

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Policy No.: OS002	Approved by: Michael Liberty
Title: Control of Hazardous Energy (Lockout/Tag out)	Date: 10/24/19
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Prepared by: Chris Widmer	

I. PURPOSE

The purpose of this program is to prevent injuries and accidents from occurring while servicing or maintaining machinery or equipment that is capable of sudden energy release, and working with machinery or equipment that is capable of storing hazardous energy.

Departments shall ensure that anyone performing service or maintenance activities is conducting these duties in a safe manner, utilizing equipment specific lock-out tag-out (LOTO) procedures.

This program establishes minimum requirements to ensure effective implementation, operation, and recordkeeping of LOTO activities at the University of Rochester (UR), in compliance with 29 CFR 1910.147.

This program does not apply to work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start-up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the *exclusive control* (see definition on pg. 3) of the employee performing the servicing or maintenance.

This program does apply to the installation, service, maintenance, or removal of any type of machinery, equipment, or their components, in which the unexpected start-up or release of stored energy could cause injury. No employee shall install, service, remove, or perform maintenance on any equipment or machinery until that equipment is turned off or de-energized, all stored hazardous energy has been bled down, dissipated, or blocked off, and the machinery has been locked out and blocked as provided in the sections below.

II. PERSONNEL AFFECTED

The provisions of this Lockout/Tag out Program shall apply to all University personnel at the University of Rochester campuses, regional sites, and related facilities and operations, including, but not limited to, Strong Memorial Hospital, Strong West, School of Medicine and Dentistry, Memorial Art Gallery, River Campus, and Eastman Theater.

As used in this program, the terms “employee” and “personnel” include staff, students working for pay and faculty.

Personnel involved in the use, installation, repair, removal, or maintenance of equipment are subject to the requirements of this program.

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III. DEFINITIONS

Affected Employee: An employee whose job assignment requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tag out, or whose job assignment requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized Employee: A person who locks or implements an equipment specific lock-out tag-out procedure on machines or equipment to perform servicing or maintenance on the machine or equipment. An affected employee becomes an authorized employee when the employee's duties include performing service or maintenance on the equipment.

Blanking/Blinding: The absolute closure of a pipe, line, or duct by fastening a solid plate that completely covers or blocks the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Capable Of Being Locked Out: An energy-isolating device will be considered to be capable of being locked out if it is designed with a hasp or other means of attachment or integral part to which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. All energy isolating devices are assumed to be capable of being locked out unless proven otherwise to EHS's Occupational Safety Unit.

Cord and Plug Electrical Equipment: Equipment that can be isolated by unplugging the equipment from the energy source and the plug remaining under the exclusive control of the employee performing the servicing or maintenance work.

Double Block and Bleed: The closure of a pipe, line, or duct by closing and locking or tagging two inline valves and by opening and locking or tagging a drain or vent valve in the line between the closed valves.

Energized: A machine or equipment that is connected to an energy source or containing stored or residual energy.

Energy Isolating Device: A mechanical device that physically prevents the transmission or release of energy, including but not limited to: 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 line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolating devices.

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Energy Source/Hazardous Energy: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gravity, spring tension/compression, gas, steam, weights/counter weights, wind, or other energy that could cause in whole or part an unexpected start up or movement of equipment, machinery, vehicles, or the release of pressure, which can cause injury.

Exclusive Control: Under the exclusive control of the employee means that the authorized employee has the authority to and is continuously in a position to prevent (exclude) other individuals from re-energizing the machine or equipment during his servicing or maintenance activity.

Group Lockout/Tag out: a unique version of standard lockout/tag out which is implemented when more than 1 authorized employee is involved in LOTO activities. All authorized employees involved shall be afforded a level of protection equivalent to that provided by the implementation of a personal lockout or tag out device.

Hot Tap: A method used in the repair, maintenance, and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure in order to install connections or appurtenances.

Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established equipment-specific lockout tag out procedure, ensuring the energy isolating device and equipment being controlled cannot be operated until the lockout device has been removed.

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. Tags must accompany lockouts.

Lockout/Tag out: LOTO should be thought of as rendering machinery, pipelines or equipment to a Zero Energy State. LOTO is concerned with all forms of energy, not just electricity.

Equipment-Specific Lockout Tag out Procedure: A written document developed for each distinct piece of equipment which outlines the means and methods for the control of hazardous energy such as the unexpected energization, startup, or release of stored energy, as well as ensuring machines or equipment are isolated and inoperative prior to performing service or maintenance.

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Occupational Safety (OS): The unit of Environmental Health and Safety (EHS) whose objective is to provide guidance in matters of health and safety, and assistance to departments and employees in evaluating risk.

Stored or Residual Energy: Any device that is capable of holding energy after equipment is shutdown. Stored or residual energy may be, but is not limited to, electricity (capacitors), air pressure (pneumatic), liquid pressure (hydraulic), tanks, pipes, springs, gravity, wind, head pressure, or flywheels. Be aware that fan blades can unexpectedly rotate or turn (freewheel) due to gravity, wind or other forces.

Tag out Device: A prominent warning device, such as a tag and 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 tag out device is removed.

Verify/Verification: Process of effectively ensuring the isolation and safe release of energy that may cause equipment start up or other source on injury.

IV. RESPONSIBILITIES

Departments:

- Departments are responsible for implementing and complying with all elements of this Program
- Ensure appropriate lockout/tag out equipment is available, staff are trained, and compliance with equipment specific lockout/tag out procedures is enforced
 - Lockout equipment will include, but not is limited to, locks, tags, valve covers, circuit breaker or switch covers, chains for wheel vales, etc.
Contact OS if unsure.

Supervisors/Lab Managers/PIs:

- Ensure employees impacted by LOTO (including new and transferred employees) are aware of this document and are trained not only in your departmental/unit equipment-specific lockout tag out procedures, but also in the significance, purpose, and use of lockout/tag out.
- Ensure only Authorized Lockout/Tag out Employees perform lockout/tag out operations on equipment, have received the appropriate level of training, and are provided with the proper equipment and personal protective equipment (PPE) to perform the job safely.

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- Conduct a hazard assessment of his/her area of control to determine whether the lockout/tag out program applies to the processes and equipment in his or her area. Record the areas assessed, including dates and individuals.
- Develop, document, and use equipment-specific lockout tag out procedures to control potentially hazardous energy before workers perform service/maintenance activities covered by the Control of Hazardous Energy (Lockout/Tag out) Standard (29 CFR 1910.147).
 - This may be accomplished by using the “Equipment Specific LOTO Procedure Development Form” in Appendix B.
- Maintain an inventory of all equipment in their department that requires equipment specific lockout/tag out procedures.
- Purchase or install equipment and machinery that has the capability to accept a lockout device on all energy isolating devices.
- Review work performed and the content of equipment-specific lockout tag out procedures at least annually to ensure compliance with policy as well as the procedures’ accuracy and effectiveness.
- Periodically audit their employees on the job to ensure compliance with equipment specific lockout tag out procedures.

Employees:

- Observe and comply with safety practices contained in the Lockout/Tag out program and to point out unsafe conditions to their supervisor.
- Authorized employees are the only employees designated to perform lockout/tag out. They are required to comply with written equipment-specific lockout tag out procedures.
- Upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or equipment.
- Do not remove or tamper with lockout/tag out devices installed by another person, except under special conditions described later in this document.
- Use energy control devices for no purpose other than lockout/tag out.

Occupational Safety:

- Assist departments with implementation of the program.
- Ensure individual departmental programs are being periodically inspected for deficiencies.
- Periodically review and update this program.
- Assist in identifying or providing training needs.

V. PROCEDURES

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The key to lockout/tag out procedures is **VERIFICATION** that the appropriate energy source(s) is locked out, the system is in fact de-energized, and pressure is safely relieved.

Typical operations covered by lockout/tag out include, but are not limited to, working on:

- electric motors and circuits
- water lines, steam lines and boilers
- refrigeration and air conditioning equipment
- permanently wired machinery or equipment including ovens
- wood planers, table and radial saws or other shop and laboratory equipment (if hard-wired)
- pressurized and non-pressurized liquid or chemical lines
- compressed air or gas lines, natural gas lines
- hydraulic/pneumatic systems
- elevators/hoists /overhead cranes
- overhead doors and dock plates

A piece of equipment can have more than one type of energy associated with it. For example, it might have an electric motor (electrical), pressurized steam lines (pneumatic and thermal energy) and pistons (mechanical energy).

It is important to identify all the sources of energy and control them by ensuring they are all de-energized and placed in a safe and secure position before beginning work on any equipment.

Stand behind or to the side of the work when opening pipelines, throwing switches or opening panels regardless of type of energy, even though the source is believed to be isolated and energy relieved.

Only authorized employees may conduct the equipment-specific lockout/tag out procedure.

A. Specific Procedures

- a. The Authorized Lockout/Tag out Employees performing the work must ensure that an equipment-specific lockout tag out procedure has been created, as well as physically locate and identify all isolating devices to verify which switches, valves, or other energy isolating devices apply to the equipment to be locked out.

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- b. NOTE THAT some activities may require equipment-specific lockout tag out procedures to be changed, updated, or new equipment-specific lockout tag out procedures created to ensure the highest level of safety for employees and continued compliance with 29 CFR 1910.147. all of these elements must be verified prior to the beginning of any LOTO activities.
- Exception: The employer need NOT document the equipment-specific lockout tag out procedure for a particular machine or equipment, when *all* of the following elements exist:
 - (1) the machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees;
 - (2) the machine or equipment has a single energy source which can be readily identified and isolated;
 - (3) the isolation and locking out of that energy source will completely de-energize and deactivate the machine or equipment;
 - (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance;
 - (5) a single lockout device will achieve a locked-out condition;
 - (6) the lockout device is under the exclusive control of the authorized employee performing the service or maintenance;
 - (7) the servicing or maintenance does not create hazards for other employees;
 - (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance
- c. If a piece of equipment is found to require an equipment-specific lockout tag out procedure, but no such procedure currently exists, a job hazard analysis shall be completed, and equipment-specific lockout tag out procedures created and kept on file. Contact OS with any questions or concerns.
- d. Notify all Affected and Other Employees as necessary that a lockout is to be performed. These persons must be instructed that they are not to disturb the lockout device or attempt to re-start the equipment until they are informed that the lockout has been cleared and it is safe to resume normal operations.
- e. If the equipment is in operation, shut it down using the normal shutdown process. Turn the equipment off if there is an on/off switch.

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- f. Turn energy isolation devices (disconnects, valves, etc.) to the “off” position. Toggle switches, push buttons, interlocks and other types of control switches are not energy isolating devices.
- g. All energy-isolating devices must be locked out. Lock isolating device in the “off” position with an assigned individual lock, and attach an identifying tag to the lock. (See Appendix A). Use only the lock issued for this purpose. The key shall remain under the control of the authorized person performing this operation. If it is impossible to use a lock, use a tag after notifying Occupational Safety and receiving approval.
- h. All forms of stored energy must then be dissipated (except for batteries which can be disconnected). This may include relaxing any springs, relieving any pressure or vacuum, allowing flywheels to come to rest, discharging capacitors, or neutralizing or adequately removing any chemicals.
- i. Any parts that could inadvertently move and cause damage or injury must be blocked in place to prevent this movement. Blocking must be secured in place so that it cannot be inadvertently removed or fall out. Fan blades may need to be blocked to prevent freewheeling, and the blocking device (e.g. clamp, wedged 2x4, etc.) tagged.
- j. **VERIFY** all forms of hazardous energy have been reduced to zero energy potential by means of testing, gauge readings, opening valves to slowly release pressure, observing and fixing as necessary a spring in a relaxed state, observing that a flywheel is not spinning, using litmus paper to verify the absence of chemical, etc.. Note that gauges should be viewed only as *indicators* of pressure content. They can fail and should not be solely relied on to convey a zero energy state.
- k. Attempt to re-start or re-energize the equipment or machinery to verify an isolated condition. If the equipment re-starts or it appears that energy has been allowed to flow into the system, no work should proceed until the problem is identified and appropriate steps are included in the equipment-specific lockout tag out procedure to control this energy.
- l. If a zero energy state is **VERIFIED** and the controls are locked and tagged out, work may then begin.

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1. Situations Involving More Than One Person Locking Out

If more than one employee works on the equipment, a lockout adaptor suitable for the installation of several locks must be used, enabling all workers to lock out the machine or energy source with their individual locks. Each locking device and lock must be identified and tagged by the person locking it. Each person must individually verify the proper LOTO themselves.

ALT. Method: equipment locks may be used to isolate to a zero-energy state. The keys of those locks, may then be placed into a group lock box, then personal LOTO locks may be affixed to the lock box

2. Procedure Involving Personnel Changes During The Job

Persons being replaced or exchanged on a job during a shift or at the end of a shift must ensure that the lock(s) and tag(s) of their replacement are substituted for their own before leaving the job or removing their devices.

If lockout tag out is to continue through the following work shift, the oncoming work crews must place their locks and tags on the energy isolating devices before the departing crew removes their locks and tags. Before work begins on the subsequent work shift, the oncoming crew must re-verify that all safety devices, such as blocking, are in place, and that there is still zero energy in the system.

3. Procedure When Work Is Left Unfinished

Locks, tags, and all other safety warning devices must be left in place during all short absences. When work is incomplete and temporarily suspended, such as overnight or over a weekend, all locks, tags, and other safety warning devices must be left in place. When work is suspended for an extended period of time, the equipment or machinery must be permanently disconnected from all energy sources and tagged as out of service. Lockout/tag out devices must be removed.

4. Procedure When One Employee Leaves The Area Without Removing Their Lock

When an employee leaves the facility site and does not remove his/her lock(s) from the energy isolating device(s), for example due to sickness, vacation, termination of employment, etc., the responsible supervisor must attempt to contact that employee to determine if he/she will be able to return to remove the lock. If the employee is unavailable or cannot return, the supervisor must complete the Abandoned Lock Removal Authorization Form (Appendix C), and then cut the lock(s) off the energy isolating device(s).

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New LOTO must be implemented by the replacing employee, including verification of zero energy. When the original employee returns to the work site, that person must be informed that their lock was removed and the status of the equipment that was locked out (e.g., returned to service, still under lockout, etc.).

5. Procedure When Physical Locking Is Impossible

When it is impossible to use a lock, a tag out device must be used in lieu of a lockout along with another positive means of disconnecting the circuit, equipment, or machinery. This can include unplugging the equipment (or locking out the plug), disconnecting the conductors, or removing fuses.

All other steps of the process are the same as those listed above for lockout. A tag out device must be placed on the plug, conductors, disconnect switch, fuse brackets, or other positive means employed.

6. Procedure When Machine Testing Is Required During A Lockout

On some machines, it may be necessary to energize or start up machinery or equipment during a lockout to troubleshoot, tune, adjust, or make measurements before the machine is fully restored to service. In such cases all persons must clear the hazard zone of all tools and equipment, leave the hazard zone, verify that all persons are clear of any hazards, remove the necessary locks, and then the equipment can be energized. A qualified person must then make the necessary measurements or adjustments and then the equipment shut down. The locked-out condition must then be re-established by repeating the exact same work steps specified on the written equipment-specific lockout tag out procedure for fully locking out the equipment.

7. Restoring Equipment To Service

- Remove all blocking and replace any critical parts removed during the equipment-specific lockout tag out procedure.
- Ensure that all tools or equipment have been removed from the hazard zone.
- Close and secure all cover panels and doors, and/or replace all equipment guards.
- Advise all Affected and Other Employees that the system is to be re-energized.
- Ensure all persons are clear of the equipment/hazard zone.
- Remove locks and tags.

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- Energize the equipment and restore the equipment to the normal condition.
- Notify all affected and other employees that the lockout condition has been cleared and the equipment is ready for use.

B. Other Considerations

1. Certain tasks, such as minor tool changes and adjustments, that are part of normal production operations and can be accomplished without removing protective guards or with the use of tools where the employee is not potentially exposed to hazardous energy or inadvertent startup of the equipment, and the equipment start control is under the control of the operator, (e.g. changing drill press bits where the power switch is shutoff and controlled by the operator) can be allowed.
2. Where it is ABSOLUTELY necessary to work on “live” electrical components, follow the procedure outlined in the UR Electrical Safety program (*IH001-Energized Electrical Safety Program*).
3. In addition to the above, other considerations are not limited to but may include:
 - a. **Pressurized Systems:** (Compressed Air / Gasses / Hydraulic Fluids / Steam / Pressurized Water, etc.)

Procedures to dissipate stored or residual energy must be implemented in pressurized systems. The machine or equipment must be returned to a “zero energy state” by methods such as opening drains, relieving pressure, blocking, bleeding, or cycling the system.

Equipment activated by compressed air, gases, steam, chemicals or other fluids should have valves that control movement. These valves will need not only to be locked out, but also bled to release any residual pressure to atmosphere. Physically disconnect the equipment from the supply plumbing if possible. If not possible, use double valves or blind off supply lines with appropriate flange plates or pipe caps.

b. Mechanical Energy:

Block equipment components so they cannot move. Examples of proper energy isolation or restraint include using support rods for counterweights or elevated components, a bar through spokes of a wheel, flywheel or fan blades, wheel chocks for rolling components, wrapping and locking chains

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around a movable equipment component and locking it to an immovable object, etc.

c. Contractors:

All outside servicing personnel (e.g. outside contractors) must comply with all applicable lockout/tag out standards or requirements. Whenever outside servicing personnel (e.g., outside contractors) are to be engaged in activities covered by the scope and application of this procedure, the University and the outside employer shall inform each other of their respective lockout or tag out procedures.

C. Training

- 1. Any affected employee** whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance will be performed, or any other employee who works in an area where such servicing or maintenance will be performed must be trained in the purpose and use of the applicable energy control procedures before working in an area where lockout or tag out is in use.
- 2. Affected employees or others** who might have reason to observe lockout/tag out situations must be informed about the prohibition of restarting and re-energizing machines or equipment that are locked or tagged out.
- 3. Each authorized person** must receive training on the recognition of applicable hazardous energy sources, the type and magnitude of the energy in their work place, and the methods and means necessary for isolation and control. At a minimum the training will include:
 - a. The identification of hazards, purpose and use of energy control procedures
 - b. Receive annual refresher training
 - c. Explanation of the UR specific lockout/tag out policies and procedures
 - d. Demonstration of and hands-on use of lockout devices and tags
- 4. Retraining** shall be provided on an annual basis and when:
 - a. New hazards are presented by the use of new equipment or machines
 - b. There is a change in policy or procedure
 - c. An affected or authorized employee's job duties or assignments change
 - d. A review or evaluation reveals a program deficiency.

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D. Records

The departments of those receiving lockout/tag out training are responsible for ensuring their employees receive the appropriate training and the maintenance of their training records. Records pertaining to this lockout/tag out program must be maintained for at least the period the employee is conducting, performing, affected by, or observing this type of work.

Work areas with lockout/tag out procedures must maintain a file of lockout/tag out equipment specific procedures developed by each supervisor for their specific jobs and equipment.

VI. REFERENCES

OSHA standard 29CFR 1910.147
IH001-Energized Electrical Safety Program

VII. APPENDICES/FORMS

Appendix A: Lockout/Tag out Tags and Locks
Appendix B: Equipment Specific Lockout/Tag out Procedure Development Form
Appendix C: Abandoned Lock Removal Form
Appendix D: Lockout/Tag out Evaluation Checklist

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VIII. REVISION HISTORY

Date	Revision No.	Description
4/24/2009	New	Establish lockout/tag out guidelines and procedures
4/26/2012	1	Reviewed
11/27/2013	2	Revised and updated
7/10/2015	3	Added additional information on cord and plug exemption, updated definitions and added information to procedure section on mechanical energy, pressurized systems and written procedure exemption
5/1/2018	No changes.	
10/24/2019	4	Reviewed program to ensure compliance with 1910.147. Edited language used in program to minimize confusion across multiple industries which will be using this document as a template for their specific applications.

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Appendix A: LO/TO Tags and Locks

LO/TO Lock and Tag Requirements (per 29 CFR 1910.147):

- Lockout devices and tag out devices shall be singularly identified; shall be the only devices(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:
- Lockout and tag out devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
- Tag out devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.
- Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.
- Lockout and tag out devices shall be standardized within the facility in at least one of the following criteria: Color; shape; or size; and additionally, in the case of tag out devices, print and format shall be standardized.
- Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.
- Tag out devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tag out device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.
- Lockout devices and tag out devices shall indicate the identity of the employee applying the device(s).

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- Tag out devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: *Do Not Start. Do Not Open. Do Not Close. Do Not Energize. Do Not Operate.*

Sample UR Lockout Tag out Tag



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Step 2: Notify Others (*List all personnel who must be notified prior to equipment shutdown.*)

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Step 3: Shutdown Equipment (*List normal stopping procedures for equipment*)

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Step 4: Isolate Equipment (*List procedures for disconnecting each energy source*)

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Step 5: Lockout/Tagout the Equipment (*Control methods are to be noted in "Step 1" of form*)

- Attach lock(s) and tag(s) to each energy isolation device.
- Ensure all tags indicate name of lock holder and date applied.

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Step 6: Release or Block Stored Energy <i>(List procedures for dissipating stored energy)</i>

Step 7: Verify Isolation <i>(List procedures for attempting restart or otherwise ensuring effectiveness of LOTO)</i>

Step 8: Perform Required Servicing
- During completion of work, avoid taking any action that could potentially reactivate the equipment.

Step 9: Release from Lockout/Tagout
- Remove all locks, tags, and lockout devices. - Remove all tools from the work area. - Replace all equipment guards. - Notify all affected & other employees of impending energization. - Ensure area is clear prior to restart.

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Appendix C: Lock Removal Form by person other than owner

General Information:	
Date & time of initial request to remove lock:	Work Unit of lock owner:
Name of lock owner whose lock/tag is to be removed:	Name of lock owner's supervisor:
Equipment & location:	
Is it absolutely necessary for the equipment to be reenergized before the lock owner can return to personally remove the lock? Yes No	
If "Yes", explain why:	

Document Reason for Removing Lock: (Lock owner called in sick, lock owner forgot to remove lock before leaving site, etc)

Document attempts to contact lock owner prior to removal:		
Date & Time	Method of Attempted Contact	Result
@		
@		
@		

Lock Removal:	
<input type="checkbox"/> Verify that the lock will be removed by the supervisor of the lock owner or the supervisor's direct designee.	
<input type="checkbox"/> Verify that the supervisor of the lock owner or the supervisor's direct designee has reviewed the equipment to ensure that it can be safely reenergized.	
Lock removed by:	Date & time of removal:

Notifications:
<input type="checkbox"/> Verify that EHS has been informed (i.e. via e-mail or phone call/message) of lock removal within 24 hours of removal.
<input type="checkbox"/> Verify that lock owner has been informed of lock removal prior to beginning their next shift.

Signature of Lock Owner's Supervisor: _____

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Appendix D: Lockout/Tagout Evaluation Checklist

SECTION I: GENERAL INFORMATION		
Date:	Supervisor(s):	
Authorized Employee(s):		
Affected or Other Employee(s):		
Specify equipment & location where the LOTO procedure is being used:		
Is the inspector an “authorized employee”? (Employees may not inspect their own procedures)	Yes	No
SECTION II: LOCKOUT/TAGOUT PROCEDURE		
(1) Were all “affected” and “other” employees verbally notified of the lockout?	Yes	No
(2) Were operational controls turned to the “Off” position prior to lockout?	Yes	No
(3) Were all energy sources turned to the “Off” or “Safe” position?	Yes	No
(4) Were lockout devices and locks properly attached to each energy isolation device?	Yes	No
(5) Were warning tags indicating the authorized employee’s name and the date attached to each energy isolation device?	Yes	No
(6) Was all stored energy properly controlled? (Pneumatic & hydraulic energy bled, suspended parts lowered, etc)	Yes	No
(7) Was an attempt made to restart the equipment or otherwise ensure the effectiveness of the lockout prior to beginning the service work?	Yes	No
(8) If a group lockout was required, did all authorized employees attach their own locks and tags to each energy isolation device?	Yes	No
(10) Were all locks and devices properly removed after servicing?	Yes	No
(11) Were all “affected” and “other” employees verbally notified when the lockout was complete?	Yes	No
SECTION III: INSPECTION RESULTS AND SIGNATURES		
Please fully explain all “No” responses and note any other deficiencies that are not specifically covered by a checklist item:		
Authorized Employee Name:		
Signature:	Date:	
Supervisor Name:		
Signature:	Date:	