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# Glenn Safety Manual – Chapter 1

## Safety & Health Management System

*Approved by: QS/Chief, Safety and Health Division*

*Distribution: BMS Library*

**NASA - Glenn Research Center  
Cleveland, OH 44135**

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### Change Record

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Change 1	5/28/2010	6/10/2015	N/A	Administrative change to add front cover and change history log to comply with NPR 1400.1
Change 2	7/27/2015	6/10/2016	N/A	This extension will allow time to complete the new GLPR for the Safety and Health Management System. Much of Chapter 1 will be incorporated into the new GLPR and then Chapter 1 can be removed.
Change 3	9/30/2015	6/10/2016	N/A	Administrative change to remove hyperlinks.
B	6/09/2016	6/09/2021	16-007	Five year review and renewal

*\*\*Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.*

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## Chapter 1—Glenn Safety and Health Management System

*NOTE: The current version of this chapter is maintained and approved by the Safety and Health Division (SHeD). The last revision date of this chapter was June 2016. The current version is located at within the BMS Library. Approved by Chief of Safety and Health Division.*

### 1.0 PURPOSE

This chapter describes this system and the processes, programs, and resources used to ensure that Glenn Research Center (GRC) and the workforce are free from recognized hazards that have the potential to cause death or serious injury. The effectiveness of the Glenn Safety and Health Management System depends on supervisors knowing and complying with the requirements that are specific to the activities and facilities within their organizations.

### 2.0 APPLICABILITY

This chapter applies to all organizations and supervisors at NASA GRC at Lewis Field and Plum Brook Station (PBS).

### 3.0 BACKGROUND

#### 3.1 Hazard Identification and Risk Assessment

The GRC directorates shall develop safety and health management plans, which define the organization’s mission, goals, objectives, metrics, and resources for the Glenn Safety and Health Management System. This requires reviewing work proposals and properly identifying and evaluating potential safety and health hazards.

#### 3.2 Legal and Other Requirements

The Safety and Health Division (SHeD) maintains manuals that include all safety and health programs and functions. Each program lists the laws, regulations, standards, and all other relevant requirements for the Glenn Safety and Health Management System.

#### 3.3 Objectives

Ensure the effectiveness of the Glenn Safety and Health Management System by providing safety awareness for supervisors so they know and understand their roles and responsibilities for health and safety requirements and how those requirements are applied to specific activities within their organizations. Compliance is mandated and the SHeD monitors the effectiveness of the requirements through inspections, assessments, audits, and Center management boards and committees.

### 4.0 POLICY

It is GRC’s policy to ensure that its operations and activities satisfy occupational health and safety requirements that comply with applicable government regulations, Agency policies, and adopted guidelines and industry standards. GRC management shall provide a means of integrating all required safety and health protection to employees in their organizations.

### 5.0 RESPONSIBILITIES

#### 5.1 Center Director

Responsible for establishing a Glenn Safety and Health Management System and assigns responsibility and authority to implement, improve, and maintain this system.

#### 5.2 Director of Safety and Mission Assurance Directorate (SMAD)

Assigns responsibility and authority within the SHeD and Center organizations for implementing, improving, and maintaining safety and mission assurance for GRC as described in the Annual Operating Agreement (AOA) for GRC.

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### 5.3 Mission Support Council (MSC)

Responsible for reviewing, approving, and advising Center institutional plans, performance goals, objectives, and metrics through functional area reviews. The Council is chaired by the Associate Center Director. Special MSC meetings are held to provide senior-level leadership and oversight for the Glenn Safety and Health Management System.

### 5.4 Chief, Safety and Health Division

Implements the requirements established by the Director of SMAD and supports the Center organizational supervisors for compliance under the Safety and Health Management System. The Division is comprised of two branches: Operational Safety and Occupational Health.

### 5.5 Medical Director, Support Service Contractor

Responsible for medical reviews of GRC programs and services that promote the health and wellness of Center employees.

### 5.6 Emergency Manager

Responsible for emergency preparedness planning and emergency response activities.

### 5.7 Glenn Research Center Management

The GRC Director is responsible for establishing a Safety and Health Management System in accordance with Federal regulations; NPR 8715.3, NASA General Safety Program Requirements; NPR 8715.1, NASA Occupational Safety and Health Programs; NPR 8715.2, NASA Emergency Preparedness Plan Procedural Requirements; and other related requirements established by NASA Headquarters.

All organization supervisors have the prime responsibility for compliance with pertinent safety requirements (including those related to housekeeping and shop safety) and for ensuring the effectiveness of the Glenn Safety and Health Management System as it affects the specific activities of their organization. This responsibility includes, but is not limited to, the following:

- Knowing GRC safety and health requirements and communicating these requirements to subordinate personnel.
- Mandating compliance with safety and health requirements and monitoring this compliance.
- Reviewing the work proposals of subordinates and contractors to ensure that all potential safety and health hazards are properly identified and evaluated, that procedures for safe operation and effective emergency rescue have been developed, and that the cognizant Area Safety Committee evaluation is obtained, where appropriate.
- Personally surveying their work areas and recognizing potential hazards therein; analyzing statistics on accidents and near accidents in these areas; and initiating or recommending corrective action where required.
- Notifying the SHED whenever there is a change in the potential exposure of any of their employees to hazardous substances or conditions.
- Soliciting technical input from the SHED for the development of safe operating procedures, emergency rescue procedures, or any other safety and health documentation.
- Providing direction for continuing safety and health education and training for subordinate personnel in accordance with the standards and criteria established by the SHED.
- Reporting all mishaps and close calls within 24 hours of occurrence per Glenn Safety Manual, Chapter 21.

### 5.8 Glenn Research Center Employees

Each civil servant employee or support service contract employee is responsible for:

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- Exercising reasonable care and caution in the safe performance of his or her work assignments and in the conduct of any activity at the Center.
- Possessing knowledge of GRC safety and health regulations, safe operating procedures, and emergency rescue procedures affecting his or her individual work area and work assignments and complying therewith.
- Reporting the development or appearance of any potentially hazardous condition to his or her supervisor or to the SHeD.
- Attending and participating in training as required.

No employee will be subject to restraint, interference, coercion, discrimination, or reprisal for filing a report of an unsafe or unhealthful working condition. No employee will be prevented from participating in Center occupational safety and health program activities.

### 5.9 Safety Committees

The safety committees conduct independent reviews of all proposed installations and operations in their assigned areas to ensure that the proposed design and/or operation is consistent with the dictates of sound engineering judgment and acceptable health and safety standards. Committee membership includes individuals with engineering and operational expertise, as appropriate for that area's activities, and representatives from the SHeD.

## 6.0 REQUIREMENTS

### 6.1 Health and Safety Functional Support Programs

The following functional programs are related to occupational health and safety and provide support to GRC supervisors and management leadership roles and responsibilities for implementation, operations, corrective action, reviews, and resources within the Glenn Safety and Health Management System. These functions are provided under the Medical Services contract.

- Employee Assistance Program
- Fitness Center
- Medical Services

### 6.2 Health and Safety Hazard Prevention Functions

The following functions have guidelines and procedures to control hazards at GRC

- Facility safety inspections
- Health and Safety Plans (HASPs)
- Mishap and incident reporting and investigation
- Personal protective equipment (PPE)
- Confined space entry
- Cranes and lifting devices
- Fall protection
- Hot work
- Electrical safety
- Emergency response

### 6.3 Training—Awareness—Competence

The SHeD shall provide technical guidance to Center organizations for all safety and health requirements.

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### **6.3.1 Training**

Supervisors shall assess the training needs of their employees and complete an annual training needs assessment for safety and health compliance. The SHED has developed training modules for supervisor and employee awareness that are implemented through the System for Administration, Training, and Educational Resources for NASA (SATERN).

### **6.3.2 Awareness**

The Center shall hold a safety and health awareness event each year as well as safety and health fairs and other internal safety and health awareness activities. The GRC distributes a Center Safety Bulletin twice each month, which addresses specific safety and health topics.

### **6.3.3 Competence**

Employee competence is a set of skills, education, training, and experience, defined as the requirements needed to perform health and safety job duties within the organization, and jobs requiring specific knowledge of applied health and safety protective measures. Competence shall be assessed during performance evaluations. Additional training needs shall be identified, at that time, in a written Individual Development Plan. Safety and health training is available through SATERN and course completion status of employees is tracked through SATERN.

### **6.3.4 Consultation and Communication**

Requirements for the Glenn Safety and Health Management System are communicated to both civil servants and contractor personnel through their organizational line management. The Contractor Safety Committee is chaired by the Chief, SHED, and is the primary means to communicate health and safety requirements to all contractors who have personnel located onsite at GRC.

### **6.3.5 Documentation**

The Safety and Occupational Health Programs Manuals are the primary documentation for programs that are applicable to the Glenn Safety and Health Management System requirements. The SHED program leads shall be responsible for reviewing the manual contents to maintain current information. The AOA contains the metric tasks that have been identified according to SMAD support to Agency, Center, and NASA programs, operations, and activities. The SHED also maintains documentation that verifies and validates compliance with all authorities for this chapter.

### **6.3.6 Document and Data Control**

The Business Management System (BMS) and Safety and Occupational Health Programs Manuals constitute the GRC procedures for documentation and data control. For reviews and revisions, GRC follows the BMS document control policy and procedure, GLPD 1410.2, GLPR 1410.1, and GLPR 1410.3. More frequent reviews and/or revisions may be undertaken if the need is identified based on changing circumstances or changes in regulations. Controlled copies of the documents are in electronic form. These documents are made available to employees and others who may need them to carry out their duties. Obsolete controlled documents are removed from circulation immediately.

### **6.3.7 Operational Control**

Operational controls are specific to the safety and health services being provided and are addressed in the Glenn Safety Manual and the Occupational Health Manual. External regulatory requirements shall be listed in the chapters of each manual.

### **6.3.8 Emergency Preparedness and Response**

The Emergency Management Plan (EMP) defines the appropriate safety and health response to implement during emergencies.

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## 6.4 Checking and Corrective Action

### 6.4.1 Performance Measurement and Monitoring

Operational control procedures shall be verified by the SHeD. Measurement and monitoring requirements shall be defined in the Safety and Occupational Health Program Manual chapters. The methods shall be designed for the specific program requirements, with a process that produces reliable validation and verification data. The process shall be scheduled at regular, appropriate intervals, annually.

The SHeD shall conduct programmatic self-assessments to evaluate compliance with relevant safety and health regulations and NASA requirements. The outcome of these self-assessments are presented to the senior Center leadership.

### 6.4.2 Accidents, Incidents, Nonconformances, and Corrective and Preventative Actions

When an incident occurs, employees are responsible for reporting mishaps and close calls in the NASA Mishap Information System (NMIS). The responsible organization shall track the corrective action performance and completion in NMIS. The SHeD shall monitor corrective action activities to determine if they were carried out according to the plan and report noncompliance. The SHeD shall verify all actions are correctly recorded in NMIS.

The SHeD shall document inspection findings through the SHEtrak. It shall also monitor corrective action activities to determine if they were carried out according to the plan and report noncompliance.

## 7.0 RECORDS

Safety and Health Management System records shall be maintained in accordance with GLPR 1440.1, Records Management, and GLPD 1420.1, Forms Management.

### 7.1 Audit

The safety and occupational health programs are audited by NASA Headquarters, regulatory agencies, and the internal audit process for GRC.

### 7.2 Management Review

The MSC holds special meetings twice each year to review the Glenn Safety and Health Management System.

## 8.0 REFERENCES

NPR 8715.3	NASA General Safety Program Requirements
NPR 8715.1	NASA Occupational Safety and Health Programs
NPR 8715.2	NASA Emergency Preparedness Procedural Requirements
NPR 8621.1	NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating and Recordkeeping
Executive Order 12196	Occupational Safety and Health Programs for Federal Employees
Title 29 Code of Federal Regulations (CFR), Part 1960	Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters
Title 29 CFR Part 1960.9	Establishes the regulatory requirements for Glenn's organizational and supervisory responsibilities for the health and safety of Federal employees
ANSI Z10 Standard	Occupational Health and Safety Management System (OHSMS)
GLPD 1410.2	Glenn Documentation and Charters Management
GLPR 1410.1	Glenn Directives Management
GLPR 1410.3	Issuing and Controlling Lower Level Documents
GLPR 1440.1	Records Management

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GLPD 1420.1

Forms Management

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**APPENDIX A.—DEFINITIONS AND ACRONYMS**

**Annual Operating Agreement (AOA)**

**Business Management System (BMS)**

**Emergency Management Plan (EMP)**

**Glenn Research Center (GRC)**

**Health and Safety Plan (HASP)**

**Mission Support Council (MSC)**

**NASA Mishap Information System (NMIS)**

**Personal protective equipment (PPE)**

**Plum Brook Station (PBS)**

**Safety and Mission Assurance Directorate (SMAD)**

**Safety and Health Division (SHeD)**

**System for Administration, Training, and Educational Resources for NASA (SATERN)**

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