



Lock-Out/Tag-Out Program

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Purpose

New College of Florida requires that all departments within the college community establish and fulfill requirements for affixing the appropriate lockout/tagout (LOTO) signage and locks to energy isolating devices, and to otherwise disable machines, equipment or processes to prevent unexpected energizing, start-up, or the release of stored electrical, hydraulic, pneumatic, chemical, thermal, or other energy.

Definitions

These definitions apply to these terms as they are used in this policy:

Affected Employee/User - A person 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.

Affected Unit - Any college, department, center, institute, or business within the College community that contains machinery or equipment subject to lockout or tagout procedures.

Authorized Employee/User - A person who locks out or tags out machines or equipment to perform service or maintenance on that particular item. An affected employee/user becomes an authorized employee/user when that employee's duties include performing service or maintenance on machines or equipment covered under this policy.

Blocking Tag -A tagout device that indicates the use of chains, wedges, key blocks, adapter pins, or self-locking fasteners for isolating, securing or blocking of equipment from energy sources.

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.

Going Through a Tag - A procedure in which a piece of equipment or machinery is started when the lockout/tagout procedure is in place.

Hot Tap - A procedure used in repair, maintenance, and service activities that involves welding a piece of equipment (pipelines, vessels or tanks) under pressure to install connections or appurtenances.

Lockout - The placement of a lockout device on an energy isolating device according to an established procedure; this ensures that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device - A device that uses 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 other equipment. Included are blank flanges and bolted slip blinds.

LOTO – acronym for Lockout/Tagout.

Normal Operations - The utilization of a machine or other equipment to perform its intended function

OSHA – Occupational Safety and Health Administration, an agency in the Department of Labor. Develops and enforces Occupational safety standards.

Owner's Representative - An individual who represents the college in all aspects of: 1) A project when dealing with a contractor; 2) A lease agreement when dealing with a vendor. Caution: Some leases may define these owner's representatives as "contact persons" or "program directors".

Servicing and/or Maintenance - Work place activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or other equipment. These activities include lubrication, cleaning or un-jamming of machines or other equipment and making adjustments or tool changes, where the employee/user may be exposed to the unexpected energization or start up of the equipment or release of hazardous energy.

Tagout - The placement of a tagout device on an energy isolating device, according to 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 according to 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.

Scope of this Policy

The college wishes to prevent injury to employees/users engaged in service or maintenance activities of machines, equipment, or processes where the release of energy may put them at serious risk. Examples of such machinery or equipment include but are not limited to autoclaves, boilers, electron microscopes, elevators, fan systems, and lasers. Work situations where unexpected energization or start-up can occur include new construction, installation or set-up of equipment, and the adjustment, inspection, maintenance, repair, and service of machines and equipment.

Energy types to be considered include electrical, mechanical, hydraulic, pneumatic, chemical, and thermal.

This policy contains procedures for the service and maintenance of equipment and machines where the unexpected energization or start-up could cause injury to employees/users.

Caution: The following situations are not subject to the procedures outlined in this document:

Work on plug and cord type electrical equipment, for which exposure to the hazards of unexpected energizing, start up, or the release of stored energy of the equipment is effectively controlled by the unplugging of the equipment from the energy sources and by the plug being under the exclusive control of the employee/user performing the servicing or maintenance;

Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products when they are performed on pressurized pipelines provided that it is clear that continuity of service is essential, shutdown of the system is impractical, **and documented procedures and special equipment are implemented which will provide proven and effective protection for employees/users.**

Service or maintenance that takes place during normal maintenance operations, such as lubricating, cleaning, and making minor adjustments and simple tool changes, except when an employee/user is required to place any part of his/her body into an area on a machine or piece of equipment where work is actually performed upon the materials being processed (i.e., point of operation) or where an associated danger zone exists during a machine operating cycle.

Each unit is responsible for the development of specific energy control procedures for each machine or other equipment within its respective areas of responsibility.

This policy is specifically intended to prevent injuries to employees/users engaged in service or maintenance activities of machines, equipment, or processes where the release of stored energy may put them at serious risk. This policy ensures college compliance with OSHA 29CFR 1910.147.

Contacts

Direct any general questions about the Lockout/Tagout Policy to your department's administrative office. If you have specific questions, call the following offices

Department of Environmental Health and Safety (EH&S) 487-4585

General Policy Provisions

The administrative head of each unit is responsible for the implementation of these procedures to ensure the safety of the employees/users. These procedures apply to the control of energy sources during service, installation, removal, or maintenance of machines or equipment.

Procedures that affect the control of hazardous energy require:

- shutting off the equipment or machine;
- locating the energy isolating devices and isolating the equipment or machinery from them;
- locking or tagging out the energy isolating devices;
- reducing or eliminating stored residual energy;
- verifying the effectiveness of the energy isolation.

All employees/users are required to comply with the restrictions and limitations imposed upon them during the use of a lockout device. The authorized employees/users are further required to perform the lockout according to requirements in the Lockout/Tagout Policy's "Affected Unit Written Procedures" segment of this document.

All employees/users, upon observing a machine or piece of equipment that is locked out to perform service or maintenance, must not attempt to start, energize, or use that machine or equipment.

All employees/users must remove a lockout device before leaving the campus upon completion of a job.

Owner's representatives must inform all outside contractors performing work on the campus, of the college's Lockout/Tagout Policy's procedures and requirements.

The requirements for the use of/installation of energy-isolating devices must be stated in Division I, Contractor's Obligations of the contract specifications.

Violators should immediately be reported to the appropriate administrative head of each unit.

Whenever a machine or equipment is replaced, repaired, renovated, or modified, or whenever a new machine or equipment is installed, energy-isolating devices that are designed to accept a lockout device must be used.

Regulated Equipment List

Facilities and Maintenance must keep a master list of all machines and equipment covered by this policy, as well as conduct ongoing surveys of all equipment regulated by this policy. Supplemental lists must be maintained by the administrative head of each unit for areas for which they are responsible.

The lists must include:

- The types and locations of the equipment and the location of the operating controls.
- The types and locations of the energy isolating devices, including any types of stored energy and the method of dissipation or restraint.
- The types and magnitude of the energy.
- The hazards of the energy and the method of control.
- The names/job titles of affected employees/users and method of notification

Sequences of LOTO Systems Procedures

1. When servicing or maintaining an activity that necessitates or causes a utility interruption, the work must be done in compliance with the Facilities and Maintenance "Utility Shutdown Procedure."
2. If a Life Safety System is activated, e.g. fire suppression or fire alarm, the Department of Environmental Health and Safety (EH&S) and the College Police Department must be notified prior to the project start.
3. Before starting the project, all affected employees/users must be notified that a lockout or tagout system is going to be utilized and give the reason for that utilization. Operators must be consulted and notified because those persons will know the type and magnitude of energy that the machine or equipment uses and will be able to explain the hazards involved.
4. If the machine or equipment is operating, it must be shut down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
5. Switches, valves or other energy isolating devices must be placed in the "shutoff position so that the equipment is disconnected from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. *Caution: Substations must be racked down and locked out in case of high voltage electrical distribution systems. At the building end of the feeder, the incoming breaker or switch must also be racked down or opened and locked out. This prevents a back feed on the system through a local buss tie breaker.*
6. Lockout devices must be attached in such a manner so as to secure the energy isolating devices in the "safe" or "off" position before the blocking material may be removed safely

7. Supervisors and operators must be certain that energy sources have been disconnected by checking the normal operating controls. Caution: Operating controls must be returned to their "neutral" or "off" positions after the test.
8. When the use of lockout devices and procedures is impossible, a tagout device must be placed to indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.
9. When possible, the tags must be placed at the same point at which a lockout would have been attached. If this is not feasible, the tag must be placed as closely as safety allows to the device in a position that will be immediately obvious to anyone who attempts to operate the device. Caution: Tags may promote a false sense of security.
10. All locked out equipment must be reported to the shift supervisor when locked out and when returned to normal service.
11. Once the locked out or tagged out is placed on the equipment, no person should attempt to operate any switch, valve, or other energy isolating device where it is locked out or tagged out.

Restoring Machines or Equipment to Normal Operations

When the servicing or maintenance is completed and the equipment is ready to be returned to normal operating condition, the following steps must be taken:

- Check the equipment and area to ensure that all nonessential items and tools have been removed and that the equipment is operationally intact.
- Check to ensure that all employees/users have been safely positioned or removed from the area.
- Verify that the controls are in neutral
- Remove the lockout devices and re-energize
- Caution: Some types of blocking may require re-energization of the equipment
- Report to the shift supervisor when the equipment is returned to normal service.

Acquiring New or Modifying Old Equipment

When a machine or other equipment is replaced or repaired, renovated or modified, or newly installed, it must be a requirement that those machines and equipment are designed to accept a lockout device

When installing new machinery and/or equipment, be certain to forward the appropriate information to Physical Plant for inclusion on the master list.

The following criteria must also be met:

- The energy isolating devices must meet requirements outlined in the College Design and Construction Standards.
- Requirements for those devices must be included in the Physical Plant guidelines for the estimating of short form jobs/contracts.
- Those requirements must also be stated in Division 1, Contractor's Obligations of the

contract specifications.

- Purchase of equipment that is covered by this policy, whether through contract or the NCF purchasing facilities, must comply with the requirements for energy isolating devices.

Equipment LOTO: When More than One Person is Involved

When more than one person is required to lockout or tagout equipment, each must place his/her own personal lockout device or tagout device on the energy isolating device(s).

When an energy isolating device cannot accept multiple locks or tags, a lockout or tagout device (hasp) must be used which can accept multiple locks, or a single lock with a single key may be used to lockout the machine or equipment. The single key must be placed in a lockout box or cabinet which allows the use of multiple locks to secure it.

Requirements for Lockout/Tagout Devices

Lockout and tagout devices must be standardized throughout the college. Each lockout and tagout device must indicate the identity of the authorized employee using the device and must warn against the re-energizing of the equipment.

Units must supply all of their authorized employees/users with an adequate number of lockout and tagout devices for their areas of responsibility.

The LOTO device must be readily identifiable and must not be used for any purpose other than energy control.

The following conditions must also be met:

- Locks must be individually keyed.
- One key must remain in the possession of the authorized employee/user; the other must be placed in a secure location in the appropriate supervisor's office.
- In case of a dire emergency condition, the supervisor may use the foreman's key to remove the lockout after it has been established that all safety precautions for removal of the lockout device have been observed.
- Supervisors must maintain a current list of key assignments, signed by the individual receiving the key. A duplicate copy of this list must be forwarded to the Office of Facilities and Campus Services.
- Blocking tags must be provided for those disconnect means where no locking ring is available.
- The authorized employee's name and the date when placed will be put on each tag.

Training

College departments must provide training to all authorized employees/users to ensure that the purpose and function of the energy control procedures are understood. Furthermore, each college department must provide employees/users the knowledge and skills necessary for the safe application, usage, and removal of the energy controls that are required. Training sessions should be scheduled as quickly as possible for any new personnel who may require hazardous energy control training. Requests for assistance in locating materials for LOTO training may be made to the EH&S department

Enforcement

Environmental Health and Safety may conduct periodic inspections of the LOTO Policy procedures during routine inspections to ensure that the energy control procedures and requirements are being followed. Additionally, the administrative head of each unit must correct any inadequacies in and/or deviations from the procedure noted during periodic inspection.

- The administrative head of each unit must respond to EH&S within 7 days that the problem has been corrected.
- The success of the correction must be ascertained by the inspector during a review with the authorized and affected employees/users.
- Enforcement of this procedure must be in accordance with disciplinary procedures established by Human Resources or as negotiated with the bargaining units.

Affected Unit Written Procedures

Each affected unit is responsible for developing and maintaining specific energy control procedures for each machine or other equipment within its respective areas of responsibility when any of the following conditions exist:

- The machine or other equipment has more than one energy source;
- The machine or other equipment has a single energy source and cannot be isolated from that energy source and completely de-energized and de-activated by locking out that single source;
- The lockout device is not under the exclusive control of the authorized employee/user performing the service or maintenance;
- There has been an accident involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance.
- Affected units must update these procedures whenever there are equipment changes.

Responsibilities

The major responsibilities each party has in connection with the college's LOTO Policy are as follows:

- Provide initial training to all employees/users
- Affected Unit - Communicate the provisions of the Lockout/Tagout Policy to all staff.
- Develop and maintain written procedures
- Provide specific training for areas of responsibility
- Develop an internal method of recording compliance with this policy
- Support the implementation of this policy

When Outside Contractor is Assisting College Personnel: Equipment LOTO

The minimum performance standard of contractors is compliance with the OSHA standard. Where College personnel are involved and College policy clearly requires additional safety requirements, contractors must comply with those requirements. When an outside contractor is assisting college personnel and both are involved in the LOTO procedures, each must place his/her own personal lockout device or tagout device on the energy isolating device(s).

Each employee/user must use his/her own lock to secure the box or cabinet. When each person no longer needs to maintain his/her lockout protection, that person will remove his/her lock from the box or cabinet

When an energy isolating device cannot accept multiple locks or tags, a lockout or tagout device (hasp) must be used which can accept multiple locks, or a single lock with a single key may be used to lockout the machine or equipment. The single key must be placed in a lockout box or cabinet which allows the use of multiple locks to secure it.

Each employee/user must use his/her own lock to secure the box or cabinet. When each person no longer needs to maintain his/her lockout protection, that person will remove his/her lock from the box or cabinet.

References

OSHA 29CFR 1910.147; Governors Executive Order 2000-292

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