

OHIO NORTHERN UNIVERSITY

**CHEMICAL HAZARD  
COMMUNICATION PROGRAM**

Issue Date: April 16, 2010

Revision 05

**APPROVAL**

This document is approved by the following ONU personnel for full and immediate implementation.

1. Lab Compliance Subcommittee Chair: \_\_\_\_\_  
Kristin Daws Date
2. Chair of the ONU Safety Committee: \_\_\_\_\_  
Kristin Daws Date
3. Security & Chemical Safety Officer: \_\_\_\_\_  
Melissa Taylor Date
4. Vice President for Financial Affairs: \_\_\_\_\_  
Bob Ruble Date
5. Vice President for Academic Affairs: \_\_\_\_\_  
David Crago Date
6. President of Ohio Northern University: \_\_\_\_\_  
Kendall Baker Date

## TABLE OF CONTENTS

|  | <u>Page</u> |
|--|-------------|
| Approval                                       | 2           |
| List of Abbreviations                          | 3           |
| Definitions                                    | 3-4         |
| I. Purpose                                     | 4           |
| II. Scope                                      | 4           |
| III. Organizational Responsibilities           | 4-6         |
| IV. Program Requirements                       | 6           |
| V. Chemical Inventories                        | 6-7         |
| VI. Material Safety Data Sheets                | 7-8         |
| VII. Container Labeling                        | 8           |
| VIII. Chemical Storage                         | 9           |
| IX. Chemical Disposal                          | 9-11        |
| X. Training                                    | 11-12       |
| XI. Safety Inspections                         | 12          |
| XII. Emergency Procedures                      | 12-13       |
| Appendix A: Responsible Parties                | 14          |
| Appendix B: OSHA Hazard Communication Standard | 15          |
| Appendix C: Safety Inspection Checklist        | 16-17       |

## LIST OF ABBREVIATIONS

|      |   |
|------|---|
| CHCP | Chemical Hazard Communication Program         |
| EPA  | Environmental Protection Agency               |
| IARC | International Agency for Research on Cancer   |
| MSDS | Material Safety Data Sheets                   |
| NFPA | National Fire Protection Agency               |
| NTP  | National Toxicology Program                   |
| OSHA | Occupational Safety and Health Administration |
| ONU  | Ohio Northern University                      |

## DEFINITIONS

**Article** means any chemicals that are formed into a shape or design during manufacture.

**Carcinogen** is a chemical that has been found by various agencies (IARC, NTP, OSHA) to be a cancer causing agent or potential cancer causing agent.

**Chemical** means any element, chemical compound, or mixture of chemicals. Chemicals take several different forms. They may be gases, mists, gels, liquids, crystals, solids, or particles.

**Corrosive** means a chemical that causes burns, visible destruction of, or irreversible alterations in living tissue at the site of contact.

**Hazardous chemical** means any chemical that is a physical and/or health threat. This includes: carcinogens, corrosives, toxic compounds, irritants, sensitizers, and chemicals having target organ effects.

**Irritant** means a chemical that is not a corrosive but causes a reversible inflammatory effect (redness, rash, itching) on living tissue at the site of contact.

**Mutagen** means a material that is capable of inducing permanent genetic changes in cells which may be inherited by subsequent generations.

**Sensitizer** means a chemical that causes a significant proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure.

**Target Organ Effects** indicates bodily organs which are most likely to be affected by exposure to a given chemical.

**Teratogen** is a substance that may cause physical deformities in a developing embryo or fetus if a significant level of exposure occurs during pregnancy.

**Toxic** means a chemical that may be lethal above a certain threshold level. Death may result from exposure through one or more of the following routes: inhalation, ingestion, or skin contact. Typically, the level of toxicity is reported as an LD<sub>50</sub> value. The LD<sub>50</sub> value is the dosage level where 50% of the laboratory test animals died when exposed to the chemical.

## **I. Purpose**

The ONU Chemical Hazard Communication Program (CHCP) was developed to comply with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, Title 29CFR 1910.1200, and any additional State requirements. In order to remain current with changing OSHA and State regulations, the CHCP will be reviewed and updated annually.

The purpose of this program is to create a comprehensive list of the hazardous chemicals used at ONU, identify the hazards associated with each class of chemicals, determine the appropriate protective measures needed to minimize chemical exposure, and communicate the hazards and proper handling procedures to employees and students using these chemicals.

## **II. Scope**

This program pertains to employees and students that routinely use hazardous chemicals or have the potential to be exposed to them during a foreseeable emergency. It does not pertain to office workers or other employees who are not expected to use chemicals. The CHCP does not cover biological hazards. Employees or students who may be potentially exposed to biological hazards such as bloodborne pathogens should refer to ONU's "Exposure Control Plan" for Bloodborne Pathogens.

## **III. Organizational Responsibilities**

In order to ensure implementation of this program, the responsibilities of the ONU administration, departments, employees, and students have been defined below.

The names of the responsible parties who currently occupy the underlined job titles are listed in Appendix A.

### **A. Administration**

1. The President of ONU is ultimately responsible for all operations at the University, including the proper administration of the ONU CHCP.

2. The VP for Academic Affairs:
  - a) oversees all matters related to safety through the Deans of Getty College of Arts and Sciences, Raabe College of Pharmacy, and Smull College of Engineering; and
  - b) advises the VP for Financial Affairs on physical facilities pertaining to questions of instructional safety.
3. The VP for Financial Affairs oversees:
  - a) proper acquisition, storage, maintenance and disposal of chemicals and equipment;
  - b) establishment and maintenance of physical facilities which comply with the requirements of this program; and
  - c) training of all employees and students who fall under the scope of the CHCP, and maintenance of all paperwork documenting training.
4. The Deans (listed under section III.A.2.a.) advise:
  - a) Academic VP on all safety issues pertaining to instruction and faculty research; and
  - b) Financial VP on safety issues pertaining to the academic facilities.
5. The Security/Chemical Safety Officer:
  - a) develops and updates a master list of all hazardous chemicals present on campus, obtains MSDS sheets for each chemical, and reviews each MSDS sheet for completeness
  - b) ensures that all contractors working at ONU will be provided with MSDS(s) of all hazardous materials they may be exposed to
  - c) obtains copies of MSDS(s) of the hazardous materials used by contractors working at ONU and provides copies to all Department/College Chemical Safety Officers (see Section IIB) where the work is to be performed
  - d) ensures that all containers on campus containing hazardous chemicals are properly labeled as described in section VII
  - e) maintains a repository of written documents pertaining to safety on campus.

## **B. Departments**

1. All departments (academic, administrative, and service) that fall within the scope of the CHCP shall appoint a Department/College Chemical Safety Officer. The Department Head will become the Department/College Chemical Safety Officer by default unless he/she delegates the position to another member of the department. Each Officer will:
  - a) develop and maintain a chemical inventory of all hazardous materials present in their department, and obtain complete MSDS sheets for each chemical listed.
  - b) submit an updated copy the departmental chemical inventory to the Security Office on an annual basis.
  - c) ensure that Security can readily access MSDS sheets to all chemicals procured and used by your department.

- d) ensure that all appropriate employees in that department receive hazard communication training

### **C. Employees and Students**

- 1. All affected employees and students are required to:
  - a) attend required training sessions in accordance with the guidelines set forth by this program
  - b) ensure that appropriate containers are used for storage, and that all containers are properly labeled
  - c) inform supervisors of defaced or improperly labeled containers
  - d) understand how to read and interpret the information found on both MSDS sheets and chemical labels
  - e) follow the manufacturer's instructions when using chemicals
  - f) report all significant leaks, spills, and exposures to the Department/College Chemical Safety Officer or an immediate supervisor who will determine the proper mode of action using the guidelines set forth in section XI of this document

## **IV. Program Requirements**

- A. Training on the OSHA Hazard Communication Standard is required for all students and employees including maintenance and custodial staff who work with, around, or may be exposed to hazardous chemicals (refer to section VIII on training).
- B. All responsible parties listed in section III must comply with the written CHCP document. Copies of the ONU CHCP will be made available to all employees and students of ONU, OSHA representatives, and outside contractors operating in areas where they may be exposed to chemicals/hazardous materials. Copies of the ONU CHCP may be obtained at the ONU Safety website or upon request at the Security Office. .
- C. In addition to complying with the CHCP, departments that have academic or research laboratories which use hazardous chemicals must also comply with the OSHA Laboratory Standard (Title 29CFR 1910.1450). The Laboratory Standard requires a written laboratory safety plan for each lab which describes safe operating procedures for the chemicals and equipment used in the lab.
- D. Contractors will provide ONU with a listing of the hazardous chemicals they plan to use and MSDS(s) prior to conducting any work on campus. Every effort will be made by the contractors to prevent exposure to employees and students. Similarly, ONU will provide contractors with MSDS(s) of all hazardous chemicals stored near the work site that the contractors could potentially become exposed to.

## **V. Chemical Inventories**

- A. A list of materials that may be hazardous will be developed by each department and submitted to the Security Department annually.
- B. The OSHA Hazard Communication Standard exempts the following items from regulation. However, items 5-7 are regulated by other laws (listed in parentheses).

1. Articles that release minimal/trace amounts of hazardous materials as long as the material does not pose a physical or health risk
  2. Wood or wood products
  3. Products sold to consumers such as foods, cosmetics, drugs, alcohol, and tobacco products.
  4. Any consumer product that is used in the manner intended by the manufacturer, and where the employer can demonstrate that the duration and frequency of exposure is not greater than the range of exposures experienced by typical consumers.
  5. Non-ionizing and ionizing radiation (OSHA 29CFR1910.96 and 1910.97 following standards set by the Nuclear Regulatory Commission)
  6. Biological hazards (OSHA 29CFR1910.1030) are covered in the ONU "Exposure Control Plan for Bloodborne Pathogens."
  7. Hazardous waste (Resource Conservation and Recovery Act regulated by the Environmental Protection Agency)
- C. Security will compile and maintain copies of all chemical inventory lists submitted by individualized departments.

## VI. Material Safety Data Sheets

The OSHA Hazard Communication Standard requires that a Material Safety Data Sheet (MSDS) must be obtained for each hazardous chemical used at ONU. Furthermore, the name listed on the chemical inventory, container, and MSDS sheet must match. The first time a chemical is ordered from a manufacturer, a MSDS sheet should accompany or precede the shipment. If an MSDS is not received for a chemical, the person ordering the chemical must obtain an MSDS by one of the following mechanisms:

1. Notifying the manufacturer and writing and requesting an MSDS
  2. Locating the MSDS sheet on the manufacturer's internet site
  3. Obtaining the MSDS sheet from a computerized MSDS program.
- B. OSHA specifies that the following information must be provided on the MSDS by the manufacturer, and that the MSDS must be in English.
1. Section I - Chemical Identity
  2. Section II - Hazardous Ingredients
  3. Section III - Physical/Chemical Characteristics
  4. Section IV - Fire and Explosion Data
  5. Section V - Reactivity Data
  6. Section VI - Health Hazard Data
  7. Section VII - Precautions for Safe Handling and Use
  8. Section VIII - Control Measures
- C. Some departments at ONU maintain hard copies of MSDS sheets for all the chemicals they work with. Other departments maintain electronic MSDS files. Either method is allowed by OSHA provided that all employees who work around hazardous chemicals have ready access to all pertinent MSDS sheets whenever they are needed. To facilitate easy access to MSDS documents for all chemicals used on campus, links to comprehensive MSDS websites are available at the ONU Safety website.

- D. Security will access MSDS forms of all chemicals used at ONU through links provided ONU Safety website. In case of an emergency, Security will also maintain back-up files of the MSDS sheets.

## VII. Container Labeling

The OSHA Hazard Communication Standard requires proper labeling of all hazardous chemicals. Information provided on the label must, at a minimum, include the identity of the chemical and its associated health and physical hazards. Labels from purchased chemicals will also have the name and address of the manufacturer or responsible party.

- E. Labels must be placed on containers containing hazardous materials when a manufacturer's label is not available. The chemical or product name must be legible and in English. There are no specific requirements for size, color or any specified text. Departments with bilingual employees may add warning labels in that language in addition to English.
- F. Health, flammability, and reactivity hazard information will be provided on each commercial chemical label. There are no regulated standards for how this information should be presented, but the hazard information must be clearly listed on the container. The uniform diamond-shaped symbol developed by the National Fire Protection Association (NFPA) is commonly used to deliver this information. The diamond symbol is divided into four sections with different colors indicating different categories of hazards (red = fire hazard, yellow = reactivity, blue = health hazard, and white = specific hazard). The degree of each hazard is denoted by a numbering system from 0-4, with 0 indicating either no or minimal hazard and 4 indicating a severe hazard potential. The final section on all labels will provide information on specific hazards (e.g. oxidizer, acid, alkali, radioactive, corrosive).
- G. Labels on containers containing hazardous materials will not be defaced or removed unless the container is immediately re-marked with the required information.
- H. If a person transfers a chemical from a labeled container to a portable container for immediate use (before leaving the work area unattended), then no labels are required on the portable container. But, since it is foreseeable that an employee may be interrupted while at work and to forget to label a container before leaving the work area, it is recommended that all chemical containers should be labeled immediately upon transfer. Chemicals added to containers stored beyond immediate use must be labeled with the name of the chemical and pertinent hazard warnings.
- I. The chemical identities of "trade secrets" may be withheld from labels and MSDS(s). However if an employee becomes overexposed to the product, the identity of the compounds may be obtained through a request from the manufacturer. Employees informed of the contents of the trade secret will be responsible for maintaining confidentiality of the chemicals that are identified.

## VIII. Chemical Storage

In order to reduce the risk of a fire or hazardous waste spill, minimum quantities of hazardous chemicals should be stored on campus. As a rule of thumb, it is best to store a one year supply (or less) of the hazardous chemicals needed for your work. The following procedures should be followed when storing hazardous materials.

1. Date all new chemical bottles as they arrive. Use older bottles of chemicals first before opening new bottles.
2. Visually inspect all storage racks/shelving/cabinets regularly for cracks, corrosion, weaknesses, leaning, or damage. Defects should be repaired immediately.
3. Store chemicals in appropriate containers. Do not use food containers such as coffee cans, baby food jars, soda bottles, etc., for chemical storage.
4. Do not store chemicals alphabetically. Segregate incompatible chemicals into different storage areas.
5. Store flammable liquids and corrosives separately in approved safety cabinets. Do not store corrosive chemicals above eye level.
6. Store flammable and combustible liquids that require refrigeration in an explosion proof refrigerator that is approved for such use, and restricted to such use (i.e., no food or drink shall be stored in these refrigerators).
7. Gas cylinders must be strapped in an upright position during storage and use, and the protective valve cap must be in place during transport.
8. Do not block aisles with chemicals or equipment.
9. Do not use or store chemical materials or wastes in hallways, break rooms, or public areas. Do not eat, drink, smoke, or apply makeup in a room where chemicals are used or stored.

## IX. Chemical Disposal

ONU is committed to minimizing the volume and reducing the toxicity of the chemicals used on campus. Wherever possible, hazardous chemicals should be replaced with non-hazardous chemicals. ONU's goal is to minimize employee exposure to hazardous chemicals, decrease the amount of hazardous waste released into the environment, and reduce escalating hazardous waste disposal costs.

### A. Waste Minimization

Items no longer of use by a department should not be considered hazardous waste until other alternatives have been considered such as: recycling, neutralization, or chemical conversion into non-hazardous compounds. In addition, chemical management systems shall be implemented to reduce excess chemical storage.

#### 1. Recycling

- a) ONU employees are encouraged to reuse hazardous chemicals whenever it is practical and cost effective to do so. For example, cleaning solvents and solutions used to develop photographs may be reused several times before their performance degrades. Other chemicals may be easily purified for reuse by distillation, chromatography, or other methods.

- b) If a chemical is no longer needed by a department, but is in good condition (i.e., in the original labeled container, uncontaminated, unexpired), the Department/College Chemical Safety Officers listed on Appendix A should be contacted to determine if the chemical could be used by another department

## 2. **Neutralization**

Corrosive aqueous acids and bases (i.e., materials with pH's  $\leq 2$  or  $\geq 12.5$ , respectively) may be rendered non-hazardous by neutralization. Prior to neutralization, concentrated acids or bases should be diluted at least ten-fold with cold water. Then, the solution may be neutralized by slowly adding a base to an acid (or vice versa) on an ice bath in a fume hood using proper protective equipment (goggles, gloves, face shield, rubber apron). The neutralized solution may be dumped down the sink with excess water.

## 3. **Chemical Conversion**

Some hazardous compounds may be easily reacted with other chemicals to produce non-hazardous compounds that can be disposed of down the sink or in the municipal waste. The hazardous waste disposal company used by ONU (see section XI.B below) or the Chemistry and Biochemistry Department/College Chemical Safety Officer may be consulted on questions regarding whether a hazardous chemical may easily be converted into a non-hazardous chemical.

## 4. **Management**

- a) Departments shall survey all the chemicals in their department and either recycle or dispose of all chemicals that are expired or are longer used by the department.
- b) Departments shall purchase limited quantities of hazardous chemicals.
- c) Chemicals should be selected with a bias towards those that are not hazardous or that can be made non-hazardous.

## **B. Waste Collection**

All hazardous, non-treatable chemicals must be adequately labeled, dated, and contained in a safe and reasonable manner prior to disposal. ONU is classified as a small quantity waste generator. Therefore, once items are designated as waste, they cannot be held for more than 180 days.

1. It is the responsibility of the individual disposing of the waste to properly label the container. If the waste is hazardous, the container must be labeled with the words "hazardous waste" or with the specific type of hazardous waste present such as "flammable waste" or "corrosive waste." The container label (or an accompanying chemical accumulation log sheet) must list all material(s) being disposed, the amounts of material, and the date the materials were added to the container.
2. Containers holding the waste must be chemically compatible with the waste placed inside the container. For example, corrosives should not be stored in metal containers.

3. Waste collection bottles must be kept capped. Oil and solvent drums should not be stored with an open bung (drum tap) or funnel in them.
4. Incompatible materials must not be combined in the same container. Flammable non-halogenated solvents, flammable halogenated solvents, corrosives, reactives, toxins, acidified organics, heavy metal wastes (e.g. mercury), pesticides/herbicides, and oil/lubricating fluids and should be stored separately. When in doubt as to whether two materials can be mixed, store the materials in separate containers.
5. Hazardous waste storage areas must be inspected weekly to ensure that waste containers are stored closed, and are not leaking. These inspections must be documented by the department.

#### B. Waste Disposal

1. ONU utilizes the services of an off campus environmental disposal company to properly dispose of its hazardous waste. The **Waste Disposal Company** (refer to Appendix A for the company's identification) is responsible for packaging chemicals, preparing hazardous waste manifests, coordinating hazardous waste pickup by authorized chemical waste handlers, and properly disposing of waste using methods consistent with federal, state, and local regulations.
2. Departments requiring waste disposal should contact the **Purchasing Department Chemical Safety Officer** to coordinate disposal through the Environmental Disposal Company. All signed waste manifests should be forwarded to the **Purchasing Department Chemical Safety Officer**, who is responsible for maintaining these files.

### X. Training

The OSHA Hazard Communication Standard mandates that all employees and students which fall under the scope of this program must receive information and training on the hazardous materials present in their workplace.

- C. Employees and students will receive training as soon as they are assigned to work with hazardous materials, or whenever new chemicals or potential hazards are introduced in the workplace. **The Vice President of Financial Affairs and Vice President of Academic Affairs** will be responsible for the training program.

Recommended training topics include:

1. A general overview of the OSHA Hazard Communication Standard
2. The location and availability of the ONU CHCP
3. Organizational responsibilities
4. Operations where hazardous chemicals are present on campus
5. Types of chemical exposures and routes of entry into the body
6. Physical and health hazards of the chemicals being worked with
7. Access, usage, and interpretation of MSDS(s)
8. Classification of chemicals and labeling requirements
9. Safe handling methods of hazardous chemicals to reduce exposure
10. Methods used to detect spills or releases of hazardous materials

- D. Adequately trained employees should realize that they are exposed to hazardous chemicals, know how to read chemical labels and MSDSs, and follow the appropriate protective measures when working with each chemical.
- E. Training sessions will be documented in order to verify that all employees are adequately trained. Records of all employees and paid or volunteer lab assistants who participate in each training session will be retained by Human Resources and the department/college. A copy of the training records will be sent to Security for inclusion in the safety repository. Individual departments will maintain documentation of safety training for students in academic lab courses.
- F. Employees that refuse to comply with required mandatory training will be subject to disciplinary action as described in the relevant employee handbook.
- E. Department/College Chemical Safety Officers have the authority to stop any unsafe practice. All unsafe practices will be reported immediately to the appropriate supervisor and vice president. Each incident will be documented, and a copy of the document will be sent to the Security office for recordkeeping. Department Chemical Safety Officers, after consulting with their immediate supervisors, have the authority to lock down any lab or chemical area that is deemed unsafe and notify the appropriate vice president. After corrective actions have been completed following the procedures outlined in the employee handbook, the appropriate vice president will authorize re-entry into the area.

## **XI. Safety Inspections**

- A. Departments or colleges with laboratories are required to self-inspect their laboratories annually to make sure they are handling and storing chemicals safely. The results of these inspections will be documented. An annual report shall be sent to the Security Chemical Safety Officer, Vice President for Financial Affairs, and Vice President for Academic Affairs summarizing the results of the safety inspections and the status of safety training compliance in the department/college.
- B. If there is a chemical safety incident in any department, the department will be inspected quarterly the year following the incident to check for compliance. At least one of the inspections will be conducted by members of the Lab Compliance Subcommittee. A copy of the inspection sheet is listed in Appendix C.

## **XII. Emergency Procedures**

General emergency procedures for spills, chemical exposure, and fire are listed below. For detailed emergency procedures refer to the ONU Campus Emergency Response Plan

- A. Call 911 if an employee requires immediate medical attention following an accident or chemical exposure. Then call Security (extension 2222) to report the incident. Make copies of the MSDS(s) of all the material(s) the victim was exposed to and provide them to the examining physician.
- B. Employees should promptly report chemical spills to the Department/College Chemical Safety Officer or their immediate supervisor. Since the Department/College Chemical Safety Officers may not always be present when an incident occurs (especially during second shift), supervisors will be trained in how to respond and who to contact if a chemical exposure occurs. Chemical spills will be contained and cleaned by trained employees using the appropriate

absorbent materials and protective equipment, unless the chemical is highly toxic or the spill is too large to be easily contained. Security should be notified immediately if assistance is needed by Hardin County HAZMAT to clean up a hazardous spill, or if the spill requires evacuation of surrounding departments or buildings.

- C. If evacuating due to a fire, exit the building immediately and pull the closest fire alarm on the way out. Do not use elevators. Once outside, keep clear of the building and account for your coworkers and students. Report missing any persons to the fire department.
- D. Employees must report all chemical exposure incidents to Security, even if no medical attention was provided. All employee exposures must be documented.
- E. All exposure incidents will be investigated by the ONU Campus Safety Committee. The Committee will determine the cause of the incident, and make recommendations on how to eliminate or reduce the chance of reoccurrence.

**APPENDIX A:  
Responsible Parties**

A current list of responsible parties is available from ONU Security.

**APPENDIX B  
OSHA Hazard Communication Standard**

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10099](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099)

## APPENDIX C Safety Inspection Checklist

Inspection Date(s): \_\_\_\_\_

Department/College: \_\_\_\_\_

Rooms or Buildings Inspected:

---

---

---

Inspection Comments:

Inspected By: (A minimum of two signatures is required).

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

| <b>SAFETY INSPECTION CRITERIA</b>  | Yes No N/A | <b>COMMENTS</b> |
|--|------------|-----------------|
| <b>SAFETY TRAINING.</b> All employees & students working in the rooms during the inspection have received CHCP training at ONU. If applicable, they have also received BBP training.   | Yes No N/A |                 |
| <b>SAFETY SIGNS.</b> Appropriate signs are posted (e.g., signs identifying hazards, limiting access, marking emergency exit routes).   | Yes No N/A |                 |
| <b>SAFETY EQUIPMENT.</b> Safety equipment is available, tested or examined regularly, and in working order (e.g., safety showers, eye washes, fire extinguishers, first aid kits, chemical spill kits, fume/laminar hoods, anti-slip mats, safety ladders) | Yes No N/A |                 |
| <b>MSDS.</b> Personnel have direct access to material safety data sheets for all the chemicals they use.   | Yes No N/A |                 |
| <b>PPE.</b> Appropriate personal protective equipment (PPE) is available and being used (e.g., goggles, safety glasses, gloves, body shields, lab coats).  | Yes No N/A |                 |
| <b>CONTAINER LABELING.</b> Containers holding chemicals must be labeled with the names of all chemicals in the container, and hazards (physical and health) should be identified).   | Yes No N/A |                 |
| <b>CHEMICAL INVENTORY.</b> A chemical inventory is available in areas where hazardous chemicals are used or stored (updated annually).   | Yes No N/A |                 |
| <b>CHEMICAL CONTAINERS.</b> Chemicals and biohazards are stored in compatible, leak-proof containers. The type of hazard must be listed. Food containers should not be used.   | Yes No N/A |                 |
| <b>GAS CYLINDERS.</b> Gas cylinders are chained or strapped in an upright position and stored away from excessive heat. Fuel cylinders are stored at least 20 feet from oxygen cylinders.  | Yes No N/A |                 |
| <b>CHEMICAL STORAGE.</b> Shelves are in good condition. Incompatible chemicals are segregated. Corrosives & flammables stored below eye level. Minimal amounts stored outside of safety cabinets.  | Yes No N/A |                 |
| <b>PROPER OPERATION OF MACHINERY &amp; EQUIPMENT UNDER PRESSURE OR VACUUM.</b> Equipment is working properly, safety guards are in place, & cords are not frayed. Individuals may not operate without training.  | Yes No N/A |                 |
| <b>GOOD HOUSEKEEPING.</b> Workspace is adequate. Waste is properly stored and disposed.  | Yes No N/A |                 |
| <b>PRUDENT PRACTICES.</b> No horseplay. No food or drink allowed in labs or chemical storage areas. No hazardous chemicals in non-lab areas.   | Yes No N/A |                 |