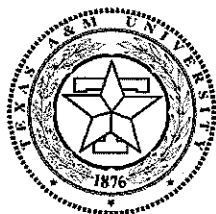


Safety Requirements and Practices



Texas Engineering Experiment Station and the Dwight Look College of Engineering Texas A&M University

Safety (including Environmental Health, Safety, and Security or EH&S) is the responsibility of all individuals employed by the Texas Engineering Experiment Station (TEES) and all faculty, staff, and students of the Dwight Look College of Engineering (COE). TEES, and the Dwight Look College of Engineering, utilize a program jointly developed and maintained by the Office of Engineering Safety and Texas A&M University's Environmental Health and Safety Department on the campus of Texas A&M University and the Riverside campus. A safe, healthful, and secure environment begins at the operational level: the student at the fume hood, the staff member in the shop, the researcher at the lab bench, the teacher in the classroom, and the accountant at a desk are all examples of where this process begins in our laboratories, shops, offices and other at-risk locations. Employees and students have the first level of responsibility; their attitudes, work habits, and understanding of preventive safety principles are critical to a safe, healthful, and secure academic and research environment. The faculty and immediate supervisors of the students and staff have the next level of responsibility, and must strive to instill safe traits and monitor safety practices in their laboratory, shop, and office personnel. The Administration must provide encouragement and leadership in all EH&S issues. This shared understanding and responsibility is the core of identifying hazards, reducing risk to acceptable levels, and implementing appropriate controls to facilitate a safe, healthful, and secure work environment.

"Engineers shall hold paramount the safety, health, and welfare of the public in the performance of their professional duties."

Code of Ethics, National Society of Professional Engineers

"Good research needs both the GENIUS to make new discoveries and the DISCIPLINE to do it safely."

Charles V. Shank, Director, Lawrence Berkeley National Laboratory

Handwritten signature of K.L. Peddicord in black ink.

K.L. Peddicord, Ph.D., P.E.
Director, Texas Engineering Experiment Station

Date Signed: 10/30/07

Handwritten signature of G. Kemble Bennett in black ink.

G. Kemble Bennett, Ph.D., P.E.
Dean, Dwight Look College of Engineering

Date Signed: 11/1/07

§.1.0. SOURCES OF AUTHORITY

Texas A&M Board of Regents

In accordance with A&M System Policy 24.02, *Health, Safety, and Environmental Management* <http://tamus.edu/offices/policy/24-02.pdf>, the Director of TEES has established the Engineering Safety Office and appointed a Safety Manager who has the responsibility for developing local procedures and policies, and for directing and administering the environmental health, safety and security program for TEES.

TAMUS Office of Risk Management and Safety (ORMS)

TEES endorses the role of the System ORMS in promoting environmental health and safety, and collaborates with ORMS through the established System Risk Management and Safety Council (RMSC)

TAMU Environmental Health and Safety Department (EHSD)

TEES collaborates with TAMU Environmental Health and Safety Department and adopts the EHSD Safety Manual for TEES Facilities and operations in Brazos County, TX. TEES reserves the option to implement project-specific regiments and guidance on a case-by-case basis to facilitate compliance and reduction of risks.

TEES Office of Engineering Safety

The Office of Engineering Safety is authorized to provide assistance to TEES Divisions/Departments and COE Departments in implementing the environmental health, safety and security responsibilities, to develop guidelines, procedures and policies, and direct and administer the environmental health, safety and security programs for TEES and the College of Engineering.

§.2.0. DUTIES AND RESPONSIBILITIES

The authority and responsibilities of the Director of TEES as *Chief Executive Officer (CEO)* are identified in System Regulation 24.02.01, *Administration of Health and Safety, and Environmental Management Programs*. <http://tamus.edu/offices/policy/24-02-01.pdf>. The CEO has authorized the Office of Engineering Safety, and the Engineering Safety Council to facilitate those duties and responsibilities, and delegated specific responsibilities to key roles within each Divisions and Departments to ensure a robust environmental health, safety and security (EH&S) program. The EH&S responsibilities for TEES Division/Department Heads, COE Department Heads, Research Center Directors, Divisional/Departmental Safety Officers, executives, employees, faculty, researchers, staff, and students are outlined below:

Director of TEES

1. Responsible to the System Board of Regents for developing, maintaining, funding, and documenting environmental health, safety, and security, and for overseeing their implementation and management in the operations and facilities of the Texas Engineering Experiment Station. For TEES facilities located on the Texas A&M University campus and the Riverside Campus, a joint program exists with the Environmental Health and Safety Department which consolidates and shares resources to operate an effective environmental health and safety program.
2. Carries out the duties and responsibilities of the component *CEO* as specified in System Regulation 24.02.01, *Administration of Health and Safety, and Environmental Management Programs*, at <http://tamus.edu/offices/policy/24-02-01.pdf>.
3. Delegates authority to authorized individuals within TEES to ensure compliance with the intent of System Regulation 24.02.01, <http://tamus.edu/offices/policy/24-02-01.pdf>, and facilitate provision of the safe, healthful, and secure environment for scholarship and research.

Director of TEES and Dean of the College of Engineering

1. Jointly authorize the Office of Engineering Safety to develop and implement local procedures and policies and to assist managers in directing and administering the safety (EH&S) program for TEES and the College of Engineering.

Engineering Safety Manager

1. Serves as the official point of contact between TEES, the College of Engineering, the TAMUS Office of Risk Management and Safety (ORMS), and the TAMU Environmental Health and Safety Department (EHSD).
2. Drafts and develops environmental health, safety, and security procedures, rules, guidance, training, and programs for TEES and the College of Engineering, and assists in their implementation.
3. Develops and implements EH&S training programs.
4. Monitors compliance with the safety policy and reports to the Director of TEES through the Assistant Agency Director for Risk and Compliance.
5. Conducts safety evaluations, audits, inspections, follow-ups, and reviews as appropriate to ensure that reported deficiencies are abated in a timely manner.
6. Investigates accidents and incidents; makes recommendations to the Divisions/Departments and Director of TEES and the Dean of the College of Engineering through the Assistant Agency Director for Risk and Compliance, where appropriate, for abatement and follow up.
7. Coordinates meetings and activities of the Engineering Safety Council, and its sub-committees.
8. Represents TEES on the TAMUS Risk Management and Safety Council (RMSC), as assigned.
9. Represents TEES on the Texas Campus Safety Association and the Campus Safety, Health and Environmental Management Association (CSHEMA, the Campus Safety Division of the National Safety Council), and other EH&S organizations, as assigned.

10. Determines safety inputs and intermediate safety variables to be monitored for safety program assessment.
11. Maintains the Engineering SafetyNet web site <http://engineering.tamu.edu/safety/> to provide EH&S information and guidance.

Engineering Safety Council

1. Assists the Director of TEES and the Dean of the College of Engineering, the Office of Risk and Compliance, and the Office of Engineering Safety in developing EH&S policy and administering the Engineering Safety (EH&S) Program.
2. Acts as a resource for Division/Department safety committees, faculty, researchers, staff, and students with regard to suggestions, complaints, and reports of safety deficiencies.
3. Reviews accident and injury reports as forwarded by the Division/Department safety committees, for mitigation, abatement, and/or training needs.
4. Participates in the development and implementation of EH&S training programs.
5. Holds regular meetings, as needed.
6. Annually reviews amendments to the Safety Requirements and Practices, and forwards recommendations to the Director of TEES and the Dean of the College of Engineering.
7. Advises and makes recommendations to Division/Department Heads on environmental health, safety, and security matters that may affect employees, students and visitors, or that may adversely affect the general public or the environment.
8. Conducts assessments of Division/Department operations and activities to facilitate the implementation of the Division's/Department's Integrated Safety Management (ISM) Plan and the Laboratory Self-Assessment Program.
9. Annually reviews Division/Department safety (EH&S) manuals.

TEES Division/Department Heads, COE Department Heads, and Research Center Directors

1. Responsible to the Director of TEES, and the Dean of the College of Engineering, for environmental health, safety, and security in their Division or Departments.
2. Implements the environmental health, safety, and security program in their Division/Departments.
3. Designates a Division/Department safety officer responsible for developing departmental procedures and policies, and safety program implementation.
4. Empowers the Division/Department safety officers to organize departmental safety committees, to take appropriate action to abate safety hazards and risks, to ensure documentation of safety records, to issue stop work orders, and to evacuate facilities in emergencies.
5. Ensures that a written safety manual exists for Division/Department-specific laboratory practices.
6. Budgets adequate funds for environmental health, safety, and security related expenses.
7. Ensures the correction of safety (EH&S) deficiencies in a timely manner.
8. Approves or disapproves Project Safety Analyses for the Division/Department.

9. Designates a single Faculty/PI as the responsible person for each laboratory, shop, and facility.
10. Ensures that all personnel receive appropriate safety training.

Division/Department Safety Officer (Safety Liaison)

1. Assists the Division/Department Head in the implementation of the safety program.
2. Assists the Faculty/PI with the implementation of the EH&S program.
3. Division/Department liaison to the Engineering Safety Manager.
4. Reports accidents, incidents, and injuries to Division/Department Heads and to the Engineering Safety Manager, in compliance with the Incident Notification Protocols.
5. Reports environmental health, safety, and security concerns to Division/Department Heads.
6. Represents the Division/Department on the Engineering Safety Council.
7. Provides appropriate and timely information to the Engineering Safety Manager, as requested.
8. Compiles, maintains, and reports the Division's/Department's designated workplace chemical lists/inventories.
9. Monitors to ensure that safe and prudent practices for environmental health, safety, and security are followed in the Division's/Department's facilities.
10. Provides current chemical inventories, Material Safety Data Sheets (MSDSs), and designated workplace chemical lists upon request; ensures that such are posted at the main entry door for each laboratory, shop and at-risk facility.
11. Identifies and recommends staffing and resources needed to fund environmental health, safety, and security programs and the correction of safety (EH&S) deficiencies within the Division/Department, in a timely manner.
12. Coordinates a PSA and Management of Change (MOC) evaluation for all research projects.
13. Ensures that the required Emergency Contact Information (ECI) is posted at the main entry door(s) for each laboratory, shop and at-risk facility, and that the information is current each semester.
14. Immediately reports all emergencies, accidents, incidents, hazards, and concerns to the Division/Department Head, the Engineering Safety Manager, and to TAMU Emergency Services (dial 9-911), in compliance with the Incident Notification Protocols <http://engineering.tamu.edu/safety/>.
15. Coordinates with building proctor and floor proctors to facilitate safety (EH&S) compliance.
16. Performs other duties as assigned to promote a safe healthy and secure environment within the Division/Department.
17. Monitors Division/Department status on the Portal Compliance Database, and coordinates with Division/Department Heads and the Engineering Safety Manager to ensure compliance.

Faculty Members, Principal Investigators, Researchers, Laboratory Managers and Supervisors

1. Responsible for operational safety in their laboratories and work areas.
2. Participates proactively in the EH&S process.
3. Identifies funding needs for abatement and correction of safety deficiencies.
4. Develops, posts, and enforces any special safety precautions or training particular to their laboratory facility.
5. Explains and enforces safety rules in his/her labs.
6. Immediately reports all emergencies, accidents, incidents, hazards and concerns to the Division/Department Head, Division/Department safety officer, the Engineering Safety Manager, and to TAMU Emergency Services (dial 9-911).
7. Controls hazards by eliminating the causes, modifying procedures, instituting engineering controls, using personal protective equipment, or removing personnel.
8. Inventories chemicals in their labs and work areas.
9. Initiates, supervises development of, and documents PSA for each affected project.
10. Ensures that reported deficiencies are abated in a timely manner.
11. Establishes and documents Standard Operating Procedures (SOPs) and Safe Work Practices (SWPs) for all research projects and laboratory procedures.
12. Ensures that current Emergency Contact Information (ECI) is posted at the main entry door for each laboratory, shop and at-risk facility.

Administrators, Staff, Student Workers, Students

1. Responsible for conserving environmental resources and preventing loss.
2. Obtains appropriate training for any new and/or unfamiliar equipment or chemicals.
3. Follows all established environmental health, safety, and security rules and regulations.
4. Immediately reports all emergencies, accidents, incidents, hazards and concerns to the Division/Department safety officer, and to TAMU Emergency Services (dial 9-911).
5. Reports unsafe conditions or practices to the Division/Department safety officer and the Faculty/PI in charge.
6. Knows and follows the proper hazardous waste disposal procedures for chemicals.
7. Reviews hazards associated with projects or pieces of equipment, and reports them in writing to the Division/Department safety officer and the responsible Faculty/PI in charge BEFORE beginning projects or installing new equipment. Alterations to facilities must have prior authorization from the Engineering Facilities Office, and be reviewed by the Engineering Safety Manager for potential EH&S risk.
8. Knows the location of, and how to use, all safety-related items/equipment in their area.

§.3.0. TRAINING

The Office of Engineering Safety specifies formal job-specific and project-specific training that is comprehensive, well documented and certifies completion for affected personnel on a case-by-case basis as appropriate, and makes technical content of appropriate EH&S training available on-line. EH&S training will be made available via the TAMUS TrainTraq System. TEES Office of Risk and Compliance will review and maintain documentation of employee safety training records in the TrainTraq System.

All new research and technical employees shall complete the following EH&S training within thirty (30) days of initial employment as appropriate:

- a. Laboratory Safety Training
- b. Shop Safety Training
- c. Other project-specific, site-specific and ongoing training as deemed appropriate by Division/Department head, supervisor, or principal investigator.

All new administrative and support staff shall complete through TrainTraq the following EH&S safety awareness training within thirty (30) days of initial employment:

- a. Hazard Awareness in Engineering Research