CCS Administrative Procedure
2.30.05 – I Lockout/Tagout

Implementing Board Policy 2.30.05
Contact: Environmental Health and Safety, 509-533-8686

1.0 Lockout/Tagout (summary of Board of Trustees Policy 2.30.05)

Community Colleges of Spokane is committed to the health and safety of its faculty and staff, and in maintaining a safe and efficient workplace that complies with all local, state and federal safety and health regulations, programmatic standards, and with any special safety concerns identified at the unit level. The application of Lockout/Tagout measures will adhere to this procedure in order to ensure a safe environment for all employees, students, and visitors including contractors and vendors.

Community Colleges of Spokane adheres to WAC 296-803, Lockout/Tagout (Control of Hazardous Energy). This procedure, as defined by WAC 296-803-100, applies to all CCS departments and programs involved in servicing and maintaining machines and equipment if there is a potential injury from unexpected energization, startup of machinery or equipment, or release of stored energy. Energy sources include electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravity, and other forms of energy.

2.0 Definitions

2.1 Affected employee: An employee whose job requires them to operate or use a machine or equipment on which service or maintenance is being performed under lockout and/or tagout or whose job requires them to work in an area where service or maintenance is being performed.

2.2 Authorized employee: A person who locks or implements a tagout system procedure on machines or equipment to perform the service or maintenance on that machine or equipment. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment, which must be locked, or a tagout system implemented.

2.3 Deenergized: Isolated or disconnected from an energy source and all stored energy has dissipated.

2.4 Energized: Connected to an energy source or containing residual or stored energy.

2.5 Energy source: Any source of electrical, mechanical, hydraulic (oils and fluids), pneumatic (gases and air), chemical, thermal or other energy.

2.6 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.

2.7 Lockout device: A mechanism or arrangement which uses a key or combination lock to hold switches or valves in the "OFF" position.

2.8 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.

2.9 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.

2.10 Zero mechanical and energy state: A state in which all sources of electrical, mechanical, hydraulic, pneumatic, thermal, and chemical energy are isolated or neutralized. This may include release of fluid or gas pressure, release of spring tension, blocking or lowering of suspended parts, etc.

3.0 Responsibilities

All affected employees are responsible for adhering to this procedure and will be trained on the safety significance, purpose and use of the Lockout/Tagout procedure by their department and the Environmental Health and Safety (EH&S) Office. Additionally, CCS departments where this procedure applies are responsible for providing standardized lockout and tagout devices that are singularly identified and not used for other purposes.

4.0 Applying Lockout/Tagout Devices (Authorized Employees Only)

4.1 All authorized employees who will be applying Lockout/Tagout devices for their department must be trained and have an awareness and understanding of the elements below prior to turning any equipment or machine off.

4.1.1 The type and magnitude of the energy that is available.

4.2 The authorized employee who is applying the Lockout/Tagout on the equipment or machine will **notify all affected employees** that servicing or maintenance on the equipment or machine is required and that it is going to be shut down and locked out.

4.3 The authorized employee must fill out the Equipment Specific LOTO Procedure Form.

4.4 The authorized employee will turn off or shut down the machine or equipment using a standardized procedure to avoid an additional hazard as a result of the equipment stoppage.

4.5 The authorized employee must completely isolate the machine or equipment from its energy sources using appropriate energy-isolating devices after the machine or equipment has been turned off and verify that all potentially hazardous stored and residual energy is disconnected, relieved, and restrained to ensure the lockout or tagout devices are put on the energy-isolating devices safely.

4.6 To ensure protection from stored and residual energy hazards, the authorized employee will confirm the following.

4.6.1 **The lockout device holds the** energy-isolating device in a “safe” or “off” position. A lockout or tagout device is applied for every energy-isolating device.

4.6.2 The lock and tag have the name of the authorized employee and other associated identification on it.

4.6.3 No residual pressure remains in equipment lines or reservoir tanks prior to implementing the LOTO procedure. This is accomplished by by thoroughly bleeding, draining, and cleansing steam, air, and hydraulic lines.

4.6.4 Mechanisms that hold tension or pressure, like springs, are carefully released and securely blocked to prevent unexpected movement.

4.6.5 All potential energy sources capable of activating the machinery are effectively locked out or tagged, safeguarding against unintended startup or operation.

4.6.6 The main valve or main electrical disconnect for equipment with electrical energy sources are tested to ensure the power to the machine is off.

4.6.7 Electrical circuits are checked with proper and calibrated electrical testing equipment. An electrical failure could energize the equipment even if the switch is in the off position.

4.6.8 Any stored energy in electrical capacitors is safely discharged.

4.6.9 Machinery that has a ram that could fall, such as power presses and welding presses, are supported with safety blocks or pins when being worked on.

4.6.10 Lockout is applied when working on or near exposed deenergized electrical circuits/parts.

4.7 Authorized employees will continue to verify the isolation of equipment and machines that

could potentially reaccumulate stored energy to a hazardous level until:

4.7.1 Service or maintenance is completed.

4.7.2 The possibility of reaccumulating hazardous energy does not exist.

4.8 Authorized employees will protect employees during shift or personnel changes by:

4.8.1 Using specific procedures for shift or personnel changes.

4.8.2 Ensuring the continuous use of lockout or tagout protection during any employee shift or personnel change.

4.8.3 Conducting a detailed transfer of all lockout or tagout devices between outgoing and oncoming employees in order to minimize any unexpected energization of any equipment or release of stored energy.

4.9 If the authorized employee is Facilities personnel, they will enter a workorder in Directline when a lockout device or tag has been applied. The work order will include the name of the person applying the device, location, hazards associated with energizing the system, and any other pertinent information.

5.0 Removal of Lockout/Tagout Devices

5.1 Only the authorized employee who applied a lockout or tagout device will remove it.

5.2 The authorized employee will:

5.2.1 Inspect the work area to make sure nonessential items have been removed;

5.2.2 Verify the machine or equipment is in operating condition and ready to energize; and

5.2.3 Check that employees in the area are in positions that make it safe to energize the machine or equipment.

5.3 If the authorized employee is Facilities personnel, they will close any associated work orders in Directline and include enough detail in the remarks to reconstruct events.

6.0 Replacement, Repair, Renovation or Modification of New Equipment

6.1 Whenever major replacement, repair, renovation or modification of machines or equipment is performed, and whenever new machines or equipment are installed, energy-isolating devices for such machines or equipment will be designed to accept a lockout device.

7.0 Marking of Disconnects and Valves

7.1 The impacted department will ensure that all disconnects and valves are clearly labeled unless they are located and arranged so their purpose is evident. The labeling will include:

7.1.1 Equipment supplied.

7.1.2 Energy type and magnitude.

7.2 All Facilities personnel to whom this procedure applies shall enter a work order in the Directline work order management system when documenting any significant machine alterations with which they are involved that affect the lock-out points required to reduce a machine's function to an inoperative status.

8.0 Additional Responsibilities If Using Tagout Devices

8.1 Authorized employees using tagout devices will ensure the following:

8.1.1 Tags are warning devices and do not provide the same level of physical restraint as a lock.

8.1.2 When attached to energy-isolating devices, tags are not to be removed without the approval of the authorized person responsible for it.

8.1.3 Tags need to be legible and understandable in order to be effective.

8.1.4 Tags must be securely attached to energy-isolating devices.

8.1.5 Tags should be made from materials that will withstand environmental conditions.

9.0 Employee Training

9.1 The training must include all elements listed in WAC-296-803-6005.

9.2 Authorized employees will be trained on:

9.2.1 The type and magnitude of energy available in the workplace.

9.2.2 Recognizing hazardous energy sources that apply.

9.2.3 Methods and means to isolate and control energy.

9.2.4 The purpose and use of the energy control procedure.

9.3 Affected employees will be trained on:

9.3.1 The purpose and the use of the energy control procedures.

9.3.2 The procedures being used.

9.3.3 Prohibition against attempting to restart or reenergize a machine or equipment that is locked out or tagged out.

9.4 Authorized and affected employees will be retrained when introduced to new or revised control methods and procedures or when there is a change in any job assignments, machines, equipment or processes that present a new hazard.

9.5 Employees will be retrained to reestablish proficiency when a periodic review shows the employee deviates from or has inadequate knowledge of energy control procedures or if CCS has reason to believe retraining is necessary.

9.6 Contact the EH&S Office at (509) 533-8686 to request training.

9.7 Departments will maintain a training record for their employees.

10.0 Inspection System and Review

10.1 The Department will ensure that the procedures are being followed. The EH&S Office and the department will conduct an inspection and review of the energy control procedures on an annual basis.

10.2 Correction of any deviations or inadequacies observed during the inspection must be completed within a reasonable time frame.

10.3 Where lockout is used for energy control, the inspection will include a review of authorized employees' responsibilities under the energy control procedure being inspected.

10.4 Where tagout is used for energy control, the inspection will include a review of authorized and affected employees' responsibilities under the energy control procedure being inspected and also a review of the limitations of tags and the proper use of tags.

10.5 Documentation of the inspection is required and will include identification of the machine or equipment on which the energy control procedure is being utilized, the date of the inspection, the employee(s) involved in the inspection and the person(s) performing the inspection.

10.6 The impacted department is responsible for maintaining the inspection records.

11.0 Protective Materials and Hardware

11.1 Only approved lockout devices and methods will be permitted. The EH&S Office and/or the department will determine what devices and methods are approved.

12.0 Outside Servicing and Maintenance Personnel

12.1 Whenever outside servicing personnel, such as contractors and vendors, will be engaged in activities covered by the scope and application of this procedure and the referenced WAC standard, CCS departments and the outside servicing personnel will inform each other of their respective lockout or tagout procedures prior to any work being done by the outside servicing personnel at CCS sites.

12.1.1 The department must inform the outside servicing personnel of the CCS LOTO procedure and supply them with a copy.

12.1.2 The department must obtain and review a copy of the outside servicing personnel's LOTO procedure.

12.2 Departments will ensure their employees understand and comply with restrictions and prohibitions of the outside servicing personnel's energy control procedures and will request that the outside servicing personnel understand and comply with restrictions and prohibitions of CCS' energy control procedures.

13.0 Group Lockout or Tagout

13.1 When servicing and/or maintenance is performed by a crew, employee, department or other group, they will utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

13.2 Ensure that each authorized employee:

13.2.1 Fills out the Equipment Specific LOTO procedure form, and check marks the "Group LOTO" section.

13.2.2 Places a personal lockout or tagout device on the group lockout device or lockbox before beginning work.

13.2.3 Does not remove it until they have finished work on the machine or equipment.

14.0 Resources:

12.1 29 CFR Part 1910.147, Control of Hazardous Energy (Lockout/Tagout)

12.2 WAC 296-803, Lockout/Tagout (Control of Hazardous Energy)

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