Safe Operating Procedure

LOCKOUT/TAGOUT FOR MACHINES & EQUIPMENT:
TRAINING AND INSPECTIONS

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.

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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.