



## **Lockout/Tagout Safety Policy**

### **GENERAL**

The UNCW Environmental Health & Safety Department (EH&S) is authorized by [UNCW Policy 05.600](#) to develop and manage comprehensive environmental, health and safety programs. Additionally, they are tasked to identify and address regulatory requirements. In that spirit, this Lockout/Tagout Policy has been developed to protect employees by ensuring that machines and equipment are isolated from all potentially hazardous energy sources and are locked out/tagged out before employees perform servicing and maintenance activities. This policy is intended to meet the Occupational Safety and Health Requirements for General Industry outlined in 29 CFR 1910.147.

### **SCOPE**

This policy applies to all university employees regardless of status or type of employment. It may be used as minimum guidelines for contractors and/or vendors that are expected to maintain their own safety program.

### **APPLICATION**

This written policy outlines responsibilities, training, specific procedures and inspections with regard to the control of hazardous energy.

### **RESPONSIBILITIES**

Each department shall be responsible for the implementation of the lockout/tagout procedures. Employees shall have training in understanding the significance of implementing the procedures. Employees will use the lockout/tagout procedures when working on or near de-energized circuit parts or on equipment where there is a danger of injury because of unexpected energization of all the circuit parts or unexpected start-up of the equipment. Department supervisors shall be responsible for training record keeping and record retention.

### **TRAINING**

The EH&S Department shall provide general training, at a minimum, every three (3) years and the department shall provide department-specific training as needed so employees understand the purpose and function of the program (knowledge, skills, application, use, maintenance) and shall include the following:

General Training shall include:

1. Recognition of hazardous energy sources, types and magnitude of energy available, the methods and means for isolation and control
2. Purpose and use of the procedures

3. Other employees whose work is in or may be in an area using lockout/tagout AND
4. Instruction about procedure and prohibition concerning starting locked or tagged equipment.

Department-specific Training shall include:

1. All information included in General Training *and*
2. Location and storage of departmental Lockout/ Tagout Devices
3. Department-specific application of Lockout/ Tagout (e.g., Facilities AiM program)
4. Hands-on training of Lockout/ Tagout

Lockout is the preferred method of energy isolation, however, circumstances may be present that will not allow Lockout. When those circumstances exist, Tagout should be performed. When using tagout systems, training will include the following limitations of tags:

1. Tags are essentially warning devices and do not provide physical restraint
2. Do not remove tags without permission of the authorized person using it
3. Tags must be legible and understandable with employee photo and contact information
4. Tags and their means of attachment must withstand the environment
5. Tags may evoke a false sense of security and must be understood as part of an overall program and
6. Tags must be securely attached

### **Retraining:**

Retraining shall reestablish proficiency and introduce new or revised control methods

1. There shall be retraining with any change in job assignments, change in machines, equipment or process that presents a new hazard or a change in energy control procedures
2. Retrain when inspection reveals a need, or whenever the employer sees a need
3. Retraining shall be completed no less than every three (3) years

### **SPECIFIC REQUIREMENTS**

Implement electrical lockout/tagout procedures in coordination with appropriate procedures for safely isolating other energy systems. Some examples are *hydraulic, electrical, pneumatic, thermal, compressed gases and fluids, chemical and mechanical*. This procedure will provide for the isolation of **all** energy sources that could endanger employees. Interface with contractors or other departments.

Note: Exception: The employer need not document the required procedure for a particular machine or equipment, when all of the following elements exist: (1) The machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees; (2) the machine or equipment has a single energy source which can be readily identified and isolated; (3) the isolation and locking out of that energy source will completely de-energize and deactivate the machine or equipment; (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance; (5) a single lockout device will achieve a locked-out condition; (6) the lockout device is under the exclusive control of the authorized employee performing

the servicing or maintenance; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance.

### **Procedural Requirements**

The department shall document the lockout/tagout procedure. It shall contain the requirements to safeguard employees while they are working on or near de-energized circuits, parts or equipment. Procedures shall require preplanning to determine where and how employees will disconnect electric energy sources to safely e-energize circuits and equipment.

### **Lockout/Tagout Device Requirements**

The locks, tags and other hardware that are identified and required will be the only devices used to lockout or tagout for personnel protection. The locks and tags used for personnel protection will be:

1. Standardized according to one or more of the following: color, shape, size, type or format
2. Distinctive in appearance, easily recognizable, clearly visible
3. Designed to convey all information required for the application (name, date, employee photo & contact information and work number as applicable).
4. Designed to deter accidental or unauthorized removal
5. Designed to withstand environmental conditions for the duration of their application
6. Tags shall only be used in instances where work cannot be performed while energy sources locked out
7. Locks may consist of standard locks, blanks, mushroom caps and plug locks, etc.

The department shall provide the locks, tags, chains, wedges, key blocks, adaptor pins, self-locking fasteners or other hardware. Lockout/tagout devices are to be singularly identified; and the only devices used for controlling energy. Do not use these for other purposes. They must be:

#### Durable:

1. Capable of withstanding environmental conditions for the maximum period of use
2. Constructed and printed so exposure will not cause deterioration of the message on the tag and
3. Tags shall not deteriorate when used in a corrosive environment.

#### Substantial:

1. Must prevent removal without excessive force or unusual techniques such as bolt cutter or cutting tools
2. Must be substantial enough to prevent inadvertent or accidental removal
  - a. Attachable by hand

- b. Self-locking
- c. Non-releasing with a minimum unlocking strength of less than 50 pounds and
- d. Similar to the general design and basic characteristics of being at least equivalent to a one-piece, all environmental-tolerant nylon cable tie.

Identifiable:

1. Lockout/tagout devices must have the identity of the employee (photo and contact information) and tagout devices must warn against hazardous conditions. Messages must include, at a minimum:
  - DO NOT START
  - DO NOT OPEN
  - DO NOT CLOSE
  - DO NOT ENERGIZE **OR**
  - DO NOT OPERATE

### **Preparation for Lockout or Tagout**

The program will have equipment shutdown procedures so the electric equipment involved is safely shut down before circuits are de-energized.

Appropriate employees shall be instructed in the safety significance of the lockout/tagout procedure. Each affected new or transferred employee and other employees whose work operations are or may be in the area, shall have instruction in the purpose and use of the lockout or tagout procedure.

Inspect carefully and locate and identify all isolating devices. Be certain which switch(s), valve(s), or other energy isolating devices control the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved. All types and locations(s) of energy isolating means must be found and managed.

### **Sequence of Lockout or Tagout system Procedures** *(see Appendix B)*

1. **Notify** all affected employees that a lockout or tagout system is going to be used. The authorized employee shall know the type and magnitude of energy that the machine or equipment uses and shall understand its hazards.
2. **Stop** the machine or equipment if operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
3. **Operate** the switch, valve or other energy isolating device(s) to isolate the equipment from its energy source(s). Dissipate, deactivate or restrain stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam or water pressure, etc.) by methods such as repositioning, blocking, bleeding down, etc.
4. **Lockout** or tagout the energy isolating devices with assigned individual lock(s) or tag(s). Use the method(s) selected; e.g., locks, tags and additional safety measure, etc.
5. This ensures personnel protection and acts as a check on the disconnection of the energy sources. Operate the push button or other normal operating controls to make certain the equipment will not operate.
6. **\*\*Caution: Return** operating control(s) to “neutral” or “off” position after the test.
7. The equipment is now locked out or tagged out.

## **Restoring Machines or Equipment to Normal Production Operations**

1. After completing the service or maintenance and determining that the equipment is ready for normal production operations, check the area around the machines or equipment to ensure that everyone is clear.
2. After removing all tools from the machine and reinstalling equipment guards and determining that all employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

## **Procedure Involving More Than One Person**

In the preceding steps, if more than one individual or department (including contractors) is required to lockout or tagout equipment, each shall place their own personal lockout device or tagout device on the energy isolating device(s). When an energy isolating device cannot accept multiple locks or tags, use a multiple lockout or tagout device (hasp).

## **Procedure Involving Shift or Personnel Changes**

In the case of shift or personnel changes, a transition period will be established so that individuals may exchange their assigned energy control devices. The orderly transfer of personal LOTO devices between off-going and on-coming employees must ensure that there is no gap in coverage. Individuals assuming control of tagout or lockout/tagout of equipment shall be fully briefed in the scope and strategy of the work by those who are being relieved.

## **Procedure Involving Lock and Tag Removal Due to Employee Absence**

LOTO locks and tags shall be removed only by the LOTO - authorized employee who applied them.

*Exception:* When the LOTO-authorized employee who applied a lock and tag is not present at the University, the lock and tag may be removed by the direct supervisor, Director or Assistant Director of the Physical Plant, in coordination with the new authorized employee, provided that all of the following conditions are satisfied:

1. The direct supervisor verified that the LOTO - authorized worker who applied the lock and tag is NOT at the University.
2. All reasonable efforts shall be made to contact the LOTO-authorized employee who applied the lock and tag to:
  - Inform the LOTO - authorized employee that the lock and tag are to be removed by using form in Appendix A.
  - Determine the operational and safety status of the equipment.
3. The direct employee supervisor determines that the equipment or area is safe before the lock and tag are removed.

Furthermore, when a lock and tag applied by a LOTO - authorized employee are removed during that employee's absence from the University, the employee's supervisor shall not allow work to resume until they are able to inform the subject employee that the lock and tag were removed.

If implementation of this procedure is necessary in any instance on campus, the employee's direct supervisor must sign the procedural form (Appendix A) to indicate that the procedure was used to remove a LOTO device safely. The supervisor shall retain hard copies of over rides for at least 2 years.

## **INSPECTION**

### **Periodic Inspection**

Inspect energy control procedure at least annually. The inspection must be:

1. Performed by the Environmental Health & Safety Department (EH&S)
2. Designed to correct any deviations or inadequacies observed
3. Reviewed with employees locking out equipment as well as their responsibilities for lockout
4. Reviewed with employees tagging out equipment as well as their responsibilities
5. Inspection reports will be kept in the departmental file for 30 years
6. Identify machine, show date of inspection, list employees included and identify person performing the inspection.

APPENDIX A

**Lock and Tag Removal Due to Employee Absence**

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1. The direct supervisor verified that the LOTO - authorized worker who applied the lock and tag is NOT at the University.
2. All reasonable efforts shall be made to contact the LOTO-authorized employee who applied the lock and tag to:
  - Inform the LOTO - authorized employee that the lock and tag are to be removed by using form in Appendix A.
  - Determine the operational and safety status of the equipment.
3. The direct employee supervisor determines that the equipment or area is safe before the lock and tag are removed.

**Action Taken** (*choose 1 only*)

Talked with employee and confirmed they are not on campus. Alerted them lock was being removed and of procedure once they return to work.

**Date**

**Supervisor signature**

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Left message at employee's primary phone number. Alerted them lock was being removed and of procedure once they return to work.

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Was not able to speak with employee or leave message for employee. Lock will not be removed.

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*APPENDIX B*      **Lockout/ Tagout Machine Specific Procedure**

<b>Machine:</b>		<b>Location/ Building:</b>		
<b>Energy Sources:</b>	<b>Electric</b>	<b>Pneumatic</b>	<b>Hydraulic</b>	<b>Other (specify)</b>
<b>Required Equipment:</b>		<b>Number of Locks:</b>		<b>Number of Tags:</b>
<b>Scope</b>	This scope covers any servicing or maintenance of the above listed equipment. The equipment must be completely shut down to perform any servicing or maintenance.			
<b>Purpose</b>	To provide specific guidance to authorized personnel on how to de-energize, isolate and reenergize the equipment to prevent unexpected start-up or release of energy that may result in injury or death.			
<b>Authorization</b>	The only employees authorized to complete a Lockout are "Names to be provided". In an emergency situation or in the absence of "Names of person(s) above" contact "Name of Supervisor".			
<b>Compliance</b>	Failure to comply with established procedures may result in disciplinary action or termination.			

**Machine Shut Down Process**

<b>Step 1</b>	Notify affected employees of shut down
<b>Step 2</b>	Turn off power at control panel
<b>Step 3</b>	
<b>Step 4</b>	
<b>Step 5</b>	
<b>Step 6</b>	



<b>Step 7</b>	
<b>Step 8</b>	
<b>Notes:</b>	

**Machine Release from Lockout/ Tagout**

<b>Step 1</b>	Notify affected employees of machines to be brought back online
<b>Step 2</b>	
<b>Step 3</b>	
<b>Step 4</b>	
<b>Step 5</b>	
<b>Step 6</b>	
<b>Step 7</b>	
<b>Step 8</b>	
<b>Notes:</b>	

**Additional notes or comments:**

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