



HAZARD COMMUNICATION PROGRAM

Northern Illinois University

*Environmental Health and Safety Department
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Review and Updates

Date	Reviewed by	Changes Made
April 28, 2015	Dave Scharenberg	Insertion of Appendix A & Review Sheet.
May 4, 2015	Dave Scharenberg	Removal of NIU web site reference.
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Purpose

The Hazard Communication (Hazcom) Program demonstrates Northern Illinois University's commitment to compliance with the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard as adopted by the Illinois Department of Labor (IDOL). A written hazard communication plan is required by federal regulations specified in 29 CFR 1910.1200, which states that each employer is required "to provide information to their employees about the hazardous chemicals to which they are exposed by means of a hazard communication program, labels, and other forms of warning, safety data sheets, and information and training."

The Hazard Communication Standard applies to any chemical in the work area to which employees may be exposed under normal conditions of use, or in a foreseeable emergency. In accordance with OSHA regulations, laboratory employees are covered under the NIU Chemical Hygiene Plan administered by the Office of Research, Compliance, Integrity and Safety (ORCIS).

The Hazard Communication Standard does not apply to consumer products as defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C 1261 et seq.), where the employer can show that it is used in the workplace for the purpose intended by the manufacturer or importer of the product, and the use results in a duration and frequency of exposure that is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended [29 CFR 1910.1200(b)(6)(ix)].

The purpose of this Hazard Communication Program is to ensure that the hazards of all chemicals purchased, used, and maintained at the NIU facility are evaluated and controlled and that all information concerning these hazards is communicated to all affected employees. Under this program, employees will be informed of the contents of the Hazard Communication Standard, the hazardous properties of chemicals with which they work, safe handling procedures, hazards associated with non-routine tasks, and measures to take in order to protect employees from these chemicals.

Definitions

Campus Unit: Any department, division, center, school, institute, or other NIU unit that employs personnel to perform tasks that might lead to exposure to hazardous chemicals.

Carcinogen: A substance or agent capable of causing or producing cancer in mammals.

Chemical: Any element, chemical compound or mixture of elements and/or compounds. Exposure to chemicals can be in a variety of forms such as: solids, liquids, gases, vapors, dusts, mists, or fumes.

Chemical Hygiene Plan (CHP): The intent of a CHP is to protect employees from hazardous chemicals and promote a healthy and safe environment. The CHP is intended to provide information on best practices in laboratory health and safety.

Chemical Manufacturer: An employer with a workplace where chemicals are produced for use or distribution.

Chemical Name: The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

CHEMTREC: Chemical Transportation Emergency Center; a national center established to relay pertinent information concerning specific chemicals on request. Toll free 24-hour telephone number is 1-800-424-9300.

Common Name: Any designation or identification such as code name, code number, trade name, brand name, or generic name used to identify a chemical other than by its chemical name.

Compressed Gas: (i) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 pounds per square inch (psi) at 70°F (21.1°C); or (ii) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 pounds per square inch at 30°F (54.4°C) regardless of the pressure at 70°F (21.1°C); or (iii) A liquid having a vapor pressure exceeding 40 psi at 100°F (37.8°C) as determined by ASTM D-323-72.

Directorial Personnel: The person with the greatest authority within the campus unit and, if possible, who also has the greatest direct knowledge and control of the employees' day-to-day activities.

Foreseeable Emergency: Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Globally Harmonized System (GHS): The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) is a system that defines and classifies the hazards of chemical products and communicates health and safety information on labels and Safety Data Sheets (SDSs).

Hazardous Chemical: Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Hazard Not Otherwise Classified (HNOC): An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical or health classes.

Hazard Statement: A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Immediate Use: The hazardous material will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Incompatible: Materials which could cause dangerous reactions from direct contact with one another are described as incompatible.

PEL: Permissible Exposure Limit. An exposure limit established by OSHA. May be time-weighted average (TWA) limit or a maximum concentration exposure limit.

Pictogram: A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated for application to a hazard category. (See **Appendix C**)

Precautionary statement: A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Safety Data Sheet (SDS): Written or printed material concerning a hazardous chemical.

Signal Word: A word used to indicate the relative level of severity of hazard and alert the user to a potential hazard on the label. The signal words used are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe.

Supervisory Personnel: NIU employees reporting directly to directorial personnel. Supervisory personnel have the responsibility for overseeing a work group(s).

Supplemental Label Element: Any additional non-harmonized type of information supplied on the container of a hazardous product that is not required or specified under the GHS.

TLV: Threshold Limit Value, a term used to express the airborne concentration of a material to which nearly all persons can be exposed day after day without adverse effects.

Unstable: A chemical which, in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

Work Area: A work area is a room (or several connected rooms) or otherwise defined space (e.g., machine shop, glass shop) in which employees handle or are exposed to hazardous chemicals.

Work Group: A work group consists of employees who perform similar tasks using similar products (e.g. plumbers, cleaning personnel, etc.) and who usually work in multiple areas.

Part 1: Hazard Communication Responsibilities

1.1 Department of Environmental Health and Safety

The Department of Environmental Health and Safety (EHS) is responsible for:

1. Developing and maintaining the written campus Hazard Communication Program.
2. Conducting or coordinating Hazard Communication training for those employees that may come in contact with hazardous chemicals.
3. Assisting campus units in the establishment of work-specific training programs.
4. Performing or assisting with chemical hazard assessments, exposure monitoring and personal protective equipment (PPE) selection.
5. Conducting periodic and annual audits to verify the integrity and effectiveness of the hazard communication programs.

1.2 Directorial Personnel

Directorial personnel are responsible for:

1. Implementing and maintaining a work-specific training program covering each work area or work group within the campus unit.
2. Evaluating the work-specific training program annually to ensure that:
 - a) The latest revision of the campus written plan is implemented;
 - b) Every product in use is listed on the inventory and an SDS is available;
 - c) The products and procedures evaluated in the hazard assessment have not changed, or a new hazard assessment has been performed;
 - d) Employees have been trained on new hazards and procedures; and,
 - e) New employees have received training.
3. Maintaining all records, such as inventory, training and hazard assessment certificates.

1.3 Supervisory Personnel

Supervisory personnel are responsible for:

1. Ensuring that all employees have received proper Hazard Communication training.
2. Assessing chemical hazards by completing Job Hazard Analyses (JHA) for employees.
3. Selecting and providing the appropriate PPE for employees, including training for proper PPE use and maintenance.
4. Providing job-specific training to employees regarding hazards in the workplace, including precautions and equipment for safe use, signs and symptoms of overexposure, and when new chemicals are introduced in the work place.

1.4 Employees

Employees are responsible for:

1. Complying with all guidelines and procedures in accordance with this written program and training provided.
2. Wearing required PPE and properly maintaining and storing designated PPE.
3. Reporting any exposures, injuries, or safety problems to the supervisor.
4. Reviewing SDSs prior to using a chemical for the first time.
5. Safe usage and storage of hazardous materials used in the department.
6. Participating in scheduled Hazard Communication training as directed.
7. Providing the supervisor with records of training.

1.5 Contractors

Contract employees must be informed about the hazardous chemicals to which they may be exposed while working at NIU. Any NIU personnel preparing specification for contractors must inform contract employees about the chemicals in the work area, the location of the SDSs, any necessary safety precautions, and answer safety related questions.

Contractors are also responsible for developing and implementing their own hazard communication program that meets the requirements established in 29 CFR 1910.1200. Contractors must provide University project managers with information concerning hazardous materials to be brought into any NIU facility before bringing such materials onsite. They must also ensure the proper handling, use, and storage of these chemicals and provide access to the SDSs.

Contract employees must complete the Contractor Acknowledgement of NIU Hazard Communication Program form in **Appendix A**. The document shall then be retained for the duration of the contracted task.

Part 2: Methods of Compliance

2.1 Employee Training

All employees shall receive training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new chemical hazard is introduced into their work area for which they have not been trained. The Hazard Communication training consists of two parts: general and work-specific. EHS will provide the general training and the campus units are expected to provide work-specific training.

The general training shall include:

1. The requirements of the Hazard Communication Standard (29 CFR 1910.1200).
2. How to read and interpret a Safety Data Sheet (SDS).
3. The elements of the Globally Harmonized System (GHS) of classification and labeling of chemicals.

The work-specific training shall include:

1. The location and availability of the written Hazard Communication Program.
2. The location of the hazardous chemicals inventory and the associated SDSs.
3. Policies and procedures specific to each hazardous chemical to be used in the workplace.
4. How to read and understand the workplace labeling system.
5. Physical and health hazards of chemicals in the work area.
6. Procedures implemented to provide employee information about chemical hazards for non-routine or special tasks.
7. The measures employees can take to protect themselves from these hazards, including controls, work practices, safe handling procedures, and personal protective equipment (PPE).
8. The proper use of PPE, including selection, donning and doffing, maintenance, storage, and limitations.
9. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
10. Emergency procedures to follow if an employee is exposed to chemicals.

Campus units are expected to offer refresher training as necessary and to train on new products as required. Employees shall be retrained when there is reason to believe that they do not have the required understanding and skills outlined above. Retraining is required when changes in the workplace, processes, or types of PPE to be used render previous training obsolete. The campus units shall document training for each employee and individual training records should be maintained in departmental personnel files.

2.2 Hazardous Chemicals Inventory

Each campus unit must complete a list of all hazardous chemicals known to be present in each work area and update the list as necessary. The inventory list shall include: a product identifier

that is referenced on the appropriate SDS; the name, location, and phone number of the manufacturer of the chemical; and, the process of use (e.g., cleaning, descaling, etc.). Substances that are not in containers shall also be included on the inventory list (e.g., chemicals contained in pipes, welding fumes, carbon monoxide from a fork lift, etc.). This inventory should be posted in the work area and readily available to employees. A Hazardous Chemicals Inventory form is located in **Appendix B**.

The inventory shall be updated when a new product is introduced to the work area. If the new product poses hazards not previously present, affected employees shall receive training on those new hazards before use. A new product may also require a hazard assessment.

2.3 Safety Data Sheets (SDSs)

A Safety Data Sheet must be kept for every hazardous chemical used and shall be readily available during all work shifts to all employees working in the area where hazardous chemicals are present. The SDS must be obtained prior to purchase or with the receipt of the product at the facility. Each SDS should be reviewed by all personnel who will be using the chemical before the chemical is used.

Electronic access and other alternatives to maintaining paper copies are permitted as long as no barriers to immediate employee access in each work area are created. If SDS documents are managed electronically, a back-up system must be in place in case of emergency causing electronic documents to be unavailable.

Directorial personnel are responsible for acquiring and updating SDSs for all hazardous chemicals in each work area. To obtain a specific SDS contact the manufacturer, distributor or supplier of the chemical. EHS recommends that SDSs be reviewed at least every three years to ensure that they are updated and the latest revisions are available. For chemicals where there have been revisions made to the SDS, the current SDS should be inserted and the old SDS archived for future reference. When a substance is no longer actively used or purchased, the SDS shall be removed from the active file and archived. The archived SDSs shall be maintained for 30 years.

2.4 Labeling Requirements

Supervisory personnel must ensure that primary and secondary containers of hazardous chemicals are properly labeled. All labels and warnings should be legible, written in English, and prominently displayed on the container. The labels should include: a product identifier; name and address of the chemical manufacturer, importer or other responsible party; GHS pictograms; signal words; hazard statements; precautionary statements; and, supplementary information. Examples of the GHS pictograms are included in **Appendix C**. An example of a GHS label is included in **Appendix D**.

Labels on incoming containers must not be defaced or removed until the container is empty. If the label becomes faded, illegible or destroyed it should be replaced and be durable, legible, and must be firmly affixed to the container(s). Labels are not required for portable containers if they

are intended only for the immediate use by the employee who performs the transfer, and the portable container is under complete control of that employee at all times.

2.5 Hazardous Non-Routine Tasks

A non-routine task is one which the employee does not normally perform and for which the employee has not previously been trained. Non-routine work can be unscheduled and unplanned, and may need to be completed immediately.

The following jobs or tasks are examples of non-routine work:

- Performed infrequently;
- Outside of normal duties;
- Does not have a documented procedure;
- Performed in a different way from documented procedure;
- Has never been performed before; or
- Routine tasks that carry high level of risk.

A written standard operating procedure (SOP) must be developed by the supervisor of the employees who will perform the task detailing appropriate actions and safeguards for the control of exposure to any hazardous chemicals. Prior to beginning non-routine tasks involving actual or potential exposures to hazardous chemicals, employees must be informed of the hazards present and given appropriate work instructions, emergency procedures, and provided with the appropriate PPE. The written SOP must be used whenever the work is to be performed and shall be maintained on file with the appropriate campus unit.

A Non-Routine Task Safety Assessment is provided in **Attachment E**. This checklist provides a sample format for the development of the written SOP for hazardous non-routine tasks.

2.6 Record Keeping Requirements

Each campus unit must maintain the following programs and records on file:

1. List of all hazardous chemicals and their corresponding Safety Data Sheets for the chemicals currently purchased, used and maintained in the facility.
2. A file of obsolete hazardous chemicals and their corresponding SDSs must be maintained for a period of not less than 30 years. The file must also include the dates of use and the date each chemical became obsolete.
3. Written training records for each employee detailing the extent of training and the date received.

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E