

Procedure Subject: <i>Chemical Inventory</i>	Effective 1/1/09
Areas: Departments with Hazardous Chemicals	Reviewed/Revised: 4/22/2010

1.0 Purpose, Applicability, and Scope

- 1.1 Purpose (Include regulatory requirements) - The purpose of this procedure is to provide a framework for those individuals on campus who are in possession of hazardous substances. See Section 8.0 for a list of regulatory agencies that require a chemical inventory.
- 1.2 Applicability – This shall apply to all students, staff and faculty on the Knoxville campus of the University of Tennessee.
- 1.3 Scope – This standard applies to all hazardous substances as defined in section 2.2 below

2.0 Abbreviations, Acronyms, and Definitions

2.1 Abbreviations/Acronyms

CFATS –Chemical Facilities Anti-terrorism Standard
EPCRA – Emergency Planning and Community Right to Know Act
MSDS – Material Safety Data Sheet
NPDES – National Pollution Discharge Elimination Standard
SARA – Superfund Amendments and Reauthorization Act

2.2 Definitions

Hazardous substance – Any substance that is capable of causing an acute or chronic health condition in humans or adversely impacting the environment. Substances that are considered physical hazards (flammable substances, explosives, shock sensitive, etc.) are included in the definition of a hazardous substance. The OSHA Hazard Communication Standard, 29 CFR 1910.1200 and the OSHA Chemical Hygiene Plan 29 CFR 1910.1450 are the two main standards that define a hazardous substance

The following substances are excluded from the chemical inventory in the workplace

- a. Consumer chemicals used in a manner that is similar to domestic-type application (e.g. Household bleach solution used to sanitize surfaces and equipment, Household baking soda used for cleaning and odor control.)
- b. Prescription and over-the-counter medication taken by personnel
- c. Hazardous waste

- d. Consumer products (e.g. cigarette lighters) in the workplace that contain hazardous materials and are for personal use
- e. Substances containing less than 1% of hazardous material (less than 0.1% carcinogens)
- f. Biohazards
- g. Radioisotopes
- h. Hazardous materials (gasoline, oil, anti-freeze, etc) found in University-owned or private vehicles and considered integral to the vehicle's operation
- i. Hazardous materials that are part of the building (e.g. lead paint) or contained in an article (e.g. furniture)
- j. Non-hazardous substances (e.g. agarose, HPLC-grade water, sand, Glass beads).

Chemical User – Any department or group of university employees that handle hazardous substances on university property, or that work offsite engaged in university-sponsored activities. Chemical Users can manage chemical inventories functionally either for a single lab, or for multiple related areas.

3.0 Roles and Responsibilities

- a. Chemical users shall:
 - i. The head of each chemical use group (lab, departmental unit, etc.) must designate an individual to be responsible for the chemical inventory for the group.
 - ii. Update the inventory list at least annually (on-line or submitted electronically to Environmental Health and Safety (EHS) by June 1 each year.
- b. Department heads who have chemical users under their control shall:
 - i. Ensure new chemical users who purchase or bring hazardous substances to the university complete a chemical inventory within 30 days of the substance arrival on campus
 - ii. Ensure their employees submit the chemical inventory on an annual basis
- c. EHS shall:
 - i. Provide a format for developing a chemical inventory
 - ii. Review the chemical inventory, take action as necessary, and submit inventory data to Facilities Services for inclusion in the chemical inventory database
 - iii. Update the chemical inventory procedure as necessary
 - iv. Serve as a technical resource for questions and comments regarding the chemical inventory
 - v. Disseminate information regarding the procedure
 - vi. Maintain the security of the information

- vii. Provide ready access to the inventory during an emergency (accidental release)
- viii. Submit necessary reports to regulatory agencies
- ix. Develop and review reports (e.g. CFATS)

d. Facilities Services shall:

- i. Provide a computer platform to manage chemical inventory data
- ii. Process requests to update inventory data
- iii. Develop custom reports of inventory data if requested
- iv. Maintain the security of the information

4.0 Procedure

- a. Chemical users must submit a current chemical inventory between March 1 and June 1 each year. Departments that do not respond by June 1 will be reminded of the need to complete their inventory.
- b. EHS shall send an electronic copy of the current inventory in the chemical inventory database to the chemical user between January 1 and March 1. Chemical users who no longer possess hazardous substances should indicate such.
- c. As a minimum the following information must be included in the chemical inventory:
 - i. Chemical name and CAS#
 - a. For brand name products, list the product name or common description (e.g. WD-40)
 - b. Only hazardous components in a mixture need to be listed
 - ii. Amount (volume or mass in English or metric units)
 - iii. Location - building and room number
 - iv. Contact person

Other information that may be helpful includes the concentration (percent by volume).

- d. If a substance belonging to a department or research group is moved periodically between several rooms or labs, it will be acceptable to list the location within a range of rooms. Example room 423-429 or 423, 465, 466.
- e. The quantity of substance should be expressed in units that are typical of that physical state. Examples:

Liquid – (gallons, quart, liters, milliliters)

Dry – (pounds, kilograms, milligrams)

Gas – (cubic feet)

- f. For simplicity it is permissible to enter the listed amount of hazardous chemical on the container at the time it was purchased as opposed to the actual volume or mass.
- g. The volume of compressed gases may be listed as the number of cubic feet of gas that the cylinder originally held when filled.
- h. Consult the chemical's MSDS to determine if a substance is hazardous or contains hazardous components. If the MSDS does not provide clear information, contact EHS.
- i. Contact EHS regarding chemicals that are a trade secret. In general, EHS will seek to include the hazard class (e.g. flammable liquid), but not the exact substance where confidentiality must be preserved.
- j. The chemical inventory is used to develop the EPCRA report, which is prepared by EHS. This report is submitted to the appropriate agencies before March 1st each year.

5.0 Recordkeeping

Starting in 2008 the University's central archived chemical inventories shall be kept for at least 30 years. These records may be kept in electronic or hard copy form.

The EPCRA Report shall be kept at least three years.

Material safety data sheets must be kept indefinitely.

6.0 Training and Information Requirements

EHS shall provide information to chemical users about this policy, including deadlines and format for submittal.

7.0 Attachments- None

8.0 Associated Standards

The following regulations and agencies require a chemical inventory directly or indirectly

- A. State Fire Marshal's office
- B. Local Emergency Planning Committee (LEPC) – under SARA Title II
- C. Local Fire Department – under SARA Title II
- D. State Emergency Planning Commission – under SARA Title II
- E. OSHA Hazard Communication Program
- F. OSHA Chemical Hygiene Plan
- G. Knoxville Utility Board (KUB) – NPDES Permit System

