance

3.5.1 MSFC's environmental management policy and program addressed in MPD 8500.1, "MSFC Environmental Management Policy," and MPG 8500.1, "MSFC Environmental Management Program."

3.5.2 MSFC's procedures for storm water pollution prevention are addressed in MWI 8550.2, "Storm Water Management" And MWI 8550.3, "Wastewater Compliance."

3.5.3 MSFC's clean air procedures are addressed in MWI 8550.4, "Air Emissions Compliance."

3.5.4 MSFC's hazardous waste compliance procedures are addressed in MWI 8550.1, "Waste Management."

3.5.5 MSFC's hazardous materials compliance procedures are addressed in MWI 8550.5, Hazardous Materials Management."

3.5.6 MSFC energy management procedures are addressed in MPD 8570.1, "MSFC Energy Management Program."

4. RECORDS

The records listed below are specific to this document. Other records associated with the MSFC Safety Program are identified in the applicable Center directives.

4.1 Annual SHE Program Plan - retained for 5 years by S&MA, thence destroyed or held as historical document.

4.2 Annual SHE Program Report - retained for 5 years by S&MA, thence destroyed or held as historical document.

4.3 Directorate/Office Safety Goals - posted in a central location and maintained by each directorate/office until updated.

4.4 Housekeeping Guidelines - posted in a central location and maintained by each department until updated.

4.5 Hazard Abatement Plans - maintained by S&MA in the SHEtrak Database for duration of plan plus 5 years, thence destroyed or held as historical document.

4.6 SSWP Safety Meeting Minutes - maintained by S&MA for each supervisor for 3 years. When SSWP is not utilized, hardcopy records are maintained by each supervisor for 3 years, thence destroyed or held as historical document.

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4.7 Monthly Safety Meeting Summary Report - maintained by S&MA for 3 years in the SSWP database.

4.8 S&MA Safety Report (the injury, illness, and close call trends) - maintained in the SHE Committee minutes.

4.9 Safety Program Self-Assessment Report and Safety Trends - maintained by S&MA and retained for 5 years, thence destroyed or held as historical document.

4.10 Safety Deviations/Waivers - maintained by S&MA and retained for duration of the variance plus 5 years, thence destroyed or held as historical document.

4.11 Inventory of Hazardous/Potentially Hazardous Operations at MSFC - maintained by S&MA and retained until updated (annually).

4.12 Safety Concerns Reporting Systems (SCRS) records - See MWI 8715.13.

4.13 SHE Professional and Area/Building Manager Inspections Findings - maintained by S&MA on the SHEtrak electronic data base and retained for 5 years, thence destroyed or held as historical document.

4.14 Injury, Illness, Close Call Trend Analysis Reports - posted in the SHE Committee minutes with exception of the OSHA Annual Report, which is posted on the main bulletin boards in Buildings 4200 and 4203 and on the SHE Web Page; retained by S&MA for 5 years, thence destroyed or held as historical document.

4.15 SHE Committee Meeting Minutes - posted on the Safety Web Page and maintained by S&MA for 3 years, thence destroyed or held as historical document.

4.16 Record custodians shall maintain records plans (MSFC Form 2441) in accordance with requirements of MPG 1440.2.

5. FLOW DIAGRAM

None

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APPENDIX A
SUPERVISOR GENERAL SHE RESPONSIBILITIES

1. Promote safety, health, and environmental stewardship by setting a positive example.
2. Communicate SHE goals established by the directorate/office directors.
3. Prepare and post housekeeping rules. (Minimum guidelines are provided in Appendix F.)
4. Conduct monthly SHE meetings with employees (direct reports) in accordance with this document.
5. Look for housekeeping problems as part of their daily routine.
6. Conduct safety visits of assigned areas of responsibility in accordance with MWI 8715.16.
7. Evaluate employees' safety performance using the performance appraisal system.
8. Are members of, or support, MSFC's SHE Committees.
9. Assure JHAs and other safety assessments are performed in accordance with MWI 8715.15.
10. Inform employees of the specific hazards associated with their workplace and duties, location of nearest medical treatment facility, procedure for obtaining treatment, method for reporting occupational injuries or illnesses, and their responsibilities and rights under OSHA law (29 CFR 1960.59 for civil service or 29 CFR 1903.2 (a) (1) for contractors).
11. Ensure MSFC Form 596, "Emergency Telephone Numbers," or equivalent is posted on telephones in their area.
12. Take appropriate action to protect employees in "Imminent Danger" situations.
13. Stop operation if an unsafe act or condition exists, and report it to management.
14. Report and investigate mishaps, including close calls, in accordance with MWI 8621.1.
15. Ensure personnel are trained to perform their jobs in a safe and healthful manner and are certified where required, before

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assignment to potentially hazardous work tasks, in accordance with MPG 3410.1.

16. Ensure all personnel (including visitors, contractors, and researchers) within work areas under their supervision comply with the requirements of the MSFC SHE Program.
17. Perform annual self-assessment of SHE Program per this document.

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APPENDIX B
EMPLOYEE GENERAL SHE RESPONSIBILITIES

Employees shall:

1. Adhere to the safety, health, and environmental rules, plans and procedures
2. Avoid unsafe acts.
3. Stop an operation if an unsafe act or condition exists and report it to the supervisor, the building manager, or the safety designee listed on the "Occupational Safety and Health Protection for NASA Employees" poster.

NOTE: Executive Order 12196 and MSFC management guarantee employees' freedom from restraint, interference, coercion, discrimination, or reprisal for exercising their rights in participating in the activities of the Agency's occupational safety and health programs.

4. Report all safety and health problems, close calls, and mishaps to their supervisor. (Reference Appendix H)
5. Report all fires immediately.
6. Attend and participate in safety meetings and SHE training and awareness activities.
7. Correct imminent danger hazards immediately or secure area and mark with hazard warnings to prevent injury or damage per MWI 8715.3.
8. Support the SHE Committees. (Active participation in the SHE Committee and/or Subcommittees is encouraged)
9. Become familiar with emergency procedures and follow them when necessary.
10. Try to participate in the SHE Program in at least three meaningful ways (Paragraph 3.1.2)
11. Obtain and post a portable appliance permit, MSFC Form 3798, for privately owned, electrically powered appliances with heating elements (MWI 8715.11).
12. Be familiar with Material Safety Data Sheets (MSDS) for all hazardous chemicals in your work area.

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13. Wear Personal Protective Equipment (PPE) when required.

**APPENDIX C
BUILDING MANAGER PROGRAM RESPONSIBILITIES**

Area Managers Ensure:

1. All personnel in their areas know how to contact their area manager.
2. Monthly inspections of their facilities and grounds have been conducted.
3. Resolution of safety, health, and environmental problems in their area.
4. Building managers are assigned in their area.

Building Managers and Assistant Building Managers:

1. Ensure assigned building(s) and surrounding grounds are safe, healthy, and in compliance with housekeeping rules.
2. Ensure good energy conservation practices are followed.
3. Ensure all safety, health, and environmental issues in their building are addressed.
4. Act as the building point of contact for safety awareness.
5. Coordinate outage requests and major construction activities.
6. Perform emergency duties specified in MPG 1040.3.
7. Ensure monthly inspection of fire extinguishers documented by initialing and dating the "Fire Extinguisher Record Tag" (MSFC Form 549). Coordinate immediate replacement of defective fire extinguishers by contacting the Logistics Services Department.
8. Document the type and location of fire extinguishers in their area on MSFC Form 542, "Building Fire Prevention Activities" (MWI 8715.11).
9. Issue MSFC Form 3798, "Permit for Portable Appliances" (see MWI 8715.11).
10. Take immediate action to correct an "Imminent Danger" (e.g., a hazard, violation, or condition that has a substantial probability to lead to death or serious physical harm). If the condition cannot be corrected immediately, call 544-HELP (4357), Safety Option, and do not leave the area until help arrives.
11. Perform monthly inspections of common areas (e.g., lobbies and parking lots) in their buildings and surrounding grounds. Document these inspections in SHEtrak.
12. Act as the building point of contact for facility inspections. This includes:
 - a. Accompany the SHE inspectors during the inspections.
 - b. Take receipt of SHE inspection finding reports.
 - c. Upon receipt of the SHE finding, post such a notice at or near each place where the condition exists or existed. Each notice shall remain posted until the condition is abated or for 3 working days, whichever is later (NPR 8715.3).
 - d. Assure action is taken to correct the SHE finding.
 - e. Upon completion of corrective action(s), close findings in SHEtrak.
 - f. If the SHE finding cannot be corrected in 30 days, enter a Hazard Abatement Plan in SHEtrak.
13. Attend the building manager-training program every 3 years.

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APPENDIX D
MSFC SHE PROGRAM CORE PROGRAM REQUIREMENTS (CPR)

CPR 1 - Management leadership and employee involvement

1. Safety and Health Plan (Policy, Goals, & Objectives)
2. Commitment to VPP
3. Planning
4. Written Programs
5. Management Leadership (Communication, Behavior, Leadership, Responsibility, Authority, Resources, Accountability)
6. Contractor Selection and Oversight
7. Program Evaluation
8. Employee Encouragement
9. Employee Involvement
10. Employee Committees

CPR 2 - System and worksite analysis

1. Pre-Use Analysis
2. Hazard Baseline and Industrial Health
3. Hazard Analysis
4. Inspections
5. Employee Concerns
6. Accident/Incident Investigation
7. Trend Analysis

CPR 3 - Hazard prevention and control

1. Hazard Controls (Procedures, Discipline, PPE, Engineering)
2. Tracking
3. Preventive Maintenance
4. Medical Program
5. Emergency Preparation

CPR 4 - Safety and health training

1. Worker, Contractor, Committees
2. Supervisors
3. Managers
4. Training Process

CPR 5 - Environmental compliance

1. Procure green chemicals through established MSFC procurement processes (Executive Order 13101),
2. Reduce, reuse, or recycle hazardous and toxic substances (Pollution Prevention Act).
3. Minimize storm water pollution from entering the environment by storing chemicals inside, implementing engineering controls, inspections, etc.
4. Ensure that equipment and processes are included in the Clean Air permit and that required inspections, recordkeeping, and tests are performed.
5. Dispose of waste (solid and/or liquid) in accordance with MSFC procedures and applicable Federal and State law.

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**APPENDIX E
MSFC SITEWIDE SAFETY RULES**

Every Employee:

1. Shall move to a secure area immediately after being notified (emergency warning system, fire alarm, or other alarm system).
2. Shall remove loose objects or other tripping hazards from floors immediately. Clean liquid spills from floor immediately or highlight by safety cones or signs.
3. Shall keep fire exits and means of egress free of boxes, file cabinets, and excess furniture.
4. Shall close desk or file drawers when not in use and not open more than one drawer of a file cabinet at a time.
5. Shall use only approved ladders, scaffolds, or step stands to reach items stored overhead or out of reach.
6. Shall, when going up or down stairs, take one step at a time and hold the handrail. In situations where there is 2-way traffic, bear to the right side of the stairway.
7. Shall use proper manual lifting techniques and limit lifts to personal physical capabilities, but in no case more than 40 pounds. Seek assistance from another employee when the item is greater than 40 pounds or too bulky to handle (do not exceed 40 pounds per employee).
8. Shall store hazardous chemicals/materials only in approved cabinets/areas.
10. Shall wear seat belts in all vehicles while at MSFC.
11. Shall not use a hand-held cell phone while driving a Government vehicle.
12. Shall not leave a vehicle running while unattended.
13. Shall walk on sidewalks and/or marked paths if available.
14. Shall not ride bicycles and motorized scooters on sidewalks or inside buildings.
(Exception: electric-powered units used by persons with physical disabilities. The Equal Opportunity Office will approve the documented "need" for the electric-powered unit and the Industrial Safety Department will approve the electric-powered unit.)
15. Shall walk (not run) in buildings, parking lots, or sidewalks. Running is allowed only in designated exercise areas.
16. Shall turn off coffeemakers and heat-producing appliances at the end of the shift.
17. Shall avoid cleaning areas/items contaminated with blood. (Only personnel who have completed the bloodborne pathogens course shall clean areas/items contaminated with blood.)
18. Shall not feed wild animals.
19. Except for special "open" events, employees shall not bring children into the workplace on a routine basis or for extended visits. When children briefly accompany the parent to the workplace, the employee is responsible for the safety and conduct of the child.

NOTE: MSFC's fire safety rules are outlined in MWI 8715.11.

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**APPENDIX F
MINIMUM HOUSEKEEPING GUIDELINES**

1. Keep area neat, clean, and orderly at all times. Limit materials, tools, and equipment out of normal storage places to those needed for operations.
2. Arrange desks, tables, etc., so that electrical and telephone cords and outlets do not present a tripping hazard.
3. Securely fasten shelves, cabinets, lockers, etc., to the floor or wall if a possibility of overturning exists.
4. Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapsing.

No items shall be stored on the top of any free-standing or fixed furniture that is 6 feet or greater in height, unless the top is specifically designed for such purpose. Items stored on the top of any height furniture shall be stacked/arranged so that it does not create a potential hazard to personnel and property. ”

5. Furniture, equipment, supplies, or other substantial physical objects shall not be stored in required egress corridors and passageways serving six or more people except in lobbies, recessed areas, or other spaces specifically designed for such purpose.
6. In areas protected by automatic sprinklers, storage shall be maintained at least 18 inches below the level of the sprinkler heads.
7. Areas that have cloth rags or paper towels saturated with combustible or flammable liquids will have a can with a self-closing lid and ventilated bottom (UL or FM approved).
8. Computer rooms and areas that generate a large amount of paper will be provided with metal cans with self-extinguishing heads.
9. Clean up areas at the end of each workday.
10. Furnace rooms, boiler rooms, or equipment rooms shall not be used for storage.

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APPENDIX G
DEVIATION APPROVAL PROCESS MATRIX

Type of Document	Wording	Routing (see Note A)	Approval Level (see Note B)	After Action Reporting and Statusing Requirements
Federal	Policy	Through Program System Safety Mgr. or S&MA Director.; Center Dir.; and NASA HQ/QS in turn	Issuing Federal Agency	Assessed and stasured annually with input to OSHA report
State	Policy	Through Program System Safety Mgr. or S&MA Director and Center Dir.	Issuing State Agency	Assessed and stasured annually with input to OSHA report
NPD	Policy	Through Program System Safety Mgr. or S&MA Director and Center Dir.	NASA HQ IPO or Enterprise	Assessed and stasured annually with input to OSHA report
NPR	Shall	Through Program System Safety Mgr. or S&MA Director	Center Director*	To NASA HQ/QS within 14 days and then assessed and stasured annually with input to OSHA report
NPR	Should	Through Program System Safety Mgr. or S&MA Director	Directorate level Facility Mgr. or Program Mgr.	To NASA HQ/QS quarterly and then assessed and stasured annually with input to OSHA report
Standard specified in an NPD	Shall	Through Program System Safety Mgr. or S&MA Director and Center Dir.	NASA HQ IPO or Enterprise	Assessed and stasured annually with input for OSHA report
Standard specified in an NPR	Shall	Through Program System Safety Mgr. or S&MA Director	Center Director*	To NASA HQ/QS within 14 days and then assessed and stasured annually with input to OSHA report
Standard	Should	Through Program System Safety Mgr. or S&MA Director	Program or Facility Manager	Not Required
MPD, MPG & MWI (SHE Documents)	Shall	In accordance with MPG 1410.2.	In accordance with MPG 1410.2.	In accordance with MPG 1410.2.

CHECK THE MASTER LIST at <https://repository.msfc.nasa.gov/directives/directives.htm>
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

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MPD, MPG & MWI (SHE Documents)	Should		Industrial Safety Dpt. Mgr.	Not Required
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Note A: The lowest organizational or program level of management having responsibility to implement safety requirements (e.g. facility manager, program systems manager, first line supervisory personnel) will assess, prepare, and submit a variance request through the appropriate levels of authority to the official with final approval authority. Safety officials (both program and Center as applicable) will concur or nonconcur with the request but will not serve as the responsible approving official.

Note B: Using the guidelines of this matrix, the final approval is the responsibility of the listed manager or director who, by their position, has the authority to accept the risk. Variances approved against mandatory ("shall") requirements are valid for up to 5 years. Variances approved against advisory ("should") provisions at the directorate or program level can remain in place as long as annual assessment and reporting is maintained.

Example: A *variance request* to a requirement stated in an NPR (fourth row of matrix) that uses the word *shall* would be routed through the Center Safety Director for concurrence and approved or denied by the Center Director. A copy would then be sent to NASA HQ/QS within 14 days along with the detailed rationale for its approval and other documentation. Annual status reports will be provided to HQ/QS concurrently with the input to the annual OSHA report.

*Approval is allowed at this level if the specific requirement is not implementing Federal regulatory policy. In those cases, the Center shall forward to NASA HQ/QS for variance request to the applicable Federal agency.

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**APPENDIX H
HAZARD REPORTING PRECEDENCE**

TO REPORT A SUSPECTED UNSAFE CONDITION:

Each employee is responsible for reporting unsafe or potentially unsafe conditions in the workplace, or unsafe products the Center produces. Employees are guaranteed freedom from restraint, interference, coercion, discrimination, or reprisal for exercising their rights. Several lines of communication are available. The preferred sequence of reporting safety concerns is:

1. Contact your supervisor/ management.
2. Contact MSFC Safety Hotline 544-HELP, "Safety Option."
3. Submit MSFC Safety Concern(s) Reporting System (SCRS) via mail in pamphlet (local bulletin boards) or the SHE Web Page,
4. Contact the Industrial Safety Department Manager 544-0046
5. Contact the safety designee listed on the "Occupational Safety and Health Protection for NASA Employees" poster (S&MA Director) NASA Safety Reporting System (NSRS)*. Forms are available in common areas of buildings at MSFC and on the SHE Webpage.
6. Report safety concerns via OSHA Hotline 1-800-321-OSHA

NOTE: If the condition is not satisfactorily corrected, go to the next step. If none of these reporting steps provides satisfactory correction, the employee may file an appeal or grievance in accordance with NPR 8715.1.

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APPENDIX I
Maximum Work Hour Guidelines

I.1 Supervisors should use the following guidelines for worker's whose job performance can directly impact the safety of others, the safety of NASA high value property, or mission, and consider them for other workers.

I.2 Maximum Work Periods:

I.2.1 12 Consecutive hours (16 hours in an emergency situation)

I.2.2 60 hours during a workweek (7 day period)

I.2.3 7 consecutive days without at least 1 full day off

I.2.4 240 hours during a 4 week period

I.2.5 2500 hours during a rolling 12-month period