

ENVIRONMENTAL HEALTH AND SAFETY
Chemical Hygiene Programs:
Operation of the Chemical Storage and Distribution Facility

Date of Last Revision/Review: July 7, 2012

Purpose/General Discussion: The Environmental Health and Safety Department (EHS) operates the Chemical Storage and Distribution Facility (CSDF) as a service to the entire Institution to achieve the following goals:

- Prevent pollution through waste minimization by facilitating the recycling of obsolete and surplus chemicals.
- Minimize the quantities of hazardous materials stored in occupied buildings by providing safe centralized storage of chemicals.
- Reduce procurement costs through centralized purchasing of chemicals.
- Maintain a stock of chemicals that is readily available.
- Receive and inspect all incoming hazardous chemicals and radioactive materials.
- Maintain a computer database of chemicals to provide:
 - Inventory available for teaching and research activities.
 - Data for community right-to-know reports.
 - Information about compliance with building and fire codes.
- Provide health and safety information to end users of chemicals.

Authoritative References:

- Uniform Fire Code, Article 79, Flammable and Combustible Liquids, International Fire Code Institute.
- Uniform Fire Code, Article 80, Hazardous Materials, International Fire Code Institute.
- Title 29, Code of Federal Regulations, Part 1910.1200, Employee Hazard Communication, Occupational Safety and Health Administration.
- Title 40, Code of Federal Regulations, Part 370, Hazardous Chemical Reporting, United States Environmental Protection Agency.
- Title 49, Code of Federal Regulations, Part 172.704, DOT Hazardous Materials Transportation.

Organizational Assignments/Responsibilities: The operation of the Chemical Storage and Distribution Facility is the responsibility of the Chemical Hygiene

Officer. The Chemical Hygiene Officer reports to the Environmental Health and Safety Director.

Discussion/Description:

Procurement of Chemicals and Radioactive Materials

Chemicals and radioactive materials used by the Institution are ordered, received and distributed by the EHS Department through the CSDF. Requests for chemicals and radioactive materials are submitted to the EHS Department using the Chemical Requisition Form (Policy Index Number 1-45-0). The requestor may indicate any special requirements such as supplier, grade, mode of transportation, etc. Chemicals and radioactive materials are distributed from the existing inventory whenever practical. Requests for chemicals and radioactive materials are honored only if the requestor has current EHS Hazardous Waste Generator training.

Distribution of Chemicals and Radioactive Materials

Hazardous chemicals and radioactive materials are processed through the CSDF. EHS personnel inspect and unpack the incoming materials. Unique bar code identification labels are affixed to chemical containers. Information about the chemicals (bar code identification, chemical name, vendor, etc.) is stored in a computer database.

After receipt of chemicals and radioactive materials at the CSDF, requestors are notified and arrangements are made for pickup or delivery. The EHS Department delivers orders that cannot be safely hand-carried to destinations (heavy or bulky loads, sensitive materials). Hazardous chemicals and radioactive materials are delivered only to the location of use (laboratory, pilot plant, etc.), not to the Departmental office. When chemicals or radioactive materials are distributed, the requestor or his/her representative signs an Acknowledgement of Receipt.

Exceptions

- Departments may order compressed gases and cryogenic liquids in containers larger than lecture bottles without processing documentation through the CSDF. Compressed gases and cryogenic liquids should be delivered only to the location of storage or use. Compressed gases and cryogenic liquids should not be delivered to the CSDF and not to Central Stores and Receiving (CSM Warehouse).

- Industrial chemicals such as fertilizers, pesticides, cleaning compounds, water treatment chemicals and custodial supplies may be purchased by the Plant Facilities Department for delivery to Central Stores and Receiving.

Managing Inventories of Chemicals and Radioactive Materials

The inventory of chemicals at the CSDF is available to all CSM departments. At the CSDF the EHS Department owns some materials and acts as the steward of materials owned by other departments. At the time of distribution, ownership of a material is transferred to the receiving department.

The responsibility for proper handling, storage, disposal, employee training and protection rests with the department in physical possession of the chemicals and radioactive materials.

Upon request EHS personnel will remove chemicals and radioactive materials from academic buildings. The EHS Department determines which of these chemicals will be stored at the CSDF and which are to be discarded as waste. For CSM in general and for chemical users in particular, the benefits of such centralization include improved accessibility, reduced procurement costs, minimized waste generation, and safer storage of hazardous materials.

The EHS Department maintains a computer database for control and tracking of chemical containers on the CSM campus. The data stored in the EHS chemical inventory database is available via the Internet through the EHS website.

Health and Safety Information

The EHS Department maintains health and safety information for the chemicals received by the Institution. The EHS Department provides the information to end users of chemicals and radioactive materials. This information includes reference books, manuals, Material Safety Data Sheets (MSDSs), and CD-ROM databases. The EHS Department also offers assistance to campus personnel in obtaining additional information from other sources.

Transportation and Shipping of DOT Regulated Materials

The EHS Department maintains US Department of Transportation (DOT) certified personnel and materials to comply with regulatory agency requirements necessary for the shipment of DOT regulated chemicals and materials. The requirements outlined in the Transportation of Hazardous Materials Policy must be followed.