

# LOCKOUT TAGOUT

MARCH 5, 2014

OTCO WATER WORKSHOP

COLUMBUS, OH





# **LOCKOUT TAGOUT TRAINING**

**in accordance with 29 CFR 1910.147**

**Edition 6**

# Why lockout/tagout is necessary?

- Prevents injury due to unexpected startup of equipment or released energy
- Maintenance/servicing operations often require employee to place part or all of his/her body into machine's point of operation



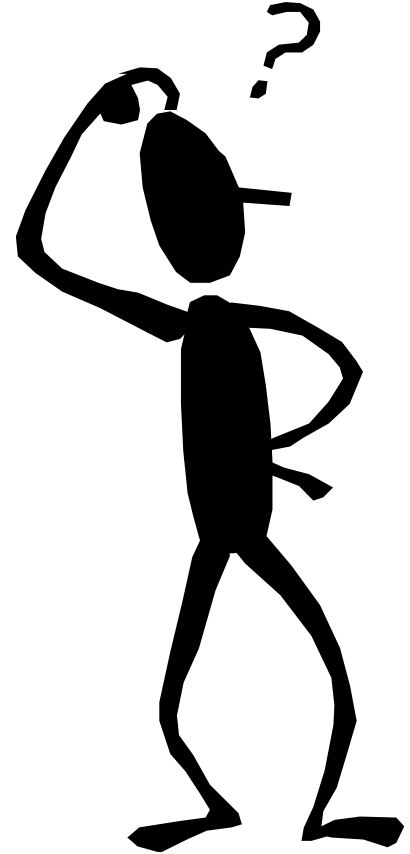
# What needs to be locked out?

- **Type, size, complexity of equipment does not influence whether or not it is locked/tagged out**
- **The need to lock out machinery/equipment depends on the hazards due to unexpected energization or release of energy**



# Who is Affected?

- Authorized employees
- Affected employees
- Other employees



# Functions covered by lockout/tagout



- **Servicing of machines and equipment**
- **Performing maintenance on equipment and machinery**
- **Normal operations**

# Lockout/Tagout

## Program Components



# Energy control program components

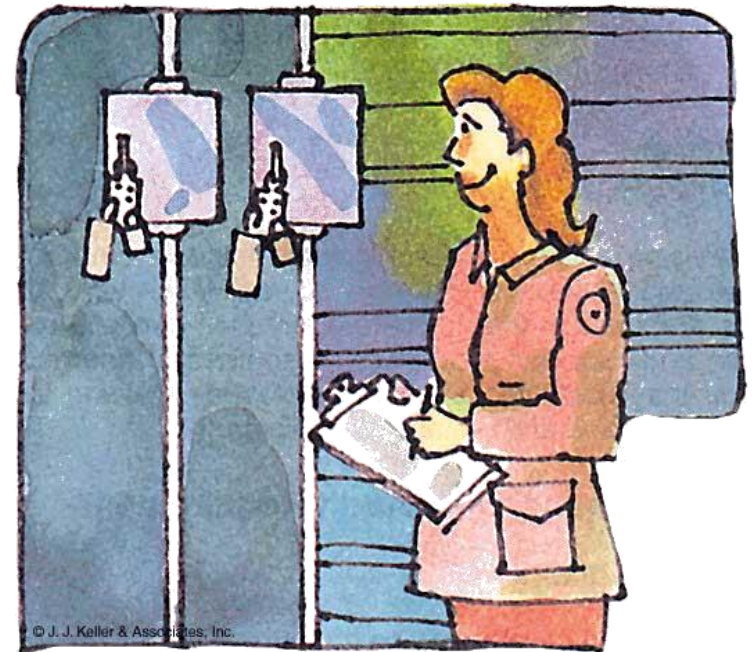


- Energy control procedures
- Training
- Periodic audits



# Program Components (cont.)

- Evaluate machines, equipment, and processes
- Develop energy control plan
- Look for all sources of energy
- Identify secondary and stored energy sources





## Hazardous energy sources (cont.)



○ **Hydraulic**

○ **Chemical**

○ **Thermal**

## Hazardous energy sources (cont.)

- **Water under pressure**

- **Gravity**



## Shutdown procedure

- **Each piece of equipment or machine must be shutdown according to written energy control procedures**
- **Orderly shutdown avoids additional or increased hazards**
- **Authorized employee uses shutdown procedures that are established for the machine**

# Isolate machinery from its energy sources

- Determine type of devices to be used
- Placement of isolating devices



# Lockout devices

- Types used
- Standardized for easy recognition
- Authorized employee may never use someone else's lockout device
- The lock must identify the person who applied it



# Tags

- **Types used**
- **Standardized for easy recognition**
- **The attachment means for a tag must be:**
  - non-reusable
  - attachable by hand
  - self-locking and non-reusable with locking strength of 50 pounds
  - equivalent to a one-piece, all-environment-tolerant nylon cable tie





## Tags (Cont.)

- The tag's legend must include the following types of statements:

**DO NOT START**  
**DO NOT OPEN**  
**DO NOT CLOSE**  
**DO NOT ENERGIZE**  
**DO NOT OPERATE**

# Lockout/Tagout

## Affected Employees

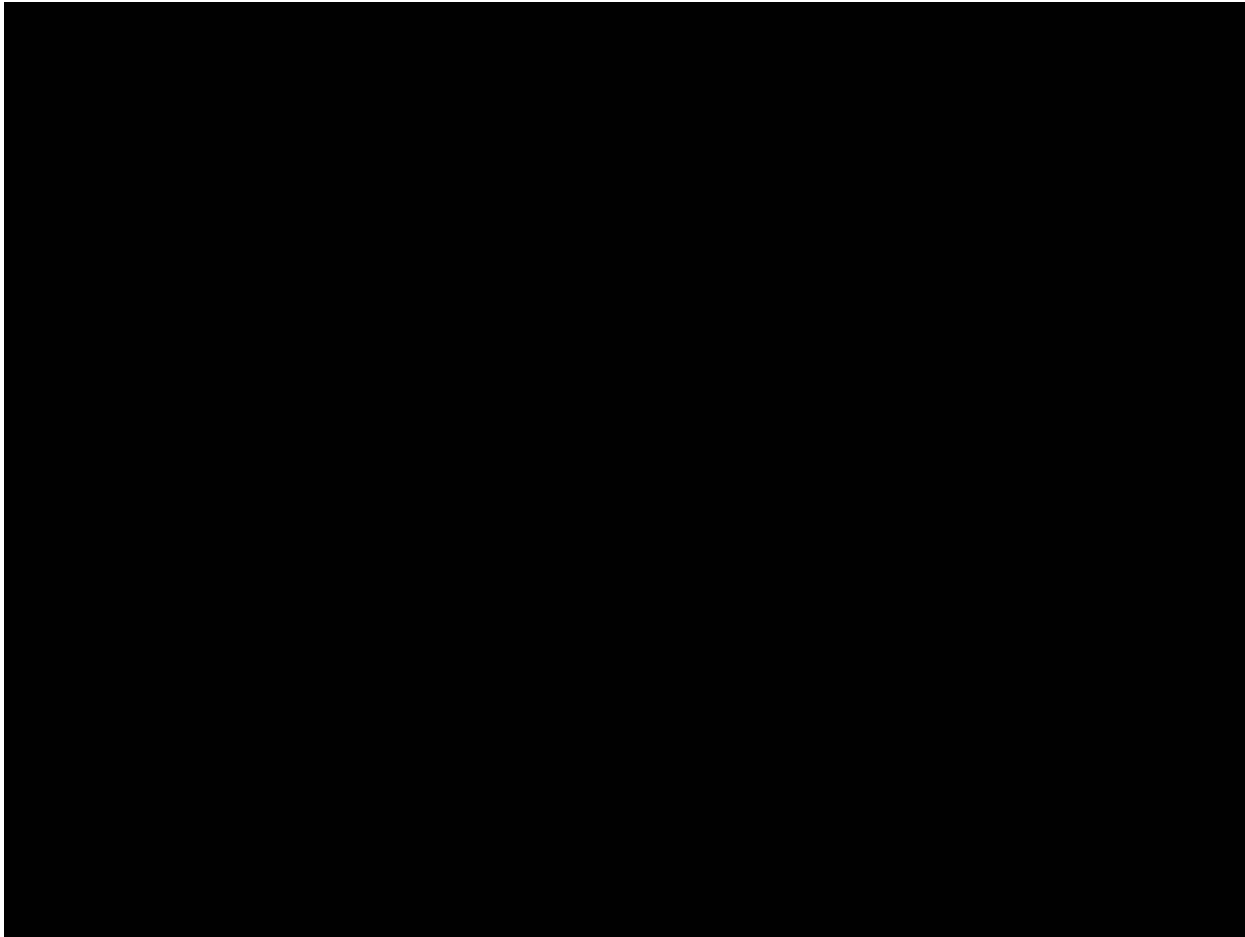
# Affected Employees

## *Definition*

- **An employee who is working in an area where lockout tagout is being performed**

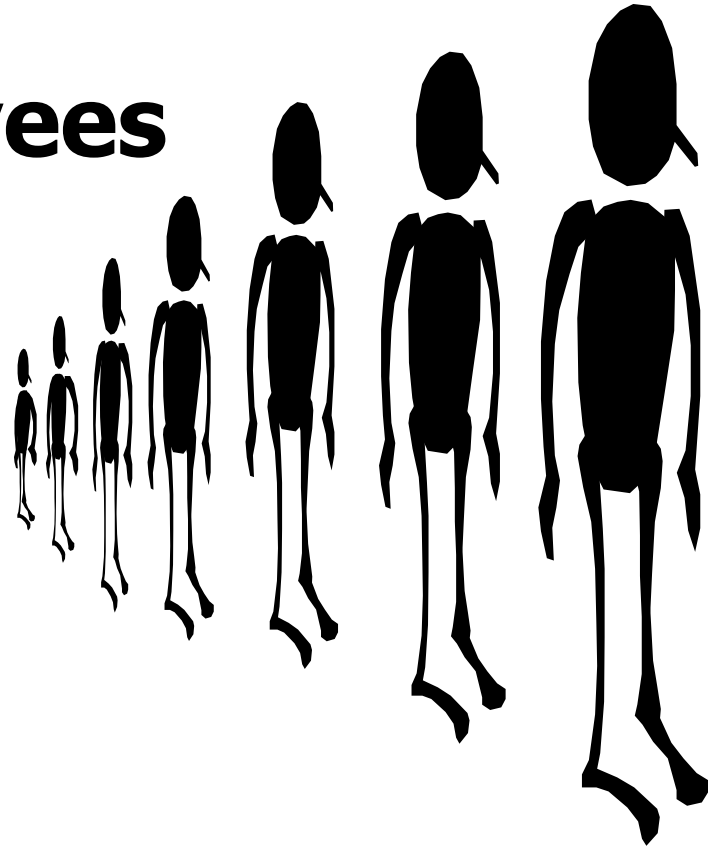


# Affected Employees



# Lockout/Tagout

## All Other Employees



## Other Employees

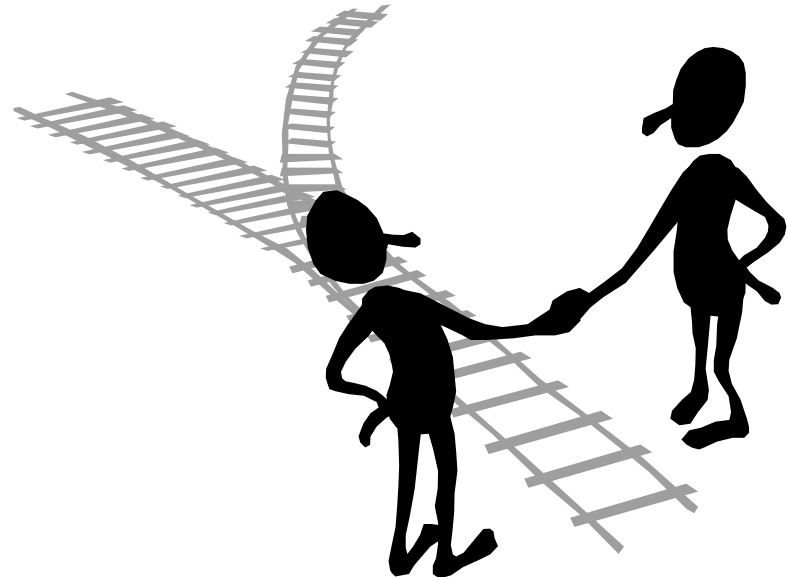
### *Definition*

- **An employee who may work in an area where lockout tagout is being performed**



## Other Employees (cont.)

- **Must be trained for LOTO procedures**



# Lockout/Tagout

## Authorized Employees



# Authorized Employees

## *Definition*

- **An employee who locks out or tags out equipment or machines**



## Preparation for shutdown

- **Locate all energy sources**
- **Inform all affected persons**
- **Each piece of equipment or machine must be shutdown according to written energy control procedures**
- **Orderly shutdown avoids additional or increased hazards**

## Shut Down (cont.)

- **Position lockout/tagout devices**
- **Only authorized employees can attach the devices**
- **Authorized employees check for and relieve:**
  - electrical energy capacitors
  - residual pressure in lines and pipes



## Shut Down (cont.)

- **Authorized employee verifies that all locks and tags are in place**
- **Authorized employee tries to operate the equipment**



## **Restoring energy to the equipment/machine**

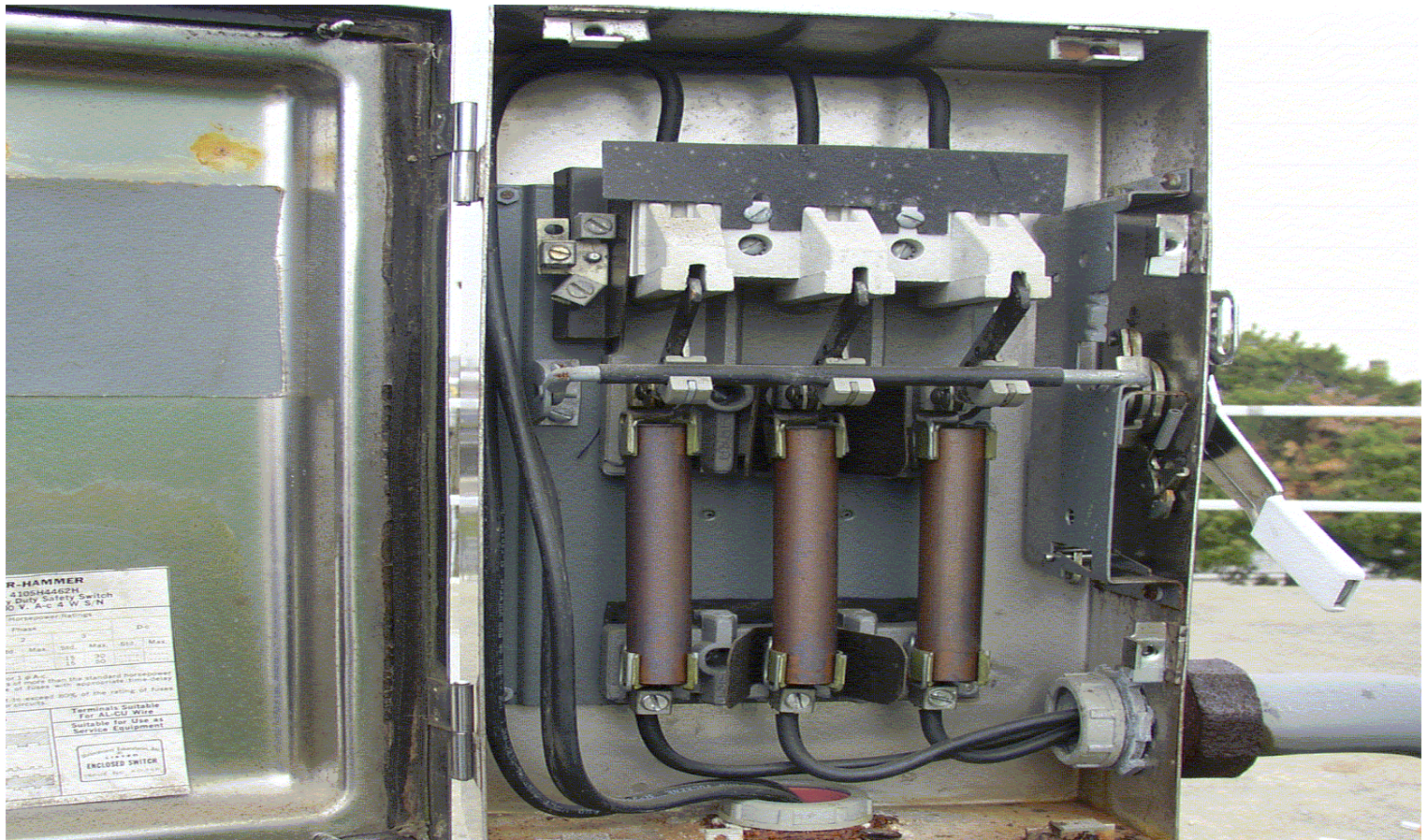
- Authorized employees remove tools from the area, replace guards**
- Authorized employees ensure that all employees are safely positioned or removed from the area**
- The authorized employee who applies the lock is the only one who can remove it**
- They know special requirements for testing and positioning equipment**

## Restarting/ Re-energizing equipment (cont.)

- Only authorized employees may remove a machine from lockout/tagout
- Affected employees must not attempt to restart or re-energize machines/equipment that are locked/tagged out



# Authorized Employees



# Lockout/Tagout

# Special Circumstances





# Group lockouts

- **Must use group lockout devices (hasps) to accommodate all locks**
- **Each authorized employee must affix a personal lockout or tagout device to the group lockout device when he/she begins work**
- **Each authorized employee must remove those devices when he/she stops working on the machine/equipment**



# Shift changes

- **The first employee's lock remains in place until the next shift's employee applies his/her lock**



# Removing a lock

- **If an employee is not available to remove a lock, the employer must:**
  - verify that the employee is not in the facility
  - make reasonable efforts to contact the employee
  - inform the employee of the removal before he/she resumes work

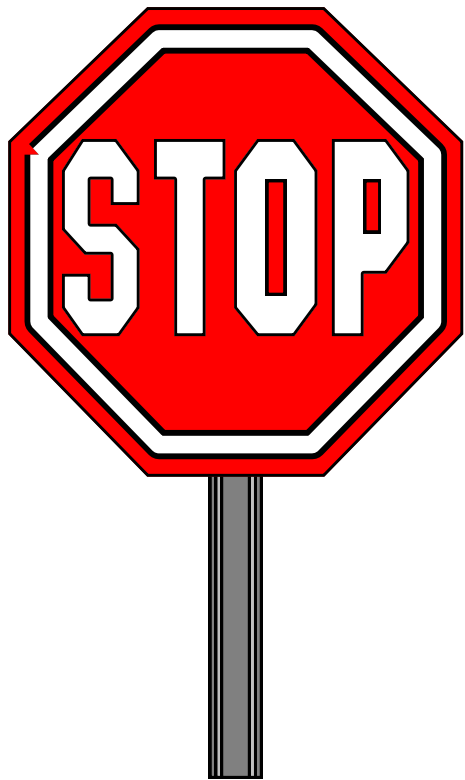


**This completes the presentation. It is your employers responsibility to certify you.**



# Questions?





**THANK YOU!**