



FACILITIES MANAGEMENT – OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY  
**The Control of Hazardous Energy Sources (Lockout /Tagout) Policy**  
**06/24/15 – Last Revision**

### **1.0 Intent:**

The intent of this policy is to establish Lockout/Tagout (LOTO) procedures and guidelines for all University at Albany employees. These procedures are intended to safeguard employees from the unexpected energizing or startup of machinery and equipment, or the release of hazardous energy during service or maintenance activities.

### **2.0 Scope:**

This policy applies to all University at Albany employees who assign, authorize or perform work on equipment that has an energy source that could be activated or released during service or maintenance activities. This includes project managers working with contractors performing lockout and/or tagout procedures.

### **3.0 Policy:**

Equipment that has the potential of being energized, activated or operated, during service or maintenance activities, shall be assessed prior to the start of work to ensure that all sources of energy and potential hazards are properly identified and secured in accordance with the procedure established by this policy.

This Policy has been developed in accordance with the following standards:

- 29 CFR 1910.147 The Control of Hazardous Energy (Lockout/Tagout)
- ANSI Z-244.1-2003 Safety Requirements for the Lock out/Tagout of Energy Sources.
- NFPA 70E-2012 Standard for Electrical Safety in the Workplace.

### **4.0 Responsibilities:**

#### **4.1 Supervisory personnel shall be responsible for:**

- 4.1.1** Assuring that only trained and authorized employees perform a lockout or tagout of a hazardous energy source.

- 4.1.2 Assessing tasks that involve servicing and maintenance on machines and equipment that could produce unexpected startup or release of stored energy. Develop written standard operating procedures (S.O.P.) that document specific steps for performing LOTO of this equipment.
- 4.1.3 Maintain an inventory of equipment in their department that requires equipment specific standard operating procedures (S.O.P.).
- 4.1.4 Identify affected/authorized employees and ensure they receive LOTO training prior to performing work on equipment that requires LOTO.
- 4.1.5 Continually monitor employee performance with regard to compliance with this LOTO procedure. Correct any deviations or inadequacies observed.
- 4.1.6 Conduct annual review of their Lockout/Tagout SOP's and update as required.

#### **4.2 Office of Environmental Health & Safety**

- 4.2.1 Provide LOTO training to all University personnel that are involved in the operation, servicing and maintenance of machines and equipment in which the unexpected startup of the equipment or release of stored energy could cause injury.
- 4.2.2 Provide LOTO devices (tags, locks and/or any other hardware) for isolating, securing or blocking of machines or equipment.
- 4.2.2. Assist Department/Shop Supervisors with their assessments and review of their energy control procedures.

#### **5.0 Definitions:**

- 5.1 **Affected Employee:** An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- 5.2 **Authorized Employee:** A qualified person who locks or implements a tag out system procedure on machines or equipment.

- 5.3 Capable of Being Locked Out:** An energy isolating device which has a hasp or other means of attachment to which, or through which a lock can be affixed.
- 5.4 Energized:** Connected to an energy source or containing residual or stored energy.
- 5.5 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. A mechanical device that physically prevents the transmission or release of energy.
- 5.6 Energy Source:** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.
- 5.7 Group LOTO:** Used when a group of employees must repair or maintain equipment or machines.
- 5.8 Lockout:** The use of a padlock to lock the controls to an energy source in an "OFF" or "de-energized" position.
- 5.9 Lockout Device:** A unique device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in a safe position and prevent the energizing of a machine or equipment meeting the requirements of LOTO procedures.
- 5.10 Primary Authorized Employee:** An authorized employee who has overall responsibility for meeting the requirements of LOTO procedures.
- 5.11 Qualified Person:** A person designated by the department/shop as having the training, knowledge and experience for that job function.
- 5.12 Servicing and/or Maintenance:** Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-jamming of machines or equipment and making adjustments to tool changes, where the employee may be exposed to startup of the equipment or release of hazardous energy.

- 5.13 Tagout:** The use of an identification tag placed on the padlock identifying the person working on the equipment and warning others not to start up the equipment.
- 5.14 Tagout Device:** A prominent warning device, such as a tag and a means of attachment, which can be fastened securely 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.

## 6.0 Exceptions

**The Control of Hazardous Energy Program does not apply to:**

**6.1** Hot Tap operations that involve transmission and Distribution systems for gas, steam, water or petroleum products when these activities are performed on pressurized pipelines provided that it is demonstrated that continuity of the system is essential; shutdown of the system is impractical; and employees are provided with an alternative type of protection that is equally effective.

**6.2** Work on cord and plug-connected electrical equipment, if unplugging the equipment from the energy source controls exposure to the hazards of unexpected energization of the equipment and if the plug is under the control of the employee performing service or maintenance.

Pneumatic tools may also fall into this category provided that they can be completely isolated from their energy source.

## 7.0 Procedures

### 7.1 De-energizing

The person(s) performing a lockout/tagout shall perform these steps in this order:

1. Notify all affected employees, any outside contractor's working in the area and the Power Plant base at 442-3444 (Uptown) or 442-3465 (Downtown) that a lockout or tagout system is going to be utilized, of the equipment involved and the reason for the lockout. The authorized employee(s) shall know the type and magnitude of energy the machine/equipment utilizes and shall understand the hazards thereof.
2. If the machine or equipment is operating, shut it down by normal stopping procedure (stop button, toggle switch etc.)

3. Locate all points of energy distribution.
4. Operate the switch, valve or other energy isolating device(s) to the off or closed position so that the equipment's isolated from the energy source(s). Stored energy (such as in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure etc.) shall be dissipated or restrained by a method such as repositioning, blocking, bleeding down, etc.
5. Lockout and/or tagout the energy isolating devices with assigned personal lock(s) or tags. The Tag should include your full name and date and time it was placed on the disconnecting device.
6. After insuring that no personnel are exposed, and as a check on de-energized sources, operate the push button(s) or other normal operating controls to make certain the equipment will not operate. When working on electrical circuitry, test for de-energization with a meter.
7. Return operating controls to neutral or off position after the test.

## **8.0 Applying tags only**

- 8.1** Where locks cannot be applied or are not feasible, or where it can be demonstrated that tags will provide equivalent safety, tags only will be permitted provided the following:

The tags are of a distinctive design that clearly prohibits unauthorized energizing or removal.

The disconnecting device is next to the circuit parts and visible to all employees involved in the work.

The use of the tag is in conjunction with the removal of an isolating circuit element, blocking of the energy source and/or opening of a disconnecting device.

The work does not extend beyond the shift.

## **8.2 Group lockout or tagout**

When service and/or maintenance is performed by two or more people they shall utilize a group lockout or tagout device (hasp) which will provide the same level of protection provided by the implementation of a personal lockout or tagout device

Each authorized employee shall affix their own personal lockout or tagout device to the group lockout device prior to beginning work. They shall remove only their lockout devices when their work is completed.

In order to ensure continuity of this program primary responsibility for overall jobs associated with group lockout or tagout shall be assigned to an authorized employee by their supervisor

## **9.0 Restoring machines or equipment to normal operations**

- 9.1** After the servicing/maintenance or repair work is complete, remove all tools and reinstall any guards or safety devices.

Verify that equipment or machine point of operation controls are in the off position. Check the work area around the equipment or machine; make sure the area is clear of employees.

Close and secure all cover panels and doors. If all cannot be closed, place barricades, or rope of a safety zone.

Advise all affected employees that the system will be re-energized. Check and ensure all persons are clear of the equipment.

Remove all tags and locks. Each employee must remove their own tag and lock. If the person who placed the locks and tags is not available only his/her supervisor may remove the locks and tags after personally making all reasonable efforts to contact the employee who placed the lock and tag and determining it is safe to do so.

## **10.0 Personnel or shift changes**

Servicing and Maintenance operations sometimes extend across one or more work shifts. In these cases, the following steps must be taken to maintain continuity in the protection of those involved in the lockout/tagout procedure.

### Personnel Change:

The arriving authorized employee's lock and tag shall be applied before the departing authorized employee's lock and tag are removed.

### Shift change:

The lock and tag of at least one authorized employee on the arriving shift shall be applied before any locks and tags of the departing shift are removed. The departing crew will inform the arriving crew of the status of the work in progress.

Supervisory personnel shall closely monitor this process and if necessary, install their own lock and tag to prevent the possibility of energization of equipment.

### **11.0 Failure to remove a lockout/tagout device**

Only the employee who installs a lock or tag shall remove that lock or tag. However, in the event of an emergency, where the employee is not available, the supervisor may cut the lock/tag providing he/she verifies that:

- a. The employee who installed the lock/tag is no longer in the facility.
- b. All reasonable efforts are made to contact the employee to inform him/her that his/her lockout and/or tagout device needs to be removed.
- c. The employee is informed of such removal before he or she returns to work.

### **12.0 Outside contractors**

Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this policy, it is the responsibility of the University at Albany's project manager to review the hazards associated with the work to be performed, and to inform the contractor of the University's lockout and tagout procedures.

It is also the Project Manager's responsibility to insure all affected University employees are familiar with the contractors LOTO procedures, and that both groups are communicating with each other to insure the safety of all affected workers for the duration of the LOTO procedure.

### **13.0 Training**

**13.1** Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the types and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.

**13.2** Each affected employee shall be instructed in the purpose and use of the energy control program. All other employees whose work operations are or may be in the area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition of attempting to restart or re-energize machines or equipment which are locked out or tagged out.

