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Occupational Health Programs Manual – Chapter 20

Hazard Communication Policy w/Change 2 (9/30/2015)

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Change Record

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A	5/2/2012	5/2/2017	1	Bi-annual review of document, minor text revisions and incorporation of verification boxes.
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***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 20—Hazard Communication Policy

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 February 2014. The current version is located on the Glenn Research Center intranet within the BMS Library. Approved by Chief of Safety and Health Division.

1.0 PURPOSE

The Glenn Research Center (GRC) Hazard Communication (HAZCOM) Policy was established to formalize the methods of communicating information on hazardous chemicals and to ensure that correct and complete information is available to GRC employees, summer and part-time temporary employees, tenant employees, construction contractors, and resident support services contractor personnel. It is not only the intent of GRC to fully comply with the Occupational Safety and Health Administration (OSHA) rules, but also to improve the overall safety of GRC.

2.0 APPLICABILITY

The GRC HAZCOM Policy applies to GRC employees, summer and part-time temporary employees, tenant employees, construction contractors, and resident support services contractor personnel who may be exposed or may expose others to hazardous chemicals under normal conditions of use or in a foreseeable emergency at Lewis Field, Plum Brook Station (PBS), or any associated offsite facility. A HAZCOM Program has been established to ensure Center compliance with OSHA regulations. The HAZCOM Program contains general information and establishes minimum requirements for the safe handling and use of hazardous chemicals.

3.0 BACKGROUND

On July 25, 1986, OSHA ruled that, pursuant to Executive Order 12196, all Federal agency heads were required to comply, by May 23, 1988, with the OSHA Hazard Communication Standard as set forth in 29 Code of Federal Regulations (CFR) 1910.1200. This chapter prescribes GRC's implementation of those directives. On March 26th, 2012, OSHA finalized the update to the Hazard Communication Rule through the publication of the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals. In the final rule, OSHA has modified its Hazard Communication Standard (HCS) to conform to the United Nations' GHS.

4.0 POLICY

It is GRC policy that employee health and safety are the highest priority. Therefore, all GRC employees, summer and part-time temporary employees, tenant employees, and resident support services contractor personnel involved in handling, storage, transportation, use, production, or disposal of chemicals shall be informed that their lives or health may depend on their knowledge of the chemicals they work with and on their taking appropriate measures to protect themselves and minimize exposure to hazardous chemicals. As a multiemployer worksite, each employer at GRC must have its own HAZCOM program that describes how they will share information with other employers, their own employees and SHeD personnel regarding Safety Data Sheets (SDSs), including access to them, precautionary measures, and any labeling systems used at the workplace.

5.0 RESPONSIBILITIES

5.1 Center Director

The Center Director provides continuing support for Center-wide HAZCOM activities.

5.2 Chief of Safety and Health Division

- Appoints a technically qualified individual as the HAZCOM Program Lead to carry out the responsibilities set forth in the HAZCOM Program.
- Assures the availability of resources necessary for the establishment, execution, and maintenance of the HAZCOM Program.

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- Assigns organization responsibility and allocates resources to ensure that all parts of 29 CFR 1910.1200 are implemented and maintained.

5.3 Hazard Communication Program Lead

- Establishes, administers, and maintains the GRC HAZCOM Program in coordination with all appropriate GRC personnel.
- Ensures that the GRC training, inventory, SDSs, and labeling requirements as specified in 29 CFR 1910.1200 are in place and maintained.
- Ensures that recordkeeping requirements are established and maintained as required by 29 CFR 1910.1200.
- Reviews the HAZCOM Program for compliance with OSHA requirements.
- Ensures that the appropriate warning placards and/or signs and labels are provided or arranged for and in place at designated areas as necessary.

5.4 Human Capital Development Division Representative

- Implements the training requirements of 29 CFR 1910.1200 in conjunction with the HAZCOM Program Lead.
- If requested, provides suitable certificates to employees upon completion of scheduled training by such employees.
- Establishes and maintains the official training records for NASA employees as required in 29 CFR 1910.1200.

5.5 Employees (Civil Servants, Support Service Contractors, and Tenant Organizations)

- Read and understand SDS for chemicals in assigned work area.
- Contact the SHed Occupational Health Branch if an SDS is not available.
- Contact supervisor or the SHed Occupational Health Branch if employee does not understand an SDS.
- All chemical containers shall be labeled to identify contents and hazards.
- Attend initial and refresher HAZCOM training sessions, as required.
- Follow all proper procedures for purchasing, storing, using, and disposing of hazardous chemicals. Employees are reminded not to buy more chemicals than they can possibly use in their project or to stockpile material.
- Follow the information and precautions specified on the SDS, such as personal protective equipment, storage requirements, ventilation requirements, emergency equipment, etc.

5.6 Supervisors (Civil Servants, Support Service Contractors, and Tenant Organizations)

- Ensure that their employees are appropriately trained to handle all hazardous chemicals in their work areas.
- Ensure that all of the information as specified in 29 CFR 1910.1200 is available to each employee.
- Implementation of the HAZCOM Program is the responsibility of each supervisor.
- Ensure employees follow the information and precautions specified on the SDS, such as personal protective equipment, storage requirements, ventilation requirements, emergency equipment, etc.

5.7 Resident Contractor Contracting Officer's Technical Representative (COTR)

- Ensures that contractors have a HAZCOM program (if required) and comply with all elements of this program.
- Ensures that contractors have an approved Health and Safety Plan (HASP) and comply with all elements of this plan (29 CFR 1926.59).

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- Effectively communicates issues and concerns to SHeD.
- Responds to SHeD requests for information.
- At minimum, ensures that SDS and inventory lists are available onsite in the work area and makes these available to the SHeD Chemical Management Lead.

6.0 REQUIREMENTS

Note: Requirements for this chapter are defined in 29 CFR 1910.1200 and 29 CFR 1926.59. The plan to address these requirements is found in the Chemical Hazard Communication Plan (Sections 6.1.1 to 6.1.5) or the Chemical Hygiene Plan (Section 6.1.6). Please refer to these documents for additional and specific guidance.

All aspects of GRC HAZCOM will ensure compliance as specified in 29 CFR 1910.1200 and 29 CFR 1926.59. The following items are required by these references.

6.1 Written Program (29 CFR 1910.1200)

As part of the HAZCOM Program, a written HAZCOM Program shall be maintained and reviewed annually by the GRC HAZCOM Program Lead. The requirements of 29 CFR 1910.1200 and the programs in place at GRC must meet the requirements defined in the written HAZCOM Program. Sections 6.2 through 6.6 are included in the HAZCOM Program Plan.

6.1 - The SHeD verification procedure to ensure compliance with the requirements listed in this section shall be accomplished updating the HazCom Program Plan annually and posting the most current version in the OHPM.

6.2 Safety Data Sheet Program (29 CFR 1910.1200)

As part of the HAZCOM Program, an SDS plan specifies that the master SDS files shall be kept, maintained, and distributed by the SHeD Occupational Health Team. SDSs are available in all work areas through the GRC SDS online Web page. A Hazardous Chemical Labeling Plan includes the chemical name and appropriate hazard warnings to ensure that containers of hazardous chemicals are labeled properly. Labels can be requested through SHeD.

6.2 - The SHeD verification procedure to ensure compliance with the requirements listed in this section shall be accomplished by reviewing all new chemical orders to ensure that an SDS is currently in the database or is procured. The SDS database can be reviewed at any time at <http://shedapps.grc.nasa.gov/msds/home.cfm>

6.3 Training Program (29 CFR 1910.1200)

As part of the HAZCOM Program, a GRC training plan shall ensure that employees with routine exposure to hazardous chemicals are aware of the OSHA standards, the hazards of the chemicals that they work with, and the ways to protect themselves from those hazards.

6.3 - The SHeD verification procedure to ensure compliance with the requirements listed in this section, shall be accomplished by providing initial HazCom and refresher HazCom training. These training files are kept in SATERN by the Human Capital Development Division.

6.4 Chemical Inventory Program (29 CFR 1910.1200)

As part of the HAZCOM Program, a Chemical Inventory Plan shall include the tracking of chemicals at GRC, bar coding, and the maintenance of the inventory is maintained. Employees who use chemicals must submit a Chemical Inventory Usage Form, NASA GRC3032, to SHeD whenever the chemical inventory is moved to a new location. Additional databases for fuels and returnable containers (RETCONs) are maintained by the Logistics and Technical Information Division.

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6.4 - The SHeD verification procedure to ensure compliance with the requirements listed in this section shall be accomplished by reviewing the inventory at <http://SHeDapps.grc.nasa.gov/chemex/home.cfm> or directly through the Chemical Management Database.

6.5 Construction Program (29 CFR 1926.59)

As part of the HAZCOM Program, the construction contractor COTR requires contractors to submit their HAZCOM programs, SDSs (typically included in the HASP), and certification statements from their subcontractors stating that they have a HAZCOM program before they are allowed to begin work. COTRs will supply SHeD with the SDS list and provide the contractor with GRC-specific chemical information as needed.

6.5 - The SHeD verification procedure to ensure compliance with the requirements listed in this section, shall be accomplished by reviewing all HASPs to ensure HazCom criteria (SDSs, HazCom plan) are appropriate before granting approval to begin work. This information resides in the Construction Program e-room.

6.6 Hazard Assessment Plan (29 CFR 1910.1200 and 29 CFR 1910.1450)

As part of the HAZCOM Program, a hazard assessment plan that includes how the hazards of chemicals are determined, what measures are to be taken to protect GRC employees from those hazards, and how GRC will be working to reduce the hazards in each work area, must be developed and maintained. Additional information on hazard identification can be found in the Chemical Hygiene Plan, the Hazard Assessment/Exposure Assessment Program, the HASP process, the Safety Permit processes, the confined space process, and the hot work process.

6.6 - The SHeD verification procedure to ensure compliance with the requirements listed in this section, shall be accomplished by updating these documents on a regular basis and ensuring that they are available to all employees.

7.0 RECORDS

- SDSs.—Maintained by SHeD.
- Chemical inventory.—Maintained by SHeD.
- Training records for civil servants.—Maintained by Human Capital Development Division.
- Training Records for affected employees.—Maintained by support service contractors and tenant organizations.

8.0 REFERENCES

Document number	Document title
29 CFR 1910.1450	Occupational Exposures to Hazardous Chemicals in Laboratories
29 CFR 1910.1200	Occupational Safety and Health Standards Hazard Communication
Executive Order 12196	Occupational Safety and Health Provisions for Federal Employees
NPR 4100.1D	NASA Procedural Requirement, Materials Inventory Management Manual
NPR 1800.1C	NASA Procedural Requirement, NASA Occupational Health Program Procedures
NPR 8715.1	NASA Occupational Safety and Health Programs
NPR 8715.3C	NASA General Safety program Requirements

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Carcinogen.—A chemical is considered to be a carcinogen if it has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen, or if it is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP) (latest edition), or if it is regulated by Occupational Safety and Health Administration as a carcinogen.

Chemical Inventory.—A list of hazardous chemicals known to be present in the workplace and work areas. At Lewis Field, this list is maintained as part of the Chemical Management Systems database at Lewis Field and the Chemical Inventory database at Plum Brook Station.

Code of Federal Regulations (CFR)

Contracting Officer's Technical Representative (COTR)

Employee.—A GRC, tenant, or resident support service contractor employee who may be exposed to hazardous chemicals in his or her assigned work area under normal operating conditions or in foreseeable emergencies.

Flammable

- **Aerosol.**—An aerosol that yields a flame projection exceeding 18 in. at full valve opening or a flashback at any degree of valve opening.
- **Gas.**—A gas that at ambient temperature and pressure forms a flammable mixture with air at a concentration of 13 percent by volume or less, or a gas that at ambient temperature and pressure forms a range of flammable mixtures with air greater than 12 percent by volume, regardless of the lower limit.
- **Liquid.**—Any liquid having a flash point below 100 °F (37.8 °C), except any mixture having components with flash points of 100 °F (37.8 °C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
- **Solid.**—A solid that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard.

Glenn Research Center (GRC)

Hazardous chemical.—Any chemical that is either a physical or health hazard.

Hazard communication (HAZCOM)

Hazardous material.—Any material defined as hazardous in 49 Code of Federal Regulations (CFR) 171.8 that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and that has been so designated. Such material has one or more toxic, flammable, corrosive, or reactive properties. All materials, listed under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), are included.

Hazard Communication Program.—Written document that describes how an employer or facility complies with the requirements of the Federal Hazard Communication Standard.

Hazard Communication Standard (29 CFR 1910.1200 for General Industry, 29 CFR 1926.59 for Construction).—Federal regulation developed by the Occupational Health and Safety Administration to reduce illness and injury caused by chemical hazards in the workplace (requires evaluation of chemical hazards and communication of hazard information to both employers and employees).

Health and Safety Plan (HASP)

Health hazard.—A chemical for which there is scientifically established evidence that acute or chronic health effects may occur in exposed employees.

Highly toxic.—A chemical falling within any of the following categories:

- A chemical that has a median lethal dose (LD50) of 50 mg or less per kg of body weight when administered orally to albino rats weighing between 200 and 300 g each.

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- A chemical that has a median lethal dose (LD50) of 200 mg or less per kg of body weight when administered by continuous contact for 24 hour (or less if death occurs within 24 hour) with the bare skin of albino rabbits weighing between 2 and 3 kg each.
- A chemical that has a median lethal concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor, or 2 mg/liter or less of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hr.) to albino rats weighing between 200 and 300 g each.

NASA Procedural Requirement (NPR)

Occupational Safety and Health Administration (OSHA).—A Federal agency responsible for establishing and enforcing standards for exposure of workers to harmful materials in industrial atmospheres, and other matters affecting the health and well-being of industrial personnel.

Physical hazard.—A chemical or product for which there is scientifically established evidence that the chemical is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or is water reactive.

Plum Brook Station (PBS)

Returnable container (RETCON)

Safety Data Sheet (SDS).—A document, provided by the manufacturer or importer of a hazardous chemical or prepared by researchers that identifies a hazardous material and provides information about the physical and health hazards associated with it. Although SDSs vary in both format and content, all must contain the following information: product identification, manufacturer's name and address, hazardous ingredients information, physical and chemical characteristics, fire and explosion hazard data, reactivity data, health hazard data, precautions for safe handling and use, and control measures.

Toxic.—A chemical falling within any one (or more) of the following categories:

- A chemical that has a median lethal dose (LD50) of more than 50 mg per kg but not more than 500 mg per kg of body weight when administered orally to albino rats weighing between 200 and 300 g each.

A chemical that has a median lethal dose (LD50) of more than 200 mg per kg but not more than 1000 mg per kg of body weight when administered by continuous contact for 24 hour (or less if death occurs with 24 hour) with the bare skin of albino rabbits weighing between 2 and 3 kg each.

- A chemical that has a median lethal concentration (LC50) in air of more than 200 parts per million but not more than 2000 parts per million by volume or less of gas or vapor, or more than 2 mg/liter but not more than 20 mg/liter of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 g each.

Work area.—A room, laboratory, warehouse, or other defined area within Lewis Field Center, Plum Brook Station, or an associated offsite facility wherein hazardous chemicals are used, stored, or transported, and where employees are present.

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