

# **Control of Hazardous Energy Sources Program**

Date: 6/15/10

## **Background**

Many serious workplace injuries, amputations, and fatalities result from the uncontrolled release of hazardous energy. To curb these accidents, the Occupational Safety and Health Administration (OSHA) issued the Control of Hazardous Energy Standard on September 1, 1989 (29 CFR 1910.147, also known as Lockout/tagout). This standard establishes safety requirements for the control of hazardous energy sources during servicing and/or maintenance.

This program refers to machine-specific, step-by-step procedures that must be used for the safe deactivation, lockout, tagout, and testing of facility equipment prior to performing any servicing and/or maintenance.

## **Note to Employees**

If you can not find a machine-specific procedure for a multi-source piece of equipment, please ask the Maintenance Supervisor for advise prior to attempting lockout. These procedures are intended to protect **YOU** from workplace injuries. Please familiarize yourself with their location and content. If you notice any errors, can't understand the language used, or have a question about the program or how to use the procedures, contact the Maintenance Supervisor with the issue. We need your help to ensure the completeness, accuracy, and effectiveness of our lockout/tagout program.

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## Program Definitions

Affected Employee - an employee whose job requires him/her to operate or use equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area where such servicing or maintenance is being performed. Note: an Affected Employee becomes an Authorized Employee when that employee's duties include performing servicing or maintenance covered under this section.

Authorized Employee - an employee whose job requires them to apply machine-specific lockout/tagout procedures for the servicing or repair of equipment.

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.

Capacitor - a storage unit that holds a charge of electricity to be totally released at a specific point during an operation. Capacitors represent a potential source of lethal energy and must be rendered safe during lockout/tagout scenarios by waiting for an amount of time to pass. This amount of time will be given in the machine-specific procedure.

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. Two examples include manually operated circuit breakers and manually operated electrical disconnect switches. Push buttons and selector switches are **NOT** considered energy isolating devices.

Energy source - any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout - the act of physically placing a lockout device (such as our standardized red locks) on an energy isolating device to comply with our established lockout/tagout machine-specific procedure. This ensures that the energy isolating device and the equipment being controlled by the device cannot be operated until the lockout device is removed.

Lockout device - a device that uses a positive means to hold an energy isolating device in a safe position and prevents the energizing or startup of a machine or piece of equipment.

Normal production operations - using a machine or piece of equipment to perform its intended production function.

Other Employee - an employee who works in an area of the facility where lockout/tagout procedures are in effect or could take place. Individuals (such as customers) who enter the plant for a variety of reasons are also classified as “Other Employees.”

Personal Identification Tag - accompanies a personal lockout lock. Indicates that the energy isolating device and the equipment being controlled by it may not be operated until the personal lockout lock and personal identification tag are removed. A personal identification tag indicates that the authorized employee identified on the personal identification tag is currently servicing/maintaining that piece of equipment. Personal Identification Tags are predominantly white and constructed of vinyl or flexible plastic to allow the repeated use of grease pencils, if necessary. They are imprinted with the words, “DANGER, DO NOT OPERATE,” and have the user’s name permanently applied to them.

Personal Lockout Lock - is accompanied by a personal identification tag. Indicates that the energy isolating device and the equipment being controlled by it may not be operated until the personal lockout lock and personal identification tag are removed. Personal lockout locks indicate that an authorized employee is currently servicing/maintaining that piece of equipment. Personal Lockout Locks are manufactured by American Lock® and are easily identified by their red color and extended locking shank. Each lock is keyed differently, with each Authorized Employee having a key for their own lock only.

Point of operation - the point on a machine or piece of equipment where cutting, shaping, boring, or forming is accomplished upon the stock material.

Servicing and/or maintenance - workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining/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 to prepare a machine or piece of equipment to perform its normal production operation.

Tagout - the act of physically placing a tagout device (such as our standardized white vinyl tag) on an energy isolating device to comply with the established lockout/tagout procedure. The tagout device indicates that the energy isolating device and the equipment being controlled by it may not be operated until the tagout device is removed.

Tagout device - a prominent warning device that can be securely fastened to an energy isolating device. It indicates that the energy isolating device and its associated equipment may not be operated until the tagout device is removed. Our tagout device is a white vinyl-coated tag displaying the phrase “DANGER, DO NOT OPERATE.”

Unsafe to Operate Lock - is accompanied by a Unsafe to Operate Tag. Indicates that the energy isolating device and the equipment being controlled by it may not be operated until the unsafe to operate lock is removed. Unsafe to Operate Locks are used when a piece of equipment is unsafe to operate and there are no authorized employees currently

servicing/maintaining the piece of equipment. Unsafe to operate locks are manufactured by American Lock and are easily identified by their gold color and extended locking shank. Each lock is keyed alike, with only a finite list of authorized employees having keys to these locks.

Unsafe to Operate Tag - accompanies an Unsafe to Operate Lock. Indicates that the energy isolating device and the equipment being controlled by it may not be operated until the unsafe to operate lock is removed. Unsafe to operate tags are predominantly yellow and constructed of vinyl or flexible plastic to allow repeated use of grease pencils, if necessary. They are imprinted with the words, “Unsafe to Operate” and have a line where the user must identify themselves.

## 1.0 PURPOSE

The purpose of this program is to protect all personnel from injury due to the unexpected start-up of equipment (or release of stored energy) during servicing, maintenance, or repair. This program has been developed to comply with OSHA 29 CFR 1910.147 (The Control of Hazardous Energy Sources)

## 2.0 SCOPE

2.1 This program applies to all employees who work in an area where servicing and/or maintenance of equipment may take place. It also pertains to those individuals (including contractors, vendors, and visitors) who may enter these areas for a variety of reasons. All personnel that enter the plant are categorized as one of the following, as previously defined: Authorized Employees, Affected Employees, or Other Employees.

2.2 This program applies to the control of energy sources during servicing and/or maintenance of machines or equipment. **Servicing and/or maintenance (please read the definition) that takes place during “normal production operations” IS covered by this program if:**

- An employee is required to remove or bypass a guard or other safety device
- An employee is required to place any part of his/her body into the point of operation of a machine or piece of equipment (or where an associated danger zone exists) during the operating cycle without using alternative protective measures.
- An employee is required to perform set-up work or clear a jam that exposes him/her to the unexpected energization or startup of the equipment or release of hazardous energy.

2.3 This program does not apply to:

- Work on cord and plug connected equipment, where pulling the plug eliminates all sources of energy and the employee doing the repair has **total control** of the plug

## 3.0 RESPONSIBILITIES

3.1 The Safety Manager will:

- Develop and publish the lockout/tagout program
- Upon contact, assist the Facility Manager and supervisors with personnel training and guidance related to lockout/tagout program requirements

- Verify completion of periodic lockout/tagout inspections. These inspections ensure that authorized employees follow written machine-specific procedures

**3.2 The Facility Manager and Maintenance Supervisor** are responsible for the following:

- Developing written procedures for all pieces of equipment that have more than 1 source of energy
- Scheduling and assisting with the execution of lockout/tagout training for employees under their direction
- Issuing locks and tags to contractors and employees under their direction, and briefing on the machine-specific procedures to be used
- Assuring that only employees trained as "Authorized" are permitted to perform repairs on equipment
- Assuring that the procedure for shift change under lockout/tagout is followed
- Participating in the Failure to Remove a Lock procedure, when required
- Participating in periodic inspections of the performed by the program coordinator
- Maintaining an adequate supply of the required locking devices, tags, multiple lock adapters, and cable ties for use by employees
- Conducting updated training whenever:
  - there is a change in job assignments or energy control procedures
  - a new hazard is introduced due to a machine, equipment, or process change
  - a periodic inspection reveals inadequacies in the lockout/tagout program, machine-specific procedures, or knowledge of the employees
- Maintaining written records of training sessions

**3.3 Project Engineers/Coordinators** and Supervisors are responsible for the following:

- Coordinating lockout/tagout program requirements between VA Martinsburg and contracted employees on their respective projects
- Informing Affected Employees in the project area whenever lockout is to take place, including the pieces of equipment to be serviced, when they will be locked/tagged out, and when it is safe to resume operation

- Assuring that contracted personnel are properly trained in the use of our machine-specific procedures prior to allowing servicing and/or maintenance on any equipment
- Participating in any periodic inspections performed within their projects
- Participating in the Failure to Remove a Lock procedure for their projects
- Conducting updated training whenever:
  - there is a change in job assignments or energy control procedures
  - a new hazard is introduced due to a machine, equipment, or process change
  - a periodic inspection reveals inadequacies in the lockout/tagout program, machine-specific procedures, or knowledge of the employees
- Maintaining written records of training sessions

**3.4 Affected AND Other Employees** have the following responsibilities:

- Adhering to the policies set forth in this document
- Actively participating in the assigned training sessions and adhering to the information provided during these sessions
- Assuring that no employees in the area attempt to operate any locked out or tagged out equipment

**3.5 Purchasing** agents for the facility are responsible for:

- Purchasing locks and tags that meet the specifications outlined in this program
- Assuring that all new equipment purchased for the facility is capable of being locked out [refer to the definition “Capable of being locked out” at the beginning of this program and regulation 29 CFR 1910.147(c)(2)(iii)]



## 4.0 PROCEDURE FOR ENERGY CONTROL

### 4.1 General

- 4.1.1 Only Authorized Employees will be permitted to lockout and/or tagout equipment for servicing and repair. Those not trained as Authorized Employees will not perform servicing and/or maintenance on machines and equipment.
- 4.1.2 When lockout/tagout is required, Authorized Employees shall follow machine-specific procedures for multi-source pieces of equipment.
- 4.1.3 If a machine or piece of equipment is capable of being locked out, a lock **must** be incorporated into the lockout/tagout process.
- 4.1.4 An approved tag must be attached to each lock so that the owner of the lock can be immediately identified.
- 4.1.5 All employees and personnel, upon observing a machine or piece of equipment that is locked out **OR** tagged out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or equipment in any way.
- 4.1.6 If tags must be used alone, they will be attached to the energy isolating devices with non-reusable, self-locking tie straps that must be cut for removal. These devices shall have a minimum unlocking strength of no less than 50 pounds (such as an all environment-tolerant nylon cable tie).
- 4.1.7 The tags will be filled out in a legible manner to warn employees not to use the machine or equipment.
- 4.1.8 For tagout only operations, additional means will be taken to ensure a level of protection equivalent to the use of a lockout device. These include, but are not limited to, removal of an isolating circuit device (such as a fuse), blocking of a controlling switch or panel, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization. **Pulling a fuse shall NEVER be the sole substitute for lockout or tagout!**

### 4.2 Lockout and Tagout devices must meet the following specifications:

- 4.2.1 Personal lockout locks are easily identified by their red color and extended locking shank. Each lock is *keyed differently*, with each Authorized Employee having only one key for each of their locks. These locks are substantial enough to prevent removal without the use of excessive force or unusual techniques, such as the use of bolt cutters

or other metal cutting tools. Personal lockout locks shall not be used for any purpose other than lockout/tagout. No one in the facility is permitted to maintain a "master key" or copies of another person's lockout keys.

- 4.2.2 Personal identification tags are predominantly white and constructed of vinyl or flexible plastic to allow the repeated use of grease pencils, if necessary. They are imprinted with the words, "DANGER, DO NOT OPERATE," and have the user's name permanently applied to them. Personal identification tags shall include extra lines to allow for written descriptions of the lockout or tagout circumstances. Personal identification tags shall not be used for any purpose other than lockout/tagout. If a piece of equipment is not capable of being locked out, a personal identification tag shall be used as a tagout device when an authorized employee is in the process of servicing/maintaining a piece of equipment.
- 4.2.3 Unsafe to operate locks are easily identified by their gold color and extended locking shank. Each lock is keyed alike, with only certain maintenance personnel having keys to these locks. These locks are substantial enough to prevent removal without the use of excessive force or unusual techniques, such as the use of bolt cutters or other metal cutting tools. Unsafe to operate locks shall not be used for any purpose other than lockout/tagout.
- 4.2.4 Unsafe to operate tags are predominantly yellow and constructed of vinyl or flexible plastic to allow repeated use of grease pencils, if necessary. They are imprinted with the words, "CAUTION, DO NOT OPERATE" and have a line where the user must identify themselves. If a piece of equipment is not capable of being locked out, a unsafe to operate tag shall be used as a tagout device when a piece of equipment is not to be operated but there is no authorized employee currently servicing/maintaining the equipment.
- 4.2.5 Other locking attachments are permitted only if they allow use of the locks and tags specified above and meet with the Maintenance Supervisor's approval. Exceptions to this rule include the following
  - 4.2.5.1 The Fire Department will continue to follow their existing procedure for isolating fire protection features when no servicing or maintenance will take place.
  - 4.2.5.2 The Boiler Plant will continue to use its existing system to isolate boiler control devices prior to servicing or maintenance. However, each employee must still attach their own lock(s) to individual devices or a group lockout device.

#### 4.3 Basic Lockout Procedure:

- 4.3.1 Notify the supervisor and Affected Employees of the pending lockout/tagout situation, including what equipment will be taken out of service and when lockout/tagout procedures will be in effect.
- 4.3.2 Obtain the applicable machine-specific lockout/tagout procedure, if required. Review the procedure to be sure that you understand the types and magnitudes of energy sources presented by the machine, the hazards of these sources, and the proper techniques to be used in controlling these sources. **If you don't understand the procedures, ask the Maintenance Supervisor for assistance BEFORE PROCEEDING!**
- 4.3.3 Follow the machine-specific procedures to shut down your equipment. This orderly shutdown is used to avoid creating any additional or increased hazards.
- 4.3.4 Follow the machine-specific procedures to ensure that all types of hazardous energy are isolated (shut off at their **source**). **NOTE: STAND TO THE SIDE OF ELECTRICAL PANELS WHEN OPENING MAIN DISCONNECT SWITCHES!!! PANELS HAVE BEEN KNOWN TO EXPLODE WHEN DISCONNECTED UNDER A LOAD.**
- 4.3.5 Attach a lockout/tagout device to **EVERY energy isolating device** that pertains to the piece of machinery or equipment. **Each Authorized Employee performing the servicing and/or maintenance must use their own devices to accomplish this step as follows:**
  - 4.3.5.1 Lockout devices must be attached in a manner that will hold the energy isolating devices in the “safe” or “off” position.
  - 4.3.5.2 Tagout devices must be attached to the energy isolating device in a manner that clearly indicates that the operation or movement of energy isolating devices from the “safe” or “off” position is prohibited.
  - 4.3.5.3 Test the disconnect or switch handle after lockout to make certain it can NOT be moved to the “ON” position.**
  - 4.3.5.4 Verify blade openings visually (whenever possible) when working on electrical conductors.**
- 4.3.6 Ensure that all personnel are clear of the area.

- 4.3.7 **Follow the procedure** to ensure that all sources of potentially hazardous stored or residual energy are relieved, disconnected, restrained, and otherwise rendered safe. Sources of stored energy include electricity (located in capacitors, too), air pressure, gas pressure, springs under pressure, gravity that can move rams or other mechanical components, hydraulic (fluid) pressure, chemical energy, heat, steam, or other energy.
- 4.3.8 Follow the procedure to **verify** that the machine or piece of equipment has been isolated and deenergized. This step usually involves the operation of a control switch, but the procedure for your machine or piece of equipment **must** be referred to for the exact steps. **If working on conductors, test for no voltage on phase-to-phase and phase-to-ground before beginning any work.**
- 4.3.9 Follow the machine-specific procedure to return all energy control switches or devices used in the previous step to the “off” or “neutral” position. The machine or piece of equipment is now locked/tagged out.
- 4.3.10 If there is a chance that stored energy could accumulate again during the lockout/tagout scenario, checks will be made at short intervals throughout the maintenance or servicing process until the possibility for accumulation no longer exists or the lockout/tagout task is completed.
- 4.3.11 Perform the necessary maintenance and/or servicing.
- 4.3.12 In the event that lockout/tagout devices must be temporarily removed from the energy isolating device to energize, test, or reposition the machine or equipment, the following events must take place first:
- 4.3.12.1 Inspect the work area to ensure that nonessential items have been removed and that all machine or equipment components are operational.
- 4.3.12.2 Check to ensure that all employees are clear of the entire operating area or have been safely positioned.
- 4.3.12.3 Notify all Authorized and Affected Employees involved that the lockout or tagout devices will be removed.
- 4.3.12.4 Have each Authorized Employee remove his/her own **personal** lockout/tagout devices. No employee is permitted to remove another employee’s personal lockout lock. The **ONLY** exception to this rule is as follows: if an Authorized Employee has left the facility without removing a lockout device, the

Maintenance Supervisor and Facility Manager must follow the procedure for Failure to Remove a Lock outlined in Section 7.0 of this program.

4.3.12.5 Perform the necessary testing, positioning, or adjustments.

4.3.12.6 Restablish the lockout/tagout procedures implemented at the beginning of the task before additional maintenance and servicing takes place. Use the machine-specific procedure for this.

4.3.13 After the maintenance and servicing task is complete, the following steps must take place to remove the lockout/tagout devices:

4.3.13.1 Inspect the work area to ensure that nonessential items have been removed and all machine or equipment components are operational.

4.3.13.2 Replace all guards or safety devices that were removed during the servicing or maintenance.

4.3.13.3 Check to ensure that all employees are clear of the entire operating area.

4.3.13.4 Notify all Authorized and Affected Employees involved that the lockout or tagout devices will be removed.

4.3.13.5 Have each Authorized Employee remove his/her own personal lockout/tagout devices. No employee is permitted to remove another employee's personal lock. The **ONLY** exception to this rule is as follows: if an Authorized Employee has left the facility without removing a personal lockout device, the Maintenance Supervisor and Facility Manager must follow the procedure for Failure to Remove a Lock outlined in Section 7.0 of this program. Authorized employees may remove an unsafe to operate lock that was applied by another employee when troubleshooting, returning the equipment to service, etc. The authorized employee who removed the lock is then responsible for returning the unsafe to operate lock and tag.

## **5.0 GROUP LOCKOUT/TAGOUT ALTERNATIVE**

5.1 For major projects involving many employees and several points of lockout/tagout, it may not be feasible to attach a long line of lock adapters to each lockout point. For this type of project, the group method of lockout will be used to ensure that each technician locks out all hazardous energy sources. The steps for a group lockout outlined below must be used **IN ADDITION TO THE**

## **STEPS FOR A STANDARD LOCKOUT/TAGOUT OPERATION OUTLINED IN SECTION 4.3 OF THIS PROGRAM:**

- 5.2 The Maintenance Supervisor or specific shop supervisor will designate an Authorized Employee as the Responsible Person for all personnel involved in the lockout/tagout operation.
- 5.3 The Responsible Person must disable **ALL** hazardous energy sources according to the machine specific procedure and the steps outlined in Section 4.3 of this program.
- 5.4 The Responsible Person will place the keys to these locks in a master "lock box" available from the Maintenance Manager.
- 5.5 All Authorized Employees working on the project will apply their own lockout lock and tag to the lock box, thereby securing all sources of hazardous energy with one lock and tag.

## **6.0 MAINTAINING LOCKOUT/TAGOUT PROTECTION FOR SERVICING/MAINTENANCE EXTENDING FOR MORE THAN ONE SHIFT**

- 6.1 Equipment disabled under this program must remain secured through shift changes, if necessary. However, the individual leaving must remove his/her personal locking devices. Turnovers such as this will take place as follows:
  - 6.1.1 The employee going off shift will wait for the timely arrival of the oncoming employee.
  - 6.1.2 The "new" employee will install his personal locks/tags to all applicable devices.
  - 6.1.3 The original technician will remove his personal locks/tags from the equipment.
  - 6.1.4 If the employee going off shift and the employee coming on shift can not make the exchange described above, the equipment's energy sources shall remain locked out as follows:
    - 6.1.4.1 The employee going off shift shall apply gold unsafe to operate locks/tags to applicable energy sources.
    - 6.1.4.2 The employee going off shift shall remove their personal (red) locks/tags
    - 6.1.4.3 When the oncoming employee arrives, they shall apply their personal (red) locks/tags to the applicable energy sources.

6.1.4.4 The oncoming employee shall then remove the gold unsafe to operate locks/tags previously applied by the employee going off shift.

**6.1.4.5** Applying and removing locks/tags in this sequence will assure that the equipment's energy sources remain isolated through the shift change.

**6.1.5** If group lockout is used, the initial Responsible Person will coordinate the transfer of locks/tags with the "new" Responsible Person to ensure continuity of the lockout/tagout operation.

## **7.0 PROCEDURE FOR FAILURE TO REMOVE A PERSONAL LOCK/TAG**

**7.1** When an employee could not, or did not, remove his/her personal lock/tag from the machine or equipment prior to leaving the facility, and the equipment **needs** to be started, the following steps will be taken:

7.1.1 The employee's direct supervisor **must** verify that the employee has left the facility. As a minimum, the supervisor will check with fellow employees and check the employee's normal and lockout/tagout work areas.

7.1.2 The supervisor must make reasonable efforts to contact the employee at home and notify him/her of the situation. If possible, the employee will return to the facility to remove his/her lock/tag.

7.1.3 If the employee cannot return to remove the locks/tags, the supervisor will review the equipment with the Facility Manager, verifying that it is safe to operate. The on-duty Police Officer will be notified of the pending removal.

7.1.4 The lock will be removed with bolt cutters or a similar device.

7.1.5 The employee whose lock has been removed **will** be notified of this situation prior to his/her resuming work at the facility. At a minimum, this will be accomplished by leaving a message at the employee's home **AND** making personal contact before the start of his/her next work shift. A sample note for documentation and contact purposes is located at the end of this program.

## **8.0 OUTSIDE CONTRACTORS**

- 8.1 When outside contractors will perform servicing or maintenance on our equipment, they must follow their own lockout/tagout program with **two exceptions**: the contractor will use OUR lockout locks (unless otherwise approved by the Facility Manager), and the contractor will use OUR machine-specific procedures (no exceptions).
- 8.2 The Maintenance Supervisor or Project Engineer/Coordinator will brief the contracted personnel on the machine-specific procedures to be used for the equipment. In addition, he will ensure that a mutual understanding exists between our employees and the contracted employees concerning the requirements of both lockout/tagout programs.
- 8.3 The Maintenance Supervisor or Project Engineer/Coordinator will issue a personal lock and tag to each contracted employee involved in the lockout/tagout process.
- 8.4 The Area Supervisor will ensure that all Affected Employees understand when and where the lockout/tagout condition will be in effect.

## **9.0 PERIODIC INSPECTIONS**

- 9.1 Periodic inspections will be performed to ensure that employees become proficient with machine-specific procedures. The Facility Manager, Maintenance Supervisor, and an Authorized Employee (other than the Authorized Employee performing service) will participate in the inspection process. The inspection will include the following:
  - Ensure that the employees performing the work have been trained as Authorized.
  - Verify that the locks, tags, and attachment devices used conform to the specifications of the program.
  - Check that the machine-specific procedures are available and that all steps have been accomplished.
  - When lockout is used, the inspector will review the employee's responsibilities under the energy control procedure being inspected. The review will take place with all Authorized Employees performing the lockout/tagout operation.
  - When tagout alone is used, the inspector will review the employee responsibilities under the energy control procedure being inspected. The review will take place with all Authorized Employees performing the



tagout operation and will outline the training elements set forth in 29 CFR 1910.147(c)(7)(ii) for tagout-only operations.

- Review any deficiencies uncovered during the inspection with the employee(s) performing the work to ensure immediate and future compliance.

9.2 Documentation of the following will be forwarded to the Safety Manager for verification and record retention purposes:

- Date of Inspection
- Identification of the equipment being serviced, repaired, or maintained.
- Names of the Authorized Persons inspected.
- The names of those conducting the inspection, including at least one Authorized Person not involved in the lockout/tagout scenario.
- Comments regarding deficiencies and corrective actions taken.

## **10.0 TRAINING REQUIREMENTS**

10.1 The Facility Manager, Maintenance Supervisor, and Safety Manager will jointly ensure that all employees covered by this program receive proper training and maintain the documentation.

10.2 Training sessions, while they may be split to accommodate training, will include the following information:

### **Maintenance Supervisor and Shop Supervisors**

- Procedures to use when an employee leaves the premises without removing a lock/tag
- The recognition of hazardous energy sources in the workplace, the types and magnitudes of those sources, and the proper methods and means necessary for energy isolation and control
- Instruction about lockout/tagout procedures and the prohibition relating to attempts to restart or reenergize machines or equipment that have been locked or tagged out
- The locations of machine-specific lockout/tagout procedures
- Recognition of the standard lock and tag

- Training in the use and limitation of tags as outlined in 29 CFR 1910.147(c)(7)(ii)

#### **Authorized Employees**

- The recognition of hazardous energy sources in the workplace, the types and magnitudes of those sources, and the proper methods and means necessary for energy isolation and control
- Instruction about lockout/tagout procedures and the prohibition relating to attempts to restart or reenergize machines or equipment that have been locked out or tagged out
- The location of machine-specific lockout/tagout procedures
- Recognition of the standard lock and tag
- Training in the use and limitation of tags as outlined in 29 CFR 1910.147(c)(7)(ii)

#### **Affected AND Other Employees**

- Instruction in the purpose and use of the lockout/tagout program
- Instruction about lockout/tagout procedures and the prohibition relating to attempts to restart or reenergize machines or equipment that have been locked or tagged out
- Recognition of the standard lock and tag

## **11.0 REFERENCES**

U. S. Department of Labor. (1999). 29 CFR 1910.147. Washington, DC: Office of the Federal Register National Archives and Records Administration.

## NOTIFICATION OF LOCK/TAG REMOVAL

\_\_\_\_\_  
Date Issued

To: \_\_\_\_\_: on \_\_\_\_\_, \_\_\_\_\_  
Name of Employee Date Removed Supervisor Involved in Removal

took part in the removal of safety locks/tags identified as belonging to you from

\_\_\_\_\_. By law in accordance with 29 CFR 1910.147, you  
Identify Piece of Equipment

must be notified of this prior to returning to work at this facility. Please contact

\_\_\_\_\_ **BEFORE** returning to work to review the  
Employees Direct Supervisor

situation and receive your lockout/tagout equipment.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Reviewing Supervisor's Signature

Please return this form to the Safety Manager for record-keeping purposes.

## PERIODIC LOCKOUT/TAGOUT INSPECTION RECORD

Date of Inspection: \_\_\_\_\_ Equipment \_\_\_\_\_

Inspectors, including at least one Authorized Persons:

\_\_\_\_\_  
\_\_\_\_\_

Authorized Employee(s) performing servicing, repair, or maintenance:

\_\_\_\_\_

If necessary, specific procedure used by the Authorized Employee(s):

\_\_\_\_\_

	<u>Yes</u>	<u>No</u>
1. Were the affected employees notified prior to the project start?	_____	_____
2. Are the appropriate locks, tags, and attachment devices available?	_____	_____
3. Are machine-specific procedures available at the work site?	_____	_____
4. Are all sources of energy de-energized, locked, and tagged out?	_____	_____
5. Have <b>all</b> exposed employees used locks/tags on <b>all</b> disconnects?	_____	_____
6. Was the on/off switch returned to "off" position following try out?	_____	_____
7. Has the inspector reviewed and corrected any deficiencies?	_____	_____

Comments: \_\_\_\_\_

We certify that any problems discovered during this inspection were reviewed with the authorized employees on this job during the inspection process:

\_\_\_\_\_  
Authorized Employee

\_\_\_\_\_  
Authorized Employee

\_\_\_\_\_  
Inspector