Purpose:

This document is to provide all employees the proper procedures for controlling of potential hazardous energy from all equipment in the facility.

Scope:

All supervisors and managers will comply with this program. Employees will use the lockout/tagout procedures when working on or near de-energized circuit parts or on equipment where there is the possibility of unexpected startup or movement of the equipment

Controlling Hazardous Energy:

Controlling hazardous energy starts with having a complete inventory of any equipment that contains hazardous energy sources and procedures to ensure that the energy source(s) are identified and controlled. The location specific procedures will ensure that the following steps are included when Locking Out and then Releasing the equipment back into operation.

Procedures:

There are a few activities to follow that ensure the lockout procedure is effective at protecting employees. These include:

1. Developing and documenting procedures
2. Training employees on the procedures
3. Inspecting the procedures on a regular basis

Developing Machine Specific Procedures

Authorized employees who perform lockout/tagout must have a documented procedure to follow when doing lockout that includes:

1. The proper steps needed to shut down the equipment and use lockout equipment
2. How and where to place the lockout equipment
3. Testing to ensure that hazardous energy has been controlled

4. The proper steps to release equipment from lockout conditions

Procedures are written by an employee familiar with the hazards of the equipment and means of controlling them. The procedures should be easily available. This can be accomplished by attaching procedures to the machine, using a tool to document procedures (I.E. Inspect N Track program from Brady), or another method identified at the local level agreed to by local leadership.

Sequence of Lockout/Tagout Procedures

1. Notify all affected employees that a lockout/tagout system is going to be used.
2. Inspect carefully and locate and identify all isolating devices. Be certain which switch(s), valve(s), or other energy isolating devices control the equipment to be locked / tagged out. More than one energy source (electrical, mechanical, or others) may be involved so be certain all types and locations(s) of energy isolating means are identified and in place.
3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
4. Operate the switch, valve, or other energy isolating device(s) to isolate the equipment from its energy source(s), then dissipate, deactivate or restrain stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.)
5. Lockout / tag out the energy isolating devices with assigned individual lock(s) and tag(s). Use the method(s) detailed in the site written procedures; i.e., locks and tag locations and additional safety measure, etc.
6. Test the equipment to ensure that all energy sources have been turned off or isolated then attempt to start the equipment using the normal operating controls to make certain the equipment will not operate. Caution: Return operating control(s) to "neutral" or "off" position after the test.
7. The equipment is now locked out / tagged out.

Restoring Machines or Equipment to Normal Operations

1. Notify all affected employees that the machine or equipment is being restored to normal operations but is not yet accessible.
2. After completing the service or maintenance and determining that the equipment is ready for normal production operations, check the area around the equipment for tools and any other materials and then ensure that everyone is clear.
3. Remove all lockout / tag out devices. Operate the energy isolating devices to restore energy to the machine or equipment.
4. If someone other than the employee who placed the lockout device is required to remove the device the owner must be notified immediately or as soon as they return to work. This notification must be directly between the employee's manager or designated representative and the employee. Phone messages and/or emails are not sufficient for notification. Only the employee's manager or their designated representative can remove another employee's lockout device. A positive form of control such as limiting site access until specific communication with the employee is an example.

Using Tagout Only Procedures

If equipment does not have a provision for locking out hazardous energy sources then a tag out only system can be used. Any tag out system must provide equal safety protection to the employee performing lockout/tagout as the lockout system. The tags will be placed in the same location where lockout devices would have been placed. Any employee using a tag out procedure must be trained specifically in this type of work.

Multiple Energy Source Procedures

Electrical lockout/tag out procedures need to work with procedures for safely isolating other energy systems. Some examples are hydraulic, pneumatic, thermal, process gases and fluids, chemical, and mechanical. Written procedures must provide for the identification and isolation of all energy sources that could be a danger to employees.

Procedures Involving More Than One Person

If more than one individual is required to perform lockout/tagout of equipment each employee must place their own personal lockout device on the energy isolating device(s).

When an energy isolating device cannot accept multiple locks or tags, use a multiple lockout / tag out hasp or a lockout/tagout key box. If using the multiple lockout/tagout hasp, each employee will place their lock on the hasp. If using lockout/tagout key box, use a single lock to lockout the machine or equipment. Place the key in the lockout/tagout box. Each employee will then use their own lock to secure the box. As each person no longer needs to maintain their lockout protection, that person will remove their lock from the hasp or box. The last employee to remove their lock from the multiple lockout device will ensure that the specific start up procedures for the equipment are followed and employees in the area are notified.

Authorizing Employees For Lockout/Tagout Procedures:

Employees who perform Lockout/Tagout will be authorized by their manager to work on equipment. It is management's responsibility to ensure each employee has proper training to perform the required work. Authorizations will be either for individual equipment or may cover specific types of equipment or areas within the workplace. The authorization will be signed by the employee and their manager and kept on file. Authorization will be done whenever a piece of new equipment requires service, an existing piece of equipment is modified or changes are made to the employee's job description. The employee and their manager will review the authorization at least on a yearly basis to ensure it is accurate.

Training:

Employee Training on Hazardous Energy Work Procedures

Employees will have training in basic hazardous energy concepts and understand the significance of implementing the procedures. Because of the very real danger involved in these tasks, all employees who use these procedures must be trained to know the purpose of the devices used to control hazardous energy. They must also know what specific tasks might expose them to hazardous energy and control measures to prevent injury. The location will also provide training so employees understand the purpose and function of the site program (knowledge, skills, application, use, removal).

Authorized Employees

Authorized employees are employees who are authorized to perform lockout/tagout and service or maintenance of equipment. Required training for these employees consists of:

1. Recognizing hazardous energy sources, types and magnitude of energy that will be found in the workplace and what methods and means for isolation and control can be used.
2. Purpose and use of the procedure. This is site specific training to ensure that all employees utilizing a Hazardous Energy Control procedure understand and can explain the procedure.
3. What devices are available for locking out equipment.
4. Informing other employees who may be working in or around an area using lockout/tag out
5. Instruction about procedures for restoring locked / tagged equipment.
6. The proper use of tags and locks

Affected Employees

An affected employee is one who works in an area where lockout/tagout can be performed. Required training for an affected employee includes:

1. The purpose of hazardous energy control procedures.

2. The purpose of the hazardous energy control devices (locks and tags, etc.).
3. How the procedures ensure their safety when working near equipment.

When to Retrain Employees

Any employee who works on new equipment or equipment that has been modified from the original training will need to be retrained. If job responsibilities change or new equipment is introduced, retraining must also take place. All retraining documents must be maintained.

Equipment:

Lockout/Tag out Device Requirements

Locks and tags used at the site must be standardized to ensure protection of personnel. Standardization means the locks and tags used for hazardous energy control are very similar in appearance and will not be mistaken for locks or tags used for other purpose. Tags allow the owner to write their name and contact information and will not be destroyed by environmental conditions. Tags must be secured by a method that does not allow them to be accidentally removed. Tag attachments are not reusable. A typical nylon cable tie is sufficient.

Periodic Inspections:

Periodic inspections are designed to identify work procedures that may need modification and/or individual work practices that need to be revised. Review each employee doing energy control procedures at least annually. The inspections must be:

1. Performed by an authorized employee (other than the one being inspected)
2. Designed to correct any deviations or inadequacies observed in the procedures or work practices
3. Reviewed with employees locking / tagging out equipment
4. Inspection reports must be maintained.

Outside Personnel:

Any outside contractor will receive information about the sites lockout/tag program. The outside contractor should have their own lockout/tagout procedures that are compliant with 29 CFR 1910.147.

If the contractor does not have a program or supplies, the site may do one of two things:

- Not allow the contractor to perform the lockout/tagout until they have met the requirements of 29 CFR 1910.147 or
- Train that contractor on the sites policy and the machine specific procedures of the machine they are locking out. The site must then also supply locks and tags.