

NUMBER: 540

SUBJECT: LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

APPROVAL DATE OF LAST REVISION: JANUARY 23, 2012; JUNE 17, 2019

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#### **540.1 – PURPOSE**

This procedure establishes requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment, in accordance with the requirements of OSHA's 1910.147. It is 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 energization or start-up of the machine or equipment or release of stored energy could cause injury. This program applies to all work operations at Bridgerland Technical College (BTECH) where employees must deal with lockout/tagout situations as part of their job duties.

#### **540.2 – “AUTHORIZED” AND “AFFECTED” EMPLOYEES**

“Authorized” employees subject to the requirements of this program (and which are required to be trained on their duties within it) include: maintenance and custodial personnel and instructors.

“Affected” persons subject to the requirements of this program include: all instructors, staff, and students.

#### **540.3 – MACHINERY AND EQUIPMENT**

Lockout/tagout is the preferred method of isolating machines or equipment from energy sources. Tagout is to be performed instead of lockout only when there is no way to lockout a machine.

**540.3.1** – A lockout lock cannot be used for any other purpose than lockout.

A lockout lock also has to be:

- **Durable** enough for the heat, cold, humidity, or corrosiveness in the area where it is used—for as long as it is needed.
- **Standardized** by color, shape, or size throughout the facility.
- **Strong** enough so it cannot be removed without heavy force or tools such as bolt cutters.
- **Identified** by the name of the employee who installs and removes it.

**540.3.2** – When tagout is performed, certain tags must be used. They have to be durable, strong, standardized, and show the identity of the authorized employee doing the work.

Tags must be:

- The same print and format throughout the facility
- Easy to read and understand, even if used in areas that are dirty, corrosive, or damp
- Tough enough so they cannot be removed accidentally.

To attach a tag, use a nylon cable tie that:

- Cannot be reused
- Can be attached by hand
- Is self-locking
- Cannot be released with less than 50 pounds of strength.

Attach and remove tags following the same steps, in the same order, as locks. But remember, **tags do not lock out energy. They only provide warning about the dangers.**

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Machinery or equipment at BTECH that falls under the requirement to have an *individualized* lockout/tagout control of hazardous energy or which cannot be locked out and thus must be tagged out shall have specific lockout/tagout procedures attached to that machine or equipment near the isolation point.

**540.4 – LOCKOUT/TAGOUT PROCEDURES**

Affected employees are notified when their machine is to be locked out according to the following method: Before performing any maintenance (planned or unplanned) or tasks that expose the employee to at-risk situations, the employee shall notify the department instructor or department head that work is being performed and the machine or equipment will be isolated by means of lockout and tagout.

**540.4.1** – The machinery and equipment listed above follow these shutdown, isolation, blocking, and securing procedures for lockout/tagout:

Preparation for shutdown. Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

Machine or equipment shutdown. The machine or equipment shall be turned off or shut down using the procedures established for the machine or the equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of equipment stoppage.

Machine or equipment isolation. All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

**540.4.2** – The machinery and equipment listed above follows these lockout placement, removal, transfer, and responsibility procedures:

Some lockout jobs require more than one person, so a group of employees is required to perform service or maintenance. Each authorized group member puts his or her own lock or tag on during the group lockout.

**Lockout or tagout device application.**

- Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.
- Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.
- Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached. Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

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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.

Verification of isolation. Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished, even though isolation is performed prior to shutdown and is checked at that point.

**Release from lockout or tagout.**

Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:

The machine or equipment. The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.

Employees. The work area shall be checked to ensure that all employees have been safely positioned or removed.

After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

Lockout or tagout devices removal. Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device. Exception: When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the employer, provided that specific procedures and training for such removal have been developed, documented, and incorporated into the employer's energy control program. The employer shall demonstrate that the specific procedure provides equivalent safety to the removal of the device by the authorized employee who applied it. The specific procedure shall include at least the following elements:

- Verification by the employer that the authorized employee who applied the device is not at the facility;
- Making all the reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed; and
- Ensuring that the authorized employee has this knowledge before he/she resumes work at that facility.

The machinery and equipment listed above follows this procedure to test the machines to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures. Ensure that the equipment is disconnected from the energy source(s) by the following:

- Check that no personnel are exposed.
- Verify the isolation of the equipment by operating the push button or other normal operating or startup control(s) to make certain the equipment will not operate.

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- Return the operating control(s) to neutral or "off" position after verifying that the equipment is isolated.

The machine or equipment is now locked out and servicing or maintenance may safely begin.

**540.5 – ANNUAL INSPECTION**

An annual inspection is done, looking at energy control practices performed, to ensure that the procedure and requirements of the standard are being followed and met.

**540.6 – ADMINISTRATION**

The Risk Management Chair has overall responsibility for coordinating safety and health programs at BTECH and therefore has overall responsibility for the Lockout/Tagout Program. The Chair will review and update the program as necessary. Copies of the program may be obtained from the Risk Management Chair.