Commonwealth Scaffold, LLC

# Lockout/Tagout Program and Training Materials

Effective Date: 12/14/2012

Revision #:



# **Table of Contents**

Lockout/Tagout Program	1
Employee Handout	8
Presentation Instructor Notes	9
Presentation Quiz	11
Presentation Sign-In Log	12

Prepared by: Date: Approved by: Date:

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# Commonwealth Scaffold, LLC

# Lockout/Tagout Program

Effective Date: 12/14/2012

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# Reference Standard

Occupational Safety and Health Administration: The Control of Hazardous Energy (Lockout/Tagout) Subpart J, 29 CFR 1910.147

# **Purpose**

This procedure establishes minimum standards for Lockout/Tagout in our facility. The goal is the prevention of accidents caused by the accidental energization of equipment or release of stored energy.

# Scope

This procedure applies to all of our company employees, all contractors and vendors performing work on company property, and all other individuals who are visiting or have business with our company. This procedure covers the servicing and maintenance of machines and equipment in which the energization or start up of the machines or equipment, or release of stored energy, could harm employees. This standard establishes minimum performance requirements for the control of such hazardous energy.

# Responsibilities

- Management is responsible for developing and periodically reviewing this program.
- Management is also responsible for appropriate employee training.
- Management and supervisors are responsible for enforcement of this program.
- Employees shall comply with all procedures outlined in this policy.
- Contractors and vendors shall comply with all procedures outlined in this policy.

# Definitions

**Affected Employee:** An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her 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.

**Contractor:** A non-company employee being paid to perform work in our facility.

**Energy Sources:** Mechanical, electrical, hydraulic, pneumatic, chemical, thermal, stored or other energy source.

**Lockout:** The placement of a 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.

**Stored Energy Source:** Is a hidden energy source that is capable of releasing energy suddenly and can cause injury or death. Examples include: springs, capacitors, heavy objects held against gravity, and hydraulic or pneumatic cylinders.



**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, which 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.

# **Program Application**

Our facility will always use Locks to achieve control of hazardous energy rather than tags except when an energy control device is not capable of being locked out.

### **Procedure**

# **Energy Control Procedures**

Our facility will maintain written energy control procedures for all equipment unless the following elements exist:

(1) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees; (2) the machine or equipment has a single energy source which can be readily identified and isolated; (3) the isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment; (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance; (5) a single lockout device will achieve a locked-out condition; (6) the lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance.

Written energy control procedures are available from the program administrator. These procedures are always available to authorized employees. (See Appendix A for the Machine Specific Energy Control Procedure)

# **Energy Control Hardware**

- Locks Each authorized employee will be assigned a sufficient number of locks to lock out the maximum number of energy control devices found on any equipment that s/he services or maintains. All locks used within our facility will have similar design and appearance. Each set of locks assigned to an authorized employee may be keyed alike-but only one key will be assigned for each lock.
- Tags Each authorized employee will be assigned a tag for each lock. Additional tags can be
  obtained from the program administrator. Tags will always be used in conjunction with locks. All
  tags used in our facility will be the same.
- Other Equipment Hasps, valve and plug covers, chains, cables and other equipment to facilitate lockout is available in the maintenance department.

# **Preparation for Lockout**

Prior to lockout, the authorized employee performing the task will do the following:



- 1. Review the Energy Control Procedure for the piece of equipment s/he will be working on. Be sure that all energy sources have been identified.
- 2. Procure all hardware needed to lockout all energy control devices
- 3. Complete information on tags.
- 4. Notify the "owner" of the equipment to be locked out (e.g. departmental supervisor, lead person, operator, etc.)

# **Lockout Sequence**

- 1. Shut down all energy sources using normal stopping/shut down devices (stop buttons, switches, valves, etc.)
- 2. Isolate energy sources by applying a lock and tag to each control device. (Note: devices not capable of being locked will have a tag applied to the device or as close as possible to it)
- 3. Stored energy must be dissipated or restrained
- 4. Verify the energy isolation of the equipment by attempting to operate the machine using the normal operating controls (Note: check to be sure that it would be safe if restart actually happened). Return the operating controls to off or safe.
- 5. Barricade the work area as necessary and perform the work.

# **Restoration of Energy**

- 1. Inspect the equipment to be sure that all tools, parts, etc. have been removed as necessary from the equipment
- 2. Replace guards, restore machine controls, etc.
- 3. Notify the equipment "owner(s)" and other employees in the area
- 4. Remove locks, tags, etc.
- 5. Test operation of the equipment
- 6. Release equipment back to the "owner(s)"

# **Multiple Employee Lockout**

When more than one employee is assigned to work on the same piece of equipment, each employee will apply her/his lock and tag to each energy control device. In cases where an energy control device cannot accept multiple locks a hasp or lock box may be used. In the case of a lock box, each energy control device will be secured with one lock but the key will be locked in a box that is capable of accepting the lock of every employee assigned to perform the work. The key cannot be obtained until all assigned employees have removed their locks.

# **Shift Change or Employee Reassignment**

Whenever a job extends from one shift to the next, a change-over period will be established where the two or more employee's may change locks. The off-going employee will remove their locks and the oncoming personnel will apply theirs. Prior to doing any work, the

On-coming employee(s) will verify that all energy sources are safe and locked out. If an authorized employee is not available at shift change, a supervisor may serve as the on-coming shift employee.

# **Stored Energy**

Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe. If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.



# **Testing or Positioning of Machines**

In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:

- Clear the machine or equipment of tools and material;
- Remove employees from the machine or equipment area;
- Remove the lockout or tagout devices;
- Energize and proceed with testing or positioning;
- Deenergize all systems and reapply energy control measures.

# **Emergency Lock Removal**

Whenever Management determines that a lock must be removed the lock owner must be notified. If the lock owner is not in the plant, the following steps must be taken:

- 1. Call the lock owner at home-if an answering machine is in use, leave an appropriate message
- 2. The supervisor, or another member of Management, will meet the employee at the entrance during the next scheduled shift and advise of the lock removal
- 3. The cut off lock will be placed on the owners work bench or tool box along with a note that explains where the lock(s) was removed.

### Contractors

Contractors will be required to submit a copy of their Company's Lockout plan to our program administrator. Our facility will also submit a copy of our Lockout program to the contractor. Both the contractor and our program administrator will make their respective employees aware of significant differences in the programs. We reserve the right to require that contractors use our facility Lockout procedures if it is more protective than the contractor program.

# **Training**

**Authorized Employees:** will be trained, at the time of hire or at reassignment into an authorized employee position, in the following:

- Recognition of hazardous energy sources
- Type and magnitude of energy in the facility
- Methods and hardware available for energy isolation and control

**Affected Employees** and employees who may work in areas where equipment is locked out: will be trained to recognize Lockout locks and tags at the time of hire or assignment requiring this training. Training will include the purpose and use of the energy control procedure. They will also be trained that under no circumstances is anyone to remove a lock and/or a tag other than the person who applied it.

Authorized and Affected Employees: Retraining will be provided as follows:

- When the periodic inspection reveals a need for retraining
- When a new hazard is identified
- When the procedure changes
- When the program administrator determines that there is a need for additional training

**All Other Employees** shall be trained on whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

When tagout systems are used, employees shall also be trained in the following limitations of tags:



- Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
- When a tag is attached to an energy isolating means, it is not to be removed without authorization
  of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise
  defeated.
- Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
- Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
- Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

# Periodic Inspection

Annually, the program administrator will assign an appropriate Authorized Employee, other than the one utilizing the procedure under review, to review the following:

- All Energy Control Procedures for accuracy and need for updating
- Each authorized employee and her/his responsibilities and understanding of the Lockout program (this may be accomplished through group meetings)
- If any tagout only is utilized in our facility the inspector will also review the employee responsibilities with all affected employees

The periodic inspection will certify the following:

- The identity of the equipment being utilized
- Whenever there is a change in their job assignments
- The inspection date
- Employees included in the inspection The inspector

# **Revision History Record:**

Revision	Section	Revised By	Description
Number			
0	NA	NA	Original document.



# Appendix A

**Energy Control Procedure** 



# **Lockout/Tagout Energy Control Procedure**

Equipment or Process:		<del></del>			
Location of Equipment:		_			
Date prepared Prepared by					
<b>Energy Sources</b>					
Type of Energy	Isolation Location	Type of Lockout Device			
Electrical	1. 2.	1. 2.			
Stored					
Mechanical					
Pneumatic					
Hydraulic					
Thermal					
Chemical					
Special Hazards	Procedure for Con	ntrol of Special Hazard			
	Special Procedures				
	Stored Energy Release Proce	dure			
	Notes				
	tively identify the exact breaker, vand tagged to isolate the source of e				
Type of Lockout shall specific	cally name the exact type of locking	g device needed.			
	e application of the lockout or tagou al energy will be relieved, disconne				
Multiple Sources: use number	ers to add multiple sources as listed	d under Electrical			



# SAFE.

Be safe and healthy on the job at Commonwealth Scaffold, LLC with these helpful tips provided by Allied Insurance Brokers, Inc..

# **Lockout/Tagout Safety**

Helpful tips for authorized and affected employees

Lockout/tagout (LOTO) procedures are used by employers to ensure energy controls are kept in an 'off' or safe position during maintenance and service work.

Two types of workers are involved in LOTO procedures: authorized and affected. An authorized employee and an affected employee may be the same person. However, both roles require proper training and safety practices.

### **Authorized Employees**

An authorized employee is trained and authorized to perform work requiring the identification and control of energy sources – usually service, maintenance or construction-related. If you are an authorized employee, adhere to the following safety precautions.

- Always be sure to secure energy control devices with your own individually assigned lock keys.
- If you install a lock, make sure you are the one who removes it.
- The locks you install must be clearly labeled with durable tags that identify them as your locks.
- Never loan or share your lock, combination or key with anyone else.
- If your shift ends and work is not complete, make sure new shift workers apply their own

- locks before you remove yours.
- Ensure that all energy is completely dissipated prior to working on any equipment.
- Always be sure all LOTO devices are compatible with the environment in which they will be used (i.e., a corrosive, humid environment).
- Prior to starting work on the machine, do not forget to test the machine or system to ensure that there is no energy left to hurt you.

# **Affected Employees**

An affected employee is not authorized to perform LOTO, but works in an area where locked, tagged and energy-controlled devices are present. If you are considered an affected employee, adhere to the following tips.

- Make sure you stay away from danger points while systems are reenergized.
- Participate in all LOTO training programs offered by your employer.
- Never attempt LOTO procedures unless you have been trained and certified by your employer under an approved Energy Control Program.



# **Shared Safety...**

Authorized and affected employees share one critical safety rule: the individual who applies the lock is the only person who is allowed to remove it.

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# LOCKOUT/TAGOUT

# INSTRUCTOR NOTES

# **Training Objectives**

- Review the Lockout/Tagout program and train employees in proper facility procedures
- Train employees to avoid accidents resulting from accidental start-up of equipment

# **Before Training**

- Read the OSHA standard and the model Lockout/Tagout Program
- Understand that this program is written to require Lockout-NOT TAGOUT (except when a lock can not be used). The OSHA standard allows Tagout, but the performance criteria is stringent and the potential for mistakes very high. The safest procedure and the procedure that is easiest to administer is lockout.
- Bring a facility lockout lock and tag and other commonly used hardware (such as valve and breaker locks, chains, etc.) along to training
- Bring a copy of an energy control procedure so that the student can become familiar with the facility format

# Introduction for Training

- Begin by stressing the overall importance of safety in your facility.
- Give examples of where Lockout is used in the facility
- Introduce the topic of Lockout by providing a general explanation of the terms:
  - Lockout and Tagout program (procedures used to prevent the accidental flow of energy during maintenance and service of equipment)
  - Lockout (application of a lock to energy control devices to prevent operation)
  - Tagout (application of a tag only to an energy control device to warn personnel to not operate it).
- As a ground breaker, you can ask employees what experience they have had with Lockout/tagout in past jobs.

### **General Guidelines**

- Stress the importance of the bullet points on these slides.
- Stress the importance of the individual employee being committed to his/her own safety.
- Be sure to be open to questions or comments.

# **Energy Control Procedures**

- Show the student a facility Energy Control Procedure and explain how to use it.
- Advise the student where s/he can find Energy Control Procedures.

# **Energy Sources**

- Review common energy sources that the student will be working with.
- Stress the hazard of stored energy and highlight stored energy sources that the student will encounter.

# **Energy Control Equipment**

Show the student the locks and tags used within the facility.



- Explain the importance of completing the tag and show the student how.
- This is a good time to provide the student with her/his locks and tags although not necessary.
- Explain the characteristics of the style lock and tag used in your facility. Explain any color code or other system that is in use to identify locks.
- Show the student other equipment such as valve locks, breaker or switch locks, cables, etc. and advise where this equipment is kept.

# **Multiple Employee Lockout**

- Explain the system used in your facility to accommodate multiple workers working on a project.
- Show the student the hardware used to secure multiple locks.

# Conclusion

- Review the importance of safety in your facility
- Discuss the points listed on the slide

# **Student Exercise**

At the conclusion of the training the following activities will demonstrate the employees' understanding of the topic:

- 1. Ask the student to explain:
- 2. When Lockout/tagout is required
- 3. What are common energy sources
- 4. What is stored energy and why is it dangerous
- 5. How to identify the locks
- 6. Other important points
- 7. Ask the student to demonstrate understanding by locking/tagging out a piece of equipment. Caution: be sure that a qualified person stays with the student to be sure that all safety requirements are met.

# **Quiz Answers**

1.) A 2.) B 3.) A 4.) A 5.) A 6.) B 7.) B 8.) A 9.) A 10.) A



# LOCKOUT/TAGOUT

# QUIZ

lame:	Date:	Score:
lace a check mark on the	line with the best answer f	or each of these 10 questions:
Lockout/tagout is a proce maintenance and service a True b False		ols in an off or safe position during
An employee who is allow a Outstanding emplobe Authorized employed		is called an:
Some energy sources are a electricity, hydrauli b gear, belt, wire		
An energy source that car a Stored energy b High energy	uses many accidents because	it is not obvious is:
We have Energy Control Fa True b False	Procedures for machines with	more than one energy source:
In our facility we: a Only use a tag b Always use a lock a	and a tag (except when a cont	rol does not accept a lock)
The Energy Control Proce a True b False	dure should always be checke	d before lockout/tagout:
a Talk to your superv	t of a machine the following sl visor machine to verify that all pow	
When multiple employees a True b False	s are working on a project eac	n must apply their own lock:
We must understand the a Contractors b The neighboring factors	lockout/tagout procedures use	ed by:



# Commonwealth Scaffold, LLC OSHA Training Sign-in Log

LOCATION:	INSTRUCTOR:	SUBJECT: Lockout/Tagout				
The employees listed have satisfactorily participated in and fulfilled all requirements of the above training.						
NAME (Print)	DEPARTMENT	NAME (Signature)	DATE			

