

Employee Safety Programs

Department of Environmental Health & Safety

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ACCIDENT INVESTIGATION POLICY/PROCEDURES

The TU Police Department (TUPD) shall be notified immediately regarding any accident on campus that involves a personal injury. Upon notification, the TUPD shall respond to the accident and, where appropriate, conduct a preliminary investigation. The TUPD shall notify the Department of Environmental Health & Safety (EHS) immediately for personal injuries that are OSHA reportable (fatality, dismemberment, etc.), involves the potential for a Tort Claims suit against the University from non-University personnel (slips, trips, falls, cuts, etc.), or involves any TU employee. Depending upon the nature and severity of the injury, EHS will also respond.

Any follow-up investigation (if necessary) shall be conducted by a team consisting of a representative from EHS, the TUPD (designated by the Director of Public Safety), the employee's supervisor, and as appropriate, Facilities Management (to be designated by the Associate Vice President (AVP) of Facilities Management). All investigation findings shall be recorded in writing. Where appropriate and whenever possible, photographs shall be obtained to document the accident scene and any other relevant evidence. His/her supervisor and TUPD/EHS shall always investigate all accidents involving employee personal injury (as necessary, depending on the severity and nature of the injury). Any follow-up accident investigation involving personal injury to a Facilities Management employee will include as a member of the investigating team (in addition to the immediate supervisor) EHS, TUPD (where appropriate) and a Facilities Management employee designated by the AVP of Facilities Management. In cases where Facilities Management expertise is required in other accident investigations, the AVP of Facilities Management, or his/her designee, shall be contacted to arrange for the individual to assist EHS/TUPD in their investigation of the accident.

For the purpose of this policy, injuries resulting from sports related activities (e.g., sprains due to playing basketball, jammed fingers due to playing volleyball, etc.), or ambulance calls for a sick person shall not constitute a need for an investigation as long as there are no other mitigating circumstance(s) involved attributable to University negligence which contributed to the accident/sickness (e.g., loose floor board, food poisoning).

When accidents are caused by a TU employee's disregard of established work procedures/policies, the investigation team shall notify the employee's immediate supervisor and the supervisor's department head within 24 hours. It shall be the supervisor's responsibility to initiate disciplinary action as warranted by the incident. Disciplinary action shall comply with current University Policy. The department head shall notify the Division Vice President of the disciplinary action to be taken.

At a minimum, on a quarterly basis, EHS shall review all accidents involving personal injury, any disciplinary action instituted against the offending employee, and any new or modified policies/procedures implemented to prevent a recurrence of a similar incidence. EHS shall make additional recommendations as necessary regarding any actions or policies/procedures implemented. Prior to the implementation of any new/modified University policies/procedures, the policy/procedure shall be submitted to the President for approval, as necessary.

Recommendations made by the investigation team and/or EHS regarding the implementation of new/modified work procedures as approved by the President shall be the responsibility of the department head/supervisor of the injured employee to implement. The department will be held accountable (i.e., will have medical costs deducted from their budget) for future injuries that occur

because of failure to implement the recommended modified/new work policies/procedures. If they do not concur with the recommendations, the department shall discuss the issue with EHS to mutually arrive at acceptable new/modified work procedures.

ANIMALS IN UNIVERSITY BUILDINGS

The purpose of this policy is to define the guidelines governing the presence of nonlaboratory animals in University Buildings. It is designed to control disruptions, nuisances and potential health hazards created by animals.

The presence of animals in University buildings has had, in many cases, an adverse effect on the normal functions of the University by causing bodily harm to individuals, unsanitary conditions, and nuisances as well as disrupting the campus educational and administrative processes.

All animals are prohibited from being kept, harbored, or maintained in any University building with the exception of laboratory animals, those permitted in housing agreements, Police K-9s, Seeing Eye dogs utilized for or by persons with visual impairment, dogs specially trained to assist the hearing impaired, other animals which assist people with disabilities, and animals used in teaching or research.

This policy will be administered and enforced by the Towson University Police Department (TUPD), in cooperation with the Towson University Department of Environmental Health & Safety (EHS). Violation of this policy by an employee or student of the University may result in disciplinary action under appropriate personnel policy and procedures, and student conduct procedures. Any person who is found to be in violation of this policy shall immediately remove such animal from the building in question at the request of the TUPD or EHS. Failure to comply with this request will result in the impoundment of the animal by the Baltimore County Animal Control Division. Animals will also be impounded after a reasonable local search conducted by EHS and/or the TUPD finds no owner in attendance. Owners of impounded animals will be held responsible for payment of any impoundment and/or license fees required to secure the release of the animal. Owners of animals on University property shall be liable for the expenses of all damages incurred by the animals.

For information regarding this policy contact the Towson University Police Department (x4-2134) or the Department of Environmental Health & Safety (x4-2949).

ASBESTOS SAFETY PROGRAM

Asbestos, referred to as the "miracle mineral" by the Greeks, is a naturally occurring mineral. It has been incorporated in virtually hundreds of items such as floor and ceiling tile, automotive brake and clutch lining, steel beam fireproofing, pipe and tank insulation, gaskets, laboratory fume hood linings, electrical wiring insulation, drywall joint and spackling compounds, fire resistant insulation in fire doors and fire curtains in theaters. These items, commonly referred to as asbestos containing materials or ACM, are found in numerous facilities located on campus. A list of these facilities with known locations of asbestos containing materials will be distributed to the campus community (see inserted list). Clinical, epidemiological, and laboratory studies have shown that exposure to airborne asbestos fibers may be detrimental to your health.

Therefore, in order to minimize employee exposure, the following University guidelines shall be strictly adhered to. The only exception is if the item(s) involved has been positively identified, by a certified/approved laboratory, as being non-ACM.

The guidelines are:

1. Do not disturb any pipe or tank covering through any activity which may cause damage to the protective outer covering.
2. Do not scrape, drill, or hammer items into ceiling tile, sheetrock, floor tile, or transite lined laboratory bench top, cabinet, or fume hood.
3. Do not insert hanging plant holders into ceiling tile.
4. Do not attach items to beams or columns that are covered with fireproofing material.
5. Do not remove or go above any ceiling tile unless clearance has been provided through the Department of Environmental Health & Safety (EHS).
6. Do not sand or abrasively abuse any floor tiles, transite lined laboratory bench top, cabinet, or fume hood.
7. Do not sand, chip, or disturb any ceramic/plaster of Paris items, especially those constructed prior to 1980.
8. Do not sand, cut, chisel, or otherwise disturb any pipe/tank gaskets.
9. Only authorized University personnel shall work with ACM. Proper personal protective equipment shall be utilized at all times while working with ACM.

By adhering to these simple guidelines, the chance of exposure to airborne asbestos fibers can be greatly minimized.

Remember, if you are not absolutely positive the item is non-ACM, then do not disturb it. (Asbestos is a hazard when it is friable or disturbed so that fibers become airborne and are inhaled.) If in doubt, contact the Department of Environmental Health & Safety x4-2949 so arrangements can be made for sampling and laboratory analysis.

BIOLOGICAL SAFETY PROGRAM

In order to provide a safe working environment and compliance with all applicable federal, state and local regulations concerning the use of biological agents, biological toxins, and recombinant deoxyribonucleic acid (rDNA), Towson University has established a Biological Safety Program. The Biological Safety Program is presently comprised of the Institutional Biosafety Committee and the Bloodborne Pathogens Program.

INSTITUTIONAL BIOSAFETY COMMITTEE (IBC)

The National Institutes of Health (NIH) has established guidelines to specify practices for constructing and handling recombinant deoxyribonucleic acid (rDNA) molecules and the organisms and viruses containing rDNA molecules. Recombinant DNA molecules include molecules that are constructed outside of living cells by joining natural or synthetic DNA segments to DNA molecules that can replicate in a living cell and molecules that result from the replication of the recombined molecules.

All academic teaching syllabus and/or research protocols involving rDNA must follow the requirement of the National Institutes of Health as presented in the latest edition of the *NIH Guidelines for Research Involving Recombinant DNA Molecules* and all supplements published thereafter in the Federal Register. In order to ensure that the research is conducted in full conformity with the provisions of the NIH Guidelines, Towson University has established an Institutional Biosafety Committee (IBC). The IBC is responsible for reviewing, approving and overseeing all rDNA research that will be performed or sponsored by University faculty, staff and/or students on or off campus. The IBC is comprised of a minimum of five members. At least three of whom are University faculty/staff with experience and expertise in rDNA technology and the capability to assess the safety of rDNA research and to identify any potential risk to public health or the environment. Two members, not affiliated with Towson University, represent the interests of the outside community.

To assist faculty, staff and students, the IBC has compiled a handbook for investigators using rDNA in research or student laboratories. Anyone who is using or contemplating the use of rDNA should contact EHS at x4-2949 or the IBC Chairperson to obtain a copy of this handbook. IBC approval is required prior to performing rDNA research. Research funding may be delayed if advanced IBC approval has not been obtained.

BLOODBORNE PATHOGENS PROGRAM (BBP)

Maryland Occupational Safety and Health (MOSH) adopted the Occupational Safety and Health Administration's (OSHA) regulatory standard dealing with occupational exposure to bloodborne pathogens (29 CFR 1910.1030) on May 31, 1992. The purpose of the standard is to eliminate or to minimize an employee's risk of an occupational exposure to blood or other potentially infectious materials as defined by OSHA. As the greatest risk of exposure is by needlestick, the Needlestick Safety and Prevention Act was incorporated into OSHA's standard effective April 18, 2001. This Act requires employers to use needleless systems and sharps with

engineered sharps protection, maintain a sharps injury log and involve workers in the needle selection process.

Towson University has established the Bloodborne Pathogens (BBP) Program to comply with this standard. The BBP Program is dedicated to reducing the possibility of occupational exposure to pathogens that are found in human blood and can cause disease in humans. Examples of the involved pathogens include, but are not limited to, Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV). The BBP program is jointly administered through EHS and the University Health Center. An Exposure Control Plan has been compiled to provide the specific regulatory compliance information. This Plan is available for review to all employees, employee representatives and regulatory agencies.

Initial and annual refresher training is provided by EHS or an approved departmental instructor. Employees requiring this training provide health care and/or emergency medical assistance on campus. Building maintenance personnel are also included. The training provides an overview of the applicable regulations, general information regarding bloodborne pathogens, modes of transmission, recognition of tasks with the potential for occupational exposure, universal precautions, engineering and work practice controls, personal protective equipment, procedures for reporting an exposure incident, availability of post-exposure medical evaluation and counseling, availability of vaccines, spill response and the disposal of special medical wastes (SMW).

COMPRESSED GAS CYLINDERS

Compressed gas cylinders are typically regulated as hazardous waste due to the contents of the cylinder. However, it has been our experience that no matter how innocuous the cylinder contents (e.g., compressed air) or even if the cylinder is empty, most domestic waste disposal companies/landfills will not accept compressed gas cylinders for disposal unless the cylinders are clearly empty of potentially hazardous contents. Typically this means that either the empty cylinder must be open to ambient atmospheric pressure by either puncturing the cylinder or removing the regulator assembly.

All compressed gas cylinders, and especially small compressed gas cylinders (i.e., lecture bottles) or unlabeled gas cylinders, are extremely expensive to dispose of properly. In order to reduce skyrocketing compressed gas cylinder disposal costs, the University has adopted the following policy regarding compressed gases:

All compressed gases purchased for use on the TU campus will be purchased in the smallest sized gas cylinders necessary. All compressed gases will be purchased in cylinders that remain the property of the vendor and will be returned to the vendor when empty or no longer required. Compressed gases will not be procured in non-returnable cylinders. Any departments purchasing compressed gases in non-returnable compressed gas cylinders are responsible for their disposal and will be charged by Environmental Health & Safety for their disposal as regulated hazardous wastes.

All non-returnable waste compressed gas cylinders will be disposed of via Environmental Health & Safety. To request the disposal of a waste compressed gas cylinder contact EHS at x42949 or at safety@towson.edu.

CONFINED SPACE

The purpose of Towson University's Confined Space Program is to establish minimum requirements and standards for safely entering confined spaces (e.g., boilers, manholes, etc.) on campus. The confined space entry procedures shall be used whenever a worker (TU employee or contractor) enters any space identified as being a confined space.

Contractors

Whenever non-university employees are working on campus engaging in activities covered by the scope and application of this procedure they must directly coordinate with the Department of Facilities Management and Environmental Health and Safety. The Department of Facilities Management will ensure that all contractors comply with this policy unless their policy meets or exceeds the requirements presented in this document and is in full compliance with current OSHA/MOSH regulations. A copy of the contractor's Confined Space Entry Policy must be provided to the Department of Environmental Health & Safety (EHS) for review at least 48 hours prior to work commencement; otherwise the contractor will comply with the University's Confined Space Program.

Training

Only employees trained in confined space entry procedures are permitted to enter a confined space at Towson University.

DRIVER IMPROVEMENT TRAINING PROGRAM

Approximately one-third of the accident/insurance costs incurred by the State of Maryland are a result of motor vehicle accidents involving State employees. Consequently, the Department of Budget and Fiscal Planning, per the recommendation of the Governor's State Fleet Safety Committee, revised the State Vehicle Fleet Policies and Procedures to require Driver Improvement Program (DIP) training to State drivers. The purpose of the DIP is to reduce State vehicle accidents by providing State drivers with advanced driver skill enhancement, education and awareness.

In 1993, Towson University, through the Department of Environmental Health and Safety, instituted a University policy that met with the Governor's State Fleet Safety Committee's guidelines. In order to promote driver safety and reduce accidents, all drivers of State vehicles must contact Fleet Services to complete on-line Defensive Driver Training as part of Driver Clearance. Drivers of University vans are also required to attend Van Driver Training offered through Fleet Services.

More than 90 percent of fatal traffic crashes are the result of driver error. To raise driver awareness and to adhere to safe driving practices, Governor Martin O'Malley issued an Executive Order effective October 1, 2009 prohibiting hand-held cell phone use while driving a State vehicle, except in cases of emergencies. If a mobile communications device must be used by an employee while driving a State vehicle, a hands-free device must be used. Drivers are encouraged to keep mobile communications device use to a minimum and, whenever possible, not make or receive calls while driving. This order does not apply to law enforcement officers or operators of authorized emergency vehicles.

To further promote and manage vehicle safety, Environmental Health and Safety personnel serve on the Accident Review Board which reviews vehicle accidents, determines accident preventability and makes recommendations for additional driver corrective action where required.

FIRE AND LIFE SAFETY PROGRAM

The Department of Environmental Health & Safety (EHS) is responsible for complying with recognized fire safety standards. Specific responsibilities include National Fire Protection Association (NFPA) Life Safety Inspections, campus fire drills and permitting.

FIRE DRILLS

EHS is responsible for performing fire evacuation drills in all campus buildings. The purpose of the drills are to familiarize campus personnel with safe evacuation routes in the event of an emergency and to test the fire

system to ensure that all components operate properly. The drills occur in all academic, administrative and residential buildings on a semiannual basis. Certain departments require drills at more frequent intervals. To minimize class disruption, the drills are scheduled during the first month of the Fall and Spring semesters at the end of most scheduled class periods. If a fire alarm system is activated for any reason, drill or actual fire, all occupants in the building are required to evacuate the building. Occupants will be notified when it is safe to re-enter a building.

HOT WORKS PERMITS

When a contractor or campus employee at any location on campus is performing work involving the use of an open flame, a Hot Works Permit is required. This permit outlines the precautions that must be taken to ensure a safe working environment when using open flames. Prior to the start of work, the permit must be obtained from EHS and completed by the Project Manager, Job Foreman or Supervisor. The completed permit must be posted at the location where the work is being performed. Upon completion of the work, the permit must be returned to EHS for record keeping purposes.

FIRE PERMITS

For campus events that involve an open fire or flame-producing device (e.g., cookouts, bonfires or fireworks), prior approval from EHS or the Authority Having Jurisdiction is required. For cookouts, contact EHS to obtain a Fire Permit. To receive this permit, there must be at least two responsible people supervising the event. Additional requirements will be discussed when the permit is issued. Bonfires are prohibited by state/county ordinances until further notice. The Office of the State Fire Marshal provides the permit for a public fireworks display. This includes indoor (Theatrical) or outdoor events. The group sponsoring the event must use a fireworks shooter licensed in the State of Maryland and must ensure that the permit is obtained prior to the event. As a condition of the contract, the shooter can be assigned the responsibility for obtaining the permit, but, for all circumstances, EHS must receive a copy of the permit prior to the event. To avoid delays in the permitting process, contact EHS as soon as it is determined when the event will occur. External permits may require at least 30 days in advance for processing.

For general information regarding fire safety on campus, "Fire On Campus" brochures are available through EHS.

BASIC FIRE SAFETY PROCEDURES

The University community, like any other community, must be constantly aware of the possibility of fire and fire related problems. Because of the proximity of unrelated programs, an incident of fire on the campus could easily threaten the lives of many people. Buildings on the campus are frequently used simultaneously for classrooms and research activities. The possibility of fire and injury in such situations is too grave to leave to chance.

In other buildings on campus, where no research activities exist, quite frequently fire hazards are produced from the use of flammable or combustible liquids, electrical appliances, and maintenance work done to keep the University in operation. To keep the campus safe, fire hazards must be addressed.

The Department of Environmental Health and Safety is charged with the responsibility of overseeing general fire safety for the entire campus. Fire prevention, however, is an area in which every member of the campus community must assume an active role.

Department Heads are encouraged to promote safety in programs within their departments as well as the University in general. Because it is important that you know and understand rules regarding fire safety, you are encouraged to review the fire safety procedures outlined below. Additionally, training in fire safety is available for groups on a regular basis through EHS. This training can be arranged to meet your needs at a time convenient to you.

OFFICE FIRE PREVENTION

1. Be alert around electrical equipment. If it is not working properly or is giving off an unusual odor, disconnect and have it serviced.
2. Inspect electrical cords regularly and replace them if they are cracked, frayed or have a broken connection. See the information on “Extension Cords”, “Power Strips” and “Electrical Abuse” at the end of this section.
3. Keep all heat producing devices away from anything that might burn such as curtains, clothing, boxes, etc. Leave plenty of space around the device to allow heat to dissipate. Allocate sufficient space around copying machines, computers, coffeepots, microwaves and other equipment that might give off heat.
4. Make sure all appliances in the work area are turned off at the end of the day. It is best to assign one person to check this each day.
5. Do your part to keep storage areas, stairwells and other out of the way areas free of waste paper, empty cartons, trash and other combustible materials.
6. Know the location of, and routes to, at least two emergency exits from your work area. Never use an elevator to evacuate the building during an emergency. Know the location of fire alarms.
7. Arson is the single largest cause of fires in office buildings. Therefore, proper security measures to keep unauthorized people out of the building will help prevent theft and fire.
8. Ensure all aisles have at least 44” of clear space to allow safe egress in fire emergencies.

IF THERE IS A FIRE

Sound the Alarm

If you discover or suspect a fire, sound the building fire alarm. If there is no alarm in the building, warn the other occupants by knocking on doors and shouting as you leave.

Leave the Building

Try to rescue others only if you can do so safely. Move at least 300 feet away from the building and out of the way of the fire department. Do not go back into the building until the fire department or local authority advises it is safe to do so. **Never use an elevator to evacuate a building during an emergency.**

Report the Fire

From a safe location outside the building, **dial 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 as much information as possible to the dispatcher such as the building and room number where the fire is located and, if possible, what is burning.

TO SURVIVE A BUILDING FIRE

Crawl if There is Smoke

If you get caught in smoke, get down on the floor and crawl. Hot, smoke filled air rises and cleaner, cooler air will be near the floor.

Feel the Door Before Opening

Before opening any doors, feel the metal doorknob. If it is hot, do not open the door. If it is cool, brace yourself against the door, open it slightly, and if heat or smoke are present, close the door and stay in the room.

Go to the Nearest Exit or Stairway

If the nearest exit is blocked by fire, heat, or smoke, go to another exit. Always use an exit stairway and not an elevator. Elevator shafts may fill with smoke or the power may fail, leaving you trapped. Stairway fire doors will keep out fire and smoke - if they are closed - and will protect you until you get outside.

Close as many doors as possible as you leave. This helps to confine the fire.

FIRE EXTINGUISHERS

It is Towson University's policy that all employees immediately evacuate the building during a fire emergency. Employees are not required to fight fires. Leave all fire fighting activities to the Baltimore County Fire Department. If you voluntarily choose to use a fire extinguisher, only use it if you have been trained in its use and if the fire is very small. If the extinguisher does not put out the fire, leave immediately.

NEVER USE A FIRE EXTINGUISHER TO FIGHT A FIRE IF:

- The fire alarm has not been pulled and the building has not been or is currently not being evacuated.
- 911 has not been notified that there is a fire.
- The fire has already spread beyond the immediate area where it started or is already a large fire (bigger than a trash can).
- The fire could block your escape route.
- You are unsure of how to properly use a fire extinguisher.
- You are not sure that the extinguisher you have is the proper one to use on this fire or it is not large enough to fight the fire.

Make sure 911 is dialed for all fires - even if you think the fire is out.

IF YOU GET TRAPPED

Keep the Doors Closed

Seal cracks and vents if smoke comes in. If you are trapped in a room and there is no smoke outside, open the windows - from the top to let the heat and smoke out and from the bottom to let in fresh air.

Signal for Help

Hang an object in the window (bed sheet, jacket, shirt) to attract the fire department's attention. If there is a phone in the room, dial 911 and report that you are trapped. Be sure to give your room number and location. **SOMETIMES IT IS SAFER TO STAY IN PLACE!** If all exits from a floor are blocked, go back to your room, close the door, seal cracks, open the windows if safe, wave something in the window, and shout or phone for help. **DON'T JUMP! THE FIRE DEPARTMENT WILL RESCUE YOU.**

IF YOU ARE ON FIRE

Drop and Roll

If your clothes catch on fire, immediately STOP, DROP and ROLL.
smothers the fire.

Rolling

Cool Burns

Use cool tap water on burns immediately. Do not use ointments. If skin is blistered, dead white, brown or charred, call for an ambulance.

TO PREVENT FIRES

No Smoking

Smoking is prohibited in all University Buildings (including dormitories).

Cook in Approved Areas or Kitchens and Use U.L. Listed Appliances

Stay nearby while appliances are on. Clean up grease and appliances as soon as possible.

Extension Cords

Extension cords are only permitted for temporary use (i.e. less than 8 hours). Use only U.L. listed extension cords and inspect them regularly for defects. Check the amperage rating and make sure it is not being exceeded. The diameter of the extension cord must be at least as large as the cord of the device being plugged into it. Never plug one extension cord into another and never plug more than one extension cord into one electrical outlet.

Power Strips

Do NOT overload power strips. This can result in overloaded circuits and fire. Multiple-outlet power strips must include a fuse protected by an internal circuit-breaker switch, which will trip open and stop electrical flow when overloading occurs.

HELP ELIMINATE CAMPUS FIRE HAZARDS

Electrical Abuse

Use only U.L. listed appliances. Do not overload outlets. Replace damaged wires.

No wires may be placed in an area where they can be stepped upon. Wires should never be taped to the floor/carpet. This includes wires from power cords, speaker wires, cable TV coaxial, phone wires, etc. If wires are in a foot traffic area, they must be in an UL-Approved cord cover. Ensure that wires are not located where they can be worn or damaged. Take caution when running wires along the walls, around doorframes and

behind furniture. Make sure that the wires are not damaged and that any furniture does not move to damage the wiring.

Use of electrical "octopuses" to obtain more outlets can result in overloaded circuits and fire. Match your appliance power requirements to the circuit power. Most electrical circuits only supply 15 or 20 amps per room for all the outlets.

Appliances

Coffee pots, irons, curling irons, etc. should never be left unattended. They should be unplugged after use and not stored until they are cool enough to touch. Also, appliances may overload circuits - match the size of the extension cord to the appliance power cord to prevent cord overheating.

Space Heaters

The use of portable space heaters in University buildings is prohibited. Special approval may be obtained from the Department of Facilities Management in coordination with the Department of Environmental Health & Safety. Only U.L. listed, enclosed oil filled heaters will be granted special approval. Contact EHS for guidance on the proper use of portable space heaters. Kerosene or compressed gas portable space heaters are strictly prohibited - NO EXCEPTIONS!

Open Flame/Fireworks

Bunsen burners, bonfires, etc. should never be left unattended. Extinguish all open flames, even if left for a very short time. Candles, bonfires and other open flame devices are prohibited from use in University buildings and on University grounds without prior approval from EHS. The possession, storage or use of any fireworks or other pyrotechnical devices in Residence Halls is strictly forbidden. The use of any type of fireworks or other pyrotechnical devices for special events requires a permit that must be requested through EHS at least 30 days in advance.

Hazardous Storage

Dispose of all combustible waste as soon as possible. Surplus materials, files or supplies should be stored in a safe place, not in corridors or under stairways. Materials should never be stored within three feet of any electrical or telephone fuse/junction panel.

Flammable Liquids & Hazardous Materials

Gasoline, ethers, paints, glues, corrosives and other hazardous materials may not be stored in campus residential buildings. Storage of motorcycles, scooters and other gasoline-powered equipment is prohibited in all campus residential, academic and administrative buildings. In all other areas such as administrative offices, labs, shops or classrooms, the storage of flammable liquids and hazardous materials is limited to specific quantities and containers. Contact EHS for guidance at x4-2949.

Obstacles

Storage of bicycles, chairs, desks, and other items is prohibited in all corridors and exit ways. Blocked exits have caused "chain reaction" pile-ups of fallen people during emergencies. Bicycles will only be locked to approved bike racks. Locking a bicycle to a handrail or anything that obstructs a building entrance or exit, either inside or outside, is in violation of the Maryland Fire Prevention Code and will subject the owner to criminal fines and/or prosecution.

Fire Lanes

The University in conjunction with the Baltimore County Fire Department has designated "Fire Lanes" on selected roads and parking areas adjacent to campus buildings. These areas have been clearly posted as no parking areas to allow emergency vehicles quick access to buildings in the event of an emergency. Parking in a posted "Fire Lane" delays emergency response vehicles and is a violation of the State Motor Vehicle Code. TU Police strictly enforce no parking in "Fire Lanes".

Protect Yourself

Participate in Fire Drills

Fire drills are conducted in all campus academic, Residence Halls, and administrative buildings twice yearly during the academic year to familiarize you with the sound of building fire alarms, emergency exits which you may not normally use, and procedures for reporting fires. LEARN WHERE OTHER EXITS ARE NOW! Familiarize yourself with the location of the fire alarm pull stations.

If You Have a Disability

If you are disabled (even temporarily) to an extent that impairs your mobility, it is your responsibility to inform your supervisor or your resident director. You are the best judge of your physical limitations. Co-workers or residents and staff will assist you to evacuate only if it places them in no personal danger. Visually impaired persons should have a sighted assistant to guide them to safety. Hearing impaired persons should be informed individually of the emergency. Do not assume they know what is occurring by watching others.

On campus, the staff notifies the fire department of disabled residents to help them find you. Look for "areas of refuge," like stair enclosures or the other side of corridor fire doors. Most elevators are designed to stop operating when the fire alarm is sounding and are not safe during fires. **SOMETIMES IT MAY BE SAFER TO STAY IN YOUR ROOM.** [Follow the advice for being trapped.]

Alcohol or Drug Use

You are especially vulnerable to smoke asphyxiation if you are under the influence of alcohol or drugs. Even young, healthy people may not be able to escape a fire if they are intoxicated. They may not be able to hear the smoke detector or fire alarm or be able to find an exit. Let the fire department know if you think someone has not evacuated the building.

Report Damaged Fire Equipment

- Fire Doors -** Should close completely and automatically.
- Exit Signs -** Two exits should be visible from all public areas.
- Fire Alarms -** Horns, bells, and pull stations should be accessible and not vandalized.
- Smoke Detectors -** Keep them clear so they can detect smoke when you are asleep, and wake you in time to get out.
- Sprinklers –** Keep 18" clearance around heads. Report bent or damaged heads.
- Fire Extinguishers -** Report missing, empty or vandalized extinguishers.

Keep Fire Doors Closed

Never prop or block fire doors open for ventilation or for ease of passage. Fire doors are designed to restrict the spread of fire and smoke and should be closed at all times.

Report All Fires

Report all fires by dialing 911 even if you think they are out. Fires that appear to be “out” may be smoldering and re-ignite at a later time and cause additional damage.

FORKLIFT TRUCK SAFETY

A powered industrial truck is defined as a mobile, power-driven vehicle used to carry, push, pull, lift, stack or tier material. Forklifts are regulated under the OSHA Powered Industrial Truck Standard, 29 CFR 1910.178. It requires all operators of industrial powered lift trucks (such as fork lifts, order pickers, pallet jacks, etc.) to be trained in safe handling, design features, inspection and other operational aspects of lift truck work.

Initial training and evaluation of the lift truck operators must be completed before they are assigned to operate a powered industrial truck at Towson University. If an employee has had forklift truck training previously, their Department must provide the Department of Environmental Health and Safety (EHS) with documentation that the employee has been trained and evaluated, including the date, type of lift truck and instructor.

EHS provides initial and refresher lift truck training to departments who utilize lift trucks on campus. Training shall consist of a combination of formal instruction (e.g., lecture, discussion, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. Training topics include:

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;
2. Differences between the truck and the automobile;
3. Truck controls and instrumentation, engine or motor operation, steering and maneuvering, fork and attachment adaptation;
4. Visibility (including restrictions due to loading);
5. Vehicle capacity and stability;
6. Inspection and maintenance and refueling and/or charging and recharging of batteries;
7. Any other operating instructions, warnings or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate;
8. Surface conditions, narrow aisles, other restricted places and pedestrian traffic where the vehicle will be operated;
9. Composition of loads to be carried and load stability including load manipulation, stacking, and unstacking;
10. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust and other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

Only trained and authorized operators shall be permitted to operate a powered industrial truck at Towson University.

HAZARD COMMUNICATION PROGRAM

"Employee Right To Know"

In 1970, the United States Congress passed legislation creating the Occupational Safety and Health Administration (OSHA) to help preserve and protect the health and well-being 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.

EMPLOYER RESPONSIBILITIES

Towson University, as an employer, has the following responsibilities to all of its employees:

1. 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.
2. To ensure that the University has Material Safety Data Sheets (MSDS) 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 end result of this requirement has been the development of the Material Safety Data Sheet.
3. To develop and implement a written hazard communication program for the workplace which outlines the University's program for meeting the requirements outlined in both the State and Federal regulations.
4. To ensure that a label or other form of warning is legible, in English, and prominently displayed on all containers.
5. 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 Towson University including MSDS, CIL, identifiers and placards; the rights an employee may exercise under this program; and the procedure by which an employee may obtain a copy of the CIL and MSDS's.

EMPLOYEE RIGHTS

An employee and/or their designated representative(s) have the following basic rights under the HCS or Right To Know (RTK) law. These rights are as follows:

1. Access to the Chemical Information Lists and Material Safety Data Sheets.
2. One copy of the requested information or the means to make a copy, without charge, within five working days.
3. If the employer 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.

FACULTY/STAFF RESPONSIBILITIES

In order to ensure that this program is successful and in full compliance with the regulations governing it, all employees have the following responsibilities:

1. To fully read the hazard warning label, chart, chemical lists, or MSDS's located in your work area.
2. To carefully read and obey the warning labels on any containers.
3. To contact the University's Department of Environmental Health and Safety (EHS) for copies of any MSDS's not found in your work area.
4. To follow the approved handling and use procedures for each product, especially those dealing with personal protective equipment or clothing.
5. To attend all training sessions.
6. To ask your supervisor or contact EHS with any questions regarding this program or any chemical products in use in your area.
7. To provide EHS a copy of the MSDS for any products which you purchase and bring into the work area as well as an updated room chemical list.

TOWSON UNIVERSITY HAZARD COMMUNICATION PROGRAM

This program is designed to meet all of the requirements set forth in both the Federal and State regulations. This program is intended to assist you, the employee, to better understand your rights and how to go about getting more information. Questions regarding this program can be referred to the Program Coordinator at x4-2949. Any requests for MSDS's or information should be coordinated through the employee's supervisor by submitting a written request to EHS.

1. Program Coordinator: Manager of Environmental Safety
2. Alternate Program Coordinator: Director of EHS

The University's Alternate Program Coordinator is to be contacted in the absence of the Program Coordinator.

HAZARDOUS WASTE DISPOSAL PROCEDURES

The proper disposal of hazardous chemical wastes is a continuing concern across the nation. The Department of Environmental Health & Safety (EHS) manages a comprehensive hazardous waste disposal program for the campus community that is in accordance with all applicable Federal and State guidelines. Disposal procedures are briefly summarized below:

ACCUMULATION OF HAZARDOUS WASTES:

- All hazardous wastes must be under the direct control of the person(s) who generated the waste and at or near the actual point of generation.
- Hazardous waste generators are required by University Policy to attend Hazardous Waste Generator Training.
- The total maximum volume of waste that may be accumulated at any one point of generation is restricted to 55 gallons of a hazardous waste or 1 quart of an acute (PListed) hazardous waste.
- There is no limit on the time a waste may be accumulated so long as it is being properly managed in accordance with the TU Hazardous Waste Management Procedures pamphlet. However, Environmental Health & Safety ***strongly*** recommends that hazardous wastes not be accumulated for more than one (1) year.
- Contact EHS to request the disposal of hazardous wastes or to register for Hazardous Waste Generator Training.

HAZARDOUS WASTE CONTAINERS:

EACH hazardous waste container MUST:

- Be made of, or lined with, a material that is chemically compatible with the hazardous waste to be stored.
- Be leak proof and capable of being tightly closed. Open containers or containers sealed with cut glass, rubber or cork stoppers, “Parafilm” or any other non-tightly fitting caps are UNACCEPTABLE and will not be accepted for disposal.
- Be stored in secondary containment devices (i.e., leak-proof basins) to contain leaks or spills or environmental contamination. Any leaks or spills should be cleaned up immediately. Secondary containment basins must be chemically inert and of sufficient size to either contain 10% of the total volume of all wastes stored in the basin (multiple waste containers) **OR** 100% of the volume of the largest single container, whichever is greater.
- Be segregated according to chemical compatibility. Incompatible wastes should not be stored together.
- Be kept tightly closed at all times during storage, except when adding or removing waste. Funnels must not remain in containers when waste is not being added. Do not open, handle, or store (stack) containers in a way that might rupture them, cause them to leak, or otherwise fail.
- Be visually inspected at least weekly. Look for leaks, reaction by-products and for deterioration caused by corrosion or other factors.
- Be maintained in good condition. If a container leaks, put the hazardous waste in another container, or contain it in some other way that complies with EPA regulations. (If necessary, contact EHS at x4-2949 for assistance.)
- Be kept clean and free of exterior contamination.
- NOT contain incompatible wastes or materials unless precautions are taken to control potential reactions.
- NOT be stored in an area accessible to the general public or areas that may be potentially exposed to temperature extremes.
- NOT be overfilled. Leave approximately 1 ½” of headspace to allow for expansion.

LABELING OF HAZARDOUS WASTE CONTAINERS:

EACH hazardous waste container MUST:

- Be clearly and indelibly labeled as to chemical contents and with the words "HAZARDOUS WASTE" and marked with the date the waste was initially generated. (EHS has free hazardous waste labels available. To request labels, contact EHS at x4-2949 or at safety@towson.edu.) If the waste is a mixture, all waste components must be identified and the estimated concentrations provided. If the waste is corrosive, the pH must be provided. The label must NOT contain abbreviations, chemical structure diagrams or formulas or "Trade Names".
- Be completely and accurately identified as to contents as above. **Unknowns will not be accepted for disposal.**

FLAMMABLE WASTES:

- Flammable wastes must be stored in an approved flammable liquid storage cabinet if total volume ≥ 10 gallons.

EMPTY WASTE CONTAINERS:

- Empty chemical containers may be disposed of via traditional, non-regulated domestic waste disposal channels.
- Empty Acutely Hazardous Waste (P-Listed Waste) containers must be triple (3x) rinsed with a suitable solvent prior to disposal and the rinsate collected and managed as a regulated hazardous waste. Non-rinsable empty acute hazardous waste containers (i.e., paper bags) must be managed as a regulated hazardous waste.
- The labels on all empty chemical containers must either be removed or made illegible prior to disposal as non-regulated domestic waste.

For additional information, consult your department's copy of the TU *Hazardous Waste Management Procedures* or contact EHS at x4-2949 or at safety@towson.edu.

HEARING CONSERVATION PROGRAM

The Occupational Safety and Health Act of 1970 (OSHA) mandates that Towson

University provide a workplace free of excessive noise and will administer a continuing, effective hearing conservation program whenever employee noise exposures equal or exceed an 8-hour, time-weighted average sound level (TWA) of 85 decibels. The Department of Environmental Health and Safety (EHS) is responsible for overseeing and coordinating the Hearing Conservation Program.

Therefore, EHS will monitor all high noise, or potentially high noise areas, to identify those employees who are exposed to noise at or above 85 dBA TWA. Employees exposed to hazardous noise levels will be enrolled in the Hearing Conservation Program at no cost to the individual. The Hearing Conservation Program includes providing annual audiometric testing, hearing protection devices, and training in the following subjects:

1. Description of the human hearing system and how noise affects it;
2. An explanation of how noise is monitored in the workplace;
3. An illustration of how an audiometric test is performed, what the results mean, and how the results are used to monitor hearing loss;
4. A description of the various types of personal hearing protection devices available to the employee, how they work, and how to properly fit, wear, and care for them; and,
5. Various administrative and engineering methods of reducing noise levels and exposures in the workplace.

If you have a concern about excessive noise exposure in your area, please contact the Department of Environmental Health and Safety at x4-2949.

INDOOR AIR QUALITY

Towson University is dedicated to providing a reasonably safe and healthy working environment for its faculty, staff and students. This fact sheet is intended to provide the campus community with basic information concerning indoor air quality.

Three fundamental components determine the quality of air in any given location:

- Amount of oxygen
- Temperature/humidity
- Presence of airborne contaminants

Oxygen is normally present in the atmosphere at a concentration of approximately 21.5%. Fresh air is introduced into campus buildings by centralized ventilation, small local fan units, passive diffusion (natural movement of air between areas without mechanical force), or by a combination of these. Most buildings that rely entirely upon mechanical means to bring air indoors utilize systems that blend outside air with recirculated air that has previously been conditioned. This type of system introduces fresh air into the building while maintaining energy efficiency.

Temperature and humidity are two factors that immediately affect people's perceptions of their environment, as well as their performance. Recommendations concerning these matters establish a work - rest regimen based upon the temperature and workload. For example, an office worker performing light duty (filing, typing, etc.) is generally allowed to work continuously in temperatures up to 86°F. If the temperature rises to 87°F, a 75% work - 25% rest regimen is suggested for each hour. Higher temperatures generally require additional recovery (rest) time. For purposes of IAQ, for workers typically clothed, it is recommended that summer temperatures be maintained between 73°F – 79°F, and 68°F – 75°F during the winter months. Relative humidity should be maintained below 60%.

There are many potential contaminants that could affect IAQ. Worker exposure to most hazardous materials is regulated by OSHA. Permissible Exposure Limits (PEL's) have been established for hundreds of substances ranging from carbon monoxide to turpentine to common nuisance dust. Often, contaminants are generated from sources external to a particular indoor environment (e.g., paint fumes, truck exhaust, and asphalt fumes). It is the Department of Environmental Health & Safety's (EHS) position that occupant's exposure to concentrations of airborne contaminants should be as low as reasonably achievable.

Other common contaminants of indoor air are bacteria and fungi (molds, mildew and yeasts). These microorganisms are always present in the air, but excessive concentrations may cause health problems. There are no enforceable standards establishing safe limits, but many IAQ professionals have recommended that levels exceeding 1,000 colony forming units per cubic meter of air (CFU/m³) suggest needed improvement or investigation of the indoor air conditions. High humidity, recent flooding, or freestanding water are conditions that readily promote high concentrations of microorganisms in the air. These conditions often produce characteristic odors.

Exposure to significant concentrations of the bacterium *Legionella pneumophila* may cause an illness commonly known as Legionnaire's Disease. Past widely publicized nonUniversity incidents served to enlighten the campus community of the necessity for preventive action. Preventive measures have been implemented, and will remain in place, to prevent *Legionella* development in building air-handling systems on campus.

The term Sick Building Syndrome has been used to describe a class of complaints characterized by nonspecific discomfort, headache, upper respiratory irritation, cough, dry

or irritated skin, and sensitivity to odors. Sick Building Syndrome incidents have occurred more frequently in buildings that are exclusively mechanically ventilated. There are many suspected causes for this type of problem, but remedial ventilation alterations usually provide relief by supplying increased amounts of fresh air, or by exhausting more used indoor air.

Acceptable indoor air quality for Towson University buildings has been defined as air in which there are no known contaminants at harmful levels, and with which 80% or more of the occupants do not suffer systematic discomfort. EHS is committed to provide acceptable indoor air for all campus occupants. Successful investigation and remediation of IAQ problems sometimes involve sophisticated and complex techniques that require a great deal of time and expense. All reasonable efforts will be made to correct problems in an expeditious manner.

Air testing is performed by EHS when evidence is suggested of contaminant presence. If air in your workplace is tested by EHS, a report will be forwarded to you indicating the parameters or contaminants tested, results of sampling and the PEL's (or recommended limits).

INSURANCE

As an agency of the State of Maryland, Towson University is provided insurance coverage through commercial carriers and the State self-insurance program. The authority to purchase insurance and provide claims management for State agencies has been mandated to the Maryland State Treasurer's Office. The Department of Environmental Health and Safety – Insurance Administrator serves as the liaison between the Maryland State Treasurer's Office and the University. The Insurance Administrator aids in investigating accidents occurring on campus; however, the State Treasurer's Office makes the final determination in the settlement of all claims. Additional responsibilities of the Insurance Administrator includes obtaining certificates of insurance, securing premium authorizations, completing risk assessment questionnaires, and compiling annual insurance surveys.

MARYLAND TORT CLAIMS ACT

The University has self-insurance protection under the Maryland Tort Claims Act (MTCA). The MTCA protects the University and/or its employees acting within the scope of their public duties from liability imposed by law for damage to property and/or bodily or other personal injury resulting from negligent acts or omissions. Under the provisions of this act, claims may be filed against the State of Maryland with the Maryland State Treasurer's Office and submitted to:

Nancy K. Kopp, State Treasurer
Treasury Building
Louis L. Goldstein Building
80 Calvert Street
Annapolis, MD 21401-1991

All claims must be submitted in writing within one year (365 days) after the incident and must include the following data:

1. A concise statement of facts describing the nature of the claim including date, time and location of the accident.
2. A demand for specific damages.
3. Names and addresses of all involved parties and witnesses, and, if applicable, the name, address and telephone number of claimants legal counsel.
4. Signature by the claimant, his legal representative or counsel.

To assist in the investigation process and to ensure potential safety issues are addressed, a copy of all correspondence/documentation should also be forwarded to the Insurance Administrator. *Information forwarded to the Insurance Administrator /EHS does not replace the required notification of the State Treasurer's Office.*

PERSONAL OR NON-STATE OWNED PROPERTY

As a rule, personal property is not covered by the State unless the loss is considered to be caused by negligence on the part of the University. The State Treasurer's Office will investigate and determine each case on the merits of the claim. It is important to note that Towson University does not assume responsibility for personal or non-university owned property kept or stored in University facilities. Should damage or loss occur, payment for loss or replacement is the responsibility of the individual. Employees are encouraged to verify if their personal insurance covers any personal property brought on campus.

STATE OWNED PROPERTY

University-owned property and property in which the State has an insurable interest is covered for direct physical loss or damage by the State Insurance Trust Fund and commercial policies. Coverage is on a "Replacement Cost Basis" and applies to all buildings and contents, materials and supplies, and machinery and equipment. The coverage provides for losses caused by fire, explosion, windstorms, vandalism, flood, steam boiler and machinery breakdown and any other direct property losses. Property coverage exclusions apply. All losses should be reported as soon as possible (within 24 hours/next business day) to the Insurance Administrator. The Insurance Administrator will advise the State Treasurer's Office of the loss and will provide the affected department(s) with the proper procedures to follow and a listing of the required documentation to submit for reimbursement. Necessary actions should be taken to mitigate damage; however, only *emergency* procurement of services/commodities can be obtained without prior approval of the Insurance Administrator.

PERSONALLY OWNED VEHICLES

The University provides only liability coverage for all privately owned vehicles driven by authorized persons on State business. Always notify both the University's Fleet Services Department and your family automobile insurance agent of all incidents and accidents. Failure to notify both could jeopardize your legal status in related claims and lawsuits. The University does NOT provide either uninsured or underinsured protection coverage. The employee may file and receive benefits under his/her automobile insurance policy. It is required that faculty/staff/students using their own vehicle on official University business carry their own auto insurance with minimum limits of at least an amount as required by the State of Maryland.

STATE OWNED VEHICLES

For the purpose of insurance coverage, State vehicle is defined as any vehicle owned by, hired, leased, loaned to, or used on behalf of the State of Maryland. Coverage is provided by the State's self-insurance program and provides liability coverage under the Maryland Tort Claims Act; physical damage on an "Actual Cash Value" basis as determined by the State Treasurer's Office; and towing and storage. Compensation for injury to an employee is provided under Workers' Compensation. Contact the Insurance Administrator for information specific to out-of-state and foreign accidents, rented vehicles and leased vehicles.

Any damage to a State vehicle must be reported to Fleet Services within 24-hours of the incident. In some instances, the driver of a State vehicle can be held responsible for damage to the vehicle operated by them if damage results through misuse or gross negligence.

THEFT

The State of Maryland does not provide insurance coverage for theft. Adequate measures should be taken to properly secure all State property. Any instances of theft/loss should be reported to TUPD and Property Control.

TRAVEL COVERAGE

All active, full-time exempt University employees are covered under a blanket commercial policy for accidental death or dismemberment resulting while traveling on the business of the University (State). "Traveling on the business of the State" means while on assignment by or at the direction of the State for the purpose of furthering the business of the State. It does not include any period of time (1) while the employee is working at his or her regular place of employment; (2) during the course of everyday travel to and from work; or (3) during an authorized leave of absence or vacation. Written notice of claim must be given within 20 days after a loss; written proof of loss must be provided within 90 days of loss.

LABORATORY SAFETY PROGRAM

Maryland Occupational Safety and Health (MOSH) adopted the Occupational Safety and Health Administration's (OSHA) regulatory standard regarding occupational exposure to hazardous chemicals in laboratories (29 CFR 1910.1450) to ensure the safety of employees working with hazardous chemicals on a laboratory-scale. Laboratory-scale work involves substances in which the containers used for reactions, transfers and other handling of substances are designed to be easily and safely manipulated by one person. This standard closely resembles the OSHA Hazard Communication Standard with the following exceptions:

1. Use of chemicals is on a laboratory-scale
2. Multiple chemical procedures or chemicals are used
3. Procedures are not part of a production process
4. Protective laboratory practices and equipment are available and in common use to minimize the potential for employee exposure to hazardous chemicals

If your research involves laboratory-scale use of hazardous chemicals, you will be enrolled in the Laboratory Safety Program.

EHS, with the assistance of campus departments performing laboratory-scale experiments, has developed a Chemical Hygiene Plan (CHP) to comply with the requirements of the OSHA/MOSH standard. The CHP is available for review to all employees, employee representatives and regulatory agencies. As part of the CHP, an EHS representative will act as the University's Chemical Hygiene Officer.

One section of the CHP is the TU Laboratory Safety Manual. This manual provides specific employer and employee responsibilities, laboratory emergency procedures, and standard operating procedures for the safe use, storage and disposal of hazardous chemicals. Copies of this manual will be provided to all involved employees during the required chemical hygiene training.

Review of all funded research using hazardous chemicals is also required as part of this standard. Upon submission of proposals to the Office of Research Administration, EHS will receive a copy of the experimental protocol. The protocol will be reviewed to establish procedures for the safe use of the hazardous chemicals. Compliance with the requirements of the OSHA standard will be required prior to performing research. This will not delay submission of grant proposals.

LADDER SAFETY PROGRAM

Falls from portable/step ladders are a major source of serious injury. Users must be aware of possible hazards and take proper precautions to prevent falling. Below are recommended items that should be done before and after using a ladder.

1. Inspect the ladder frequently, before and after each use or when the ladder tips over.
2. Reject any defective ladder and tag it “out of service” to prevent use by another person. Have ladder repaired or discarded if beyond repair.
3. Use the ladder designed for your tasks. Consider strength, type and height. For step ladders, use a ladder that is 3 feet shorter than the highest point you have to reach.
4. Get help when handling a heavy or long ladder (10 feet or more).
5. Keep ladder away from electrical wires. Check for overhead electrical wires before setting up. Ensure that all electrical equipment used during ladder work is in good condition and properly grounded.
6. Tie off ladder at the top and secure bottom to prevent it from slipping. Clear the area around the base and top of the ladder of debris, tools and other objects. Keep step ladders close to your work; don't overreach.
7. Set up barricades and warning signs when using a ladder in a doorway or passageway. Do not place a ladder against flexible or moveable surfaces or erect on unstable surfaces.
8. Clean muddy or slippery boot/shoe soles before climbing the ladder. Avoid climbing with wet soles. Ensure that footwear is in good condition.
9. Face the ladder when ascending or descending and when working from it.
10. Keep the center of your body within the side rails.
11. Ensure that only one person is on a single-width ladder.
12. Maintain three points of contact by keeping two hands and one foot, or two feet and one hand on the ladder at all times.
13. Grasp the rungs when climbing, not the side rails. Do not carry objects in your hands while on the ladder.
14. Do not work from the top three rungs of a portable ladder. Do not climb or sit on the top two steps of step ladders.

By following these simple procedures, ladder injuries can be prevented. For additional information, please contact the Department of Environmental Health and Safety (EHS) at x42949.

LEAD PAINT

Lead is a common element found throughout the environment in many different sources. Health effects from lead exposure continue to be a concern both in the workplace and at home. Since the ban on leaded gasolines, environmental lead levels have decreased dramatically. However, lead-based paints in buildings and housing prior to 1977 continue to be a significant source of potential exposure.

All Towson University employees involved in the non-abatement disturbance of lead containing materials and lead-based paints must attend a lead awareness training class in accordance with Maryland Department of the Environment regulations. Workers involved in the abatement of lead paint hazards require more extensive EPA-approved lead abatement worker and/or lead paint maintenance and repainting supervisor or lead paint removal and demolition supervisor training. Lead paint abatement work includes any activity that eliminates or reduces lead paint hazards, including paint removal, replacement of components, encapsulation or repainting.

The Department of Environmental Health & Safety (EHS) coordinates the campus Lead-Based Paint Management Plan which ensures that lead containing paints are properly maintained and disposed of by performing sampling, monitoring, and inspections as necessary to protect employee health and safety and to comply with regulatory requirements. The plan also provides the criteria to be followed when working on lead-based painted structures on campus. Only trained and protected individuals are permitted to disturb lead-based paint. All other personnel should contact EHS prior to the disturbance of painted surfaces unless it is known with certainty, either through documentation or testing, that the surface does not contain lead.

LOCKOUT/TAGOUT PROGRAM

The Towson University Lockout/Tagout Program provides procedures to prevent accidental startup of machines or equipment, and to prevent the release of stored energy during servicing or maintenance of equipment. Lockout/Tagout must be used when employees are required to service or maintain equipment where hazardous energy exists, guards or safety devices are by-passed, the employee must put any part of his/her body into the piece of equipment or when unexpected start-up could occur. The Lockout/Tagout program is regulated under the OSHA Standard, 29 CFR 1910.147.

This program defines responsibilities and establishes procedures for the lockout/tagout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. These procedures must be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could occur.

Through the use of specific procedures that involve applying locks and/or tags, equipment is isolated from both kinetic and potential electrical, chemical, thermal, hydraulic and pneumatic and gravitational energy prior to equipment repair, adjustment or removal. While lockout is the preferred method of isolating machines or equipment from energy sources, tagout is permitted when the energy isolating devices are not lockable. Tagout may not be used when the energy isolating devices are lockable.

The Department of Environmental Health and Safety (EHS) will train employees before they are required to perform any lockout/tagout procedures. Every authorized employee will receive initial training in the significance of the lockout/tagout procedures, as well as how to use those procedures. Retraining will be held annually. Only authorized (trained) employees may lockout machines or equipment.

Affected employees are not authorized to perform any type of lockout/tagout procedure. Authorized employees will notify the affected employees whenever a lockout or tagout will occur, as well as when the equipment is being placed back in service.

OFFICE SAFETY PROGRAM

One of the elements of the Governor's State Employee Risk Management Administration Program (SERMA) is office safety. To ensure a safe workplace, the following guidelines are being provided for your information. By adhering to these guidelines, office safety hazards can be identified and expediently corrected to avoid potential injury.

1. Keep aisles, stairs and exits clear.
2. To prevent striking someone, doors opening into corridors should be labeled "Caution - Open Slowly" □
3. Keep floors clean, dry, free of broken tiles, paper clips, rubber bands, and/or other foreign materials.
4. Make sure floors and walls are free from protruding nails, splinters, holes, loose boards, loose panels, hooks and staples.
5. Make sure electrical and/or telephone cables do not cross, dangle or extend into walkways or under chairs.
6. Keep desk and file cabinet drawers closed when not attended.
7. Make sure office chairs are in good condition: free of sharp edges, broken seats, loose backs, loose arm rests or loose casters.
8. Make sure heavy hanging objects are properly secured.
9. Make sure typewriters and other office machines are secured on firm working surfaces.
10. Keep pointed objects such as razor blades, X-Acto knives, etc. boxed or properly stored.
11. Make sure storage rooms are kept neat, orderly, well-lit and material is properly stored.
12. Make sure every effort has been made to arrange office furniture and electrical appliances with safety and personnel in mind and to obtain maximum utilization of installed facilities (overhead lighting, overhead drop cords, and outlets located on posts).
13. Make sure fire extinguishers are accessible.
14. Make sure fire extinguishers are properly mounted and secured.
15. Make sure fire alarms, bells, etc. are free of foreign objects such as paper, rags or wooden blocks.
16. Do not wrap electrical cords around metal water pipes or warm appliances.
17. All electrical tools and equipment, including cords, cables and hoses shall be free of splices and shall not extend into walkways. All receptacle plates and junction boxes must be properly secured. Frayed or damaged insulation on electrical cables at receptacle ends (grounding prong missing, broken plugs) are considered defective.

PERSONAL PROTECTIVE EQUIPMENT

The OSHA Personal Protective Equipment Standard (29 CFR 1910.132 .133, .135, .136 and .138) requires Towson University to furnish and require employees to use suitable personal protective equipment (PPE), such as hard hats, safety glasses, goggles or splash shields, gloves, safety shoes, etc. where there is a “reasonable probability” that injury can be prevented by such equipment. PPE will be provided to all employees who are required to wear it at no cost to the employee. Hearing and respiratory protection are covered under other specific OSHA standards.

While the use of PPE is important, it is only a supplementary form of protection, necessary where all hazards have not been controlled through other means of engineering or administrative controls. Engineering controls will be implemented before the use of PPE.

Employees shall receive training concerning the hazards of the chemicals, processes, or instruments used in their work and the measures that they can take to protect themselves from these hazards. They will also be trained in how to properly wear and maintain their personal protective equipment. PPE will be worn in accordance with manufacturer’s instructions.

Managers and Supervisors are responsible for knowing the hazards in their areas that require PPE and assuring that safe operations are maintained within their departments to prevent injuries to the eyes, face, head, hands and feet. They must also enforce PPE use in the areas in which it is required and immediately notify the PPE Program Administrator of any new job hazards that require new or different types of PPE.

Material Safety Data Sheets (MSDS) or other references should be consulted for information on the type of protective measures required for the particular work being performed. Eye, face, head, hand and foot hazards have been assessed on campus by EHS based upon a review of employee job descriptions and job audits. The appropriate protection will be provided for all affected employees. Employees are required to use PPE wherever hazards exist.

PROPER LIFTING TECHNIQUE

The predominant reason for back injuries on campus is due to improper lifting. Therefore, in order to alleviate this problem, the following techniques/guidelines are being provided to you. Please review and utilize these recommendations each and every time you lift objects.

Some general procedures/guidelines that are recommended prior to actual lifting are:

1. Warm up - stretch/bend gently prior to lifting.
2. When possible, break larger loads into smaller ones.
3. Wear safety shoes with non-skid soles/reinforced toes.
4. Wear tight fitting gloves - avoid loose fitting clothes.
5. Load/unload at waist height.
6. Know how heavy the load is (push up on object to determine this) - get help or use special equipment to accomplish the task (hand truck, barrel dolly, etc. - remember to push, don't pull).

Once the above has been accomplished, the following techniques/guidelines are recommended for actual lifting:

LOADING/UNLOADING

1. Stand close to load.
2. Grip firmly with your hands, not just your fingers.
3. Bring load close to your body.
4. Keep arms/elbows tucked in.
5. Keep your weight centered - back straight, stomach muscles tight, feet spread.
6. Bend your knees, let your legs do the work - lift your head/shoulders first, then let your legs push your body up slowly and smoothly, push buttocks out behind you.
7. Move slowly with the load; take small steps.
8. Do not twist; if you have to change direction, move your feet first.
9. Face the spot you have chosen and lower the load slowly.
10. Place load on the edge of the surface - slide into place.
11. For special situations like removing items from a shelf:
 - a. stand on a platform (not a ladder) - lift in smaller pieces.
 - b. grip firmly - slide load down as close to yourself as possible.
12. For a two person lift:
 - a. people should be the same height.
 - b. one person should give the "lift" command.
 - c. lift/raise at the same time - keep load at same height.
 - d. move smoothly together - unload at the same time.
13. For awkward objects (chairs, desks):
 - a. grip top outside/bottom inside corners.
 - b. feet spread, back straight - use legs to lift.

RADIATION SAFETY PROGRAM

The Maryland Department of the Environment Air and Radiation Management Administration (MDE-ARMA) has established regulations for the control of ionizing radiation (COMAR 26.12.01.01-.03). These regulations establish the requirements for the safe use of radiation-producing devices and sealed and unsealed radioactive materials. A Department of Environmental Health & Safety (EHS) representative acts as the University's Radiation Safety Officer (RSO) to ensure compliance with the applicable regulatory requirements and to maintain the University's Radioactive Material License.

EHS is committed to keeping radiation exposure to workers and the general public as low as reasonably achievable (ALARA). A Radiation Safety Manual has been compiled to provide personnel working with radioactive materials standard operating procedures to ensure their safety. In addition, a Radiation Safety Guide for Ancillary Personnel has been developed to provide basic radiation safety information for ancillary campus personnel (Housekeeping, Facilities Management and University Police) who occasionally enter or work in areas posted with the radiation symbol. **Ancillary personnel are not allowed to use or handle radioactive materials.**

Prior to using radioactive materials, personnel must be cleared by EHS as either a Principle User (PI) or an Individual User (IU). PI's must complete an application package. The completed package will be submitted to MDE-ARMA for approval and for the PI to be added to the Radioactive Material License. Employees/students requesting clearance as an IU must complete general and site-specific training and, once approved, can only use radioactive materials under the direct supervision of a PI.

As part of the concept of ALARA, all users of radioactive materials will be issued dosimetry to monitor for exposure. Dosimetry appropriate for the type of work the individual will be performing will be issued by EHS on a monthly basis. Dosimetry reports will be reviewed monthly by EHS to determine any occupational exposure. If an exposure occurs, the RSO will review the individuals work practices to determine the cause of exposure and will make the necessary recommendations for changes in procedures, etc. to prevent future exposures. Additional ALARA guidelines that are followed are: 1) all regulated materials will be used/stored in secured, clearly labeled, permitted locations that are well away from the general public; 2) periodic surveys of all licensed areas where radioactive materials are used/stored will be performed; 3) radiation exposure to workers under the age of 18 and workers who have declared their pregnancy will be kept to 10% of the regulatory limit. If a worker does not formally declare their pregnancy, normal exposure limits will be observed; and 4) minors less than 16 years old are strictly prohibited from entering or working in any campus location where regulated radioactive substance are used or stored or when there is any potential to exposure to ionizing radiation.

To ensure that only licensed radioactive isotopes are purchased, that the licensed limit of radioactive isotopes are not exceeded and that a proper inventory of all radioactive materials on campus is maintained, the RSO or an approved EHS representative must place all orders for radioactive materials. In addition to this, PIs will receive a quarterly inventory report to update use, decay and disposal of radioactive materials in their possession. Radioactive waste management will be provided by EHS. This includes decay-in-storage of waste containing isotopes with a half-life less than 90 days and disposal of waste containing long-lived isotopes.

All radiation-producing devices must be registered with MDE-ARMA. Examples of these devices include x-ray diffraction units, electron microscopes and certain cathode ray tubes. If you use or plan to use any of these types of devices on campus, you must be trained in the safe use of the equipment. Manufacturer's representatives can provide the necessary training. If a device that is capable of producing radiation is either purchased by or donated to TU, EHS must be contacted prior to its use and the device must be registered with MDE-ARMA prior to operation. To avoid delays in use, registration of the device should be done as soon as possible. Annual inspections of all radiation-producing devices will be performed by the Radiation Safety Officer and a formal certification will be performed every three years by an MDE-ARMA approved inspector. All licensing fees will be funded by EHS.

SMOKING ON CAMPUS

On September 3, 1992 Governor Schaeffer signed Executive Order 01.01.1992.20 which prohibits smoking in all State buildings and in State vehicles when occupied by more than one individual.

On March 27, 1995 the State General Assembly passed House Bill 1368 entitled *Prohibition on Smoking in an Enclosed Workplace* into law (Code of Maryland Regulation [COMAR] 09.12.23). This law requires all entrances to public buildings be clearly posted "No Smoking" and prohibits the smoking or carrying of lighted tobacco products in all public buildings in the State with limited exceptions.

COMAR also provides for penalties for non-compliance. Individuals who smoke in University buildings are subject to disciplinary action in accordance with TU's Office of Human Resources Policies. In addition, the University may be fined by the Maryland Occupation Safety & Health Administration (MOSH) for each non-compliance.

Contractor Construction Trailers/Field Offices

University employees have the right to request that any University/Contractor business be conducted in a smoke free environment (i.e., outdoors or inside a University building where smoking is prohibited). The Contractor must either move the meeting to a smoke-free location or refrain from smoking during the meeting. Failure to comply with this requirement would place the Contractor in default status.

By definition, if the Contractor's "Field Office" is located inside a University Building, smoking is prohibited in that office. If a Contractor wants to smoke, he/she must leave the building.

Contractors are also prohibited from smoking inside University owned/leased buildings undergoing construction/renovation. Buildings under construction are University Property and by law, smoking is prohibited.

Special Medical Waste (SMW) Disposal

The Department of Environmental Health & Safety (EHS) is responsible for the disposal of SMW in accordance with all applicable Federal and State regulations. SMW is biomedical waste and is defined as all non-radioactive biological, pathological and infectious materials to include:

- Human or animal anatomical materials;
- Blood or blood soiled materials;
- Clinical specimens (sputum, urine, feces, blood, etc.);
- Sharps (syringes, needles, surgical instruments, etc.);
- Unused cultures and stocks of infectious agents;
- Contaminated animal bedding, and;
- Biologically contaminated lab materials

SMW contaminated with radioactive materials are regulated for disposal as radioactive wastes.

Preserved biological specimens must be removed from any preservative solutions and thoroughly drained of all free liquids prior to disposal. Typically, these preservative solutions are regulated as hazardous chemical wastes and cannot be disposed of as SMW. Waste preservative solutions should be presumed to be regulated hazardous chemical wastes and managed in accordance with TU's *Hazardous Waste Management Procedures* pamphlet.

All SMW will be disposed of in leak-proof containers labeled as Biohazard. Needles, syringes, scalpel, etc., must be disposed of in puncture-proof sharps containers. EHS has approved SMW boxes, bags and sharps disposal containers available at no charge. It is the generators responsibility to properly package all SMW in the appropriate containers.

To request SMW disposal materials or to request the disposal of SMW, contact EHS at x4-2949 or at safety@towson.edu.

VIDEO DISPLAY TERMINALS PROGRAM

The use of Video Display Terminals (VDTs) has grown dramatically over the last few decades. The estimated VDT usage in 1975 was 1 million; today use is estimated to be over 10 million. The personal computer is the most commonly used VDT on this campus.

Extensive tests conducted by the National Institute for Occupational Safety and Health (NIOSH) and the Food and Drug Administration (FDA) show that radiation from VDT terminals, in normal operation, is well below existing governmental standards. The tests were conducted at a distance of 2 inches from the screen. As a result, because the radiation levels are extremely low, there is no appreciable radiation hazard to the operator, particularly at normal viewing distances (~18 inches).

Although radiation is not a significant problem, any close work, including working on a VDT, can cause discomfort and stress over a period of time. That can effect how you do your job and your general health.

Therefore, to enhance your comfort and reduce stress, follow these guidelines:

VDT UNIT

1. Top surface of the keyboard space bar is no higher than 2-1/2 inches above the work station.
2. Elbows at a 90 degree angle resting comfortably at side.
3. Top of viewing screen is at or below eye level.
4. Screen is about 18 inches from the operator's eyes.
5. Screen is tilted back ~10 to 20 degrees.
6. No glare is on the screen.
7. Images are clean, sharp, and easy to read.
8. For text entry, the keyboard should be directly in front of the operator.
9. For data entry, the keyboard should be directly in front of the operator's keying hand.

BODY POSITION

1. Place document holder at the same height and distance from your eyes and the screen.
2. Knees at a 90 degree angle or greater.
3. Feet flat on the floor or supported by a footrest.
4. Adjust chair to accommodate elbow position.
5. Wrists flat over keyboard.
6. Head directly over shoulders; shoulders relaxed.
7. Lumbar back supported by chair back or cushion.

GLARE

1. Adjust contrast and brightness on screen.
2. Position screen away from windows and overhead light.
3. Tilt screen to reduce glare.
4. Position lighting to reduce glare.
5. Adjust window coverings to reduce glare from outside light.

EXERCISES

The following exercises are recommended prior to working with a VDT:

1. Chin tuck.
2. Neck rotation.
3. Neck side & forward bending.
4. Chest stretch.
5. Wrist flexion/extension.
6. Finger stretch.

WORK METHODS

No matter how comfortable your work station is, sitting still for long periods of time can be tiring and stressful. Therefore, in addition to the above:

1. Stretch occasionally and look away from your work.
2. If possible, get up from your terminal and do other tasks.
3. If possible, alternate different tasks throughout the work day.

Again, the above are recommended guidelines to follow to increase your comfort and reduce stress. For illustrations, etc. related to Proper Ergonomics of a PC, Computer Related Health Hazards, and Computer Related Repetitive Strain Injury, go to:

1. <https://www.osha.gov/SLTC/computerworkstation/hazards.html>

WASTEWATER/SANITARY SEWER DISCHARGE

The University's Industrial Wastewater Discharge Permit strictly prohibits the disposal of waste chemicals and corrosives via the sanitary sewer system.

NO waste chemicals (i.e., old, unused, excess, etc.) including but not limited to, organic solvents and/or corrosives (pH <6 and >10) will be disposed of on campus via the sanitary sewer system without advance written approval of EHS.

University contractors shall submit MSDS's for all chemicals to EHS for approval, prior to their use or disposal. Contractors will be held strictly accountable for the improper disposal of waste chemicals and corrosives on campus via the sanitary sewer system.

Storm Water Overview

What is storm water?

Storm water is water runoff after a rain storm from streets, construction sites, parking lots, buildings and other areas that goes directly into storm drains and eventually into local streams and rivers. This water can pick up pollutants along the way to these streams and rivers. Towson University has set up a program that seeks to protect this water from pollutants.



Why are storm water and sewer systems separate?

Storm water systems are not treated at the waste water treatment facility. This water flows directly to the streams and rivers. Waste water (sewage) is sent to the waste water treatment facility and cleaned before it is released into the rivers.

What is a Municipal Separate Storm Sewer System (MS4)?

An MS4 is a conveyance or system of conveyances that is:

- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.;
- Designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.);
- Not a combined sewer;
- Not part of a Publicly Owned Treatment Works (sewage treatment plant)

Storm Water Management Program Components

The Phase II Permit is broken down into six components, and the implementation and enforcement of the six components is collectively referred to as a municipality's SWMP. The six components are:

1. Public Education and Outreach
 2. Public Participation and Involvement
 3. Illicit Discharge Detection and Elimination
 4. Construction Site Stormwater Runoff Control
 5. Post-Construction Stormwater Management for New Development and Redevelopment
 6. Pollution Prevention and Good Housekeeping for Municipal Operations
-

What is impervious surface area?

Impervious surfaces are areas constructed of infrastructure such as pavement, concrete and buildings that do not allow water to penetrate into the ground.

Parking Lot with Pervious Concrete



What can I do to reduce pollution in storm water runoff?

There are many things that we can do to help reduce pollution:

- Disposing of waste properly
- Placing litter in proper containers
- Never dump anything into a storm drain □ Check vehicles for leaking fluids.
- Recycle used motor oil

What is an illicit discharge?

An illicit discharge is disposal of anything other than storm water into the storm water drainage system. This includes illegal connection or tie-ins to the storm sewer system.

Examples of illicit discharge to storm sewer system:

- Trash
- Sanitary wastewater (sewage)
- Septic tank waste

- Car wash, laundry or industrial wash water
- Concrete truck washout
- Improper disposal of automotive fluids and household toxics
- Soapy water used to wash parking lots, sidewalks, buildings and loading docks
- Grease trap overflows
- Sump pump with contaminated water flowing into storm drain
- Dirty water from mopping being dumped to a storm drain

To report an illicit discharge please contact the Towson University Police Department at (410) 704-4444.

NOTE: For additional information regarding Storm Water Management education/research go to <http://www.towson.edu/fcm/centers/uebl/> or contact the Department of Environmental Health and Safety at (410) 704-2949.