

## D. EMPLOYEE INFORMATION AND TRAINING

The intent of the Information and Training Program is to inform workers of the physical agents and hazardous chemicals in their laboratory, the nature of the risks associated with handling these materials, and the proper disposal of wastes generated by research activities in the laboratory. Before working with any of these hazardous materials, lab workers will be informed of the conditions under which the materials may be harmful or may cause injury. They will be trained in the proper control methods (engineering, personal protective equipment, etc.) and appropriate procedures necessary to control occupational exposure to hazards in the laboratory. This training is designed to satisfy the requirements of the Public Employees OSHA Occupational Exposure to Hazardous Chemicals in the Laboratories Rule (the Laboratory Standard), the NJ Worker and Community Right-To-Know (NJ RTK) Act, and the Rutgers University Hazardous Waste Disposal Policy and Procedures.

Initial information and training will be provided to University laboratory employees in two separate training sessions. First, a general orientation session will be provided, scheduled, and documented by REHS. The session covers the topics outlined below, under "General Orientation (Classroom Training)". Second, a "hands-on" training session specific to the employee's work area must be scheduled by the employee's Department and given by their lab supervisor or Chemical Hygiene Officer. This session must cover the items listed below, under "Laboratory Training (Hands On/Specific to Work Area)". REHS will provide blank attendance forms to document this "hands-on" training session. However, a copy of the completed Department attendance form must be sent to REHS for compliance documentation.

University laboratory employees are also required to complete annual "refresher" training. This training reviews the key points of each program area, identifies program and policy changes implemented during the past calendar year, and discusses issues observed in the laboratories during annual audit activities. Refresher training is available to employees in either a "classroom" setting or "on-line" from the REHS web site. For "classroom" settings, REHS can modify the training program content to emphasize specific chemical and physical agents encountered in department laboratories. The "on-line" training program content covers all areas and enables employees to get additional information through links and photographs contained in the program. The annual "refresher" training program content is modified periodically to reflect program changes and emphasize different lab safety topics.

### 1. Initial Training

#### a. General Orientation (Classroom Training) - to be provided by REHS

- 1) **Regulatory Review** - the contents of the Laboratory Standard, the NJ RTK Act, and the EPA RCRA standard as applicable to the university policy will be reviewed, and a copy will be made available in the CHP.
- 2) **CHP** - The contents of the Chemical Hygiene Plan will be reviewed.
- 3) **Physical and Health Hazards** - the physical and health hazards of chemical exposure will be reviewed, including, but not limited to: biohazards, carcinogens, compressed gases, corrosives, cryogenic materials, embryotoxins, explosives, flammables, mutagens, oxidizers, poisons, radioactive materials, reactive materials, sensitizers, and teratogens.
- 4) **Methods of Determining Exposure** - the following methods of determining exposure will be reviewed:
  - i. Exposure monitoring
  - ii. Evaluation of work practices
  - iii. Use of senses: sight with emphasis on sense of smell and focusing on the odor threshold of materials with poor warning properties.

- 5) **Permissible Exposure Limits (PELs)** - PELs and other occupational exposure limits will be reviewed. Also, a copy of OSHA Air Contaminants Standards, 29 CFR 1910.1000 is included in the CHP in Appendix 8. If a material is considered hazardous but has no PEL, REHS will help establish controls for working with the material safely.
- 6) **Central Files** - Employees will be informed that the University maintains, for hazardous materials in the workplace, Material Safety Data Sheets (MSDSs) and Hazardous Substance Fact Sheets (HSFSs) in the Rutgers Environmental Health and Safety (REHS) Department and in all major campus libraries. Employees will be informed of the location and availability of these hazard information resources. Additional reference materials, available in individual departments, on the hazards, safe handling, and storage of hazardous materials will also be discussed.
- 7) **Chemical Exposure Prevention** - the following exposure prevention mechanisms will be reviewed:
  - i. Engineering Controls:
    - \* Substitution - Substitute less hazardous materials for more hazardous material, whenever possible.
    - \* Isolation/Enclosure - Enclose the lab experiment or procedure; (e.g. utilize glovebox).
    - \* Ventilation - Remove airborne toxic materials from workers breathing zone through use of local exhaust ventilation (e.g. fume hoods).
  - ii. Administrative Controls - minimize exposure through good housekeeping procedures, by minimizing exposure time, through good work practices.
  - iii. Personal Protective Equipment - use of personal protective equipment will be discussed, including: eye and face protection, skin protection (e.g. gloves, aprons, lab coats), and respiratory protection.
- 8) **Hazardous Waste Management** – the following policies and methods used to manage hazardous waste generated at the university will be reviewed including, but not limited to: hazardous waste determination, drain disposal of chemicals, waste labeling and satellite accumulation areas, waste container management, waste compatibility, request for waste pick-ups, hazardous waste minimization techniques, empty/used laboratory containers and glassware, universal waste, and used oil disposal.

**b. Laboratory Training ("Hands-On"/Specific to work area) to be provided by laboratory supervisor or principal investigator.**

- a. **CHP Availability** - The location and availability of the Chemical Hygiene Plan (CHP) for individual labs will be reviewed.
- b. **SOPs** - Standard Operating Procedures developed for that specific lab will be reviewed.
- c. **Emergency Procedures** - Emergency procedures and equipment for the lab (e.g. Location and use of eyewash, safety showers, fire extinguishers, exit routes, etc.) will be reviewed.
- d. **Safety Equipment** - Safety equipment used in the lab (e.g. fume hoods, face shields, gloves, etc.) will be reviewed.

- e. **Designated Areas** - Designated areas and any special procedures for handling extremely hazardous substances will be reviewed.
- f. **Signs and Symptoms of exposure** - Signs and symptoms associated with exposure to materials in the laboratory will be reviewed. In addition, the methods and observations that can be used to detect the presence or release of hazardous materials in the laboratory will again be covered in the hands-on training.

**2. Annual Refresher Training – to be provided by REHS**

- a. Topics incorporated will cover all program areas listed above and may be modified to reflect potential hazards anticipated in specific departments or areas for “classroom” training.
- b. “On-line” training requires lab workers to complete a short “test” to document completion of this program.