



**CHEMICAL INVENTORY
STANDARD OPERATING PROCEDURE (SOP)**

I. Purpose

The purpose of this procedure is to outline the procedures for a chemical inventory system including records of chemicals which are stored, used, transferred, and disposed.

II. Scope

This SOP is applicable to all users of hazardous chemicals.

III. Abbreviations, Acronyms, and Definitions

a. Abbreviations/Acronyms

EHS- Environmental Health and Safety

SDS –Safety Data Sheet

SARA – Superfund Amendments and Reauthorization Act

b. 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

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.

IV. 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. The inventory must be submitted electronically to 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 and take action as necessary.
 - 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. Provide ready access to the inventory during an emergency (accidental release).
 - vii. Submit necessary reports to regulatory agencies.

V. Procedure

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. 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.

- a. As a minimum the following information must be included in the chemical inventory:
 - i. Chemical name and CAS#.
 - ii. For brand name products, list the product name or common description (e.g. WD-40).
 - iii. Contact person.
 - iv. Only hazardous components in a mixture need to be listed.
 - v. Amount (volume or mass in English or metric units).
 - vi. The quantity of substance should be expressed in units that are typical of that physical state. Examples:
 - 1. Liquid – (gallons, quart, liters, milliliters).
 - 2. Dry – (pounds, kilograms, milligrams).
 - 3. Gas – (cubic feet).
 - vii. Location - building and room number.
 - viii. Other information that may be helpful includes the concentration (percent by volume).
 - 1. 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.
 - ix. 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.
 - x. The volume of compressed gases may be listed as the number of cubic feet of gas that the cylinder originally held when filled.
 - xi. Consult the chemical's SDS to determine if a substance is hazardous or contains hazardous components. If the SDS does not provide clear information, contact EHS.
 - xii. 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.
 - xiii. The chemical inventory is used to develop regulatory reports, which is prepared by EHS.

- b. The following substances are excluded from the chemical inventory in the workplace
- i. 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.)
 - ii. Prescription and over-the-counter medication taken by personnel.
 - iii. Hazardous waste.
 - iv. Consumer products (e.g. cigarette lighters) in the workplace that contain hazardous materials and are for personal use.
 - v. Substances containing less than 1% of hazardous material (less than 0.1% carcinogens).
 - vi. Biohazards.
 - vii. Radioisotopes.
 - viii. Hazardous materials (gasoline, oil, anti-freeze, etc) found in University owned or private vehicles and considered integral to the vehicle's operation.
 - ix. Hazardous materials that are part of the building (e.g. lead paint) or contained in an article (e.g. furniture).
 - x. Non-hazardous substances (e.g. agarose, HPLC-grade water, sand, Glass beads).

VI. Recordkeeping

Chemical inventories shall be kept for at least 30 years. These records may be kept in electronic or hard copy form. SDS's must be kept indefinitely.

VII. Training and Information Requirements

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

VIII. Associated Standards

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

EPCRA Sections 301-313

Homeland Security Chemical Facilities Anti-terrorism Standard

Tennessee Fire Marshal's office

Local Emergency Planning Committee (LEPC) – under SARA Title III

Local Fire Department – under SARA Title III

National Pollution Discharge Elimination Standard

Tennessee Emergency Response Council

OSHA Hazard Communication Program 29 CFR 1910.1200

OSHA Chemical Hygiene Plan 29 CFR 1910.1450