



**HAZARDOUS ENERGY
CONTROL PROGRAM
February 2016**

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 from hazardous energy.

B. COMPLIANCE WITH PROGRAM

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

C. DEFINITIONS

- (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) **Affected Employee** – An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout/tagout or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- (3) **Other Employee** – Employees whose work operations are or may be in an area where energy control procedures may be utilized.
- (4) **Energy Source** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

D. DUTIES AND RESPONSIBILITIES

- (1) **Risk Management and Safety (RMS)**
 - a. Establish the Hazardous Energy Control Program for UNLV.

- b. Review equipment specific procedures developed by departments for applicable machinery and equipment under their control and assist with updating, when requested.
- 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 energy supplied machinery or equipment.
- c. Verify authorized employees complete required training before being assigned jobs requiring lockout/tagout.
- d. Ensure periodic inspections of all energy control procedures are completed annually in accordance with Section J of this procedure.
- e. Acquire and issue locks, tags, and lockout devices for machinery and equipment requiring lockout/tagout and establish a system that provides accountability for issuance and use.
- f. Provide appropriate PPE to protect against the hazards encountered while performing lockout/tagout of all energy sources.
- g. Notify RMS if machinery or equipment is added to inventory to determine if equipment specific procedures are needed.
- h. 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/Tagout Training.
- b. Review and understand the energy control procedures for the machines and equipment on which they are required to perform lockout/tagout.
- c. Use prescribed PPE; perform the lockout/tagout steps in accordance with the general or equipment specific procedures established for the machines and equipment being worked on.

- d. Notify supervisor if conditions exist or develop, that prevent the completion of specified steps for a lockout/tagout.
- e. Ensure that locks, tags, and lockout devices are in good condition and only used for their intended purpose of lockout/tagout.
- f. Retain control of the locks, tags, and lockout devices issued to them.
- g. Properly care for PPE and inform supervisor when PPE is no longer suitable for use.
- h. Perform periodic inspections on machinery and equipment when requested.

(4) Affected Employee

- a. Complete Affected Employee Lockout/tagout Training.
- b. Do not remove locks, tags, or lockout devices from machines or equipment and comply with all other restrictions or limitations imposed.

(5) Other Employee

- a. Complete Other Employee Lockout/tagout Training.
- b. Do not remove locks, tags, or lockout devices from machines or equipment and comply with all other restrictions or limitations imposed.

E. CONTRACTORS/SUB-CONTRACTORS

- (1) Contractors and sub-contractors whose job assignments require the use of lockout/tagout while working on UNLV properties shall comply with the applicable standards specified in 29CFR 1910.147, *The Control of Hazardous Energy*, 29CFR 1926.416, *Electrical* and 29CFR 1926.417, *Lockout and Tagging of Circuits*.
- (2) Contractors and sub-contractors shall submit a copy of their written Lockout/Tagout Program to the UNLV point of contact, if requested.
- (3) Contractors and sub-contractors may request a copy of the UNLV Hazardous Energy Control Program (accessible at the OSH tab within the RMS website) through their UNLV point of contact.

F. ENERGY CONTROL PROCEDURES

- (1) Machine and equipment specific energy control procedures, where established at UNLV are available at the OSH tab within the RMS website.
- (2) When machine and equipment specific energy control procedures are not required, then the general procedures (Appendix A) shall be followed for lockout/tagout.

G. GROUP LOCKOUT

- (1) To ensure that machines and equipment are safe to work on by more than one employee at a time, group lockout/tagout will be used.
- (2) The supervisor responsible for the work being done will designate one authorized employee to oversee the job.
- (3) The designated authorized employee will ensure proper procedures are followed for the shutdown, lockout/tagout and startup of the machine or equipment.
 - a. Each employee, including the designated authorized employee overseeing the job, applies a lock and tag on the energy control device for the machine or equipment. When work has been completed, each authorized employee removes their lock, tag, and lockout device.
 - b. The designated authorized employee, overseeing the job, removes their lock and tag last and will check that all employees are accounted for and the area is safe to perform a restart.
 - c. The designated authorized employee will perform all steps necessary for a safe restart.

H. SHIFT CHANGE OVER

- (1) When possible, job assignments will be completed by the individuals who have placed locks, tags, and lockout devices on machines or equipment.
- (2) When job assignments cannot be completed and a shift changeover is necessary, the departing authorized employee will brief the on-coming authorized employee on the job status and any hazards present.

- (3) The on-coming authorized employee will place their lock and tag on the lockout device. The out-going authorized employee will then remove their lock and tag from the lockout device.
- (4) The on-coming authorizing employee will use appropriate test methods to determine that the machine or equipment is not energized prior to commencing work.

I. REMOVING LOCKS – OWNER NOT PRESENT

- (1) If an individual who installed locks, tags, and lockout devices on machines or equipment is not at work to remove them, but can be contacted, the supervisor will:
 - a. Call the authorized employee to obtain information about the job status.
 - b. Determine if any problems would be incurred by the removal of locks, tags, and lockout devices.
 - c. Inform the authorized employee that their locks, tags, and lockout devices will be removed upon completion of the job.
 - d. Assign other authorized employees to complete remaining work.
- (2) If the authorized employee is not at work and cannot be contacted, the supervisor 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 and remove the lock, tag, and lockout device upon completion of work.
 - c. Provide an update on the status of the job to the authorized employee whose lock and tag were removed.

J. PERIODIC (ANNUAL) LOCKOUT/TAGOUT INSPECTION

- (1) The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.

- (2) During the inspection, the inspector will review the lockout/tagout steps with the authorized employees who normally work on the equipment and then complete the required lockout/tagout steps on the machinery or equipment being locked out.
- (3) The assigned authorized employee who performs the inspection and authorized employees observing the inspection will determine if any steps require changing.
- (4) Inspection results will be recorded on the “UNLV Lockout/Tagout Periodic Inspection” record (Appendix B) with a copy forwarded to RMS for review.
- (5) The inspector will then perform the necessary steps to remove the locks, tags and lockout devices and restore the machine or equipment for normal operation.
- (6) The department manager or supervisor will review/approve proposed changes and update the procedure.
- (7) Once the procedure has been approved, a copy will be sent to RMS for posting to the RMS website (available at the OSH tab).

K. TRAINING

- (1) Employees who perform servicing and maintenance on machinery and equipment will receive a two-part “Authorized User” training course.

The first part will be completed either in the classroom or through an on-line presentation.

The second part of the training will be provided and documented by the department or school to which the employee is assigned. This training will be equipment-specific.

RMS will provide a form documenting that training has been completed and any other guidance that might be needed.

- (2) Employees who work on machinery and equipment that may be locked out will receive “Affected User” training.
- (3) Employees who work in areas where energy control procedures may be utilized will receive “Other Employee” training.
- (4) Employee retraining of lockout/tagout procedures may be necessary when:

- a. Changes occur in job assignments.
- b. Procedure reviews indicate that changes to lockout/tagout procedures are required.
- c. Equipment is added to inventory which presents new hazards.
- d. Deficiencies exist in authorized employees' knowledge of, or failure to follow all the prescribed steps.

L. APPENDICES

Appendix A – “General Lockout/Tagout Procedures” Steps
Appendix B – “UNLV Lockout/Tagout Periodic Inspection” Form
Appendix C – “Control of Hazardous Energy (LOTO)”

Appendix A General Lockout/Tagout Procedures

Authorized employees will follow the general procedures below unless equipment specific lockout/tagout 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 tagged/locked out.
3. Turn off/shut down the machine or equipment and install lockout devices, and tags on the energy isolating devices.

Note: Tags shall not be used alone. They must only be used in conjunction with locks and lockout devices.

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

Note: Use meters/test equipment to verify that all residual energy has been released from the machine or equipment.

6. Perform servicing, maintenance, or repair prescribed for the machine or 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 machine or equipment components are intact.
8. Check that employees have been safely positioned away from the machine or equipment and notify them that lockout devices, locks, and tags will be removed.
9. Remove all lockout devices, locks, and tags placed on the machine or equipment.
10. Start the machine or equipment using normal startup procedures and then check for proper operation.
11. Release the machine back to those who will be operating and using it.

**Appendix B
UNLV Lockout/Tagout
Periodic Inspection**

Machine/Equipment _____

Date of Review _____

Location (building/room) _____

Authorized Employee (s) Performing Inspection

1. _____
(Signature) (Department)

2. _____
(Signature) (Department)

Authorized Employee (s) Observing Inspection (additional lines on reverse)

1. _____
(Signature) (Department)

2. _____
(Signature) (Department)

3. _____
(Signature) (Department)

Observations/Changes Recommended

RMS Review


1. _____
(Signature) (Date)

Note: After completing this form, please forward to RMS, by fax (702-895-4690), email, or campus mail service (stop 1042)

Authorized Employee (s) Observing Inspection (cont'd)

- | | | |
|-----|-------------|--------------|
| 4. | _____ | _____ |
| | (Signature) | (Department) |
| 5. | _____ | _____ |
| | (Signature) | (Department) |
| 6. | _____ | _____ |
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| | (Signature) | (Department) |
| 13. | _____ | _____ |
| | (Signature) | (Department) |
| 14. | _____ | _____ |
| | (Signature) | (Department) |

Appendix C Control of Hazardous Energy (LOTO)

	<h3 style="margin: 0;">Control of Hazardous Energy (LOTO)</h3> <p style="margin: 0; text-align: right;">Site- or Department-Specific Training</p> <p style="margin: 0;">Supervisor Name: _____</p> <p style="margin: 0;">Date: _____ Time: _____ Location: _____</p> <p style="margin: 0;">Training Outline:</p> <ul style="list-style-type: none"> · Verify that each employee has completed either classroom or on-line training. · Site-specific identification of hazardous energy sources. · Type and magnitude of the energy available in the workplace. · Means necessary for energy isolation and control. · Opportunity to ask questions. 																																	
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%; text-align: left; border-bottom: 1px solid black;">Employee Name (Print Clearly)</th> <th style="width: 30%; text-align: left; border-bottom: 1px solid black;">Job Title</th> <th style="width: 35%; text-align: left; border-bottom: 1px solid black;">Signature</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td>_____</td><td>_____</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td></tr> <tr><td>3. _____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td></tr> <tr><td>6. _____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td></tr> <tr><td>8. _____</td><td>_____</td><td>_____</td></tr> <tr><td>9. _____</td><td>_____</td><td>_____</td></tr> <tr><td>10. _____</td><td>_____</td><td>_____</td></tr> </tbody> </table>		Employee Name (Print Clearly)	Job Title	Signature	1. _____	_____	_____	2. _____	_____	_____	3. _____	_____	_____	4. _____	_____	_____	5. _____	_____	_____	6. _____	_____	_____	7. _____	_____	_____	8. _____	_____	_____	9. _____	_____	_____	10. _____	_____	_____
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<p style="margin: 0;">This is to certify that the persons above have acknowledged receipt of information and training in Lockout/Tagout Training.</p>																																		
<p style="margin: 0;">_____ Supervisor's Signature</p>	<p style="margin: 0;">_____ Supervisor's Job Title</p>	<p style="margin: 0;">_____ Date</p>																																