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**EHS-304, ENERGY CONTROL PROGRAM (LOCKOUT/TAGOUT)**

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## 1.0 Introduction

### 1.1 Purpose

The purpose of this program is to provide guidance in the protection of all Emory employees from the unexpected energizing, start up, or release of stored energy that may occur during the servicing or maintenance of machines and equipment as prescribed in the Occupational Safety and Health Administration (OSHA) standard [29 CFR 1910.147 The Control of Hazardous Energy](#) (lockout/tagout). While some entities and/or divisions of Emory may have additional or more stringent guidelines, the guidelines outlined in this document shall serve as the minimum requirements for all.

### 1.2 Scope

This program is inclusive of all Emory employees, including healthcare, faculty, staff, student employees, contractors, and other people who operate, use, or work in close proximity to machines or equipment on which servicing or maintenance is being performed under lockout or tagout.

### 1.3 Definitions

**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.

**Authorized Employee.** A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance of equipment that is required to be locked out or tagged out.

**Capable of being *Locked Out*.** 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 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.

**Energized.** Connected to an energy source or containing residual or stored energy.

**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.

**Energy Source.** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

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**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.** A 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.

**Servicing and 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 unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected.

**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.

#### 1.4 Responsibilities

##### ***Environmental Health and Safety Office (EHSO) and Applicable Hospital and Clinic Safety Management***

As the administrative department for the Energy Control Program, EHSO and applicable hospital and clinic safety management are responsible for:

- Development, implementation, and administration of the Energy Control Program;
- Assisting supervisors with development of specific lockout/tagout procedures;
- Reviewing, updating, and evaluating the overall effectiveness of the Energy Control Program;
- Ensuring that Lockout/Tagout training is provided to all Emory employees.

##### ***Directors, Supervisors and Managers***

Directors, supervisors, and managers have primary responsibility for the management and enforcement of the Energy Control Program in their areas. They must:

- Produce an inventory of equipment and machines that have the potential for unexpected energization, start-up, or release of stored energy;
- Develop lockout/tagout procedures, with the assistance of the EHSO and/or applicable hospital and clinic safety management, for all equipment in which the unexpected energization or start-up of the equipment, or release of stored energy, could harm employees;
- Ensure that all affected personnel are trained;
- Submit an Energy Control Procedure Form to EHSO or the applicable hospital and clinic safety management whenever a new piece of equipment or machinery is introduced into the work area;
- Ensure an annual review of lockout / tagout procedures is conducted with

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employees to verify the procedures are effective and are followed.

**Employees**

- All employees are responsible for complying with the rules set forth by this program and must complete all required Energy Control Training;
- If work must be performed on equipment that does not have a specific written procedure, employees must lock out the equipment and inform the supervisor.

**1.5 Training Requirements**

- EHSO and the applicable hospital and clinic safety management are responsible for ensuring that Energy Control training is provided to their employees who work with (or in close proximity to) machines or equipment that will be locked out or tagged out. This training is given to authorized and affected employees upon initial assignment and whenever there is a change in the employee's job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.
- It is the responsibility of the supervisor to ensure their employees complete training, inform EHSO and the applicable hospital and clinic safety management when a new employee is assigned, and when new equipment is introduced into the work area.
- Training will be conducted by EHSO and the applicable hospital and clinic safety management.
- EHSO and the applicable hospital and clinic safety management will maintain documentation of attendance (including employee's name, department, and signature) for trainings they provide their employees.
- The training will include the following:
  - The recognition of applicable hazardous energy sources;
  - The type and magnitude of the energy available in the workplace;
  - The methods and means necessary for energy isolation and control; and
  - Instruction in the purpose and use of the energy control procedure.
  - When tagout systems are used, employees also are trained in the following:
    - Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
    - Tags are only warning devices;
    - Tags do not provide the physical restraint that is provided by a lock;
    - Tags cannot be removed without authorization of the authorized person responsible for it;
    - Tags are never to be bypassed or ignored;
    - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations in the area;
    - Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- Additional retraining is conducted whenever a periodic inspection reveals or whenever management has reason to believe, that there are deviations from or

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inadequacies in the employee's knowledge or use of the energy control procedures.

- The retraining reestablishes employee proficiency and introduces new or revised control methods and procedures, as necessary.

### 1.6 Recordkeeping Requirements

- All training records are retained for two years and contain employee's name and date of training.
- Training records for trainings conducted by EHSO are retained by EHSO
- Training records for training conducted by hospital and clinic safety management are retained by the applicable hospital and clinic safety management.

### 1.7 Program Evaluation

The written Energy Control Program shall be re-evaluated periodically, at a minimum of every two years, and will be revised as necessary.

## 2.0 Prerequisites for Lockout/Tagout

- De-energize the equipment or machine and lockout or tagout prior to servicing or performing maintenance on energized equipment or machine; **NOTE:** Only the authorized employee performing the servicing or maintenance of the equipment may perform lockout or tagout;
- Utilize lockout procedures if an energy isolating device is capable of being locked out. However, if it can be demonstrated that the utilization of a tagout system will provide full employee protection, you may use the tagout system.
- Use a tagout system if an energy isolating device is not capable of being locked out;
- When a tagout device is used on an energy isolating device, which is capable of being locked out, the tagout device is attached at the same location that the lockout device would have been attached.

## 3.0 Energy Control Procedures

- Procedures must be developed, documented, and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this Program.
- The procedures clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, including - but not limited to - the following:
  - A specific statement of the intended use of the procedure;
  - Specific procedural steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy;
  - Specific procedural steps for the placement, removal, and transfer of lockout devices or tagout devices and the responsibility for them; and
  - Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.
- The procedures require the supervisor to submit an Energy Control Procedure Form to EHSO or applicable hospital and clinic safety management whenever a

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new piece of equipment or machinery is introduced into the work area. **NOTE:** If an employee must perform work on a piece of equipment that does not have a specific procedure, the employee must lock out the equipment and inform the Supervisor. The Supervisor is responsible for submitting the Energy Control Procedure form to EHSO or applicable hospital and clinic management personnel.

#### 4.0 Protective Materials and Hardware

- The employer provides locks and tags for the isolating, securing, or blocking of machines or equipment from energy sources.
- Both lockout devices and tagout devices indicate the identity of the employee applying the device(s).
- Lockout and tagout devices are standardized within the facility.
- Locks used for lockout/tagout are not used for any other purpose.
- Locks must be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
- Tagout devices warn against hazardous conditions if the machine or equipment is energized and include a legend such as the following:
  - **Do Not Start. Do Not Open. Do Not Close. Do Not Energize. Do Not Operate.**
- Tagout devices are constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
- Tagout devices, including their means of attachment, are substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means are of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

#### 5.0 Periodic Inspection

- Supervisors are responsible for conducting annual inspections of the Energy Control Procedures to ensure that the procedure and the requirements of this program are being followed.
- The annual inspections consist of the following:
  - A review of the Energy Control Procedures to determine if any deviations or inadequacies exist.
  - A review of the employee's responsibilities under the energy control procedure being inspected and the elements set forth in the Energy Control Standard (The control of hazardous energy (lockout/tagout). - 1910.147).
- The Energy Control Procedure is revised if the review of the procedure indicates that the current procedure is ineffective.
- For each review, the employees sign a Lockout/Tagout Review Sign-in Sheet which includes the following:
  - Identification of the machine or equipment on which the energy control procedure is utilized, and
  - The date of the review, the employee(s) included in the review, and the

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person performing the inspection.

- The sign-in sheet is retained by the department conducting the review and is available for inspection by EHSO or applicable hospital and clinic safety management.

## 6.0 Notification of Employees

- Affected employees are notified by the supervisor or authorized employee of the application and removal of lockout devices or tagout devices.
- Notification is given before the controls are applied and after they are removed from the machine or equipment.

## 7.0 Release from Lockout/Tagout

- Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures are followed and the following actions are taken by the authorized employee(s):
  - The work area is inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.
  - The work area is checked to ensure that all employees are safely positioned or removed.
  - Affected employees are notified that the lockout or tagout device(s) have been removed prior to the equipment being restarted. **Note: The employee who applied the lockout or tagout device to the energy isolating device is the one who removes the device.**
- When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the area supervisor and in accordance with the following procedure:
  - The area supervisor or his designee must verify that the authorized employee is not on campus.
  - The area supervisor or his designee will make every attempt to contact the authorized employee to inform him/her that the device is being removed.
  - The area supervisor or his designee will inform the authorized employee that the device has been removed prior to the employee resuming work.

## 8.0 Testing or Positioning of Machines, Equipment or Components

In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized, the following sequence of actions are followed:

- Clear the machine or equipment of tools and materials.
- Remove employees from the machine or equipment area.
- Remove the lockout or tagout devices.
- Energize and proceed with testing or positioning.
- Deenergize all systems and reapply energy control measures to continue the servicing and/or maintenance.

## 9.0 Outside Personnel

- Whenever outside contractors are used, the on-site area supervisor or designee

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and the outside employer will inform each other of their respective lockout or tagout procedures.

- The area supervisor will ensure that that the restrictions and prohibitions of the outside contractor's Energy Control Program are communicated to his/her employees.

## **10.0 Group Lockout or Tagout**

- When servicing and/or maintenance is performed by a crew, craft, department or other group, they utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.
- Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock);
- The authorized employee ascertains the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment;
- When more than one crew, craft, department, etc. is involved, the overall job-associated lockout or tagout control responsibility will be assigned to an authorized employee designated to coordinate affected work forces and ensure continuity of protection; and
- Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

## **11.0 Shift or Personnel Changes**

Specific procedures are utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including the provision for the orderly transfer of lockout or tagout device protection between off-going and on-coming employees, to minimize exposure to hazards from the unexpected energization or start-up of the machine or equipment, or the release of stored energy.