



DEPARTMENT OF ENVIRONMENTAL  
HEALTH & SAFETY

## Environmental Health and Safety

**Overview:** The University of Tennessee Environmental Health and Safety Department provides technical services to anticipate, recognize, evaluate, and control hazards that could potentially bring harm to our faculty, staff, students, contractors, and visitors during their study, research, service and employment. Services includes technical consultation, training, investigation, inspection and federal, state and local laws/regulations compliance audits. The department provides direct functional support of all Knoxville campus operations including the UT Space Institute, UT Institute of Agriculture, College of Veterinary Medicine and organizations under operational control including UTHSC Speech and Audiology and the Graduate School of Medicine. In addition, the EHS department provides services to the University under the UT Safety Officer's direction. The EHS Department manages six cost centers supporting the programmatic areas of compliance listed below.

**The Laboratory Safety Services (LSS) Program** ensures any work or research involving hazardous chemicals or biological agents of potential pathogenicity for humans, animals or plants, used in laboratories (research, academic, & diagnostic testing), maker spaces, machine shops and supporting facilities, is conducted in a manner that affords protections to personnel, animals and the surrounding community. LSS is responsible for conducting annual inspections of 1,000+ laboratory/supporting spaces, relating to 400+ faculty throughout 25 departments /centers across 4 separate Knoxville-area campuses. The biosafety program extends to 5 UTIA Research & Education Centers across the state. On average, EHS LSS personnel train approximately 4,000 UTK individuals annually and approximately 500 across UTIA and GSM. Other critical research administrative support activities include 173 IBC registration reviews, 114 IACUC (animal research) reviews, 20 laboratory commissioning/decommissioning and review/approval of 50 material transfer agreements.

**EHS Environmental Protection Programs (EPP)** evaluates, monitors and controls environmental releases (air, water, hazardous waste, oil). The EPP manages disposal of hazardous chemical, universal, biological, radioactive and mixed wastes and provides technical oversight of the recycling program. The EPP provides contingency and evacuation planning in coordination with university and local emergency response agencies. EHS EPP manages two EPA generator sites, one with the main campus as an EPA designated Large Quantity Generator (LQG) and JIAM as a Small Quantity Generator. EPP provides training and hazardous waste services to 1,000+ personnel inclusive of over 350 wet-laboratories. Annual waste removal is an average of 550 waste drums and a combined waste removal of over 40,000-lbs of hazardous waste and 10,000+ lbs. of non-hazardous waste. The EPP's waste minimization effort saves the university approximately \$50K in disposal costs annually. The university's status as a Large Quantity Generator results in an average of 8 regulatory agency inspections annually (EPA / TDEC).

**EHS Industrial/ Occupational Worker Program (IWS)** develops and implements programs and training that recognize, evaluate, and prevent workplace hazards. IWS workplace monitoring/risk minimization tasks include hazard assessments, inspections, training and workplace/environmental monitoring using analytical methods. Specific program areas include: exposure monitoring, hearing conservation,

personal protective equipment, respiratory protection, indoor air quality, asbestos and lead management, food sanitation, thermal stress, drinking water quality, ergonomics, Right-to-Know/Hazard Communication, forklift safety, confined space entry, heat/cold injury prevention, office safety, electrical safety, lockout/tagout, and accident investigations. EHS Industrial/ Occupational Worker Program (IWS) conducts approximately 250 onsite response and mitigation visits annually; over 35 academic and facilities maintenance shop inspections; and review of major maintenance operations and construction/renovation pre-planning across campus. Annually, EHS IWS conducts 75+ indoor air quality and mold testing assessments and restoration activities as well as approximately 500 respirator fit tests.

**EHS Fire and Life Safety Program (FLS)** performs a variety of services including inspection and servicing of fire protection and life safety systems, responding to incidents, and performance of fire incident investigations. EHS FLS performs inspections of buildings and grounds to anticipate, recognize, evaluate and ensure compliance with fire and life safety code and emergency/evacuation planning. The EHS Fire and Life Safety Program is responsible for monthly inspections, annual maintenance and 6-year hydrostatic testing of over 3,700 fire extinguishers across campus and UTIA Extension sites. The FLS Program is responsible for bi-annual fire inspections of 145 locations which includes living areas, laboratories and classroom locations across campus. Additional service support requirements include fire drills for over 100+ locations. EHS FLS is the technical support and mitigation proponent for approximately 8 to 10 annual inspections by the State Fire Marshal's Office annually.

**EHS Training, Development, Data, and Communications (TDDC)** facilitates training content development and deployment among several training modes and systems, manages the UTK CPR/AED/BFA training center, provides comprehensive EHS systems development, data & information management tools for respective staff, as well as research-associated safety/compliance committees and research faculty. It provides essential functions designed to protect the integrity of the research enterprise and granting agency compliance agreements through development of reliable and robust recordkeeping systems to meet standards. EHS TDDC provides Chemical Inventory Management for 68,000 chemical containers for 500 ownership units (labs and discrete locations) and 1000+ unique permissions. Including registration management for the Institutional Biosafety Committee (134 active registrants among UTHSC, CVM, UTIA, and UTK, for 100 PIs, 376 labs for a total of 821 active personnel). TDDC also is responsible for Laboratory Door Placard data processing for Emergency Management and Response for 980 spaces; annual biosafety training of approximately 1100 personnel; and over 8,000 course completions annually covering 1300+ participants.

**EHS Radiation Safety (RAD)** oversees the safe use of radioactive sources and x-ray devices for faculty, staff, and students engaging in teaching, research, or service activities. Other critical RAD responsibilities include regulatory permit management, safety training, occupational radiation exposure monitoring, lab protocol and safe use reviews, facility inspections, radioactive waste management and disposal, monitoring of environmental releases, and incident investigations/reporting. The unit administers the faculty led Radiation Safety Committee. EHS RAD also oversees the high-powered laser safety program and other non-ionizing radiation safety programs. Annually, EHS RAD manages, maintains, conducts and/or approves: four State of Tennessee radioactive materials licenses; 65 x-ray producing devices state registration and inspection, including three particle accelerators; 65 Principal Investigator or department level ionizing radiation source permits; training covering 15 topics for approximately 1,700 radiation and laser safety users; safe utilization of 65 Class IIIb and IV laser systems; 240 inspections of radiation use areas or devices; and 1-2 external agency regulatory inspections.