24.01.01.W1.24AR Lockout/Tagout Hazardous Energy Procedure

Approved: August 15, 2010
Revised: October 4, 2023
Next Scheduled Review: October 4, 2028

Procedure Summary

Environmental Health and Safety at WTAMU is composed of two distinct but integrated environmental safety departments that report to the Vice President of Research and Compliance. Academic and Research
Environmental Health and Safety (AR-EHS) is responsible for research and academic related compliance, which includes laboratory and academic research and the associated compliance committees. Fire and Life Safety (FLSEHS) is responsible for fire related compliance and conducts fire and life safety inspections of campus buildings and assists with the testing of all fire detection and suppression systems.

Supplements TAMUS Regulation 24.01.01

Table of Contents

1. Purpose

This program establishes recommended minimum requirements for the lockout/tagout of energy isolating devices. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially

hazardous energy sources, and locked out before energization or start-up of the machine or equipment or release of stored energy could cause injury. When the energy isolating devices are not lockable, tagout device may be used, provided additional training and more rigorous periodic inspections are accomplished. When tagout is used and the energy isolating devices are lockable, full employee protection, as well as additional training and more rigorous periodic inspections, is necessary. For complex systems, more comprehensive procedures may need to be developed, documented, and utilized.

2. Scope

The following information is provided to assist WTAMU departments in developing procedures to meet safety requirements for controlling hazardous energy using lockout/tagout (LOTO) techniques. Affected departments of WTAMU are expected to establish a program for the control of hazardous energy. An energy control program shall consist of energy control procedures, employee training, and periodic inspections.

3. Responsibilities

- The WTAMU EHS will assist with training as appropriate and monitor program compliance.
- The department/supervisor will provide appropriate LOTO training for affected employees, provide necessary equipment for the program, and conduct periodic inspections to assure program compliance.
    - Failure to de-energize is the most common factor involving LOTO injuries. Supervisors must ensure proper de-energization techniques are in place and are followed.
- The employee will comply with the restrictions and limitations during the use of LOTO and perform the LOTO in accordance with established procedures.

4. Program Requirements

4.1 <u>Sequence of lockout:</u>

- Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
- The authorized employee shall use established procedures to identify the type and magnitude of the energy that the machine or equipment utilizes, understand the hazards of the energy, and know the methods to control the energy.
- If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop, open switch, close valve, etc.).
- De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy sources(s).

- Lockout the energy isolating device(s) with assigned individual lock(s).
- Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, air, gas, steam, or water pressure, etc.) shall be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding, etc.
- Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.
- Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment.
- The machine or equipment is now locked out.

4.2 Restoring Equipment to Service

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken.

- Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
- Check the work area to ensure that all employees have been safely positioned or removed from the area.
- Verify that the controls are in neutral.
- Remove the lockout devices and re-energize the machine or equipment.

  Note: *The removal of some forms of blocking may require re-energization of the machine before safe removal.*
- Notify affected employees that the servicing or maintenance is completed, and the machine or equipment is ready for use.

4.3 Full Employee Protection (Tagout Procedures):

- When a tagout device is used on an energy-isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.
  - An example may include a 120V oven that needs repair. The oven could be unplugged and a tag affixed to the plug notifying potential uses of the needed repair.
- In demonstrating that a level of safety is achieved in the tagout program, which is equivalent to the level of safety obtained by using a lockout program, all tagout-related provisions, together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device, shall be demonstrated to the work supervisor. Additional means to be

considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

5. Training and Communication

Training shall be provided to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of energy controls are acquired by employees. The training shall include the following:

- Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
- Each affected employee shall be instructed in the purpose and use of the energy control procedure.
- All other employees whose work operations are or may be in an area where energy control procedures may be utilized shall be instructed about the procedure and the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out.

West Texas A&M University Environmental Health and Safety will follow the Texas A&M University System Policy 33.05.02 Required Employee Training. Staff and faculty whose required training is delinquent more than 60 days will have their internet access terminated until all trainings are completed. Only Blackboard and Single Sign-on will be accessible. Internet access will be restored once training has been completed. Student workers whose required training is delinquent more than 30 days will need to be terminated by their manager through Student Employment.

6. Record Retention

No official state records may be destroyed without permission from the Texas State Library as outlined in Texas Government Code, Section 441.187 and 13 Texas Administrative Code, Title 13, Part 1, Chapter 6, Subchapter A, Rule 6.7. The Texas State Library certifies Agency retention schedules as a means of granting permission to destroy official state records.

West Texas A&M University Records Retention Schedule is certified by the Texas State Library and Archives Commission. West Texas A&M University Environmental Health and Safety will follow Texas A&M University Records Retention Schedule as stated in the Standard Operating Procedure 61.99.01.W0.01 Records Management. All official state records (paper, microform, electronic, or any other media) must be retained for the minimum period designated.

7. Definitions

***Authorized employee*:** A person who locks out or tags out machines or equipment in order to perform servicing of maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

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 circuits 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.

Lockable**:** An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which or through which a lock can be affixed, or it has a locking mechanism through which a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability.

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.

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 energyisolating device and the equipment being controlled may not be operated until the tagout device is removed.

Contact Office
WTAMU Environmental Health and Safety
(806) 651-2270