

## **Lockout/Tag-out Program**

### **Failure to Follow Proper Procedures When Using the Lockout/Tag-out System Will Result In Disciplinary Action**

#### **Preplanning for Lockout (Preparation for Shutdown)**

An initial survey shall be made to determine which switches, valves, or other energy isolating devices apply to the equipment being locked out. More than one energy source (electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or others) may be involved. Any questionable identification of sources shall be cleared by the employees with their supervisors. Before lockout commences, job authorization should be obtained from the supervisor.

Only supervisors or authorized individuals shall prescribe the appropriate duties and responsibilities relating to the actual details of affecting the lockout/tag-out. Energy isolating devices shall be operated only by authorized individuals or under the direct supervision of authorized individuals. Where high voltages greater than 480V are involved the supervisor electrician shall be responsible for turning off the main power controls.

All energy isolating devices shall be adequately labeled or marked to indicate their function. The identification shall include the following:

- Equipment supplied
- Energy type and magnitude

Where system complexity requires, a written sequence in checklist form should be prepared for equipment access, lockout/tag-out, clearance, release, and start-up.

#### **Lockout/Tag-out Procedures preparation**

Notify all affected employees/ building occupants that a lockout is required and the reason therefore.

#### **Contact**

Authorized Personnel is to secure lockout/tag-out device. Authorized personnel include managers, shop supervisors, area maintenance supervisors.

#### **Machine or Equipment Shutdown**

If the equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.). Disconnect switches should never be pulled while under load, because of the possibility of arcing or even explosion. Personnel knowledgeable of equipment operation should be involved with shut down or re-start procedures.

#### **Machine or Equipment Isolation**

Operate the switch, valve, or other energy-isolating device so that the energy source(s) (electrical, mechanical, hydraulic, etc.) is (are) disconnected or isolated from the equipment. Stored energy, such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems,

and air, gas, steam, or water pressure, etc., must also be dissipated, disconnected, or restrained by methods such as grounding, repositioning, blocking, bleeding-down, etc. Pulling a fuse is not a substitute for locking out. A pulled fuse is no guarantee the circuit is dead, and even if it were dead, there's nothing to stop someone from inadvertently replacing the fuse.

**CAUTION:** Intermittently operating equipment such as pumps, blowers, fans, and compressors may seem harmless when dormant. Don't assume that because equipment isn't functioning, it will stay that way.

### **Application of Lockout/Tag-out**

Lockout and tag the energy isolating device with an assigned individual lock, even though someone may have locked the control before you. You will not be protected unless you put your own padlock on it. For some equipment it may be necessary to construct attachments to which locks can be applied. An example is a common hasp to cover an operating button. Tags shall be attached to the energy isolating device(s) and to the normal operating control and shall be attached in such a manner as to preclude operation.

### **Verification of Isolation**

After ensuring that no personnel can be exposed and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.

If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the maintenance or repair is completed, or until the possibility of such accumulation no longer exists.

**CAUTION:** Return operating controls to neutral position after the test. A check of system activation (e.g. use of voltage indicator for electrical circuits) should be used to assure isolation.

The equipment is now locked out.

### **Release from Lockout/Tag-out**

Before lockout or tag-out devices are removed and energy is restored to the machine or equipment, inspect the work area to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.

Check work area to ensure that all employees are in the clear. Notify affected employees that lockout/tag-out devices have been removed.

The employee who applied the device shall remove each lockout/tag-out device from each energy-isolating device. The energy isolating devices may be opened or closed, to restore energy to equipment.

Contact Authorized Personnel when energy is restored and return lockout/tag-out device. (Proper Documentation Required)

### **Lockout/Tag-out Interruption (Testing of Energized Equipment)**

In situations where the energy isolating device(s) is lockout/tagged and there is a need for testing or positioning of the equipment/process, the following sequence shall apply:

- Make sure to Clear equipment and/or process of tools and materials.

- Make sure all personnel are clear of danger.

- Remove the control of locks/tags according to established procedure.

- Proceed with test, etc.

De-energize all systems and re-lockout /re-tag-out the controls to continue the work.

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

In the preceding steps, if more than one individual is required to lock out equipment, each shall place a personal lock and tag on the group lockout device when he/she begins work, and shall remove those devices when he/she stops working on the machine or equipment. The supervisor, with the knowledge of the crew, may lock out equipment for the whole crew. In such cases, it shall be the responsibility of the supervisor to carry out all steps of the lockout procedure and inform the crew when it is safe to work on the equipment. Additionally, the supervisor shall not remove a crew lock until it has been verified that all individuals are clear.

### **Scheduled Leave**

If the **owner** of the device (owner being the person who installed the lockout/tag-out device) is going on scheduled leave and someone else may need to work on the locked out unit, they must remove their lock and have it replaced by a **new owner** who is on regular duty.

### **Conditions for lockout/tag-out removal by Authorized Personnel**

Only the **owner** of the device shall remove lockout/tag-out devices.

#### **Exceptions to the conditions of removal:**

**Owner** incapacitated by illness or injury then **his/her supervisor** shall remove the lockout/tag-out device.

**Owner** is no longer employed by Texas A&M University, then **his/her supervisor** shall remove the lockout/tag-out device.

**If Authorized Personnel determines that circumstances warrant removal of a lockout/tag-out device, every effort must be made to contact the owner of the device. After the above conditions have been met the Authorized Personnel may remove device.**