



Hazardous Energy Control Program

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Prepared by: Deon Day
Occupational Safety Program Coordinator

Reviewed by: Julie Moos
Occupational Safety Program Manager

Approved by: Brent Webber
Assistant Director of Environmental Health and Safety

Summary of Changes

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<u>Section</u>	<u>Change</u>
Throughout	Word, grammar, punctuation, and structural changes
C	Added definitions for: Affected employee, Energized, and Lockout Device

A. SCOPE AND APPLICATION

The Hazardous Energy Control Program is established in accordance with OSHA standard 29 CFR 1910.147 “The Control of Hazardous Energy (Lockout/Tagout)” and describes the program elements 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

All UNLV employees, designated volunteers, students, and contractors are required to follow the program elements.

NOTE: As used in this program, “equipment” refers to all machines 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. DEFINITIONS

- (1) **Affected Employee** – An employee whose job requires them to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires them to work in an area which such servicing or maintenance is being performed.
- (2) **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.
- (3) **Energized** – Connected to an energy source or containing residual or stored energy.
- (4) **Energy Source** – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- (5) **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.
- (6) **Lockout Device** – A device that utilizes a positive means such as a lock, to hold an energy isolating device in a safe position and prevent the

energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

D. DUTIES AND RESPONSIBILITIES

(1) Contractors

- a. Have an established Hazardous Energy Control Program (Lockout/Tagout) in accordance with OSHA Standards 29 CFR 1910.147 Subpart J.
- b. Provide a copy of their Hazardous Energy Control Program (Lockout/Tagout) to the UNLV project manager/point of contact.
- c. Provide appropriate personal protective equipment (PPE) and equipment locks to authorized employees that require access to energized devices.

(2) Risk Management and Safety (RMS)

- a. Establish the Hazardous Energy Control Program (Lockout/Tagout) for UNLV.
- b. Assist departments in performing annual reviews of lockout/tagout procedures specific to their equipment and areas.
- c. Develop and offer training to authorized, affected, and other employees.

(3) Department Managers and Supervisors

- a. Implement the Hazardous Energy Control Program (Lockout/Tagout).
- b. Identify/appoint authorized employees for department owned equipment.
- c. Verify the authorized employees have completed the appropriate training before being assigned work tasks requiring the use of lockout.
- d. Ensure annual inspections of all equipment specific procedures are completed.

- e. Establish a system or method to acquire and issue locks/lockout devices as well as accountability for the issuance and the use of those devices.
- f. Provide appropriate personal protective equipment (PPE) to employees required to work with an energized device/source.
- g. Notify RMS of equipment added to inventory in order to assess if equipment specific lockout procedures are needed.
- h. Notify department employees when contractors are performing work on devices or equipment owned by the department.

(4) Authorized Employee

- a. Complete “Authorized Employee” lockout training.
- b. Review, acknowledge, and understand the energy control procedures for the equipment on which they will be required to perform lockout.
- c. Use appropriate PPE to perform lockout steps in accordance with general or equipment specific procedures that are established.
- d. Inspect PPE before each use and report any faults, damages, or wear to the management/supervision so that it may be replaced as necessary.
- e. Notify the supervisor if hazardous conditions exist or develop that prevent the completion of steps specified for the lockout procedure.
- f. Ensure that locks and lockout devices are in good condition and only used for their intended purpose.
- g. Retain control of keys, locks, and lockout devices issued.
- h. Assist with the annual reviews of equipment specific lockout procedures.

E. ENERGY CONTROL PROCEDURES

- a. 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.

- b. Copies of equipment specific energy control procedures are available at the OSH section within the RMS website.
- c. When equipment specific energy control procedures are not required then the general lockout/tagout procedures (Appendix A) shall be followed.

F. GROUP LOCKOUT

- (1) Whenever three or more authorized employees are working on the same equipment a group lockbox will be used.
- (2) The authorizing employee supervising the job will meet with all employees working on the equipment to discuss the possible hazards and purpose of locking out the equipment.
- (3) The authorized employee supervising the job will then:
 - a. Shut down equipment as specified in the general Lockout/tagout procedures found in appendix A of this program.
 - b. Place a lock/lockout device on the breaker and/or equipment being serviced.
 - c. Acquire a group lockbox and place the key for their lock into the box.
 - d. Acquire a second lock to add onto the group lockbox.
- (4) The other authorized employees working on the equipment will place their locks on and insert keys into 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 around the equipment and remove their keys from the group lock box.
- (6) The authorized employee supervising the job will:
 - a. Remove any materials or tools they may have used.

- b. Check that the equipment is ready for restart.
- c. Acquire the key for their lock from the group lockbox and remove the lock.
- d. Perform startup using normal operating procedures.

G. 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 the job status, hazards present, and then remove their locks.
- (3) The on-coming authorized employees will immediately place their locks onto the equipment.
- (4) The on-coming authorized employees will use appropriate test methods to determine that the equipment is not energized and it is safe to work.

H. REMOVING LOCKS – OWNER NOT PRESENT

- (1) If the authorized employee who installed a lock onto a piece of equipment is not available 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 or hazardous conditions.
 - c. If no unsafe or hazardous conditions would develop, inform the authorized employee that their lock and/or lockout device will be removed upon job completion.
 - d. Assign other authorized employees to complete the remaining work and return equipment to normal operability.

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

I. 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 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 operability.
- (3) The department manager or supervisor will:
 - a. Update the procedure.
 - b. Review and approve proposed changes.

- (4) Once the procedure has been approved, a copy will be sent to RMS for posting to the RMS website.

J. 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 online 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. New lockout devices are identified.
 - c. Lockout procedure reviews indicate that changes are needed.
 - d. Equipment is added to inventory which presents new hazards.
 - e. Deficiencies exist in authorized employees’ knowledge of, or failure to follow all prescribed steps.

K. APPENDICES

Appendix A – General Lockout Procedures Form

Appendix B – UNLV Lockout/Tagout 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 are never used in place of locks and lockout devices at UNLV.

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, power switches are in the "off" position, tools are accounted for, 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 employees who will be operating it.

Appendix B**UNLV Lockout/Tagout Periodic Inspection****Procedure Used:**_____ **Date of Review:**_____**Machine Location (Building/Room):**_____**Authorized Employee(s) Performing Inspection:**1. _____
(Signature) (Department)2. _____
(Signature) (Department)**Authorized Employee(s) Observing Inspection:**1. _____
(Signature) (Department)2. _____
(Signature) (Department)3. _____
(Signature) (Department)**Observations/Changes Recommended:**

RMS Review:1. _____
(Signature) (Date)