THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UT Health Science Center: GS5103 - Lock Out Tag Out Safety Policy	
Version 1	**Publication Date: 06/14/2022**

No./Title: GS5103 – LOCKOUT TAGOUT POLICY	**Resp. Office: Campus Safety and Emergency Management**	**Effective Date: 3/12/2021**
Category: General Safety	**Last Review: 6/30/17**	**Next Review: 3/1/2024**
Contact: Tim Barton, Chief Safety Officer	☎ 901.448.6114	✉ tbarton4uthsc.edu
Related Policies: UT System Safety Policy SA0100 UT System Safety Policy SA0700 **UTHSC GS5113 – ELECTRICAL SAFTEY POLICY**		
Generic Procedure for Lockout/Tagout (Appendix A); Lockout/tagout checklist – Annual Employee Audit (Appendix B) ; Equipment Lockout Work Plan (Appendix C) ; Lockout/Tagout Program Training Certification (Appendix D)		

PURPOSE, APPLICABILITY, AND SCOPE:

This procedure is intended to protect employees from injury during the servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machines or equipment, or release of stored energy, could harm employees. The procedure is intended to comply with the OSHA Standard for the Control of Hazardous Energy (lockout/tagout). This procedure is applicable to all employees, students and visitors on the UTHSC Memphis campus.

ABBREVIATIONS, ACRONYMS AND DEFINITIONS:

Affected employee*:* A person who uses equipment that is being serviced under lockout or tagout procedures, or who works in an area where equipment is being serviced.

Authorized employee: A person who locks out or tags out equipment to do service or maintenance work. An affected employee becomes an authorized employee when that employee's duties include service or maintenance work on equipment.

Capable of being locked out: An energy-isolating device that is designed with a hasp or other means of attachment to which, or through which a lock can be affixed, or if it has a locking mechanism built into it. Other energy-isolating devices will also be considered to be capable of

being locked out, if lock out can be achieved without the need to dismantle, rebuild, or replace the energy- isolating device or permanently alter its energy-control capability.

Energy-isolating device (EID): A mechanical device that physically prevents transmission or release of energy.

Hazardous energy: Any of the types of energy existing at a level or quantity that could be harmful to workers or cause injury through inadvertent release or start-up of equipment. Lockout device: A device that locks an energy-isolating device in the safe position.

Lockout: Placing a lockout device on an energy-isolating device, under an established procedure, to ensure the energy-isolating device and the equipment it controls can't be operated until the lockout device is removed. (An energy-isolating device is capable of being locked out if it has a hasp that accepts a lock or if it has a locking mechanism built into it.)

Procedure: A series of steps taken to isolate energy and shut down equipment.

Service or maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining machines or equipment. Also includes lubricating, cleaning, unjamming, and making adjustments or tool changes if a worker may be exposed to the unexpected startup of the equipment during such activities.

RESPONSIBILITIES:

Campus Safety shall:

- Provide general training on lockout/tagout safety upon request.
- Review and revise this procedure periodically and upon notice of the need for changes.
- Serve as a technical resource for questions and comments for the lockout/tagout program.
- Maintain records as required.
- Periodically review compliance with this program (inspection logs, training, etc.).

Supervisors shall:

- Ensure that employees complete general lockout/tagout training (general) and have received training on lockout/tagout practices for their work area.
- Ensure employees have the proper lockout/tagout equipment and have been trained to properly use it.

- Develop and maintain safe shut down procedures on each piece of equipment or machine that their employees are expected to service or maintain.
- Enforce the use of lockout/tagout devices when performing service or maintenance work and may be exposed to hazardous energy.
- Notify affected employees of lockout/tag-out procedures that are going to take place in their work area.
- Conduct pre-work safety briefings with employees, when applicable.
- Ensure authorized individuals are audited annually on lockout/tagout practices.
- Maintain training and audit records.

Authorized Employees shall:

- Complete training on the purpose and use of energy-control procedures.
- Comply with the UTHSC lockout/tagout procedure and the specific shut down procedures for equipment.
- Conduct safety briefings with all personnel, prior to the start of any work.
- Notify their supervisor when they have any questions about isolating energy sources safely; have observed on-compliance activities or when problems are identified with equipment or lockout devices.

Affected Employees (non-authorized employees) shall:

- Complete awareness training concerning the about the UTHSC Lockout/Tagout procedures
- Observe the prohibition against starting machines that are locked or tagged out.

Contractors and Subcontractors Shall:

- Comply with all provisions of UTHSC's Lockout/Tagout procedure.
- Ensure that their employees are appropriately trained and authorized.
- Ensure that a compliant lockout/tagout program is in effect with the contractor/sub-contractor. The program is the responsibility of the Contractor and Subcontractors, individually. If a contractor sub-contracts to complete the work, then the Contractor is responsible for verification and compliance of the lockout/tagout program of the subcontractor.
- Comply with any shut down procedures that have been developed by the University for each Machine or piece of equipment that the contractor must service or maintain or other such project where energy sources are present. When shut down procedures are not

available from the University, the contractor shall develop and provide the University with their own shut down procedures for that machine or piece of equipment or project.

- Provide certifications of training when applicable and upon requested.
- Ensure that a safety briefing has been completed prior to any work, with all personnel involved including applicable University staff.

PROCEDURE:

General Requirements

The following minimum procedure must be followed while performing service or maintenance on equipment and during the application of lock out/tag out controls. Supervisors are required to customize these generic procedures by establishing specific, written energy isolation protocols applicable to the equipment or systems that they service.

- The authorized employee or supervisor must notify people affected by a shutdown that a loss of service will occur and provide the expected start and duration of the project and a description of all systems shutdown. Sufficient lead time should be provided to allow affected areas to prepare for shutdown.
- The subject equipment or system shall be shutdown using normal procedures. Following shutdown, the lockout or tagout devices are attached to each energy isolating device by the authorized employee.
- Once lockout or tagout has been completed, all potentially hazardous stored or residual energy must be relieved, disconnected, restrained and otherwise rendered safe.
- Prior to starting work on the subject equipment or systems, the authorized employee shall verify that isolation and de-energization has been completed successfully.
- Once work is complete and prior to removal of the lockout or tagout devices, the work area shall be inspected to ensure that nonessential items have been removed. The work area shall also be inspected to ensure that all employees have been safely positioned or removed.
- Following the removal of lockout and tagout devices, affected employees shall be notified that the equipment or system will be restarted.

Specific Written Energy-Control Procedures

Authorized employees who lockout or tagout equipment or perform service and maintenance must follow specific written energy-control procedures. The procedures must include the following information:

- The intended use of the procedure.
- Steps for shutting down, isolating, blocking, and securing equipment.
- Steps for placing, removing, and transferring lockout devices.
- Equipment-testing requirements to verify the effectiveness of the energy-control procedures.

Lockout and tagout devices:

- Lockout devices must work under the environmental conditions in which they are used. Locks shall only be used for lockout purposes and shall be “heavy-duty” so that it can only be removed with heavy-duty bolt cutters.
- Tagout device warnings must remain legible even when they are used in wet, damp, or corrosive conditions. Tags shall be held in place with a tie capable of withstanding 50 lbs. of force. At least one tag must be provided for locations where locks are applied. Note that if more than one energy isolation device (EID) is locked out, there must be a tag at each EID.
- Each Lockout/Tagout device must be identifiable as to who attached it and its purpose.
- An authorized individual may not lend their lock or key to anyone else. Tagout devices must have a standardized print and warning format.
- Each lock out device and tag shall only be removed by the authorized employee that applied them. If the authorized employee is not available to remove a lock out device, removal may be done by the authorized employee’s supervisor but only after making all reasonable efforts to contact the authorized employee and after verifying that the equipment or system is safe. The authorized employee must be informed that their lock out device has been removed.
- During service or maintenance projects that require multiple individuals, or which occur over multiple shifts each individual must apply their lock so that the equipment will not be operable until each individual involved in the project has completed their work and removed their lock.

Lockout/Tagout Auditing

Each authorized employee shall be audited annually on lockout/tagout. The audit must be conducted by an authorized individual who is authorized to perform a lockout/tagout, but does not use lockout/tagout on the equipment that is being audited. To assist departments in auditing, an audit checklist has been developed (see Appendix B). This form, or a similar record, should be maintained in the department's files.

RECORDKEEPING

Training must be documented. Each department must maintain a record of the training. The following information should be contained in the training record:

1. Date of training,
2. Instructor, name of employee and location and a brief description or outline of what was covered.

FORMS AND ATTACHMENTS:

1. Generic Procedure for Lockout/Tagout (Appendix A)
2. Lockout/tagout checklist – Annual Employee Audit (Appendix B)
3. Equipment Lockout Work Plan (Appendix C)
4. Lockout/Tagout Program Training Certification (Appendix D)

Appendix A
Generic Procedure for Lockout/Tagout

1. Notify individuals who use the equipment that it will be taken out of service.
2. Stop the equipment by its normal shut down procedure.
3. Identify all energy sources (e.g. electrical, steam, hydraulic, etc.) and their magnitude (e.g. 120 volts, 60 psi steam, etc.). Look for hidden energy sources such as springs, capacitors, elevated parts, etc. The equipment may contain more than one type of energy.
4. Isolate the equipment from its energy source. This typically involves closing valves, opening switches or operating other energy isolation devices. Note - an on/off switch or run/stop switch are not energy isolation devices.
5. Dissipate or secure stored energy. This may involve repositioning, blocking, bleeding, braking, etc.
6. Apply your lock to the energy isolation device.
    a. Always provide a completed tag with your lock.
    b. *A tag **alone** can only be used where it is infeasible to lockout an energy source*. Additional precautions must be followed if only a tag is used.
7. Each individual working on the equipment must install their lock. It may be necessary to use a multiple lock hasp.
8. Ensure that no one is exposed to danger, and then as a check to be sure that all energy sources are isolated, activate the equipment's normal controls to make certain the equipment will not operate. Check to make sure you any test equipment (e.g. multi-meter) is working as designed.

CAUTION: Always return the controls to the "neutral" or "off" position after this test. Only when the equipment is locked and/or tagged out may work proceed.

Temporary Removal of Lockout for Testing or Adjustments

I. Clear equipment of tools, etc.
II. Remove employees from danger zone
III. Remove lock and/or tag
IV. Proceed with test by energizing the equipment
V. De-energize equipment (following steps *three through seven* above)

Restoring the Equipment After Work is Completed

a. Check the area around the equipment to insure that no one is exposed to danger after servicing or maintenance is complete
b. Remove all tools, loose parts, etc. from the equipment
c. Replace all guards, shields or other safety features
d. Remove the tag and lockout devices. Each person must remove their own lock
e. Operate the energy isolation device to restore energy to the equipment

Shift Changes and Prolonged Lockout/Tagout

When a shift change is occurring and the out-going shift will be removing their lockout/tagout and the incoming shift will be applying their lockout/tagout, at least one employee from each shift must be present at the equipment for the change.

The incoming shift shall apply their lockout/tagout before the outgoing shift leaves. It is acceptable to maintain a lockout continuously for an indefinite period of time.

Questions regarding the lockout/tagout policy should be addressed to Campus Safety at 448-6114.

Appendix B
LOCKOUT/TAGOUT CHECKLIST
Annual Employee Audit

Employee:	Department:
Equipment:	Building:

This audit should be completed annually for each authorized individual who performs lockout/tagout. Note that the person conducting the audit will immediately stop the process if the authorized individual is endangered

1.	Were all affected individuals notified that equipment will be shut down?
2.	Was equipment shut down safely?
3.	Were all sources of energy (gas, steam, pneumatic, electrical, etc.) located?
4.	Were all energy isolation devices(s) locked out?
5.	Was a tag(s) placed on each energy isolation device(s)?
6.	Was any residual energy neutralized or bled down?
7.	Were energy sources blocked or restrained?
8.	Were the normal controls activated once the area is clear or verify that the equipment is dead?
9.	Were the controls set in the "off" or "neutral" position?
WORK CAN NOW BE PERFORMED	
10.	Were all tools, parts, equipment removed?
11.	Were all guards, shields and other safety devices replaced?
12.	Were there any individuals who were exposed to a hazard?
13.	Were the lock and tag removed?
COMMENTS:	

Supervisor or Person Conducting the Audit	**Date**

Appendix C
LOCKOUT/TAGOUT PROGRAM

Equipment Lockout Work Plan

Equipment Lockout Work Plan

Equipment:_____ Location: _____

Work Scope: _____

Contact Person: _____

Energy Flow to be Controlled (Check All that Apply)

☐ Steam	☐ Natural Gas	☐ Moving Parts	☐ Chemicals
☐ Electric Power	☐ Compressed Air	☐ Pneumatic	☐ _____
☐ Control Power	☐ Water	☐ Hydraulic	☐ _____

Lockout Checklist

- ☐ Complete an Equipment Lockout Plan
- ☐ Identify all energy sources
- ☐ Notify affected employees
- ☐ The equipment has been removed from service
- ☐ The equipment has been isolated
- ☐ Apply lockout devices
- ☐ Reduce equipment to a zero energy state
- ☐ Test and Verify equipment isolation
- ☐ Perform Task
- ☐ Notify Supervisor when equipment is available for service
- ☐ Return all lockout devices to proper storage

Lockout Points

Hazard	Action Required	Lock #	Name	Lock On	Lock Off

Lockout Points

Hazard	Action Required	Lock #	Name	Lock On	Lock Off

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Appendix D
LOCKOUT/TAGOUT PROGRAM
Training Certification

Lockout/Tagout Program
Training Certification

Department:_____

Training Dates: _____

The following individuals have been trained in the provision of the Lockout/Tagout Program:

Name (Printed)	Signature