15. **Lockout/Tagout Program**

15.1 **PURPOSE**

The purpose of the Lockout/Tagout program is to protect The University of Montana employees from injury or death from the release of hazardous energy. This program establishes the minimum requirements for isolation of electrical, chemical, thermal, hydraulic, pneumatic, and gravitational energy prior to equipment repair, adjustment or removal. Reference: OSHA Standard 29 CFR 1910.147, the control of hazardous energy.

15.2 **GENERAL LOCKOUT/TAGOUT PROCEDURES**

Before working on, repairing, adjusting or replacing equipment and machinery, all appropriate safety procedures, including lockout/tagout, must be utilized to place the machinery or equipment in a neutral or zero mechanical state. See Appendix A for standard operating procedures.

When the energy-isolating device cannot be locked out, a tagout system may be used, provided the level of safety is equivalent to the level of safety using a lockout system.

The University of Montana will supply the lockout and tagout devices required. Assigned safety locks are issued to all authorized employees trained in the Lockout/Tagout Procedures. One key per lock is issued and the keys shall not be duplicated. (A safety lock or tag can only be removed by the owner.) These locks may not be used for any other purpose.

If more than one individual is required to work on the equipment, each individual shall place their own lockout/tagout device on the energy isolating device(s). When the energy-isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) may be used.

There may be occasion where a piece of equipment will be pulled out of service until repairs can be conducted. In these cases an out of service lock/tag will be placed on the equipment after de-energization. The out of service lock/tag will remain until the repairs can begin. Before repairs begin the out of service lock/tag must be replaced with a safety lock/tag using the standard operating procedures in Appendix A.
15.3 MANAGEMENT'S REMOVAL OF LOCK AND TAG
Only the employee who applied the lock and tag may remove his/her lock and tag. However, should the employee leave the facility before removing the lock and tag, the lock may be removed by using bolt cutters or other equivalent means under the direction of the Facilities Services Director or the Maintenance Services Manager as required in 29 CFR 1910.147(e)(3). The Director or Manager must be assured that the employee who applied the lock and tag is not at the facility and is notified before returning to work that the lockout/tagout devices have been removed, that all tools have been removed from the area, all guards have been replaced, and all employees are clear of the area before the lock and tag are removed and the equipment is returned to service.

15.4 INSPECTION
Each campus (Main, Resident Life, and MISSOULA COLLEGE) will coordinate with the EHRM and conduct an inspection at least annually of the energy control procedures to ensure that the procedure and the requirements of this standard are being followed.

15.5 TRAINING
All University of Montana employees who are required to utilize lockout/tagout procedures will be trained in the procedures when initially hired and as required by changes in equipment or technology. All training will be documented.

Training will include:
- Recognition of applicable hazardous energy sources
- The type and magnitude of energy available in the workplace
- Methods and means necessary for energy isolation and control
- The limitations of using tagout system only
15.6 APPENDIX A LOCKOUT/TAGOUT STANDARD OPERATING PROCEDURES

- When the energy-isolating device is not lockable, a tagout device may be used in place of a lock.
- All authorized employees who perform lockout/tagout must follow this sequence:
  1. Prepare for shutdown. Know what type of energy the machine uses. Identify potential hazards.
  2. Let affected employees know you will be locking or tagging out the equipment and why.
  3. Turn off the machine or equipment.
  4. Locate and isolate all energy sources. Get rid of any stored energy, as in springs, hydraulic systems, or air pressure. You may have to block, bleed, vent, etc. to be sure there's nothing left to move a machine part.
  5. Lock out the switches or other energy controls. Attach your lock to hold the switches in an "off" or "safe" position. Also apply a tag to identify who is working on the equipment and to warn others that the switch is locked out.
  6. Test the operating controls. Be sure no one is close enough to get hurt. Put all controls in the "on" position. Make sure the power doesn't go on and that the equipment won't operate.
  7. Put operating controls back in the "off" or "safe" position.
  8. Test the circuits and electrical parts of the equipment to be sure they are de-energized.
  9. Perform necessary service or maintenance.

CAUTION: If you need energy to test or position the equipment during maintenance or repair, follow all the lockout removal steps before you turn energy on. And follow all lockout steps to turn off the power and protect yourself before you begin work again.

- Restore the equipment back to service using the following steps.
  1. Check the machine or equipment and the immediate area around the equipment to ensure that all tools and other items have been removed and that the equipment components are operationally intact.
  2. Check the work area to be sure that all employees have been safely positioned or removed from the area.
  3. Verify that the controls are still in the "off" of "safe" position.
  4. Remove the lockout and tagout devices and re-energize the equipment. The lockout and tagout devices must be removed only by the person who put them on. If servicing lasts more than one work shift, the outgoing and incoming workers will together remove the outgoing worker's lock and install the new worker's lock.
  5. Notify the affected employees that the servicing or maintenance is completed and the equipment is ready for use.