BENTLEY UNIVERSITY
Facilities Management

Lockout and Tagout Policy for

Objective: This procedure establishes the minimum requirements for the lockout of energy-isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance where the unexpected energizing or start-up of the machine or equipment or release of stored energy could cause

injury.

Who: All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout.

The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing

a machine or piece of equipment that is locked out to perform servicing or maintenance shall not attempt to start, energize, or

use that machine or equipment.

1.0 POLICY

- Bentley University's policy is that any individual engaged in maintaining, repairing, cleaning, servicing, or adjusting machinery or equipment on Bentley University property will abide by the procedures outlined in this document and specific guidelines outlined in our injury prevention program. These procedures are designed to meet or exceed applicable OSHA standards for safe work practices.
- As part of this policy, a Job Hazard Analysis (JHA) will be conducted for all major maintenance and repair operations within the shop. JHA will be used to develop Standard Operating Procedures (SOPS) to help assure safe work practices.
- Lockout is a first means of protection; warning tags only supplement the use of locks. Tags alone may be used only when applying a lock is not feasible and with the approval of the appropriate supervisor.

2.0 PURPOSE

Lockout and tagout ensure that all employees are protected from the unexpected activation of mechanical and/or electrical equipment during maintenance, repairing, cleaning, servicing, or adjusting machinery or equipment. It also assures that all employees are protected against the release of residual (stored) energy in machines.

3.0 DEFINITIONS

3.1 LOCKOUT

- The practice of using keyed or combination security devices ("locks") to prevent the unwanted activation of mechanical or electrical equipment.

3.2 TAGOUT

• The practice of using tags in conjunction with locks to increase the visibility and awareness that equipment is not to be energized or activated until such devices are removed.

• Tagout devices will be non-reusable, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds.

3.3 ACTIVATION/ENERGIZATION

• Energy that sets machinery into motion by starting, switching, pushing, moving, or otherwise engaging power sources for such equipment. Completing a circuit that provides a flow of electricity is the primary or secondary power source for machinery/equipment.

3.4 ENERGY CONTROL PROCEDURES

• Use lock-out/tag-out equipment to ensure safe work practices.

3.5 HAZARDOUS MOTION AND ENERGY

• Hazardous motion may result even after power sources are disconnected. Examples are coiled springs, raised hydraulic equipment, and any energy source (e.g., electricity, pressurized steam) that may cause injury. Hazards may be caused by equipment under mechanical stress or gravity that may abruptly release and cause injury.

3.6 AUTHORIZED EMPLOYEES

- An employee who locks or tags machines or equipment for servicing or maintenance.

3.7 AFFECTED EMPLOYEE

- An employee who is required to use machines or equipment on which servicing is performed under the

4.0 RESPONSIBILITIES

4.1 SAFETY LEADERSHIP TEAM

• Conduct a Job Safety Analysis for repair and maintenance processes.

• Provide annual training to employees affected by Lockout and tagout procedures.

• Inspect energy control procedures and practices at least annually to ensure that general and specific lockout and tagout procedures are followed.

• Inspections should be carried out by persons OTHER than those employees directly utilizing energy control procedures.

• Inspections will include a review between the inspector and each authorized employee of that employee's responsibilities under the energy control procedure being inspected.

• Certify that periodic inspections have been performed (see RECORDKEEPING and Appendix A, LOCK OUT/TAG OUT INSPECTION FORM)

• Maintain a file of equipment, machinery, and operations that require the use of lock-out/tag-out procedures. The file will include the location, description, power source, and primary hazards of equipment/ machinery, a list of the direct operators/maintenance personnel, and a list of lock-out/tag-out equipment that is used and maintained on-site.

4.2 SUPERVISORS

• Ensure that each employee and contractor engaging in work requiring locking/tagging out of energy sources understands and adheres to adopted procedures.

• Assure employees receive energy control training before operating the machinery or equipment.

• Provide and maintain the necessary equipment and resources, including injury prevention signs, tags, padlocks, and seals.

4.3 EMPLOYEES

• Adhere to specific procedures as outlined in this document for all tasks that require the use of lockout and tagout procedures.

5.0 SPECIFIC PROCEDURES

5.1 PREPARATION FOR LOCKOUT AND TAGOUT

• Survey to locate and identify all isolating devices to determine which switch(es), valve(s), or other energy isolating devices apply to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, hydraulic, thermal, and chemical) may be present with a single piece of equipment.

5.2 SEQUENCE OF LOCKOUT OR TAGOUT SYSTEM PROCEDURE

• Notify affected employees that a lockout or tag-out system will be utilized and the reason.

• The authorized employee shall know the type and magnitude of energy the machine or equipment utilizes and shall understand the hazards thereof.

• If the machine or equipment is operating, shut it down by the standard stopping procedure (depress the stop button, open the toggle switch, etc.).

• Operate the switch, valve, or other energy-isolating device(s) to isolate the equipment from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating

flywheels, hydraulic systems, air, gas, steam, or water pressure) must be dissipated or restrained by repositioning, blocking, bleeding down, etc.

• Lock out/Tag out the energy-isolating devices with assigned individual lock(s) or tag(s).

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

• CAUTION: Return operating control(s) to neutral or off position after the test.

• The equipment is now locked out or tagged out.

5.3 RESTORING MACHINES OR EQUIPMENT TO NORMAL OPERATIONS

• After the complete servicing and/or maintenance, and the equipment is ready for normal production operations, check the area around the machines or equipment to ensure no one is exposed.

• After all tools have been removed from the machine or equipment, guards have been reinstalled, and employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

5.4 PROCEDURE INVOLVING MORE THAN ONE PERSON

• In the preceding steps, if more than one individual is required to lockout or tagout equipment, each shall place their own personal lockout and Tagout device on the energy isolating device(s). When an energy-isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) may be used. If a lockout is used, a single lock may be used to lock out the machine or equipment, and the key is placed in a lockout box or cabinet, allowing multiple locks. Each employee will then use their own lock to secure the box or cabinet. As each person no longer needs to maintain lockout protection, that person will remove their lock from the box or cabinet.

5.5 TEMPORARY REMOVAL OF LOCKOUT AND TAGOUT DEVICES

• In situations where lockout and 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 will be followed:

• Remove non-essential items and ensure that machine or equipment components are operationally intact.

• Notify affected employees that lockout and tagout devices have been removed and ensure that all employees have been safely positioned or removed from the area.

• Have employees who applied the lockout and tagout devices remove the lockout and tagout devices.

• Energize and proceed with testing or positioning.

• De-energize all systems and reapply energy control measures in accordance with section 5.2 of these procedures.

5.6 MAINTENANCE REQUIRING UNDISRUPTED ENERGY SUPPLY

• Where maintenance, repairing, cleaning, servicing, adjusting, or setting up operations cannot be accomplished with the prime mover or energy source disconnected, such operations may only be performed under the following conditions:

• The operating station (e.g., external control panel) where the machine may be activated must be controlled by a qualified operator at all times.

• All participants must be in clear view of the operator or communicate with each other.

• All participants must be beyond the reach of machine elements, which may present a hazard.

• Where machine configuration or size requires that the operator leaves the control station to install tools and where machine elements may move rapidly if activated, such elements must be separately locked out.

• During repair procedures where mechanical components are being adjusted or replaced, the machine shall be de-energized or disconnected from its power source.

6.0 EMPLOYEE TRAINING

• Designated employees will receive annual lock-out/tag-out training outlined in 29CFR [Specifically 1910.147 (c)(7)(i),(ii), & (iii)]. During this training, employees should be made aware of lockout and tagout procedures as well as how and why they are being used.

• Employees need to be trained to know, understand, and follow the applicable provisions of the hazardous energy control procedures. The training must cover at least three areas: aspects of the employer's energy control program, elements of the energy control procedure relevant to the employee's duties or assignment, and the various requirements of the OSHA standards related to lockout and Tagout.

7.0 RECORDKEEPING

7.1 INSPECTION RECORDS

• Maintain inspection records.

• Human Services will complete and maintain all LOCKOUT AND TAGOUT INSPECTION FORMS.

7.2 TRAINING RECORDS

• Training records will be maintained by [position]. Records will include an outline of topics covered and a sign-in sheet of those employees attending.

• Resources: Free lockout and tagout tutorial: www.osha.gov/dts/osta/lototraining/tutorial/tu-overvw.html5

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APPENDIX A MODEL LOCKOUT AND TAGOUT INSPECTION FORM

1. Inspection date: _____

2. Inspector: _____

3. Employee(s):

_____

_____

4. Machine/equipment on which the energy control procedure was being utilized:

_____

Does the employee have or have access to adequate lock-out/tag-out devices? o Yes o No

Has the employee tested the effectiveness of their lock-out/tag-out devices? o Yes o No

Has the employee received lockout and tagout training in the last year? o Yes o No

If this is an outside contractor, has a supervisor informed them of the o Yes o No

Necessity for adhering to these procedures? Have all procedures been followed? o Yes o No

Were tag-outs legible and clearly displayed? o Yes o No

Comments/Observations:

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