



Control of Hazardous Energy

Lockout / Tagout Program

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The University of Memphis Lockout / Tagout Program

Purpose

The purpose of this document is to inform and guide University of Memphis employees and contractors who may be required to perform maintenance or service to machines or equipment where controlling hazardous energy is necessary. Failure to comply with the procedures contained in this document can lead to serious injury or death. This Lockout / Tagout Program has been developed and implemented in accordance with 29 CFR 1910.147 and University Policy UM1293.

Scope and Application

Lockout / Tagout procedures and the requirement to de-energize machines and systems apply to a variety of energy types, including electrical, hydraulic, pneumatic, mechanical, gravitational, thermal, chemical, fluids and gases, pressured water, and steam.

This program applies to employees who conduct normal or routine servicing or maintenance where it is required to remove or bypass a guard or other safety device, or to place any part of their body into an area on a machine or piece of equipment where a danger exists during machine operation. Servicing and/or maintenance includes workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include tasks where the employee may be exposed to the *unexpected* energization or startup of the equipment or release of hazardous energy.

Only authorized employees are permitted to isolate hazardous energy in machines or systems.

Lockout of energy isolation devices must be done using individually assigned locks. Tags without locks may only be used when there is no feasible way to apply a lock to the machine or system. If tags alone are used, a specific procedure must be in place that includes taking an additional energy disabling step to de-energize the machine or system.

Responsibilities

Environmental Health and Safety Personnel (EH&S)

EH&S personnel have the following responsibilities under this program:

- Develop, periodically review, and update this program;
- Assist other affected departments in complying with this program by serving as a source of information for regulatory and safety information;
- Assist in the development of training programs related to this program; and
- Stop work when actions that are not in compliance with this program are observed.

Directors of Activities and Department Chairs

Directors of activities and department chairs are responsible for implementing this program by ensuring creation of equipment-specific written procedures, training of staff, purchase of necessary equipment, and modification of machines and systems where necessary.

Supervisors

Supervisors have the following responsibilities under this program:

- Develop written lockout /tagout procedures for all equipment as necessary;
- Perform a hazard assessment on all appropriate equipment prior to authorizing work to proceed;
- Ensure that necessary locks, tags, and other protective devices are available and properly used by staff;
- Maintain an up-to-date listing and distribution of energy control program devices;
- Ensure that authorized employees have received the required training and understand the requirements of this policy; and
- Notify affected employees of system shutdown and restart.

Authorized Employees

Authorized employees are personnel responsible for implementing any measures required for hazardous energy control. Authorized employees have the following responsibilities under this program:

- Know the hazards that may be faced during servicing or maintenance, including information on the mode, signs or symptoms, and consequences of the exposure;
- Receive specialized training to understand the types, magnitude and hazards of energy presented by the equipment they are authorized to lock out;
- Notify affected employees of system shutdown and restart; and
- Adhere to all protocols listed in the Procedures section of this program.

Affected Employees

Affected employees have a job requiring that they either work on a machine that is locked out or in an area where related servicing or maintenance is being performed. Affected employees shall not attempt to start-up or energize equipment or systems that have been locked or tagged.

Procedures

Shut-Down Energy

The following minimum procedures must be followed during the application of lockout /tagout controls. Supervisors shall customize these generic procedures by establishing specific, written energy isolation protocols applicable to the equipment or systems serviced.

1. The authorized employee or supervisor must notify employees affected by a shutdown that a loss of service will occur and provide the expected start and duration of the project and a description of all systems shutdown. Sufficient lead time should be provided to allow affected areas to prepare for shutdown.
2. The subject equipment or system shall be shutdown using normal procedures.
3. Operate the switch, valve, or other energy isolating device so that the energy source(s) (electrical, mechanical, hydraulic, other) is/are disconnected or isolated from the equipment.
4. Following shutdown, the lockout or tagout devices shall be attached to each energy isolating device by the authorized employee(s).

5. Once lockout or tagout has been completed, all potentially hazardous stored or residual energy must be relieved, disconnected, restrained, and otherwise rendered safe.
6. Prior to starting work on the subject equipment or systems, the authorized employee shall verify that isolation and de-energization has been completed successfully.

Restoring Energy

The following minimum procedures must be followed when restoring the equipment to service.

1. Once work is complete and prior to removal of the lockout or tagout devices, the work area shall be inspected to ensure that nonessential items have been removed. The work area shall also be inspected to ensure that all employees have been safely positioned or removed.
2. Following the removal of lockout and tagout devices, affected employees shall be notified that the equipment or system will be restarted.

Multiple Authorized Employees

The following minimum procedures must be followed when multiple authorized employees have applied lockout devices.

- The lockout device and tag shall only be removed by the authorized employee who applied them.
- If the authorized employee is not available to remove a lock out device, removal may be done by the authorized employee's supervisor but only after making all reasonable efforts to contact the authorized employee and after verifying that the equipment or system is safe.
- The authorized employee must be informed that their lockout device has been removed.
- When service or maintenance is performed by more than one crew, trade, or group, group lockout or tagout devices shall be used. Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, lockbox, or comparable mechanism when beginning work and shall remove the device when work is completed.

Coordination with Contractors

Contractors are expected to follow all OSHA requirements, including those covering the control of hazardous energy. Contractors must have a written hazardous energy control plan as it applies to the specific work being done for the University. The written plan must be available for review by EH&S if requested.

Training

Before initiating an energy isolation event, the authorized employee and supervisor must be trained on Lockout / Tagout. All employees shall acquire understanding, knowledge, and skills necessary for the safe performance of duties required. Training shall be provided to each authorized employee:

- Before the employee is first assigned duties;
- Before there is a change in assigned duties; and
- Whenever non-compliance with this program occurs.

Program Evaluation

Environmental Health and Safety shall conduct periodic evaluations of the workplace to ensure that the provisions in this program are being implemented. The evaluations shall include regular consultations with employees who are involved with Lockout / Tagout. Problems identified shall be noted in an inspection log and addressed by EH&S. The report shall list plans to correct deficiencies in the Lockout / Tagout program and target dates for the implementation of those corrections.

Documentation and Recordkeeping

An electronic copy of this program is available on the Environmental Health and Safety website. A paper copy and the TOSHA standard are kept in 216 Browning Hall and are available for all employees who wish to review them.

Copies of training records are maintained in 216 Browning. Records shall be updated as new employees are trained and as existing employees receive refresher training.

Definitions

Energy Isolating Device	A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolating devices.
Lockout	The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
Lockout Device	The device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.
Tagout	The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.
Tagout Device	A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.