



HAZARDOUS ENERGY CONTROL PROGRAM
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Summary of Changes

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<u>Section</u>	<u>Change</u>
B	Change to read "... applies to UNLV authorized employees..." Added note that tags will not be used at UNLV to perform lockout
C	Moved to the back of the procedure, removed definitions for "affected" employees, "other" employees and "tags."
D (2) g	Reworded to show that department managers or supervisors will perform PPE assessments to determine appropriate protection for equipment to be locked out.
D (3) c	Authorized employees to use the PPE prescribed by the assessments performed by department managers or supervisors.
D (4)	"Affected employee" responsibilities removed.
D (5)	"Other employee" responsibilities removed.
E	Changed to incorporate the use of a group lock box when (3) or more authorized employees are working on the same piece of equipment.
H	Clarified the steps departments should follow to perform their annual review of lockout procedures.
I	Removed reference to "affected" and "other" training in this program document.
Appendix A	Removed reference to "tagout" in the General Lockout Procedures.



A. SCOPE AND APPLICATION

The Hazardous Energy Control Program is established in accordance with 29 CFR 1910.147, "The Control of Hazardous Energy (Lockout/Tagout)" and describes the procedures that will be followed at all University of Nevada, Las Vegas (UNLV) properties to protect employees, volunteers and students from hazardous energy.

B. COMPLIANCE WITH PROGRAM

This procedure applies to UNLV authorized employees who perform maintenance or repairs on machines and equipment that is subject to lockout.

Note: As used in this program, equipment refers to all machines and equipment used at UNLV and will hereafter be known by the title "equipment."

Note: Tags are never used in place of locks and lockout devices at UNLV.

C. DUTIES AND RESPONSIBILITIES

(1) Risk Management and Safety (RMS)

- a. Establish and update the Hazardous Energy Control Program for UNLV.
- b. Assist departments perform annual reviews of their equipment specific procedures.
- c. Develop and offer training to authorized, affected and other employees.

(2) Department Managers and Supervisors

- a. Implement the Hazardous Energy Control Program.
- b. Identify authorized employees for department owned equipment.
- c. Verify authorized employees have completed training before being assigned jobs requiring lockout.
- d. Ensure annual inspections of all equipment specific procedures are completed in accordance with Section H.



- e. Acquire and issue locks and lockout devices.
- f. Establish a system that provides accountability for issuance and use of locks and lockout devices.
- g. Complete personal protective equipment assessment (PPE) for equipment requiring lockout and issue PPE to employees.
- h. Notify RMS if equipment is added to inventory to determine if equipment specific lockout procedures are needed.
- i. Inform department employees when contractors and sub-contractors will be working on machinery or equipment owned by the department.

(3) Authorized Employee

- a. Complete “Authorized Employee” Lockout Training.
- b. Review and understand the energy control procedures for the equipment on which they are required to perform lockout.
- c. Use PPE as determine by the assessment; perform lockout steps in accordance with general or equipment specific procedures established for the equipment.
- d. Notify supervisor if conditions exist or develop, that prevent the completion of all steps specified for the lockout.
- e. Ensure that locks and lockout devices are in good condition and only used for their intended purpose of lockout.
- f. Retain control of the keys, locks and lockout devices issued to them.
- g. Properly care for PPE and inform supervisor when PPE is no longer suitable for use.
- h. Assist with annual reviews of equipment specific lockout procedures.

D. ENERGY CONTROL PROCEDURES



- (1) Equipment specific energy control procedures will be developed when there is more than one source of energy to the equipment or when the controls for the energy source (s) are in a separate location from the equipment.
- (2) Copies of previously developed equipment specific energy control procedures are available at the OSH tab within the RMS website.
- (3) When equipment specific energy control procedures are not required, then the general procedures shown at Attachment A shall be followed for lockout.

E. GROUP LOCKOUT

- (1) Whenever three or more authorized employees are working on the same equipment, then a group lock box will be used.
- (2) The authorizing employee supervising the job will meet with all employees working on the equipment do discuss the equipment that will be worked on, possible hazards and the purpose of locking out the equipment.
- (3) The authorized employee supervising the job will then:
 - a. Shut down the equipment using normal operating procedures.
 - b. Place a lock on the breaker or lockout device for the equipment being serviced
 - c. Acquire a group lock box and place the key for his lock into box.
- (4) The other authorized employees working on the equipment will place their locks on the group lock box and complete their assigned tasks for the equipment.
- (5) When all has been completed, each authorized worker will ensure all tools and material used are clear of the area on or near the equipment and remove their key from the group lock box.
- (6) The authorized employee supervising the job will;
 - a. Remove any materials or tools they might have used.
 - b. Check that the equipment is ready for restart.



- c. Acquire the key for their lock from the group lock box and remove the lock.
- d. Perform startup using normal operating procedures.

F. SHIFT CHANGE OVER

- (1) When possible, job assignments will be completed by the individuals who have locked out the equipment.
- (2) When job assignments cannot be completed and a shift changeover is necessary, the departing authorized employees will brief the on-coming authorized employees on job status, hazards present and the remove their locks.
- (3) The on-coming authorized employees will immediately place their locks on the equipment.
- (4) The on-coming authorizing employees will use appropriate test methods to determine that the equipment is not energized and it is safe to work.

G. REMOVING LOCKS – OWNER NOT PRESENT

- (1) If the authorized employee who installed a lock on a piece of equipment is not at work to remove the lock, the supervisor or department manager will:
 - a. Call the authorized employee to obtain information about the job status.
 - b. Ask the authorized employee if removal of the lock would create any unsafe conditions.
 - c. If not unsafe conditions would develop, inform the authorized employee that their lock and lockout device will be removed upon completion of the job.
 - d. Assign other authorized employees to complete the remaining work and return equipment to normal operably.



- (2) If the authorized employee who installed a lock on a piece of equipment is not and work and cannot be contacted, the supervisor or department manager will:
 - a. Review the job progress to-date and determine if the remaining work can be completed safely without exposing anyone to injury or causing property damage.
 - b. Assign other authorized employees to complete the work, remove the lock upon completion of work and return equipment to normal operability.
 - c. Provide the authorized employee whose lock was removed, an update on the status of the job.

H. ANNUAL LOCKOUT INSPECTION

- (1) The department manager or supervisor will assign an authorized employee (who does not normally work on the equipment) to complete the steps of the energy control procedure.
- (2) During the inspection, the authorized employee completing the steps will:
 - a. Review the lockout steps for the equipment.
 - b. Complete the required lockout steps on the equipment.
 - c. Along with authorized employees observing, determine if any changes are needed.
 - d. Remove the lock and lockout device and take the necessary steps to restore the equipment to normal operation.
 - e. Record inspection results on the "UNLV Lockout Periodic Inspection" record (see Appendix B) and provide department manager or supervisor.
- (3) The department manager or supervisor will:
 - a. Review/approve proposed changes.
 - b. Update the procedure.



- c. Forward a copy of the “UNLV Lockout Periodic Inspection” record to RMS for review.
- (4) Once the procedure has been approved, a copy will be sent to RMS for posting to the RMS website.

I. TRAINING

- (1) Employees who perform servicing and maintenance on equipment will receive a two-part “Authorized User” training course.
 - a. The first part will discuss general lockout program requirements and may be completed by attending a class presentation or on-line training.
 - b. The second part will be department provided and documented instruction on the specific procedures used for the equipment assigned.
- (2) Employee retraining of lockout procedures may be necessary when:
 - a. Changes occur in job assignments.
 - b. Lockout procedure reviews indicate that changes are needed.
 - c. Equipment is added to inventory which presents new hazards.
 - d. Deficiencies exist in authorized employees’ knowledge of, or failure to follow all prescribed steps.

J. DEFINITIONS/TERMINOLOGY

- (1) 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.
- (2) Energy Source – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- (3) 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.



K. APPENDICES

Note: For a copy of the "UNLV Periodic Inspection" Form, please contact RMS, OSH.

Appendix A – "General Lockout Procedures" Steps

Appendix B – "UNLV Lockout Periodic Inspection" Form

Appendix A

General Lockout Procedures

Authorized employees will follow the general procedures below unless equipment specific lockout procedures have been developed.

1. Identify the type and magnitude of energy sources, the hazards to be controlled, and the location of energy isolating devices.
2. Notify all personnel in the area that the machine or equipment will be turned off and locked out.
3. Turn off/shut down the machine or equipment and install locks and lockout devices, if needed.

Note: Tags will not be used for lockout.

4. Relieve, disconnect, or restrain residual energy.
5. Attempt to activate equipment controls to verify that isolation and de-energization of energy sources have been successfully completed.

Note: Use meter and/or test equipment, as needed, to verify that all residual energy has been released from the equipment.

6. Perform servicing, maintenance, or repair required for the equipment.
7. Upon completion of the servicing, maintenance, or repair, inspect work area to ensure that all non-essential items have been removed, guards have been re-installed and that all equipment components are intact.
8. Check that employees have been safely positioned away from the equipment and notify them that lockout devices and locks will be removed.
9. Remove all lockout devices and locks placed on the equipment.
10. Start the equipment using normal startup procedures and then check for proper operation.
11. Release the equipment back to the employees who will be operating it.