

LOCKOUT/TAGOUT FOR MACHINES & EQUIPMENT: TRAINING AND INSPECTIONS

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

Introduction

During normal operation, guards must be in place to protect employees from contacting moving or dangerous parts of machines or equipment that could lead to entanglement, amputation/laceration, and pinching, pinning, crushing, or other injury. However, it may be necessary to remove or inactivate guards during maintenance and repair operations. In these situations, a Lockout/Tagout (LO/TO) program must be observed.

Regulatory Basis

The content of this SOP and UNL's LO/TO program is based on the Occupational Safety and Health Administration (OSHA) general industry standard, 29 CFR 1910.147, *The Control of Hazardous Energy*.

Training

All "authorized" and "affected" employees must complete LO/TO training.

- An "**Affected Employee**" is an employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under LO/TO, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- An "**Authorized Employee**" is a person who locks out or tags out machines or equipment in order to perform service or maintenance.

Different levels of training are required for affected and authorized employees.

- General awareness training is required for all affected and authorized employees. This is achieved by completing the EHS training titled "Control of Hazardous Energy: Lockout/Tagout (LO/TO) for Machines and Equipment." This course is available as a web-based module.
- **Authorized** employees must complete specific procedural training for each machine/equipment they work on. The training must be conducted by a competent individual who is experienced with the machine/equipment and prescribed, written LO/TO procedures. Generally this a supervisor or his/her delegate.

The training must include:

- Thorough review of the written LO/TO procedure (See EHS SOP, ***Lockout/Tagout for Machines & Equipment: Written Procedures***).

- Hands-on demonstration of implementation of all steps of the procedure. The trainee should demonstrate his/her knowledge by performing the procedure for the trainer.
 - Review of the limitations of tags in the LO/TO procedure, if applicable.
 - Procedures to be used in the case of a shift change, if applicable.
 - Group LO/TO procedures, if applicable.
 - Working with outside contractors, if applicable. This training must be performed each time a new project with an outside contractor is started.
- **“Affected”** employees must be instructed in their role as it relates to the LO/TO procedures that are applicable to the machines/equipment they operate. Because they are not actually implementing the procedure to conduct maintenance/repair, the required level of site-specific instruction is much less. Essentially affected employees must be informed of:
 - The specific LO/TO devices that are used in their work area.
 - The method that will be used to communicate with them when a machine/equipment is undergoing LO/TO, as well as the method that will be used to inform them when the LO/TO is complete.

The status of an employee may change depending on the job assignment. Employees should be trained to one or both roles as an **“Authorized”** or **“Affected”** employee, as applicable.

Training Frequency

Employees must complete LO/TO training (EHS general training and supplemental task or machine/equipment-specific training) before being assigned to conduct any task that requires implementation or observance of LO/TO procedures and devices. Retraining must occur when there is:

- A change in job assignments;
- A change in machines/equipment;
- A change in energy control procedures or devices;
- A change in process that presents a new hazard;
- Indication that an employee has not retained the requisite skill or knowledge to properly implement LO/TO concepts and procedures;

Retraining must also occur as part of the annual review of written LO/TO procedures. The review should also include discussion with authorized and affected employees to reinforce each employee’s responsibilities relative to the procedure. (See EHS SOP, ***Lockout/Tagout for Machines & Equipment: Written Procedures***).

Training Documentation

EHS will maintain documentation of persons completing the EHS general awareness training (Control of Hazardous Energy: Lockout/Tagout (LO/TO) for Machines & Equipment). Departments should maintain documentation of specific training provided by the supervisor (or delegate). All training records should be maintained for a minimum of three years.

Program Review and Inspections

Supervisors (or their authorized delegate) must periodically (at least annually) review written procedures & observe employees performing LO/TO to verify continued efficacy and employee adherence to established procedures. Reviews must be documented, to include:

- Date of review;
- Name of the person conducting the review;
- Identification of the procedure that was reviewed
- Names of the employee(s) involved in the review (generally the name(s) of the employee(s) who were actually implementing the procedure at the time of review).
- Deficiencies in the procedure or its implementation and corrective actions taken.

Review records should be maintained for a minimum of three years.