

**STANDARD OPERATING PROCEDURE # FAC 6.010****Subject: Lockout/Tagout**

**Purpose and Scope:** Using Lockout/Tagout (LOTO) to prevent injury to employees/users engaged in service or maintenance activities or machines and equipment.

**POLICY**

It is the policy of the UWF Department of the University of West Florida (UWF) to prevent an undesirable release of hazardous energy during any servicing, maintenance, or modification of energized equipment or machinery. This policy is implemented through the Lockout/Tagout (LOTO) procedures described in this program. These procedures must be strictly followed when it is necessary to work on any equipment or machinery that may release any form of hazardous energy, including, but not limited to electrical, steam, hot water, mechanical, chemical, hydraulic, or pneumatic energy, while the equipment is shut down.

LOTO is required whenever servicing, maintenance, or modification is being performed on equipment or machinery in which the unexpected energization or startup of the equipment, or the release of stored energy, could cause injury to people or damage to equipment. All sources of hazardous energy must be shut off and secured. Each person who works on the equipment must perform LOTO.

**DEFINITIONS**

**Affected employee** – An employee whose job requires them to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or Tagout, or whose job requires them 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 covered under this section.

**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 underground 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.

**Hot tap** – A procedure used in the repair, maintenance and service activities that involves welding a piece of equipment (pipelines, vessels, or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

**Lockout** – The placement of 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 mean 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. Included are blank flanges are bolted slip blinds.

1. **LOTO** – an acronym for Lockout/Tagout
2. **Normal production operations** – the utilization of a machine or equipment to perform its intended production function.

**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 unjamming of machines or equipment, and making adjustments or tool changes where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

**Setting up** – Any work performed to prepare a machine or equipment to perform its normal production operation.

**Stored Energy** - Energy that is available and may cause movement even after energy sources have been isolated. Stored energy may be in the form of compressed springs, elevated equipment

components, hydraulic oil pressure, pressurized water, air, steam, or gas, or rotating flywheels, shafts or cams.

**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 that 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.

**Zero-energy State** – A condition that is reached when all energy sources to or within equipment are isolated, blocked, or otherwise relieved, with no possibility of re-accumulation. Equipment is not safe to work on until it is in a zero-energy state.

## PROCEDURE/GUIDELINE

### **A. Applicability and Purpose**

1. This program is applicable to all UWF employees or contractors, to all work conducted under the authority of UWF, and to all equipment and property managed by UWF. Non-UWF and sub-contractor personnel will follow the provisions of this chapter while at UWF facilities.
2. To establish site-specific practices and requirements for Lockout/Tagout (LOTO) of energy sources to protect employees or contractors from injury.

### **B. Exclusions**

**Note:** These exclusions do not apply under the following conditions:

- If an employee or contractor is required to remove or bypass a guard or other safety device; or
- If an employee or contractor is required to place any part of their body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operations); or
- Where a danger zone exists during the equipment or machine operation cycle.

**LOTO procedures do not apply under the following circumstances:**

1. Work on cord and plug-connected electrical equipment if unplugging the equipment controls all the energy, and the plug remains under the continuous

control of the employee performing the servicing, maintenance, or modification. Employees must follow LOTO guidelines in accordance with this and departmental policy when working on cord or plug-connected electrical equipment.

2. Electrical systems less than 50 volts to ground that do not increase exposure to electrical burns or to explosion due to electrical arcs.
3. Hot tap operations that involve transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that the employer demonstrates that:
  - Continuity of service is essential, and
  - Shutdown of the system is impractical, and
  - Documented procedures are followed, and special equipment is used that will provide proven, effective protection for employees or contractors.
4. Minor tool changes and adjustments and other minor servicing activities that take place during normal production operations if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures that provide effective protection.

### C. Implementation Guidelines for LOTO

1. The following departments have been identified through evaluation of the types of equipment used, and the requirement for shutting down the equipment for maintenance or service, as those departments that must implement all the guidelines of this policy.
  - a. Utilities
  - b. Building Services
  - c. Housing
  - d. Grounds
  - e. Environmental Services
  - f. Construction and Development
2. The above departments will identify equipment and machines that require LOTO during servicing and maintenance. Authorized employees or contractors will be identified and only those individuals are authorized to perform LOTO.
3. If equipment or machines require LOTO in any department not identified above, **Supervisor must be contacted for instructions on implementation of LOTO.** Workplace activities that may require LOTO include, but are not limited to: installing, setting-up, inspecting, maintaining, cleaning, attempting to dislodge jammed materials or placing any part of the body inside any piece of equipment or

machine, while the machine is still in operation or in an energized state. Employees or contractors who have not been designated an “**authorized employee or contractor**” will not perform such tasks.

#### **D. Administrative Locking**

1. A careful distinction must be made between LOTO and various other locking practices, collectively referred to as Administrative Locking. The LOTO procedure is specifically reserved for those instances in which a zero-energy state must be ensured to allow personnel to service, maintain, or modify equipment. Administrative locking is normally not used as the primary means of protection during a servicing, maintenance, or modification procedure, and is not a substitute for LOTO.
2. Administrative locking is distinguished from LOTO in both practice and purpose. A group rather than an individual may control an administrative lock. An administrative application must not use UWF-designated LOTO locks or LOTO tags. The “*Caution Tag*” is an administrative locking tag that is not to be used as a LOTO tag.
3. Administrative locking may be performed for many reasons, including equipment security, programmatic purposes, or general safety. Examples of administrative locking are:
  - Locked fences around high-voltage transformers
  - Locked fences around propane storage tanks
  - A locked door to a room that contains hazardous equipment
  - A water valve locked in the open position

#### **E. Training and Authorization**

**Only employees or contractors who are trained and authorized can perform LOTO.**

1. **Training for Authorized Employees or Contractors to Perform LOTO**
  - a. All employees who are responsible for the service, maintenance, repair, or modification of equipment and machinery will receive annual LOTO training. Additionally, all employees charged with the responsibility of implementing LOTO will receive annual LOTO training. The annual LOTO Training Course will cover, at a minimum, the following areas:
    - Recognition of applicable hazardous energy sources;
    - Details about the type and magnitude of the hazardous energy sources present in the workplace;

- The methods and means necessary to isolate and control those energy sources; and
  - All elements and special procedures of the LOTO Program.
- b. Contractors who will be required to perform LOTO while in UWF facilities are required to be trained in the procedures established in this policy. Contractors will be trained in the procedures required to LOTO the piece of equipment or machine they are servicing.

## **2. Authorization**

- a. The Department Manager or designee provides specific authorization after the employee or contractor satisfies the training requirements. They must ensure that the employee or contractor is thoroughly familiar with the equipment (within the context of their job function) and with the energy-control procedures. They shall provide additional on-the-job training if the employee or contractor is not thoroughly familiar with the equipment and/or written procedure.
- b. When satisfied that both the training and authorization requirements have been met, the Department Manager or designee may authorize an employee or contractor to perform LOTO. This authorization stipulates the specific equipment or types of equipment on which the authorized employee may perform LOTO. Each Department must maintain records of authorized employees or contractors, and the type of on-the-job training, if any, that was given.

## **3. Reauthorization and Retraining**

- a. LOTO reauthorization is required when:
- An authorized employee's job changes or if they are reassigned, and if a new contractor is assigned to perform service on the equipment or machine;
  - New equipment or machinery is to be used;
  - New energy-control procedures are to be implemented.
- b. LOTO retraining and/or reauthorization is required when:
- The Department Manager, Utilities Office or the Safety Officer has reason to believe that an employee or contractor has inadequate knowledge of LOTO procedures or policy;
  - A periodic inspection shows a deficiency in the authorized employee or contractor ability to implement LOTO policy correctly.

#### **4. Affected Employee Training**

- a. Any UWF employee may be near to, or affected by, equipment on which LOTO is performed. Therefore, all employees or contractors receive LOTO awareness training annually. All new hire employees will receive LOTO training in New Employee Orientation and prior to operating or working around equipment or machines that require LOTO. Contractors will be trained by their company on how to perform LOTO and they will be made aware of the guidelines established by UWF.
- b. All employees or contractors must know how to recognize LOTO, why LOTO is implemented, and the importance of leaving LOTO devices in place. Employees or contractors are prohibited from tampering with LOTO devices or attempting to restart equipment to which LOTO is applied.

#### **F. Lockout/Tagout Equipment**

The department requiring LOTO is responsible for providing LOTO equipment to those employees or contractors and ensuring that they use it. Contractors may provide their own locks and tags. Departments the contractor is working for must approve these locks and tags. All affected employees must be trained to identify them.

##### **1. Padlocks**

- a. Padlocks shall be identified as being used for LOTO. At UWF, a padlock will be marked to indicate it is for LOTO. Padlock labels can be used for writing in the authorized employee's name and department or the contractor's name and company. Other means of identification (e. g., engraving) are also permissible.
- b. The Department Manager may elect to utilize a checkout system that permits authorized employees or contractors to borrow locks from a common local supply. In such cases, the authorized employee checking out a lock must re-label it with their name and department.

##### **2. Padlock Labels**

Each lock must be clearly labeled with the authorized employee's name and department or contractor's name and department. Adhesive labels may be used.

##### **3. Keys**

- a. Each LOTO padlock is required to have two keys, primary and emergency. The primary key must be in the possession of the authorized employee who

applied the lock. The emergency key must be kept in a secured area (e.g., a lock box) with access limited to the authorized employee's immediate Supervisor. If an outside contractor has authorization to utilize their own locks, an emergency key must be provided to the Department Manager or designee.

- b. A group of locks with a common key may be used for equipment with multiple energy-isolation devices, if desired. If a group of locks is keyed alike for this purpose, one key only may be issued for use by the authorized employee and a second key may be kept for emergency use, as described above.

#### 4. **Tags**

The **“Danger Do Not Operate” tag or sign is required for LOTO operations at UWF**. The tag must always be used in conjunction with a lock unless the energy-isolating device is not physically capable of being locked. The tag or sign is required to be attached with a nylon locking cable tie or affixed. The tag or sign should be made of weatherproof materials. The authorized employee or contractor who performs LOTO must complete all applicable sections of the tag.

#### 5. **Other Hardware**

- a. The Department Manager or designee, or contractor shall provide other hardware as required such a multiple lock hasps and circuit breaker and valve lockout devices.
- b. When at all possible contractors required performing LOTO while servicing equipment should use the locks and tags available in the department since they are easily recognized by the department employees or contractors. If contractors use their own locks and tags all employees or contractors in the department must be trained to recognize the locks and tags.

### **G. General LOTO Procedures**

#### **1. Preparation and Notification**

- a. Always use Written Procedures for the equipment or machine being locked and tagged out.
- b. Assess energy type and magnitude. The authorized employee or contractor must assess the type, magnitude and hazards of the energy to be controlled.



- c. Determine methods of control. The authorized employee or contractor must determine the appropriate methods of controlling the hazardous energy; e.g., disconnect switch or valve. Note: Push buttons selector switches, interlock circuits, and other control type devices are not energy isolating devices.
- d. Notify all affected personnel. The authorized employee or contractor must notify all affected employees or contractors of the impending shutdown and the reasons for it.

## **2. Shutdown**

- a. Verify that it is safe to shut down equipment. The authorized employee or contractor must verify that it is safe to shut down the equipment.
- b. Perform normal equipment shutdown. The authorized employee or contractor must turn off or shut down the equipment using established methods for that equipment.
- c. Isolate and lock out energy sources. The authorized employee or contractor must operate the energy-isolating device and affix their LOTO lock to this device. The lock must be affixed so as to hold the energy-isolating device in an off or safe position that physically prohibits normal operation of the energy-isolating device. Where more than one authorized employee is involved in the job and a Group LOTO procedure is used, each authorized employee must affix their own personal lock using a multiple lock hasp.
- d. The authorized employee or contractor must complete all appropriate information on the tag and apply it to the equipment or machine so that it will stay affixed. If the placement of the tag compromises safety by obscuring indicator lights or controls, the tag must be located as close as is safely possible to the device, in a position that is immediately obvious to anyone attempting to operate the device. Where more than one authorized employee is involved in the job and a Group LOTO procedure is used, each authorized employee must affix their own personal tag on a multiple lock hasp.
- e. Release stored energy. The authorized employee or contractor must completely release or otherwise control any stored energy. In the case of stored mechanical energy, vent valves, spring releases, blocking devices, or equipment repositioning (as appropriate) must be utilized. In the case of stored electrical energy, approved grounding wands or discharge devices must be used.

- f. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation must be continued until the servicing, maintenance, or modification is completed or until the possibility of such accumulations no longer exists. The equipment must be in a Zero-Energy State.

### **3. Verification of LOTO Application and Procedure**

- a. Attempt to restart the equipment. The authorized employee or contractor must physically attempt to operate the energy-isolating device and attempt to start the equipment using the normal equipment controls (e.g., start buttons or selector switches).
- b. If the equipment is electrical, test for zero-energy state. The authorized employee or contractor must additionally test potential electrical energy sources using appropriate instruments or testers. The authorized employee or contractor shall use test equipment to verify that the circuit elements and equipment parts are de-energized, and shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back-feed even though specific parts of the circuit have been de-energized and presumed to be safe.
- c. If the authorized employee is not qualified to test the energy being isolated, they must ensure that a qualified person tests the energy. The qualified tester, if other than the authorized employee, must be identified in the "Remarks Section" on the tag. If the circuit to be tested is over 600 volts, nominal, the test equipment must be checked for proper operation before and immediately after this test.

### **4. Release from LOTO**

- a. Before LOTO devices are removed and energy is restored to the equipment, the authorized employee or contractor must follow the procedures below:
  - (1) Verify that it is safe to re-energize.
  - (2) Verify that the work for which the lock was applied has been completed and that it is safe to re-energize equipment.
  - (3) Clear all tools and personnel. The authorized employee or contractor must check the work area to ensure that all tools and personnel are at a safe distance from the equipment.
  - (4) Remove all isolating and grounding devices. The authorized employee must remove any devices applied.
  - (5) Replace safety guards. The authorized employee must check the equipment to ensure that any removed guards are installed.

- (6) Remove lock and tag, reset the energy-isolating device, and return the machinery to service.
- (7) Notify all affected personnel. The authorized employee or contractor must notify all affected employees or contractor that the equipment is back in service.

Note: If following the above-prescribed sequence compromises safety, the authorized employee or contractor may modify the sequence. However, all steps must be performed.

## **H. Temporary Removal of LOTO Devices**

1. When LOTO devices must be temporarily removed from the energy-isolating device so that the equipment or machine can be energized for testing or positioning, the following sequence of actions must be taken:
2. Notify the affected employees or contractor and management.
3. Clear the equipment of tools and materials.
4. Remove employees or contractor from the machine or equipment area and ensure that required tools be safely and properly positioned.
5. Remove all repositioning and blocking devices and return all vents and valves to their normal operating positions.
6. Remove all grounding/shorting conductors.
7. Energize and proceed with testing or positioning.
8. De-energize all systems and reapply lockout/Tagout measures to continue the servicing, maintenance, or modification of the equipment. The original tag may be reused.

## **I. Emergency Removal of LOTO Devices**

When the authorized employee or contractor, who applied a LOTO device, is not available to remove it, the Department Manager or designee may remove the device. This is considered to be an emergency procedure, to be undertaken only in extreme circumstances.

**Extreme care must be taken and the following steps must be performed:**

1. The Department Manager or designee must verify that the authorized employee or contractor is not at the facility.
2. The Department Manager or designee must make every reasonable effort to contact the authorized employee or contractor. This may include a telephone call to the employee's home or other location.

3. If the employee or contractor is contacted, the Department Manager or designee must inform the employee or contractor that their LOTO devices are being removed.
4. The Department Manager or designee must verify that it is safe to remove the LOTO devices.
5. The Department Manager or designee or Utilities Office may then use the emergency key to remove the LOTO devices, or the lock may be cut off if the key is not available.
6. The Department Manager or designee or Utilities Office must ensure that the authorized employee or contractor is presented with the removed lock immediately upon returning to work, and is informed of the reasons for the emergency removal.
7. The emergency procedure must be duly recorded in the department's lockout/Tagout records and signed by either the Department Manager or designee or Utilities Office and the authorized employee or contractor as soon as possible.

#### **J. Tagout Only**

1. If a device is incapable of being locked out, a "Tagout only" procedure may be employed. Any energy-isolating device capable of being locked out must be locked out without exception.
2. To conduct a Tagout only procedure, the authorized employee or contractor must follow all the steps outlined in the General Procedures for LOTO for the piece of equipment or machine. ***The placement of the lock is omitted.*** Instead, the authorized employee or contractor must utilize a second means of isolating the hazardous energy. Removal of an isolating circuit element, blocking of a controlling switch, openings of an extra disconnect device, or removal of a valve handle are all examples of secondary measures. The second means of isolation must be identified on the tag, and tags must be affixed to both the energy-isolating device, and at the point of the second means of isolation.
3. If it is determined that a device is incapable of being locked out, and a second means of isolation is not possible, an equipment-specific written procedure is required. Utilities Office must approve the procedure prior to its implementation.
4. It is UWF policy to make every means available to design energy-isolating devices to accept a lockout device when new machines or equipment is installed, or whenever machines or equipment undergo major repair, renovation, or modification.

#### **K. Group LOTO Procedure**

1. When several employees or contractors perform servicing, maintenance, or modification, the Department Manager or designee or Utilities Office may determine that the use of a group LOTO procedure is appropriate. This determination must be made only if the size of the group or contractors and the nature of the work preclude the feasibility of individual LOTO, and if the level of protection provided by the group LOTO procedure is equivalent to that of individual LOTO.

2. A group LOTO procedure is a special procedure wherein the responsibility for applying and removing the lockout devices of a group of authorized employees or contractors is vested in a single designated authorized employee or contractor.
3. Procedure/Application of Group LOTO.
  - a. The Department Manager or designee along with Utilities Office or contractor must determine that group LOTO is appropriate.
    - A meeting of all members of the group covered under the procedure will be convened.
    - The Department Manager or designee, or contractor must describe the tasks to be performed.
    - Primary responsibility will be delegated to a designated authorized employee or contractor for a specified group of employees or contractor working under the protection of the group's LOTO.
    - The structure of the group, the names of all group members and the designated authorized employee, and reasons for the group LOTO must be documented in an appropriate LOTO logbook.
    - Each member of the specified group must be trained and authorized.
  - b. The designated authorized employee or contractor is responsible for ensuring that each step of the general or equipment-specific written procedure is completed.
  - c. The designated authorized employees or contractor(s) must apply their personal LOTO lock(s) and tag(s) to the energy-control device(s) and indicate on the tag that a "group lockout" is in effect.
  - d. The designated authorized employee or contractor must communicate to each person in the area that LOTO is in place and work may commence. If the makeup of the crew changes while work is in progress, the designated authorized employee must inform any new group member that a group lockout is in place and communicate to them all the information relating to the group lockout. The names of the new group members must be added to the log.
  - e. Anyone leaving the group before the servicing, maintenance, or modification is completed must notify the designated authorized employee or contractor. The group member leaving must communicate the status of their activities to the designated authorized employee or contractor. The designated authorized employee or contractor must make necessary changes to any documented being maintained to include an entry indicating the date and time of each group membership change.

#### **4. Release from Group LOTO.**

- a. When the work is completed, the designated authorized employee or contractor must communicate to each group member that the group LOTO is being considered for removal and:
  - Must verify with each member that all tasks performed in conjunction with the specific jobs are complete.
  - Must verify that the equipment has been returned to a safe restart condition.
- b. After positive verification is received from all employees or contractor(s), the designated authorized employee or contractor may remove the group LOTO devices and perform equipment restart.
- c. If any group member is not present to provide the verification that is required under Steps 1 and 2, the designated authorized employee or contractor must follow all the procedures as outlined in paragraph I, page 10: Emergency Removal of LOTO Devices.
- d. The designated authorized employee or contractor is responsible for maintaining all appropriate documentation when required.

#### **L. Shift Changes**

To ensure the continuity of LOTO protection during shift or personnel changes, if work is to be continued by an oncoming shift, an orderly transfer of LOTO devices between authorized employees or contractors from the off-going and oncoming shifts must be performed. The authorized employees or contractors from both shifts must both be present at the lockout device. The off-going authorized employee must remove their lock and tag, and the oncoming authorized employee must immediately place their lock and tag on the LOTO device. The authorized off-going employee must inform the authorized oncoming employee of any potential hazards.

##### **1. Gaps Between Shifts**

- a. If the orderly transfer of LOTO devices is not possible because of a gap in shifts, a procedure must be implemented to provide continuity of LOTO protection.
- b. If the authorized employees or contractors from both shifts cannot be present simultaneously at the lockout device because there is a gap between their shifts, the authorized employee of the off-going shift may acknowledge, by written logbook entry, prior consent to remove his or her LOTO devices during the oncoming shift. The Supervisor of the authorized employee must make a corresponding logbook entry. The logbook entries must include the authorized employee's and Supervisor's printed names and signatures, the equipment identification, maintenance procedure being performed, and all other pertinent safety information regarding the equipment and/or procedure.

- c. The Supervisor of the oncoming shift must read and understand the logbook entries, and is authorized to remove the LOTO device of the authorized employee from the off-going shift.
- d. The authorized employee of the oncoming shift may apply their LOTO devices.
- e. Both the oncoming authorized employee and his/her Supervisor must make logbook entries acknowledging the performance of this special procedure.
- f. All subsequent LOTO actions must conform to the standard LOTO policy and procedures.
- g. Before resuming work, the authorized employee who gave prior consent for removal of their LOTO devices must be personally informed by the Supervisor that the authorized employee's devices have been removed. This authorized employee and Supervisor must make confirming logbook entries, and the Supervisor must then return the LOTO devices to the employee.

#### **M. Periodic Inspections**

The Department Manager or designee and/or the Safety Officer shall perform periodic inspections and reviews of each department's energy-control procedures. The periodic inspection is designed to correct any deviations or inadequacies observed. The review must identify the machine(s) or equipment, on which the energy-control procedure was utilized, the date of the inspection, the employees or contractor included in the inspection, and the person who performed the inspection.

#### **N. Tag-On**

Sump pumps, emergency lights, refrigerators, or equipment that must be shut down in a controlled manner fall into a class of equipment that should not be accidentally de-energized. When a circuit breaker, disconnect switch, or energy securing device is readily accessible to any employee, the circuit breaker or disconnect switch may be tagged to indicate that it is not to be turned off. The energy-security device must not be locked by any means that would prevent the device from being used as an emergency disconnects.

#### **O. Recordkeeping Requirements**

1. The Department's listed in Section C (Implementation Guidelines for LOTO), will maintain a listing of all authorized employees or contractors and the equipment/machinery with which they are authorized to work.
2. The Department will maintain a listing of all issued locks and keys.
3. All equipment or machines for those departments (identified in Section C (Implementation Guidelines for LOTO), page 4 will have the following documentation maintained in the LOTO Policy Book:

- a. A list of all equipment or machines requiring LOTO in the department and the location of the energy source for each.
  - b. A list of "Authorized Employees or Contractors" authorized to perform LOTO procedures.
  - c. Step-by-step guidelines for performing LOTO for each piece of equipment or machine.
  - d. Step-by-step guidelines for releasing each piece of equipment or machine from LOTO.
4. A master copy of all documentation will be maintained in Utilities Office.
  5. At the discretion of the Department Manager, recordkeeping requirements may be satisfied by an orderly system of archiving completed tags.
  7. Records shall be maintained for two (2) years.

## **P. Responsibilities**

1. All Employees or Contractors
  - Understand the general reasons for LOTO
  - Recognize when LOTO is being used
  - Understand the importance of not tampering with or removing a lock and/or tag
2. Authorized Employees or Contractors
  - Employees will receive annual LOTO training to recognize the conditions of work that require LOTO.
  - Contractors will receive training by their company on LOTO procedures.
  - Use the materials and procedures specified in this policy to implement the LOTO program.
3. Department Managers and Supervisors
  - Ensure implementation of all procedures required for the department is implemented in accordance with the LOTO Policy.
  - Provide authorization for employees or contractors, and maintain records of authorized employees or contractors as required.
  - Ensure that authorized employees have received annual LOTO training and provide additional on-the-job training if the employee is not thoroughly familiar with the equipment and/or written procedure.
  - Ensure any contractor servicing any piece of equipment or machine in the department has been trained on LOTO for the equipment or machine and is familiar with this policy.



- Provide required LOTO equipment to employees or contractor, and ensure that it is used in accordance with procedures established by this policy.
- Control emergency keys for LOTO locks in the Department.
- Remove LOTO devices in case of emergency.
- Generate and maintain equipment-specific written procedures, where required, and identify the equipment.
- Maintain appropriate records of LOTO events in accordance with the procedures established by this policy.

**Q. List of Employees to use Lockout/Tagout**

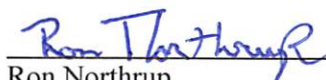
1. All Utilities employees are to use Lockout/Tagout when working on any equipment
2. All HVAC employees are to use Lockout/Tagout when working on any equipment

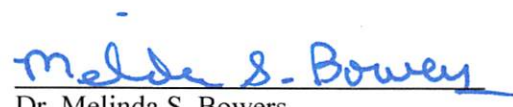
**R. List of Equipment for LOTO**

1. Chillers
2. Boilers
3. Pumps
4. HVAC Air Handlers
5. Exhaust Fans
6. Cooling Towers
7. Sewer Pumps
8. Lift Stations
9. Fan Coil Units
10. Transformers
11. Electrical Main Switches
12. Main Electrical Panel Boards
13. Generators when servicing

**Developed by: Utilities, Energy & Sustainability**

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