Chemical Safety

Hazard Communication Program

Hazard Communication - Right to Understand (GHS)

Manual

Department of Environmental Health & Safety
Phone: (410) 704-2949
Fax: (410) 704-2993
Email: safety@towson.edu
Website: https://www.towson.edu/public-safety/environmental-health-safety/
Emergency: 911
TUPD: (410) 704-4444

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Table of Contents

Purpose

The purpose of this program is to establish a workplace program to ensure that hazard information is communicated to employees who use chemical substances on campus, to eliminate illness and injury caused by chemical hazards, and to ensure compliance with OSHA and MOSH regulations.

Scope

The scope of the program pertains to employees and contractors who track, handle, transport, store, and use chemicals on campus. The program is intended to provide information to employees about the hazardous chemicals to which they are exposed, by means of the program manual; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces, and other forms of warning; access to chemical inventory information or lists of hazardous chemicals present; safety data sheets; and training.

This program applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency. The program does not apply to consumer products; food, beverage, or drug intended for human consumption; articles as defined by OSHA; biological hazards; or ionizing or non-ionizing radiation.

Definitions

Chemical: *Any substance, or mixture of substances.*

Chemical Inventory List (CIL): *The list of hazardous chemicals in a given work area for which employees may reasonably anticipate use or exposure.*

Chemical name: *The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.*

CIDB: Chemical Inventory Database program related to tracking chemical inventory and safety data sheets. The computer application, Vertere ChIM, is used to administer the program.

Classification*: To identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.*

Combustible dust*: Finely divided solid particulates of a substance or mixture that pose a flash-fire hazard or explosion hazard when dispersed in air or other oxidizing media.*

Common name: *Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.*

Container: *Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.*

Employee: *A worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.*

Exposure or exposed: *An employee is subjected in the course of employment to a hazardous chemical, and includes potential (e.g., accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g., inhalation, ingestion, skin contact or absorption.)*

Foreseeable emergency: *Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.*

Gas: *A substance which (i) At 122 °F (50 °C) has a vapor pressure greater than 43.51 PSI (300 kPa) (absolute); or (ii) Is completely gaseous at 68 °F (20 °C) at a standard pressure of 14.69 PSI (101.3 kPa).*

Hazard category: *The division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.*

Hazardous chemical: *Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, or hazard not otherwise classified.*

Hazard class *means the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.*

Hazard not otherwise classified (HNOC) *means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).*

Hazard statement: *A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.*

Health hazard: *A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to § 1910.1200—Health Hazard Criteria.*

Immediate outer package: *The first package enclosing the container of hazardous chemical.*

Immediate use: *The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.*

Inventory: *See Chemical Inventory List.*

Label: *An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.*

Label elements: *The specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.*

Liquid: *A substance or mixture which at 122 °F (50 °C) has a vapor pressure of not more than 43.51 PSI (300 kPa (3 bar)), which is not completely gaseous at 68 °F (20 °C) and at a standard pressure of 101.3 kPa, and which has a melting point or initial melting point of 68 °F (20 °C) or less at a standard pressure of 14.69 PSI (101.3 kPa). Either ASTM D4359-90 (R2019) (incorporated by reference, see § 1910.6); or the test for determining fluidity (penetrometer test) prescribed in section 2.3.4 of ADR 2019 (incorporated by reference, see § 1910.6) can establish whether a viscous substance or mixture is a liquid if a specific melting point cannot be determined.*

Mixture: *A combination or a solution composed of two or more substances in which they do not react.*

Personal Protective Equipment (PPE)**:** Specialized clothing or devices worn by users to protect them from work-related hazards.

Physical hazard: *A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, liquids, or solids); aerosols; oxidizer (gases, liquids, or solids); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; in contact with water emits flammable gas; or desensitized explosive. The criteria for determining whether a chemical is classified as a physical hazard are detailed in*

appendix B to this section.

Physician or other licensed health care professional (PLHCP): *An individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows the individual to independently provide or be delegated the responsibility to provide some or all of the health care services referenced in paragraph (i) of this section.*

Pictogram: *A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.*

Precautionary statement: *A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.*

Product identifier: *The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.*

Responsible party: *Someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.*

Safety data sheet (SDS): *Written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.*

Signal word: *A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.*

Simple asphyxiant: *A substance or mixture that displaces oxygen in the ambient atmosphere and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.*

Solid: *A substance or mixture which does not meet the definitions of liquid or gas.*

Specific chemical identity: *The chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.*

Substance: *Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and*

any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret: *Any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to § 1910.1200—Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.*

Use: *To package, handle, react, emit, extract, generate as a byproduct, or transfer.*

Work area*: A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.*

Workplace *means an establishment, job site, or project, at one geographical location containing one or more work areas.*

Responsibilities

A. Environmental Health & Safety (EHS)

1. EHS is responsible for implementing and maintaining the program.
2. EHS will provide training and information as required.
3. EHS will investigate and document all reported incidents that are related to hazard communication, and it will recommend corrective actions.
4. EHS will review and revise the program as needed for compliance with applicable regulations and TU policy.

B. Departments/Supervisors

1. Supervisors will ensure that employees are in compliance and follow procedures.
2. Supervisors will ensure that employees have hazard labels, access to a chemical inventory list (CIL), and safety data sheets (SDS) for relevant chemicals to which employees may reasonably anticipate use or exposure.
3. Supervisors will ensure that EHS is provided a list of trainees as required, and that employees receive training.

C. Faculty/Staff Personnel and Contractors (Employees)

1. Employees will participate in the program by reading and understanding the guidance herein, and following procedures as described.
2. In order to ensure that this program is successful and in full compliance with the regulations governing it, all employees have the following responsibilities:
    a) To fully read the hazard warning label, chart, CIL, or SDS located in their work area.
    b) To ensure that a label or other form of warning is legible, in English, and prominently displayed on all containers in your work area (properly labeled).
    c) To carefully read and obey the warning labels on any containers.

d) To contact EHS for copies of any SDS not found in your work area or inaccessible online.
e) To follow the approved handling and use procedures for each product, especially those dealing with personal protective equipment and clothing.
f) To attend all training sessions and/or complete all training modules.
g) To notify EHS of new employees in their area who handle chemicals and should attend training.
h) To ask your supervisor to contact EHS with any questions regarding this program or any chemical products in use in your area.
i) To provide EHS with a copy of the SDS for any new products which you purchase and bring into the work area.
j) To notify EHS of the amount and location of any new products which you purchase and bring into the work area.
k) To regularly maintain chemical inventory in your area through the TU Chemical Inventory Database (CIDB).
l) If an employee produces hazardous waste in their position, it is their responsibility to contact EHS and schedule and attend Hazardous Waste Generator training, which is separate from Hazard Communication training.

Introduction

In 1970, the United States Congress passed legislation creating the Occupational Safety and Health Administration (OSHA) to help preserve and protect the health and wellbeing of all employees in the United States. As a part of this continuing effort, the Hazard Communication Standard (HCS) was enacted. This specific legislation establishes the legal rights of employees to be informed about hazardous materials present on the job. As a result, employees are endowed with the "right to know" about the potential health risks, protective equipment and clothing, and the proper procedures for the handling, and storing of all chemicals and chemical products used in the workplace. Through employee training and education, employers such as Towson University hope to reduce the number of injuries or illnesses that can be attributed to the improper use and handling of these products. As of 2012, with the implementation of the Globally Harmonized System of Classification and Labeling Chemicals (GHS) through OSHA, the Employee Right-to-Know has been updated to the Employee Right to Understand.

It is the policy of Towson University (TU) to provide a safe workplace for its employees based on guidelines established by OSHA and the State of Maryland. The Towson University Department of Environmental Health & Safety (EHS) has developed and implemented this program to assure that each of its employees receives the information and training they need so that they may work safely with hazardous chemicals found in the workplace. This program is the primary tool for providing hazard communication to our employees. It contains policy, guidelines, and procedures that determine how every aspect of the program is achieved.

This written program is based on the OSHA Hazard Communication Standard, Title 29 CFR 1910.1200 (Right to Understand – GHS), State of Maryland "Access to Information About

Hazardous & Toxic Substances" COMAR 09.12.33 regulations, and additional requirements instituted by TU. The components of the program are as follows:

- Introduction
- Program Management
- Participating Personnel
- Faculty/Staff Responsibilities
- Hazardous Locations
- Chemical Inventory
- Hazard Labeling
- Safety Data Sheets (SDS)
- Employee Training & Information
- Non-Routine Tasks
- Contractors
- Trade Secrets
- Documentation
- Quality Assurance/Program Evaluation

Distribution

The entire program is available for review online at the EHS Chemical Safety & Hazard webpage. Copies of the program will be provided to all employees and to other persons under special circumstances.

Quality Assurance and Updates

If, at any time, employees have any questions or concerns about the program, they are encouraged to submit their comments in writing to the Program Coordinator in EHS. The Program Coordinator will acknowledge employee comments in writing. Comments will be evaluated, and appropriate action will be taken. In addition, this program will be evaluated annually. This program will be updated and revised as new information and data become available.

Applicable Regulations

- 29 CFR 1910.1200 – Hazard Communication

Procedure

A. Program Management

1. EHS has been assigned the responsibility of implementing and maintaining the Hazard Communication Program, since this department already administers recordkeeping, medical surveillance, and training for TU employees. Therefore, TU has the following responsibilities to all of its employees:
    - To compile and maintain an alphabetical Chemical Information List (CIL) of all regulated chemicals and chemical products used on campus. This list shall

include the manufacturer's name, chemical name, common name, and location on campus.

- To ensure that the University has SDS for all regulated products in accordance with Federal and State regulations. In November 1985, all chemical product manufacturers were required by law to supply information regarding the safe use and handling of their products to all consumers. The result of this requirement was the development of Material Safety Data Sheets (MSDS), known today as Safety Data Sheets (SDS), per the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
- To develop and implement a written hazard communication program for the workplace, which outlines the University's program for meeting the requirements described in both the Federal and State regulations.
- To ensure that a label or other form of warning is legible, in English, and prominently displayed on all containers.
- To provide an employee training and education program designed to inform all faculty/staff about the existence and content of this law; the hazard communication methods used by the University including the CIL, SDS, identifiers and placards; the rights an employee may exercise under this program; and the procedures by which an employee may obtain a copy of the CIL and/or SDS.

2. The Towson University Hazard Communication Program has a Program Coordinator with the authority to carry out its written requirements.
   a) Program Coordinator
      i. *The primary Program Coordinator is the EHS Manager.*
      ii. *The Program Coordinator is responsible for overseeing the total program as well as these specific duties:*
         1) *Coordinate program implementation*
         2) *Schedule/assign training for existing employees*
         3) *Conduct training for new hires, temporary, and contract employees*
         4) *Maintain all records and documentation generated by the program*
         5) *Address all comments concerning the program*
         6) *Conduct quality assurance audits on a scheduled basis*
         7) *File all reports with the appropriate government authorities*
         8) *Any other task affecting program maintenance*
         9) *Handle requests for CILs and SDS*
      iii. *The Program Coordinator will have the responsibility for assuring that the program is properly managed and operated according to the guidance provided in the written program. This will be accomplished by a review of employee comments, safety records and QA audits.*

   b) Other Key Personnel
      i. *When the Program Coordinator is not in the office, another person must be available for questions and requests concerning the program.*

ii. *Three additional persons have been identified to assist the Program Coordinator with the responsibilities of the program. They are as follows:*
    1) *Environmental Safety Assistant (1st alternate Program Coordinator)*
    2) *EHS Assistant Director (2nd alternate Program Coordinator)*
    3) *EHS Director (3rd alternate Program Coordinator)*
iii. *One of the above-named personnel will always be available during operating hours for information regarding the program. Find the appropriate staff member here: https://www.towson.edu/public-safety/environmental-health-safety/contact.html*

B. Participating Personnel

1. Because of the nature of hazardous chemicals, it is the policy of TU to have all employees and contract personnel (as applicable) participate in the program.
2. For the purposes of this program, employees and work areas will be classified and grouped in order to better determine the level of participation and training employees will receive.
    a) University personnel are grouped in the following classifications:
        i. *Academic & Auxiliary (PIs/LIs, Lab/Studio Managers, Support Staff, Print Shop Employees)*
        ii. *Administrative (Office Employees, Management)*
        iii. *Contractors*
        iv. *Environmental Health & Safety*
        v. *Facilities Management (General Services, Grounds, Maintenance, Material Management, Trades-Electric, Painters, Vehicle, Plumbers, Engineering, etc.)*
        vi. *Other Public Safety (Access Control, Key Shop, TUPD)*

3. Work Areas at the University include:
    a) Administrative Offices
    b) Laboratories
    c) Maintenance Facilities (General Services, Landscape Services, Maintenance Shops & Closets, Power Plant)
    d) Print Shop
    e) Shipping & Receiving Areas
    f) Studios
    g) Other Hazardous Storage Areas

4. Because all personnel at one time or another must enter an area where hazardous chemicals are being used or stored, all personnel will participate in the program at some level.

C. Hazardous Chemical Locations

1. It is the policy of TU to identify and mark locations where hazardous chemicals are used, stored, or transported.

2. Hazardous chemicals can be found in the following locations:
   a) Administrative Offices
   b) General Services
   c) Laboratories & Studios
   d) Landscape Services
   e) Maintenance Shops & Closets
   f) Power Plant
   g) Print Shop
   h) Shipping & Receiving Areas
   i) Other Hazardous Storage Areas

   See Appendix D for a campus map indicating these hazardous locations.

3. The Program Coordinator or their designee will physically audit chemical inventory locations as necessary.

D. Chemical Inventory

1. It is the policy of TU to list all of the hazardous chemicals used/stored at the campus through the CIDB.
2. TU utilizes numerous chemicals in the daily activities on its main campus and other campuses. These chemicals have been listed in the CIDB and can be reviewed at the EHS office. Designated users may access chemical inventory list (CIL) through Vertere (with login information): https://vertere.towson.edu/vimenterprise/Login.aspx. However, copies of CIL will be made available for rooms requested by written request. An employee and/or their designated representative(s) have the right to access the CIL within one working day of receiving their written request (unless there is an emergency). Employees also have the right to one copy of the requested information or the means to make a copy, without charge, within five working days of written request.
3. As required, the Program Coordinator will review all submittals of new SDS to determine if any other chemicals have been added. If a new chemical has been added, the Program Coordinator will take the appropriate steps to revise the program and related documents.
4. During the 2014 legislative session, the General Assembly passed House Bill 189 which eliminated the requirement for an employer to submit a Chemical Information List (CIL) to Maryland Department of the Environment, effective October 1, 2014. There remains the requirement for an employer to develop a list of hazardous chemicals in accordance with 29 Code of Federal Regulations 1910.1200(e)(1)(i). The CIL will be submitted upon request to appropriate agencies as necessary.

E. Hazard Labeling

1. General Label Requirements
   a) TU will label all hazardous containers, as required, with the identity, hazard warning, and manufacturer for each hazardous chemical container on campus.

b) The program objective is to have all hazardous chemicals labeled. The chemical user is responsible for ensuring all chemicals are appropriately labeled within their area. The Program Coordinator will provide assistance as requested.
c) Any hazardous chemical containers used, stored, or transported at TU, shall contain identity, hazard warning, and manufacturer, at a minimum. All GHS-compliant labels will contain the following information:
   i. *Product Identifier (Chemical/Common Name)*
   ii. *Signal Word*
   iii. *Hazard Statements*
   iv. *Precautionary Statements*
   v. *Supplier Identification (Name, Address, Phone Number)*
   vi. *Pictograms (GHS Hazard Symbols)*

d) See the Resources section for a link to *Chemical Container Labeling* guidelines. If at some time a regulated chemical is introduced and used in the facility, it will be marked and labeled in accordance with OSHA regulations in addition to labeling required in this section.
e) If the manufacturer's label is not present or if a chemical is being used in a secondary (or portable) container not provided by the manufacturer, it will be labeled immediately. Secondary containers must comply with these labeling requirements if the following is true:
   i. *if the contents are not used within one shift by the individual who conducted the transfer,*
   ii. *this individual leaves the work area,*
   iii. *the container is moved to another work area and is no longer in possession by this individual. This label must contain two key pieces of information: the identity of the hazardous chemical(s) in the container (e.g., chemical name) and the hazards present.*
f) There are many ways to communicate this hazard information. See Resources section for a link to the GHS Label Printing Instructions for a sample label. For GHS label creation, the chemical user may follow the procedure for Chemwatch: https://jr.chemwatch.net/chemwatch.web/account/autologinbyip.
g) All labels and information on labels shall be written in English. If at some time TU employs workers who are unable to read English, the information will be added to the label in the employee's native language.
h) Each new chemical received to campus should be recorded on a checklist. This checklist is to be forwarded to EHS for each new chemical received on campus. This log shall note date of receipt, contents, quantity, label check and initials.
i) For new hazardous chemicals received by TU employees as applicable, the item status shall be updated in CIDB to "In Use/Stored" and the Receive Date should be added. If CIDB is not used, each new chemical received to campus should be recorded on a checklist. This checklist is to be forwarded to EHS. This log shall note date of receipt, contents, quantity, label check, and initials.

j) The Program Coordinator or his designee will check container labels on a periodic basis. If the labeling is improper, corrective action shall be taken immediately. In addition, employees are trained to report to their supervisor if a container is found with inadequate labeling, so corrective action can be taken.

2. Regular Containers (drums, etc.)
   a) When hazardous chemicals arrive at TU, the containers will be checked against purchase order records immediately for the following information:
      i. *Product Identifier (Chemical/Common Name)*
      ii. *Signal Word*
      iii. *Hazard Statements*
      iv. *Precautionary Statements*
      v. *Supplier Identification (Name, Address, Phone Number)*
      vi. *Pictograms (GHS Hazard Symbols)*

   b) If the purchase order records verify the delivery, it will be accepted. Before being transferred to its destination, the labels shall be checked again to verify their adequacy. If the labeling is inadequate, then the proper identity and hazard label will be permanently affixed to the container. When this has been completed, the original labeling shall be removed or permanently covered to avoid confusion. Under no circumstances shall container labeling be removed or covered before the proper labels are attached.

3. Tanks and Reaction Vessels
   a) All hazardous chemical containers shall have the labeling required under this section, including storage tanks, pipes, and reaction vessels where appropriate.
   b) Labeling on tanks and vessels shall be on permanently attached placards no less than one foot by one foot square.
   c) The labels shall be placed on the tanks and vessels at no higher than five feet and spaced horizontally every five feet for adequate viewing from all directions.
   d) Tanks and reaction vessels not labeled will have their contents discussed at employee training sessions.

4. Pumps and Pipes
   a) All pumps and pipes used to transfer or transport hazardous chemicals will be labeled as appropriate.
   b) Pipes or piping systems that are not labeled will be discussed in employee training sessions as to their contents, potential hazards, and safety precautions to be taken.
   c) Unlabeled pipes may be found almost anywhere on campus, particularly in mechanical rooms, the University Power Plant, and areas where the Facilities Management personnel are assigned.
   d) In these work areas, employees can contact Facilities Management for further information.

5. Temporary Containers
    a) Outside of laboratories and studios, it is not usual University practice to use any other containers than the originals to transfer chemicals to storage or for use.
    b) However, if for any reason, another container, such as a bucket, drum, spray bottle, etc is used to temporarily store, use, or transport a hazardous chemical, it shall be labeled according to this section.
    c) Once its use has been completed, it must be cleaned, and the labels must be removed.

F. Safety Data Sheets

1. Accurate, up-to-date SDS shall be obtained, reviewed, and updated, if necessary, for each hazardous chemical used at TU.
2. The objective of SDS is to provide the user(s) with:
    a) Safe handling procedures
    b) Personal protective equipment/measures to be used
    c) Storage requirements
    d) Potential health hazards, if used incorrectly

3. TU relies on chemical distributors, the manufacturer, or its database vendor to supply SDS. Towson University will ensure that the SDS meets the uniform 16-section format, if available. SDS shall be obtained prior to use of any hazardous chemical.
4. The Program Coordinator ensures that Towson University maintains SDS for hazardous materials on campus.
    a) Applicable SDS are available to all employees through the CIDB.
        i. ***For Chemwatch****:* *https://jr.chemwatch.net/chemwatch.web/account/autologinbyip*.
            1) This link is found on the TU EHS webpage, under the Safety Data Sheets header here: https://www.towson.edu/public-safety/environmental-health-safety/programs/chemical-safety-hazard/
            2) Alternatively, the link may be found on the Chemistry Department webpage under the Laboratory Safety header here: https://www.towson.edu/fcsm/departments/chemistry/resources/safety.html
        ii. ***For Vertere*** *(limited access, with login information): https://vertere.towson.edu/vimenterprise/Login.aspx*.

    b) The Program Coordinator is responsible for acquiring and updating SDS.
    c) The Program Coordinator contacts the chemical manufacturer or vendor if additional research is necessary, or if SDS has not been supplied with an initial shipment.
    d) A master list of SDS is available from the Program Coordinator through CIDB.

5. An employee and/or their designated representative(s) have the right to access Safety Data Sheets within one working day of a written request (unless there is a medical emergency).
6. Employees also have the right to one copy of the requested information or the means to make a copy, without charge, within five working days of written request. SDS will be provided electronically upon request.
7. For larger SDS requests, a chemical inventory list will be provided to the employee and/or their designated representative(s) who may access SDS via Chemwatch (links provided above).
8. If Towson University fails to provide access to or a copy of the information about the hazardous chemical pursuant to the provisions of the law, an employee may refuse to work with the hazardous chemical. The employee, however, may not walk off the job or refuse to perform other duties while awaiting the requested information. Management cannot retaliate in any manner or willfully terminate the employment of any employee exercising their rights under this program.

9. <u>New and Updated SDS</u>
    a) When new or updated SDS are received, the chemical user will forward a copy to the Department of EHS for review of completeness. This review will be based on the requirements set in 29 CFR 1910.1200(g)(2)(i-xii). If it is determined to be incomplete, then a revision will be requested from the manufacturer.
    b) First-time use of hazardous chemicals shall not commence until SDS has been received, approved, and distributed to the proper locations. Approved updates of SDS received from our distributors shall replace outdated (M)SDS at all locations.
    c) SDS will be maintained in the same form as they are received from the manufacturer or distributor. They are filed alphabetically, according to their common/trade name at the EHS office.

10. <u>Location/Availability</u>
    a) All SDS for the University will be maintained at Department of Environmental Health & Safety office.
    b) Copies of site-specific SDS may be maintained at:
        i. *Dean/Chairperson Offices (optional)*
        ii. *Supervisor Offices (optional)*
    c) However, the master copy of SDS for all chemicals shall be maintained at the EHS office. These copies of the SDS shall be available to all employees or their designees during normal facility operating hours at the above locations.

11. <u>Format</u>
    a) Safety Data Sheets as required by OSHA per GHS will be in the following 16-part format (in order):
        i. *Identification*
        ii. *Hazard(s) identification*
        iii. *Composition/information on ingredients*

iv. *First-aid measures*
v. *Firefighting measures*
vi. *Accidental release measures*
vii. *Handling and storage*
viii. *Exposure control/personal protection*
ix. *Physical and chemical properties*
x. *Chemical stability and reactivity*
xi. *Toxicological information*
xii. *Ecological information*
xiii. *Disposal considerations*
xiv. *Transport information*
xv. *Regulatory information*
xvi. *Other information*

G. Non-Routine Tasks

1. When employees are required to perform hazardous non-routine tasks, such as cleaning tanks, entering our permit-required confined spaces, or cleaning out the swimming pool, a special training session will be conducted to inform them regarding the hazardous chemicals to which they may be exposed and the proper precautions to take to reduce or avoid exposure.
2. See the Hazard Communication Training (HCT 4) section in Step M3b(iv) for training topics.

H. Contractors

1. Contractors are provided with one copy of the Employee Safety Programs (ESP) Manual. The president or most senior company member signs off that they have received the ESP and will distribute it to their employees. See Appendix G for a copy of the form that is signed by the Contractor. Contractors are required to comply with all of the programs listed in the ESP while on campus. See Appendix H for the Goldenrod Addendum to TU Contracts.
2. Each contractor bringing chemicals onsite must provide the Program Coordinator with the SDS, appropriate hazard information on these substances (including the labels used) and the precautionary measures to be taken when working with these chemicals at least 2 weeks before the chemical is used on campus.

I. Trade Secrets

1. It will be the policy of TU to request trade secret information on products being utilized on campus (as necessary) and provide that information to those requesting it under the existing regulations.
2. As the non-manufacturer of these materials, it will be necessary to request this information from the producer, in writing (unless there is a medical emergency) with reasonable detail as to why this information is being requested.

3. It will be the objective of TU to provide to the requesting individual(s) trade secret information pertaining to the hazardous chemical being utilized from the manufacturer. Additional details regarding obtaining trade secret information will be discussed on an individual basis with the personnel requesting it.
4. The Program Coordinator will review each request for trade secret information. It will be the responsibility of the Program Coordinator to determine University action on the subject.

J. Recordkeeping

1. TU shall make the forms and documents listed in this program available to employees on a written request basis.
2. All of the following information is maintained on databases at EHS or through HR:
   a) Participating Personnel (EHS/HR)
   b) Employee Program Records (EHS/HR)
   c) Hazardous Locations (EHS)
   d) Chemical Inventory (EHS)
   e) Safety Data Sheets (EHS)
   f) Employee Information and Training (EHS/HR)

K. Program Evaluation

1. Quality Assurance
   a) It is the policy and responsibility of TU to do whatever is necessary to assure the effectiveness of our Hazard Communication Program.
   b) For program quality assurance, the program as a whole must be reviewed. This requires periodic review by members of EHS and random employee interviews.
   c) It is the responsibility of the Program Coordinator to ensure periodic review is conducted. Ultimately, it is the responsibility of the President of Towson University to assure that this program is carried out.

2. Periodic Review
   a) Periodic review of the effectiveness of the program will occur.
   b) EHS will conduct periodic surveys to determine the effectiveness of the program.
   c) Employees may contribute data and insights into how to improve the program.
   d) Evaluation will be based on audits, number and type of incidents related to the use, and compliance.

3. Modifications
   a) Any modifications to the current program must be approved by EHS, recorded, and addressed to end users.

L. Emergency Procedures

1. Personnel Injury/Illness/Exposure
   a) In case of emergency, call 911 or TUPD for 410-704-4444.
   b) If applicable, contact the National Poison Control Center at 1-800-222-1222.

i. *See Appendix A for other emergency contact telephone numbers.*

c) First aid kits for minor injuries are provided by your department and will be found within the facility.

d) Eyewashes and safety showers are available for use by personnel in laboratory spaces as required.

i. *Eye Exposure: Go to an eyewash station and rinse for at least 15 minutes.*

ii. *Skin Exposure: Wash ethanol off skin with plenty of soap and water.*

2. Contamination/Spill

a) In case of a major contamination or spill (e.g. immediately dangerous to life or health, cannot be contained to the room), immediately exit the facility, and do not re-enter the contaminated environment until the condition can be corrected.

b) Warn others in the laboratory of the emergency on your way out of the facility.

c) Contact EHS at 410-704-2949.

d) Report the nature/hazard of the spill (i.e. whether biological or chemical, volume or mode of contamination [airborne, toxic, etc.]), and any other pertinent information.

3. Fire/Emergency Evacuation

a) In case of fire or required evacuation (e.g. natural gas leak, severe weather event), stop work immediately and evacuate the facility, shutting down operations on the way out of the laboratory.

b) Warn others in the laboratory of the emergency on your way out of the facility.

4. Security Threat/Breach

a) In case of security threat, contact TUPD at 410-704-4444.

b) Security threats may include unauthorized individuals entering the laboratory, Ethanol Room, or Chemical Stockroom. Individuals threatening or harming laboratory personnel, the facility, or research being conducted, or otherwise intentionally causing harm or trespassing.

M. Training

1. Employee Training Access

a) For training in Hazard Communication, it may be assigned/accessed virtually through Vector Solutions SafeColleges found at the following URL: https://towsonehs-md.safecolleges.com/training/home. Workers shall request training by emailing safety@towson.edu or by calling the Environmental Health & Safety (EHS) office at 410-704-2949.

b) For training in inventory or label use, contact EHS for CIDB training.

2. Employee Training Overview and Information

a) All employees (including temporary, onsite contractual and part-time) and contractors shall receive information on TU's Hazard Communication Program. It

is the contractor's responsibility to train their employees in the Hazard Communication Program and its procedures.

b) The objective of employee training is to provide all personnel identified in this program with the necessary information and training to assist and abate the potential for injury, illness, or death resulting from the inadvertent exposure to hazardous chemicals utilized at TU.

c) All those persons who handle chemicals as a result of their job duties at Towson University are required to attend Hazard Communication training or watch the related training modules. Information and training will be provided based on job responsibility and risk.
   i. *Employees must be trained on hazardous chemicals prior to their initial assignment to work with hazardous chemicals.*
   ii. *Employees may receive up to four levels of instruction depending on the job and risk.*
   iii. *These levels range from basic program information to hands-on materials handling training.*

d) The departments are required to notify EHS of new employees in their area who handle chemicals and should attend training.
   i. *It is the department's responsibility to notify EHS of new employees during the semester.*
   ii. *EHS also requests a monthly new hire list from the Department of Human Resources (HR) to ensure that the campus departments do not miss newly hired employees who may handle chemicals.*
   iii. *EHS contacts the individual or their department to find out if they handle chemicals during their regular job duties.*

3. Training Program Structure and Content
   a) Employee Safety Programs Manual
      i. *Towson University distributes the Towson University Employee Safety Programs (ESP) manual to all employees.*
      ii. *The ESP is available through this link: https://www.towson.edu/public-safety/environmental-health-safety/documents/employee-safety-programs-updated.pdf*
      iii. *The ESP states that TU has a written program and employees shall receive training as required.*
      iv. *Employees sign a form (in Appendix G) that they have received the ESP or verify that they have received the manual by other means. These records are kept at EHS. A database of these signed records is also maintained by EHS.*

   b) Training is structured into four areas, identified as hazard communication training (HCT): HCT 1, HCT 2, HCT 3, and HCT 4.
      i. *HCT 1*

This is a general, but University-specific, program of orientation provided through the ESP. The ESP will be distributed to <u>all</u> TU employees. Training will consist of the following:

1) *Review of the ESP manual.*

ii. *HCT 2*

Instruction in this next level shall require designated personnel to complete Hazard Communication training. Topics to be discussed and explained shall include at a minimum:

1) *Review of the TU's Hazard Communication Program*
   - **A. Chemical Inventory Information (such as CIL, Acquisition/Location)**
   - **B. Contractor Responsibilities**
   - **C. Hazard Communication Standard (Summary, Training Requirements)**
   - **D. Hazardous Non-Routine Tasks**
   - **E. Labels and SDS (Acquisition/Location, Description, Use)**
   - **F. Program Coordinator and Alternates**
   - **G. TU Employee Rights under the Standard**
   - **H. TU Faculty and Staff Responsibilities**
   - **I. TU Hazard Communication Training (Summary)**
   - **J. TU Hazard Communication Program (Location, Link)**
   - **K. TU Rights and Responsibilities under the Standard**
2) *Physical and/or chemical health hazards of chemicals used, stored, or transported on campus*
3) *Methods of recognizing release or presence of hazardous chemicals on campus*
4) *Control methods used by TU to reduce risk of exposure during normal and emergency situations*
5) *Specific chemical hazard information (chemical hazard classes)*
6) *Procedures for dealing with spills and other abnormal releases of chemicals*
7) *Proper handling and storage techniques (See Resources for a copy of Towson University's Procedures for the Safe Storage of Chemicals)*
8) *Special controls such as monitoring instrumentation and personal protective equipment (PPE)*
9) *Labeling information and requirements including an explanation of the NFPA Diamond (See Resources and Appendix E).*

iii. *HCT 3*

Instruction at this level will consist of unique departmental training. The minimum instruction includes:

1) *Specific chemical operations instruction*
2) *Chemical-specific emergency procedures such as spill clean-up and disposal techniques*
3) *Specific chemical hazard information including review of specific SDS for hazardous chemicals utilized in the work area*

4) *Control methods used to prevent contact with hazardous chemicals, such as personal protective gear*
5) *Instruction on the use of personal protective equipment (PPE)*

iv. *HCT 4*

TU has identified training for the following non-routine task involving hazardous chemicals in its facility:

1) *Confined space entry and storage tank cleaning*
   - **A. EHS currently provides Confined Space Entry training (no rescue training is included).**
   - **B. Alternatively, the Maryland Fire and Rescue Institute (MFRI) conducts training for Confined Space Entry and Rescue.**
2) *Swimming pool cleaning in Burdick Hall*
   - **A. Facilities Management personnel conducts specific training for storage tanks and swimming pool cleaning.**
3) *Additional training courses shall be developed for any additional non-routine tasks encountered. Training information will include (at a minimum):*
   - **A. Protective/safety measures the employee can take;**
   - **B. Measures that TU has taken to lessen the hazards, including ventilation, respirators, presence of another employee, etc.; and**
   - **C. Emergency procedures.**

4. <u>New Hazard Training</u>
   a) When new hazards are introduced into the workplace, training will be given to personnel at the highest level at which they have previously been trained.

5. <u>Retraining</u>
   a) Employees shall be given refresher training as needed.
   b) If hazards change or if the employee changes job requirements, retraining may be necessary.
   c) If an accident or incident occurs, retraining will be required to ensure it does not happen again.

6. <u>Personnel Training Requirements</u>
   a) The employee groups listed in Table 1 below are formed based on assumed training requirements in Hazard Communication.
   b) The following matrix in Table 2 below defines what training is given to which group of employees.
   c) These training assignments are subject to change based on personnel or supervisor requests.

Table 1. Employee Training Group Table. The table is used to define groups based on training requirements in Hazard Communication.	
Employee Group	**Group Code**
Academic & Auxiliary	AA
Administrative	AD
Contractors	C
Environmental Health & Safety	EHS
Facilities Management	FM
Other Public Safety	PS

Table 2. Employee Training Structure. The table displays a training requirements matrix for the employee training groups found in Table 1. "**X**" indicates training is required.				
Group Code	HCT 1	HCT 2	HCT 3	HCT 4
AA	**X**	**X**	**X**	
AD	**X**	**X**		
C	**X**	**X**		
EHS	**X**	**X**	**X**	**X**
FM	**X**	**X**	**X**	If applicable
PS	**X**	**X**	**X**	

7. Training Program Presentation
   a) EHS will present HCT 1 and HCT 2 through an in-person training and/or video training module(s) (the latter in association with HR). The Program/Alternate Coordinators, or their designee, will conduct the training session. The department/section supervisor or manager will conduct HCT 3. SDS and personal protective equipment are also covered in HCT 2-4.
   b) A complete lesson plan is attached to this program in Appendix F.
   c) It is the responsibility of the Program Coordinator and EHS to maintain training records; however, HR will maintain personnel records along with training, with respect to video training modules.

Resources

A. OSHA

1. Hazard Communication Guidance
2. Labels & Pictograms Information
3. Safety Data Sheets Information

B. Environmental Health & Safety

1. To request guidance, training, or for general inquiries concerning this program, contact EHS by emailing safety@towson.edu or by calling the Environmental Health & Safety (EHS) office at 410-704-2949.
2. Chemical Container Labeling
3. CIDB Manual
4. GHS Label Printing Instructions
5. Procedures for the Safe Storage of Chemicals

Appendix A: Emergency Contact Telephone Numbers

FIRE - RESCUE - EMERGENCY MEDICAL SERVICE: 911

At the emergency blue-light and yellow phones located around campus, press the emergency button to be connected to the University Police who can contact 911 for you, or dial 911 on the keypad to be connected directly to the 911 Center. Give the dispatcher all of the requested information.

Towson University Police Department [TUPD]: (410) 704-4444
For Other Emergencies

Department of Environmental Health and Safety: (410) 704-2949

Concentra Urgent Care [Timonium, MD]: (410) 252-4015
For Occupational Health, Medical Consultation and Evaluation

Facilities Management - Work Control Center: (410) 704-2481

Appendix B: First Aid & Reporting Instructions

Note: The following are suggested medical care facilities. Individuals may choose their own providers for medical care.

For major, immediate illness/injuries: Call 911 and/or go to the nearest hospital (UMD St. Joseph Medical Center, 7601 Osler Dr, Towson, MD 21204)

For minor injuries/illnesses and chronic/ongoing work-related injuries:
Employees: Concentra Occupational Health is open on Monday-Friday, 7:30AM-6:00PM (Concentra Occupational Health, 1830 York Road, Suite F, Timonium, MD 21093). Complimentary transportation is available for work-related injuries. You may also make a telemedicine visit: by visiting Concentra Telemed.

Students: TU Health Center is open on Monday-Friday, 8:00AM-5:00PM. (Ward West, University Avenue; TU Shuttle Bus service stops here, check schedule for times/stops). Please note that when Towson University is closed, the Health Center is also closed. There is an after-hours answering service and on-call physician available when the center is closed.

Other Nearby Medical Facilities:
MedStar Urgent Care Facility (MHUC) at the following locations:

- Towson at Hillside Avenue is open on Monday-Friday, 8:00AM-8:00PM (MedStar Urgent Care, 7825 York Road, Towson, MD 21204; Phone: 855-910-3278)
- Towson at Anneslie is open on Monday-Friday, 8:00AM-8:00PM (MedStar Urgent Care, 6317 York Road, Towson, MD 21212; Phone: 833-735-1958)

Please see next page for First Aid & Reporting Instructions table.

	Hazard Class:	Biological, Chemical	Biological, Chemical	Biological	Biological, Chemical	Chemical Physical	Chemical, Physical, Radiological	Biological		All	
Assess Incident/ Personnel Action	**Incident Type:**	Severe Allergic Reaction, Anaphylaxis	Accidental Ingestion	Animal Contact (Bite, Scratch, Other Contact) Biotoxin/ Venom	Accidental Inhalation	Burns/ Contact Exposure	Burns > 3 inch diam., deep/ all skin layers; covers hands, feet, face, groin, buttocks, or major joint/ encircles arm or leg	Injection Needlestick, Sharps Exposure		*If victim is unconscious/ not breathing/ no pulse:	**If victim is conscious, but not breathing normally:
	Severity:	Major	Major	Major	Major	Minor	Major	Minor	Major	Major	Major
Reduce Danger		Stop work immediately.								Stay with victim, if safe to do so. Ensure area is secure.	
		Exit the area, if possible. Seek fresh air.								Keep calm.	
Contact Emergency Medical Services		Call 911 or TUPD at (410) 704-4444					Call 911 or TUPD at (410) 704-4444		Call 911 or TUPD at (410) 704-4444		
		Consult Poison Control Center at 1-800-222-1222 or Safety Data Sheets (SDS) for the chemical [find Section 4: First Aid Measures].							Consult Poison Control Center at 1-800-222-1222 or Safety Data Sheets (SDS)		
Use First Aid		Use EpiPen/ equivalent. *See Right **See Right	Wash affected area (foaming soap & water, or for chemicals – use water only; 15-minute minimum) and/or use eyewash/shower (15-minute minimum) Flush splashes to the nose, mouth, or skin with water. Do not induce vomiting unless instructed.							*Use CPR/AED until assistance arrives.	**Use CPR only.
		If bleeding, apply firm pressure and wrap. Dry, use first aid kit for ointment and bandage as required, and/or mark area for post-exposure identification/treatment.									
Alert Others		Warn/seek assistance from other personnel, if necessary. Notify Supervisor or have other personnel do so, after commencing first aid.									
Seek Immediate Medical Treatment		Minor Incident: Students – TU Health Center during the times, dates, and address listed. Employees – Concentra Occupational Health during the times, dates, and address listed. Other nearby providers are listed, if the above are not available. Major Incident: UMD St. Joseph Medical Center, Emergency Room, 24 hours/day, 7 days/week. **Drive self, drive other(s), or request transport.**									
Report Injury/Incident		File a First Report of Injury with Human Resources, and submit an Environmental Health & Safety Incident Report Form within 24 hours of the injury (or your Supervisor may do this on your behalf). For fatal accident or hospitalization, report to EHS within 8 hours (or TUPD at 410-704-4444 after office hours).									
Seek Post-Exposure Care		Seek medical advice from your primary care physician after initial treatment and advise them that you work with animals. Employees may go to Concentra for follow-up, post-exposure treatment as required.									

Appendix C: Hazard Communication Regulation

29 CFR 1910.1200: Hazard Communication
https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200

Appendix D: Hazardous Chemical Locations on Campus

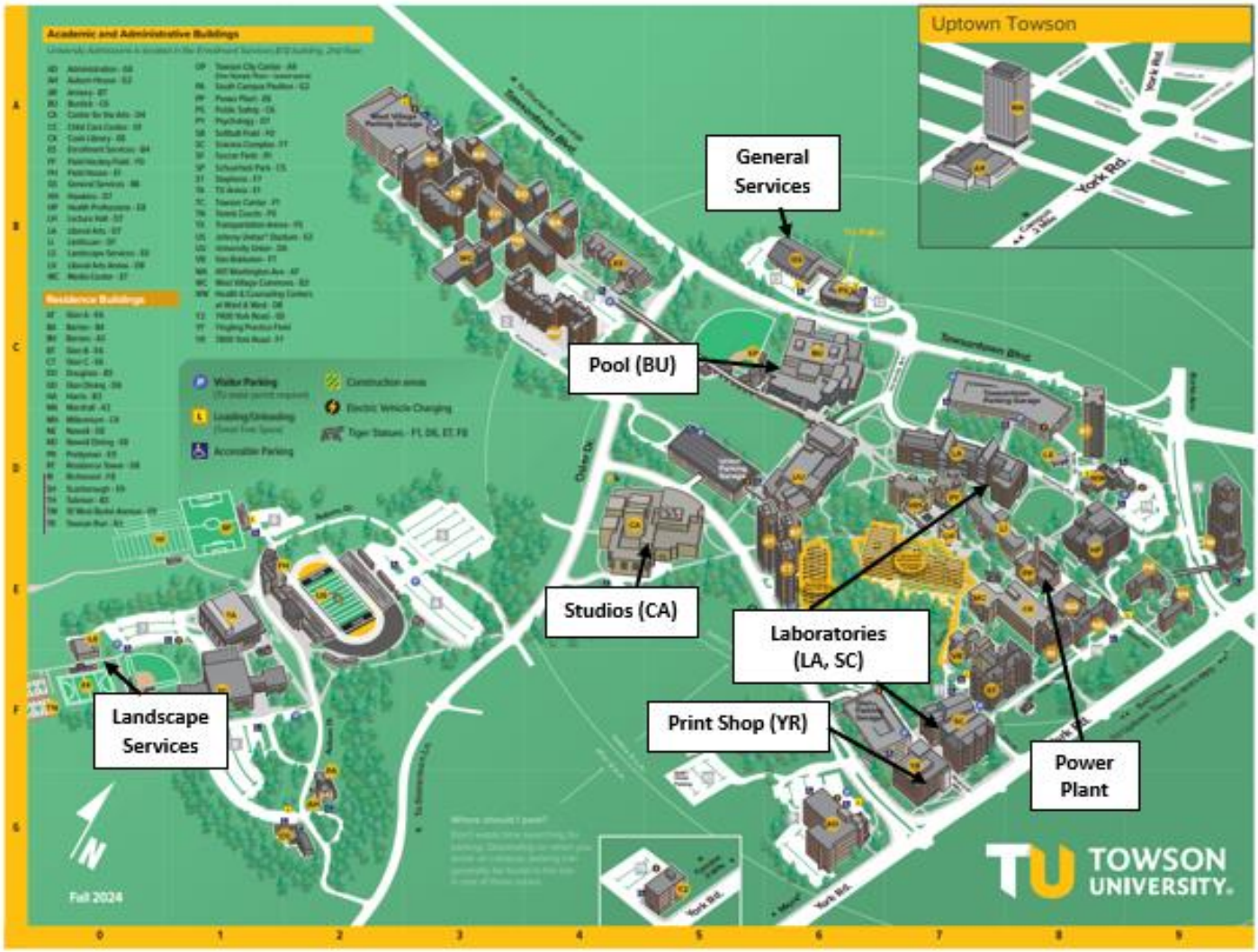

Figure 1. TU Campus Map. The map depicts the primary hazardous chemical locations on campus. Other areas not highlighted are administrative offices, maintenance shops/closets, shipping and receiving areas for buildings, and storage areas that may contain hazardous chemicals.

Appendix E: NFPA Labeling System

This is an example of a typical NFPA label. This system uses colors to represent the kind of hazard. Rating numbers are defined below.

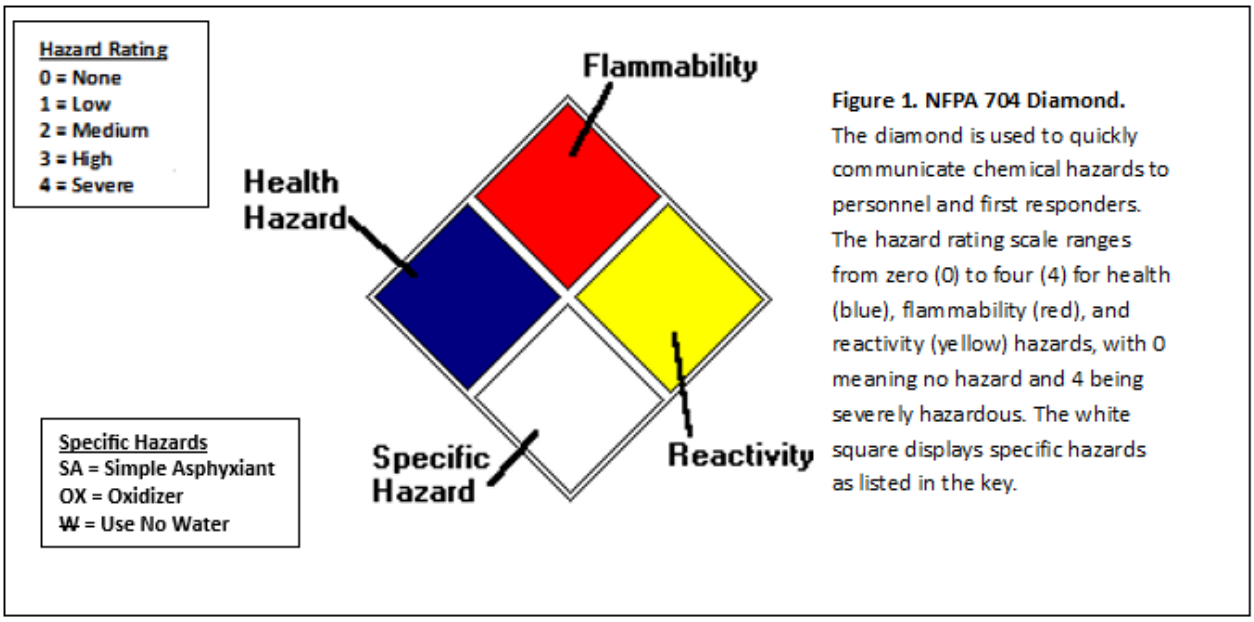

Figure 1. NFPA 704 Diamond. The diamond is used to quickly communicate chemical hazards to personnel and first responders. The hazard rating scale ranges from zero (0) to four (4) for health (blue), flammability (red), and reactivity (yellow) hazards, with 0 meaning no hazard and 4 being severely hazardous. The white square displays specific hazards as listed in the key.

Health Hazard - Blue

4 - Materials that upon very short exposure could cause death or major residual injury even though prompt medical treatment was given (example: Acrylonitrile, Bromine, Parathion).

3 - Materials that upon short exposure could cause serious temporary or residual injury even though prompt medical treatment was given (examples: Aniline, Sodium hydroxide, Sulfuric acid).

2 - Materials that upon intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment was given (examples: Bromobenzene, Pyridine).

1 - Materials that upon exposure would cause irritation but only minor residual injury even if no treatment was given (examples: Acetone, Methanol).

0 - Materials that upon exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.

Flammability - Red

4 - Materials that: (a) rapidly or completely vaporize at atmospheric pressure and normal ambient temperatures and burn readily, or (b) are readily dispersed in air and burn readily (examples: 1,3-Butadiene, Propane, Ethylene oxide).

3 - Liquids and solids that can be ignited under almost all ambient temperature conditions (examples: Phosphorus, Acrylonitrile).

2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur (examples: 2-Butanone, Kerosene).

1 - Materials that must be preheated before ignition can occur (examples: Sodium, Red phosphorous).

0 - Materials that will not burn.

Reactivity - Yellow

4 - Materials that in themselves are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures (examples: Benzoyl peroxide, TNT, Picric acid).

3 - Materials that: (a) in themselves are capable of detonation or explosive reaction but require a strong initiating source, or (b) must be heated under confinement before initiation, or (c) react explosively with water (examples: Diborne, Ethylene oxide, 2-Nitropropane).

2 - Materials that: (a) in themselves are normally unstable and readily undergo violent chemical change but do not detonate, or (b) may react violently with water, or (c) may form potentially explosive mixtures with water (examples: Acetaldehyde, Potassium).

1 - Materials that in themselves are normally stable but which can: (a) become unstable at elevated temperatures, or (b) react with water with some release of energy, but not violently (example: Sulfuric acid)

0 - Materials that in themselves are normally stable, even when exposed to fire, that do not react with water.

Specific Hazard - White

This field designates special information about the material.

SA - Denotes materials that are simple asphyxiants. These chemicals are typically gases that displace oxygen and cause suffocation. Unlike toxic gases, these gases are not poisonous and their effects may not be immediately obvious if oxygen is depleted.

OX - Denotes materials that are oxidizing agents. These chemicals give up oxygen easily, remove hydrogen from other compounds or attract negative electrons.

W - Denotes materials that are water reactive. These chemicals undergo rapid energy releases on contact with water.

If you have any questions, please contact the Department of Environmental Health & Safety at 410-704-2949.

Appendix F: Training Lesson Plan

HAZARD COMMUNICATION RIGHT TO UNDERSTAND TRAINING OUTLINE

I. Introduction (About 2 minutes)
II. Hazard Communication Basics (About 6 minutes)
III. Revised Hazard Communication Standard – the Right to Understand (About 3 minutes)
IV. Label Requirements for Hazardous Chemicals (About 13 minutes)
V. Final Assessment (About 2 minutes)

Section I Introduction

- Hazard Communication Standard (HCS)
  - Employee Rights
  - University Responsibilities
- Justification for Hazard Communication
  - Chemical exposure effects
  - Understanding hazards and how to protect yourself and others

Section II Hazard Communication Basics

- Description of Hazardous Chemicals
  - Examples of Hazardous Chemicals commonly found on campus
- Federal Agencies responsible for regulating chemicals
  - Exceptions to HCS labeling
- Hazard Communication Program
  - Employer Responsibilities
  - Employee Responsibilities
  - Product Labels
  - Safety Data Sheets
- Familiarization with Work Chemicals and Information
  - Don't Put Yourself at Risk/Know the Hazards
  - Use Your Training
  - Proper Chemical Handling

Section III Revised Hazard Communication Standard – the Right to Understand

- The Right to Understand
  - Scope
  - Globally Harmonized System (GHS)
  - Hazard Communication Standard Revisions

Section IV Label Requirements for Hazardous Chemicals

- Product Label
  - Revised Hazard Communication Standard Label Requirements and Flexibility
  - Main Types of Labels
  - GHS Requirements
  - HCS Pictograms, Hazard Classes and Categories
  - Other Labels

Section V Final Assessment

- Trainee must answer each question.
- Trainee must answer 80% correctly to pass.

Appendix G: University Contractors Acknowledgment Form

TOWSON UNIVERSITY.	Employee Safety Program
	Contractors
	Form

University Contractors Acknowledgment Form

To University Contractors

From Department of Environmental Health & Safety

Re Employee Safety Programs Manual & Campus Asbestos Containing Material (ACM) Locations

Towson University, in its commitment to the preservation of employee health and safety, is providing online for your reference the following documents. They can be accessed, viewed, or downloaded from the Department of Environmental Health & Safety (EHS) website at: https://www.towson.edu/public-safety/environmental-health-safety/programs/employee-safety.html.

1. Employee Safety Programs Manual

This booklet is being provided to you for use while your employees are working at our facilities. Since many of your employees work in the same areas as university personnel, there is the same level of exposure for both groups.

REMINDER: IT IS THE RESPONSIBILITY OF ALL UNIVERSITY CONTRACTORS TO PROVIDE SAFETY DATA SHEETS (SDS) FOR ANY HAZARDOUS CHEMICAL UTILIZED AT THIS CAMPUS TO EHS.

2. Known Locations of Asbestos at TU

This list is intended to be a guidance document only. It is substantially complete. However, the purpose is to inform and alert personnel to known asbestos containing material (ACM) locations on campus and thereby avoid accidental disturbance and reduce the potential for fiber release episodes. It is your responsibility to review and discuss the information contained in these documents with all of your employees. Please keep a copy available on location for use by your employees. Should you have any questions or concerns, please contact EHS (410-704-2949).

Please sign the bottom of the form and return a copy with the original signature to EHS.

I, the undersigned, acknowledge it is my responsibility to review the above information in its entirety; to familiarize myself and other company employees with the contents.

Name (Print)	**Signature**	**Date**

Company	**Title**

Appendix H: Procurement Addendum to Towson University Contracts

11:03 HAZARD COMMUNICATION STANDARD

A. The Contractor will be responsible for advising all of its employees of their rights under Towson's Hazard Communication Standard Program, or more commonly referred to as the Right To Know (RTK) Program. The University will supply the vendor with a reproducible copy of the TU Employee Safety Program (ESP) booklet, which outlines this program. The Contractor is responsible for distributing a copy of Towson's ESP booklet to its employees. The Contractor must provide written documentation to the Department of Environmental Health and Safety that each and every employee who physically works on campus has received a Towson ESP booklet and has been trained in his/her rights and responsibilities pursuant to the Program. The Owner, President or other most senior Company/Corporate Officer will sign and return written verification to EHS stating that he/she will adhere to the requirements specified above. The University's Department of Environmental Health and Safety is responsible for administering the University's RTK program and will handle all information regarding this program. Failure to adhere to the requirements of the RTK Program may result in implementation of punitive action such as the cancellation of the contract(s).

B. Pursuant to the provisions of the RTK Program, the Contractor will be responsible for the following:

1. Submission to the Contract Services Office and EHS of the manufacturer's Safety Data Sheet (SDS) for all chemicals or chemical products to be used or in use at the University. These SDS must be delivered no later than two (2) weeks prior to the start of any work under this contract. There must be an SDS for every product in use or present on the campus unless exempted in writing by EHS. SDS for any changes or additions to the complete campus chemical list must be submitted five (5) working days prior to the actual change occurring. All proposed changes must be approved in writing by EHS prior to the actual use of the new product on campus. The University, through EHS, reserves the right to order a change in the use, storage, or method of handling of any chemical/chemical product that it feels poses an unreasonable hazard to the University's community.

   NOTE: In the absence of the original manufacturer's SDS, EHS will accept a generic equivalent as long as a letter from the Contractor stating that the original is not available is attached.

2. The Contractor must warrant in writing to Towson University's Contract Administrator in the Procurement Department that all employees have been trained and will continue to be trained in the proper and safe storage, handling, use and disposal of all chemicals/chemical products in use.

3. The Contractor agrees to obey and follow all local, state, and federal regulations regarding the storage, handling, use and disposal of all chemicals/chemical products. The Contractor agrees to properly dispose of all regulated waste in accordance with all applicable regulations and to make available to University's Contract Administrator all records necessary to support such activity.

11:04 ASBESTOS

A. The Contractor is responsible for training and equipping all personnel concerning work in an asbestos environment as applicable. They must be trained as prescribed by COMAR 26.11.21. All new employees must be trained within 30 days after the Contractor hires them. This is to be accomplished at no additional cost to this contract or the University. An initial report on all employees as to their asbestos training will be presented to the University's Contract Administrator within the first 90 days of the Contract and updated on a monthly basis. Thereafter, failure to comply with this requirement would place the Contractor in default status.