

LOCKOUT / TAGOUT PLAN

EUGENE SCHOOL
DISTRICT 4J



For Compliance with OR-OSHA
OAR 437, Subdivision 2/J,1910.147

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PURPOSE

Eugene School District 4J has established this Lockout/Tagout (LO/TO) Program to provide the maximum protection to our employees whenever they must isolate machines or equipment from energy sources and to prevent unexpected energization, start-up or release of stored energy that could cause them injury.

The primary method of guarding against hazardous energy will be accomplished by utilization of this LO/TO program. This program is intended to meet or exceed minimum requirements defined by Oregon Occupational Safety and Health Division (OR-OSHA).

POLICY

District personnel involved in the maintenance, repair and servicing of equipment that requires the bypassing of guards are required to follow this policy. Those involved will be instructed in the safety significance of the lockout procedures to follow.

Each operator and maintenance person will know all the energy sources within equipment, machinery or process. All sources of energy are covered under the procedures of this program, including electrical, mechanical, hydraulic, pneumatic, chemical and thermal energy.

Repair and service on cord and plug electrical equipment are required to have the electric cord pulled from the

energy source prior to repair. If the plug remains under the exclusive control of the employee performing the servicing and there are no other sources of energy (mechanical, pneumatic, hydraulic, or stored energy), no additional LO/TO procedures are required.

The key definitions used in this program and in the regulations are found in Appendix A.

RESPONSIBILITY:

- 1) **Supervisors** of authorized employees are responsible to provide instruction on the LO/TO procedures and their safety significance as outlined in the training requirements of this program. The supervisors are responsible for conducting periodic audits to ensure that proper LO/TO procedures are being followed and record the results of the audit.
- 2) **The Risk Manager** is responsible to see that the overall policy is developed and works with the department supervisors, safety committee and employees to ensure implementation. The Risk Manager is responsible to see that periodic audits and review of the policy are completed annually.
- 3) **Authorized Employees:** Affected departments will identify those who are authorized to implement the LO/TO procedure. Authorized staff receive special training to recognize and

understand the particular hazards involved with the tasks to be performed and the type and magnitude of energy to be controlled. In general the following are authorized to lockout equipment:

- (a) Data Processing Staff
- (b) Facilities: Maintenance Staff and electricians
- (c) Transportation: Mechanics & Service Personnel
- (d) Custodial and Grounds Departments.
- (e) District Operations Employees (note: in general they do not repair their own equipment but if they do, then control of energy must be followed)

4) **Affected Employees**

- a) An employee whose job requires him/her to operate or use a machine or equipment on which servicing and maintenance is being performed under LO/TO, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- b) An affected employee's responsibility is to ensure that they do not attempt to operate any equipment being LO/TO and follow all safety procedures in shut down and restarting equipment.

- 5) **All Other Employees** who may see lockout/tagout on equipment are to honor the locks and tags and make no attempt to start or remove the devices.
- 6) **Training:** A key component of this program is employee training. It is the supervisor's responsibility to see that all employees involved in this program are trained. The authorized employees are to receive additional specialized training as outlined in this program. The training must be documented by the Supervisor.
- 7) **All Employees** who observe inadequacies in the performance of lockout/tagout or deficiencies in this program are to report the information to their Supervisor.

BASIC LOCKOUT/TAGOUT PROCEDURES

- 1) All equipment energy sources capable of being locked out during servicing, repair, or maintenance will be locked-out to prevent accidental or inadvertent operations which could cause injury.
 - a. Energy sources can include: electrical, pneumatic, hydraulic, stored energy: gravity, springs; thermal; fluid flow - pressure.
 - b. Equipment energy sources not capable of being locked out will be isolated and then tagged-

out to inform all others of the safety procedure in use and warning that no operation of the equipment is permitted.

- c. Example of some equipment not capable of being locked out may include: 110v circuit breakers, and older power panel installations.
- d. Tags will be used at these energy isolating devices. The Facilities Department will design systems capable of being locked-out if major replacement, repair, renovation, or modifications are made on the electrical systems or equipment.

2) **Typical conditions requiring lockout or tagout devices at our facilities include:**

- a. Anytime repairs, servicing and/or changes are being done on machines or equipment and the safeguards are by-passed, or work on electrical circuits in which the employee could come into contact with hazardous energy occurs (mechanical, pneumatic, hydraulic, or stored energy).
- b. Whenever moving parts of machinery or equipment are being cleaned or oiled and accidental contact with movable parts is possible.
- c. When it becomes necessary to remove a plug or to clear blocked mechanisms or pumps

which exposes the employee to potential release of hazardous energy.

- d. When working on lines which contain hazardous substances, or high-pressure lines. Such systems should be clearly marked. Valves in the system should be capable of being locked out. In the case of high-pressure lines, there should be a means of safely relieving pressure in blocked sections.
- e. To lockout power to equipment to prevent use by unauthorized persons and/or to prevent use in off hours.

3) No employee shall attempt to operate any switch, valve, or other energy isolating device bearing a lockout or tagout device.

4) Lock securing switch levers to prevent activation of electrical circuits or equipment on which work is being done. If it is not capable of being locked, apply a tagout which is securely fastened to the disconnect lever or at the immediate area to warn of the on-going procedure.

5) Other basic controls that may be needed due to the type of energy present include:

a. **Hydraulic Energy:** Close valve and bleed off line or block the device.

b. **Air Pressure:** Close valve

and bleed off pressure from line prior to working on the device. Note: some valves when they lose pressure open, which can cause hydraulic or other liquid flows which could be hazardous to employees. These valves must be isolated and controlled.

- c. **Springs:** Attach a hold down device or leave in open position where no stored energy is present.
- d. **Fluid Flow - Water Pressure:** Insure proper gate devices are used that hold the back pressure, or drain lines so no fluid pressures present.

LOCKOUT/TAGOUT HARDWARE (EQUIPMENT)

- 1) Locks, tags and hasps will be used as energy isolating devices. Valves with handle and lock attachment hole will be locked out. If the locks become damaged in anyway immediately seek a replacement lock.
- 2) Valves not capable of being locked-out will have tags placed on them with a slip lock plastic attachment device capable of withstanding 50 pounds of pressure.
- 3) The hardware is required to meet the following criteria:
 - a. Durable to withstand weather and all types of exposures.

- b) Standardized by color, or shape, or size, or format
- c) Locks substantial so they cannot be removed without excessive force.
- d) Singularly identifiable.
- e) Only device used for controlling energy and not used for other purposes.
- f) Tags substantial to prevent inadvertent or accidental removal.
- g) Tag attachment devices need to be non-reusable, attached by hand, self-locking, and a minimum unlocking strength of no less than 50 pounds.
- h) Lockout/tagout devices - shall indicate identity of employee applying device.
- i) Tag must have a written warning on it, i.e., **Do Not Start.**
- j) **Locks, tags, hasps, chains, and other restraining devices will be kept by each authorized employee.** Additional locks and equipment will be kept at the lockout center in the tool room service center. Each supervisor will review the location of the lockout centers and how to obtain additional lockout equipment as necessary.

k) **Out of Service Tag:** The facilities and maintenance staff may need to use an out of service tag when a piece of equipment is not functioning properly and it needs to be removed from service for the protection of the equipment.

(i) **THE OUT-OF-SERVICE TAG IS NOT TO BE USED FOR LOCKOUT/TAGOUT HAZARDOUS ENERGY CONTROL. OUT-OF SERVICE TAGS WILL BE "CAUTION TAG" YELLOW IN COLOR.**

l) **REMEMBER** once work begins on the equipment that places the employee in danger of hazardous energy release the authorized employee(s) must place their personal lock and tag on the energy isolating device.

SEQUENCE FOR A LOCKOUT OR TAGOUT PROCEDURE

The lockout/tagout procedure must be conducted in the following manner. No deviations will be tolerated.

1) The **authorized** employee shall notify the affected employees that the lockout/tagout system is going to be utilized. In many cases no one's safety will be affected by our maintenance and

repair activities, thus there will not be any affected employees.

2) If a particular piece of equipment is operating, it must be shut down by the normal stopping procedure such as depressing the stop button or opening the switch. Some equipment has detailed procedures that need to be followed by trained employees.

3) The authorized person shall lock out and tag out the energy isolating device of the equipment or machines with their individual assigned lock or by using individually keyed locks. These devices are assigned to each maintenance employee as part of his/her tools. The locks in the lockout center are individually keyed and can be used by other authorized employees or for additional hardware if multiple disconnects must be locked out during maintenance.

4) The authorized employee must operate the switch, valve or other energy isolating device to make sure the equipment is isolated from its energy source. Stored energy, such as the energy found in springs, rotating fly wheels, hydraulic system or compressed air or gas lines must be dissipated or restrained by either repositioning, blocking or bleeding down.

5) After ensuring that no personnel are exposed, the authorized person shall complete another check to make sure that all of the energy sources have been

disconnected. The type of verification testing will depend on the type of equipment or electrical installation. Equipment may be tested by trying to operate it by turning on the controls.

CAUTION: Return operating controls to neutral or off position after test.

- 6) Many of the electrical disconnects operating various pieces of equipment can be locked out; however, if other equipment energy requiring control cannot be locked-out then a tagout device will be used. The tagout device must be attached on or as close as possible to the energy isolating device. The tag must clearly indicate that the operation or start-up of the energy isolating device from the safe or off position is prohibited.

EQUIPMENT TESTING UNDER LOCKOUT/TAGOUT

At times, some of our equipment must be tested or positioned while doing maintenance or repair. The following procedure must be followed under those conditions:

- 1) Clear the machine or equipment of all tools and materials that are non-essential items.
- 2) Make sure that all of the

employees are clear of the machine or equipment and notify them that the machine will be energized.

- 3) The authorized employee shall remove the lock.
- 4) Energize and proceed with the testing or positioning.
- 5) De-energize all systems and complete the shut down procedures before continuing any maintenance or service.

RESTORING EQUIPMENT TO NORMAL OPERATIONAL STATUS

When the authorized employee has completed their work, then the lockout device and tag can be removed. The following procedure will be followed during that process:

- 1) The authorized person shall inspect the work area to make sure that all of their tools have been removed from the machine and ensure that the machine or equipment components are operationally intact.
- 2) Check the work area to ensure that all employees have been safely positioned or removed.
- 3) Notify all of the affected employees that the equipment is to be restarted.
- 4) Remove Lockout and Tagout device.

Note: The authorized employee is the only person who shall remove the lockout or tagout device. The only exception to this is under the following conditions.

REMOVAL BY SOMEONE OTHER THAN THE PERSON THAT APPLIED THE LOCK:

Removal of a safety lockout or tagout device by any other person other than the authorized employee, who applied it, may only be done under the direction of the supervisor, under the following procedure.

- 1) The supervisor will verify that the authorized employee who applied the device is not at the facility by checking with the immediate supervisor and co-workers.
- 2) The supervisor will call the authorized employee at home if possible to inform him that his lockout and/or tagout device needs to be removed. If the employee cannot return to remove the lock then the supervisor will inform the person that the lock is being removed. The supervisor or lead person may then use a master key or second key that is kept in a locked, inaccessible location known only to the supervisor and remove the lockout device.
- 3) The supervisor must follow all the correct protocols for removal of a lockout or tagout as outlined above and safely place the

equipment back in service and then notify affected employees.

- 4) If all reasonable efforts have been made to contact the authorized employee, but the person was not reachable, the supervisor will ensure that the authorized employee upon return to work will know that his/her lock was removed and that routine operation of the equipment is now occurring.

PROCEDURE INVOLVING MORE THAN ONE PERSON

If more than one employee is required to lockout or tagout equipment, each shall place his/her own personal lockout device or tagout device on the energy isolating device(s). When an energy isolation device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) is to be used.

SHIFT OR PERSONNEL CHANGES

During shift or personnel changes the hazardous energy control responsibility will be transferred in a manner that maintains uninterrupted protection for the employees involved.

- 1) All employees in the immediate affected work area shall be informed of the transfer of lockout/tagout devices between the off-going and oncoming employees.

- 2) On-coming shift employees must verify the equipment has been de-energized and proper procedures have been followed.
- 3) The on-coming authorized employee shall apply his/her own lockout/tagout device to the energy control source prior to the removal of the lockout/tagout device by the off-going employee.
- 4) The on-coming authorized employee shall ensure that no personnel are exposed, and as a check that all energy sources are disconnected, operate the push button or other normal operating controls to make certain the equipment will not operate. Return operating control(s) to the “off” position after the test.

CONTRACTORS

When we hire outside contractors to come into our facility to work on our machines and equipment, their activities may create hazards which normally are not present to our regular employees.

A copy of our procedures will be given to that contractor and a mutually agreed upon procedure established concerning the lockout/tagout devices that will be used to protect our employees and the contractor's workers. This coordination will help to ensure that all of our employees know what kind of work is to be performed, where and when it is to be performed, and how they are being protected.

The maintenance supervisor or other project manager will identify the energy isolating devices for the contractor. The contractor's employees will be responsible to lockout all devices capable of locking or place a energy control tag on or as near the device as possible.

PERIODIC INSPECTION

Periodic inspection is intended to assure that the energy control procedures continue to be implemented properly, and that the employees involved are familiar with their responsibilities. OSHA requires that an inspection type audit of lockout procedure must be done AT LEAST ANNUALLY.

- 1) Supervisor will assign a periodic inspection of the Lockout/Tagout Program procedures to be performed at least annually to ensure that the procedure and the requirements of Oregon OSHA rules are being followed. (Note: the audits must be done by an authorized person and he/she cannot audit their own job)
- 2) The periodic inspection will be performed by an authorized employee not involved in the energy control procedure being inspected. The inspector must determine three issues:
 - a) Whether the steps in the energy control procedure are being followed
 - b) Whether the employees

involved know their responsibilities under the procedure, and:

- c) Whether the procedure is adequate to provide necessary protection and what changes, if any, are needed.
- 3) The inspector will observe and talk with the employees in order to make these determinations. These inspections are intended to provide immediate feedback and action to correct any inadequacies observed.
- 4) Written records shall be made of these inspections and the findings of these inspections will be kept by the Risk Manager. See **Appendix B for the Audit Inspection Form.**

EMPLOYEE TRAINING

Retraining will be conducted whenever a periodic inspection reveals, or whenever there is reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The retraining will re-establish employee proficiency and introduce new or revised control methods and procedures as necessary.

The District offers to all employees on-line safety-training video courses, including Lockout/Tagout. This course complies with OSHA required training. Contact Risk Management for details.

Annual training review of this program by all affected and authorized employees is recommended.

DOCUMENTATION OF TRAINING

The Supervisor or lead person will document that employee training has been accomplished and is being kept up-to-date. The certification shall be an individual certificate of training for each employee receiving the training.

APPENDIX A

LOCKOUT/TAGOUT DEFINITIONS

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 or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed. **The affected employee's safety may be effected by the de-energization of the equipment.**

(An example would be at a maintenance shop when the air compressor will be shut down for maintenance and repair and the garage repair personnel have a vehicle on the hydraulic hoist. The lack of air pressure could cause the hoist to lower without notice. In this case, the garage staff would be affected employees).

Authorized employee.

A person who locks or implements a tagout system procedure on machines or equipment to perform the servicing 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.

"Capable of being locked out."

An energy isolating device will be

considered to be capable of being locked out either if it is designed with a hasp or other attachment or integral part to which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. Other energy isolating devices will also be considered to be capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energy isolating device.

A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a slide gate; a slip blind; a line valve; a block; and any similar device used to block or isolate energy. The term does not include a push button, selector switch, and other control circuit type devices.

Energy source.

Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout device.

A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a

machine or equipment.

Out-of-service device.

This is a tag that is placed on equipment controls or at the main disconnect to notify other personnel that the equipment or process is taken out of service because it is not functioning properly or equipment damage may occur or personnel does not want the equipment on-line for process reasons. It is never to be used as an energy control tagout. THIS TAG STATES:

Tagout device.

A 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. THIS TAG STATES:

<p style="text-align: center;">DANGER</p> <p style="text-align: center;">DO NOT OPERATE</p> <p>Signed: _____</p> <p>Date: _____</p> <p>** Backside of this tag states, " DO NOT REMOVE THIS TAG"</p>

APPENDIX B

Audit Inspection Form

Eugene School District Energy Control Program Inspection Form

Name	Location (Building, Room #)	Equipment Name/number	Lockout Date	Note positive or negative finding and corrective action is needed	In compliance Yes/No	Notes
Evaluator: _____ Dept: _____ Year: _____						