Title: Lockout/Tagout Program

Apples to: Indiana University Northwest  
Date Issued: April 1995  
Latest Review/Revision: October 18, 2010

I. Overview

a. Scope/Application/Purpose: This program covers the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy could cause injury to employees. Although OSHA does not specifically address students, as used in this program, the terms “employee” and “personnel” includes students. This program establishes minimum performance requirements for the control of such hazardous energy.


c. Compliance: All Indiana University employees, contractors, and subcontractors shall comply with the OSHA Standard, 29 CFR 1910.147, this basic written program, and appropriate department procedures. All employees, upon observing a machine or piece of equipment which is locked or tagged out to perform servicing or maintenance shall not attempt to start, energize, or use that machine or equipment.

Compliance shall include understanding the written elements of the standards and programs, participating in training on the standard and on individual procedures and equipment, following established work procedures, proper use of personal protective equipment, and prompt and proper reporting of accidents, injuries, and near-misses.

Failure to follow the IU Northwest Lockout/Tagout Program can result in life threatening or serious injury situations. Failure to lockout or tagout or otherwise not follow the lockout/tagout procedures will result in disciplinary action up to and including termination of employment.

d. Limitations: This is not a definitive document and is intended to serve as a basic program for Indiana University Northwest. Refer to Section II, Department Responsibility, and Section III, Establish Written Equipment-Specific Energy Control Procedures, for specific requirements and instructions.

e. Exceptions:

   i. Normal production operations are not covered by this program (See Subpart O of 29 CFR 1910). Minor tool changes and adjustments, and other minor servicing activities, which take place during normal production operations, are not covered by this program if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection. However, servicing and/or maintenance which takes place during normal production operations is covered by this program if:

      1. An employee is required to remove or bypass a guard or other safety device; or
      2. An employee is required to place any part of his or her body into an area on a machine or piece of equipment where work is actually performed upon

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the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle.

ii. 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 of the employee performing the servicing or maintenance.

iii. Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that the employer demonstrates that:
   1. continuity of service is essential;
   2. shutdown of the system is impractical; and
   3. documented procedures are followed, and special equipment is used which will provide proven effective protection for employees.

f. Lockout/Tagout and Full Employee Protection
   i. If an energy isolating device is not capable of being locked out, the employer’s energy control program shall utilize a tagout system.

   ii. If an energy isolating device is capable of being locked out, the employer’s energy control program shall utilize lockout, unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection.
      1. When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.
      2. In demonstrating that a level of safety is achieved in the tagout program which is equivalent to the level of safety obtained by using a lockout program, the employer shall demonstrate full compliance with all tagout-related provisions of 29 CFR 1910.147 together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

   iii. After January 2, 1990, whenever replacement or major repair, renovation or modification of a machine or equipment is performed, and whenever new machines or equipment are installed, energy isolating devices for such machine or equipment shall be designed to accept a lockout device.

g. This program contains the following elements:
   i. Overview
   ii. Department Responsibility
   iii. Establish Written Equipment-Specific Energy Control Procedures
   iv. Protective Materials and Hardware
   v. Periodic Inspection
   vi. Training and Communication
   vii. Basic Lockout/Tagout Procedure
   viii. Release from Lockout or Tagout
ix. Lockout or Tagout Devices Removal
x. Additional Requirements
xi. Questions/Comments

APPENDIX A: LOTO Procedure Template
APPENDIX B: LOTO Periodic Inspection Guidance
APPENDIX C: LOTO Periodic Inspection Form
APPENDIX D: Exchange of Lockout/Tagout Program

h. 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.

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. An affected employee becomes an authorized employee when that employee’s duties include performing servicing or maintenance covered under this section.

Capable of being locked out—An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are 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.

Energized—Connected to an energy source or containing residual or stored energy.

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 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.

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

Hot tap—A procedure 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. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

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.

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. Included are blank flanges and bolted slip blinds.

Normal production operations—The utilization of a machine or equipment to perform its intended production function.

Servicing and/or maintenance—Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or...
equipment and making adjustments or tool changes, where the employee may be exposed
to the unexpected energization or start up of the equipment or release of hazardous
energy.

Setting up—Any work performed to prepare a machine or equipment to perform its normal
production operation.

Tagout—The placement of a tagout device on 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.

Tagout device—A prominent 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.

II. Department Responsibility

Each department shall establish a program consisting of energy control procedures, employee
training and periodic inspections to ensure that before any employee performs any servicing or
maintenance on a machine or equipment where the unexpected energizing, start up or release
of stored energy could occur and cause injury, the machine or equipment shall be isolated from
the energy source and rendered inoperative. Departments are responsible for adopting and
implementing this Control of Hazardous Energy Program (Lockout/Tagout). Employees are
responsible for observing safety practices contained in the Lockout/Tagout Program and to
point out unsafe conditions to their supervisor(s).

III. Establish Written Equipment-Specific Energy Control Procedures

a. Procedures shall be developed, documented and utilized for the control of potentially
hazardous energy when employees are engaged in the activities covered by 29 CFR
1910.147.

Exception: The department need not document the required 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 reaccumulation 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 deenergize 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 locker-out
condition; (6) the lockout device is under the exclusive control of the authorized employee
performing the servicing or maintenance; (7) the servicing or maintenance does not create
hazards for other employees; and (8) in utilizing this exception, has had no accidents
involving the unexpected activation or reenergization of the machine or equipment during
servicing or maintenance.

b. The procedures shall clearly and specifically outline the scope, purpose, authorization, rules,
and techniques to be utilized for the control of hazardous energy, and the means to enforce
compliance including, but not limited to, the following:
i. A specific statement of the intended use of the procedure;
ii. Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;
iii. Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the responsibility for them; and
iv. Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

IV. **Protective Materials and Hardware**

a. Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided by each department for isolating, securing or blocking of machines or equipment from energy sources.
b. Lockout devices and tagout devices shall be singularly identified; shall be the only device(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:
   i. **Durable**—Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.
   ii. **Durable**—Tagout 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.
   iii. **Durable**—Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.
   iv. **Standardized**—Lockout and tagout 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 tagout devices, print and format shall be standardized.
   v. **Substantial**—**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.
   vi. **Substantial**—**Tagout devices**, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout 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.
   vii. **Identifiable**—Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s).
   viii. Tagout 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.**

c. Only lockout and tagout devices approved by the Office of Environmental Health & Safety (OEHS) shall be used.

V. **Periodic Inspection**
a. Each department shall conduct a periodic inspection of the energy control procedures at least annually to ensure that the procedures and the requirements of 29 CFR 1910.147 are being followed.
   i. The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.
   ii. The periodic inspection shall be conducted to correct any deviations or inadequacies identified.
   iii. Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee’s responsibilities under the energy control procedure being inspected.
   iv. Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee’s responsibilities under the energy control procedure being inspected, and the elements set forth in 29 CFR 1910.147 (c)(7)(ii).

b. Each department shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.

VI. Training and Communication

a. Each department shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The Office of Environmental Health & Safety can assist with providing basic training, but specific training must be provided by department personnel with knowledge of department-specific equipment, and the skills and experience to understand the equipment. The training shall include the following:
   i. Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
   ii. Each affected employee shall be instructed in the purpose and use of the energy control procedure.
   iii. All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

b. When tagout systems are used, employees shall also be trained in the following limitations of tags:
   i. Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
   ii. When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
   iii. Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
iv. Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.

v. Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

vi. Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

c. Employee Retraining

i. Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.

ii. Additional retraining shall also be conducted whenever a periodic inspection, described in Section V, reveals, or whenever the department has reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

iii. The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

d. Each department shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

VII. Basic Lockout/Tagout Procedure

**NOTE:** Lockout or tagout shall be performed only by authorized employees who are performing the servicing or maintenance.

a. Notification of employees—Affected employees shall be notified by the authorized employee of the application of lockout devices or tagout devices. Notification shall be given before the controls are applied to the machine or equipment.

b. Preparation for shutdown—Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

c. Machine or equipment shutdown—The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.

d. Machine or equipment isolation—All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s).

e. Lockout or tagout device application

i. Lockout or tagout devices shall be affixed to each energy isolating device by authorized employees.

ii. Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.

iii. Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.
1. Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached.

2. Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

f. **Stored energy release**
   
i. Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

   ii. If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

**g. Verification of isolation**—Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergization of the machine or equipment have been accomplished.

**VIII. Release from Lockout or Tagout**

Before lockout or tagout devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:

a. **The machine or equipment**—The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.

b. **Employees**
   
i. The work area shall be checked to ensure that all employees have been safely positioned or removed.

   ii. After lockout or tagout devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tagout device(s) have been removed.

**IX. Lockout or Tagout Devices Removal**

Each lockout or tagout device shall be removed from each energy isolating device by the employee who applied the device.

**Exception:** When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the supervisor, provided that specific procedures and training for such removal have been developed, documented and incorporated into the department's energy control program. The department shall demonstrate that the specific procedure provides equivalent safety to the removal of the device by the authorized employee who applied it. The specific procedure shall include at least the following elements:

a. Verification by the supervisor that the authorized employee who applied the device is not at the facility;
b. Making all reasonable efforts to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed; and

c. Ensuring that the authorized employee has this knowledge before he/she resumes work at that facility.

X. **Additional Requirements**

a. **Testing or positioning of machines, equipment or components thereof**—In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:
   i. Clear the machine or equipment of tools and materials in accordance with Section VIII(a);
   ii. Remove employees from the machine or equipment area in accordance with Section VIII(b);
   iii. Remove the lockout or tagout devices as specified in Section IX;
   iv. Energize and proceed with testing or positioning;
   v. Deenergize all systems and reapply energy control measures in accordance with Section VII and the appropriate equipment-specific procedure to continue the servicing and/or maintenance.

b. **Outside personnel (contractors, etc.)**
   i. Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this program, the on-site employer and the outside employer shall inform each other of their respective lockout or tagout procedures.
   ii. The on-site employer shall ensure that his/her employees understand and comply with the restrictions and prohibitions of the outside employer's energy control program.

c. **Group lockout or tagout**
   i. When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.
   ii. Group lockout or tagout devices shall be used in accordance with the procedures required by Section III including, but not necessarily limited to, the following specific requirements:
      1. Primary responsibility is vested in an authorized employee for a set number of employees working under the protection of a group lockout or tagout device (such as an operations lock);
      2. Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment;
      3. When more than one crew, craft, department, etc. is involved, overall job-associated lockout or tagout control responsibility is assigned to an authorized employee designated to coordinate affected work forces and ensure continuity of protection; and
      4. Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when
he or she begins work, and shall remove those devices when he or she stops working on the machine or equipment being serviced or maintained.

d. **Shift or personnel changes**—Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization or start up of the machine or equipment, or the release of stored energy. The authorized employee in charge of group lockout/tagout or an individual lockout/tagout will coordinate the change in shift and personnel. At a minimum, the following procedures must be completed:

   i. Change locks or tags.
   ii. Retest to ensure deenergized state of equipment or machinery being serviced.
   iii. Notify management of start up and testing to be performed.
   iv. Notify management of changes in the job that affects the lockout or tagout procedures.

XI. **Questions/Comments**

Questions, comments, or suggestions should be addressed to the Office of Environmental Health & Safety.
APPENDIX A

Lockout Procedure for _____________________ 1
(Machine Name, System Name, Location)

Purpose/Scope
This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start up of the machine or equipment or release of stored energy could cause injury.

Authorization
Lockout or tagout shall be performed only by authorized employees who are performing the servicing or maintenance.

Compliance with this Procedure
All Indiana University employees, contractors, and subcontractors shall comply with the OSHA Standard, 29 CFR 1910.147, this basic written program, and appropriate department procedures. All employees, upon observing a machine or piece of equipment which is locked or tagged out to perform servicing or maintenance shall not attempt to start, energize, or use that machine or equipment.

Compliance shall include understanding the written elements of the standards and programs, participating in training on the standard and on individual procedures and equipment, following established work procedures, proper use of personal protective equipment, and prompt and proper reporting of accidents, injuries, and near-misses.

Failure to follow the IU Northwest Lockout/Tagout Program can result in life threatening or serious injury situations. Failure to lockout or tagout or otherwise not follow the lockout/tagout procedures will result in disciplinary action up to and including termination of employment.

Sequence of Lockout
(1) Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.

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<tr>
<th>Name</th>
<th>Job Title</th>
<th>Contact Information</th>
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1 Specific information about the placement, removal and transfer of lockout and/or tagout devices and the responsibility for them can be found in the Indiana University Northwest, Office of Environmental Health & Safety, Lockout/Tagout Program.
(2) The authorized employee shall identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.

Energy sources may include:
- Electrical
- Hydraulic
- Mechanical
- Compressed gas
- Radio frequency
- Other:

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<tr>
<th>Type(s) and Magnitude(s) of Energy</th>
<th>Hazard(s)</th>
<th>Methods to Control the Energy</th>
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(3) If the machine or equipment is operating, shut it down by the normal stopping procedure (depress the stop button, open switch, close valve, etc.).

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<th>Type(s) of Machine or Equipment Operating Controls</th>
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(4) De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).

Energy isolating devices may include:
- Circuit breakers
- Disconnect switches
- Blocks
- Other:

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<th>Type(s) of Energy Isolating Devices</th>
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(5) Lock out the energy isolating device(s) with assigned individual lock(s).

Lockout devices may include:
- Locks
- Plug covers
- Adapter pins
- Switch lockouts
- Other:

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6) Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.

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<th>Type(s) of Stored Energy</th>
<th>Method(s) to Dissipate or Restrain</th>
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Note: If there is a possibility of reaccumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

(7) Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.

Caution: Return operating control(s) to neutral or “off” position after verifying the isolation of the equipment.

Method of verifying the isolation of the equipment.

(8) The machine or equipment is now locked out.

**Restoring Equipment to Service**

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken.

(1) Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and 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 from the area.

(3) Verify that the controls are in neutral.

(4) Remove the lockout or tagout devices and reenergize the machine or equipment.

Note: The removal of some forms of blocking may require reenergization of the machine before safe removal.

(5) Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.
APPENDIX B
LOTO Periodic Inspection Guidance

At least annually, supervising departments shall conduct a periodic inspection. This periodic inspection shall include:

1. A separate review of each written energy control procedure. This will ensure that the procedures are adequate to provide the necessary protection and to identify what changes, if any, are needed.
2. Observing the implementation of an energy control procedure(s).

An authorized employee other than the one(s) utilizing the energy control procedure being inspected shall perform the periodic inspection.

The employee performing the periodic inspection does not have to observe every authorized employee implementing the energy control procedure on the machine or equipment on which he or she is authorized to perform servicing and maintenance.

The inspector participating in the review needs to:

1. Observe a representative number of such employees while they are implementing the procedure; and
2. Talk with all other authorized employees even though they may not be implementing the energy control procedure.

This review may be completed in one or more meetings in which all authorized employees (as well as affected employees) will be in attendance to review the specific energy control procedures.
## LOTO Periodic Inspection Form

**Date:**

**Time:**

**LOTO Procedure:**

**Authorized Employee(s):**

**Inspector(s):**

- Employee must notify all the affected employees that the machinery or equipment will be locked and tagged out while servicing and maintenance is being completed. Affected employees notified:

- Employee must identify the types of energy sources, potential hazards, and all control devices that are related to the piece of machinery or equipment that is to be serviced. Energy source(s) identified:

  If more than one energy source is present, is there an existing procedure, specific to the machinery, used to LOTO? If so, what is its title?

- Employee must turn-off all operating controls. Operating control(s):

- Employee must locate all energy sources. Location of energy source(s) requiring LOTO:

- Employee must lockout and tagout the energy-isolating device in the “OFF” or “SAFE” position. If lockout device is not used, please indicate why.

  (Ensure that the tagout device is filled out properly and is legible.)

- Employee must isolate all energy sources by blocking, bleeding and venting stored energy as found in springs, hydraulic systems, and pneumatic systems. Stored energy source(s):

- Employee must test the operating controls.

- Employee must return all operating controls to the “OFF” position after verifying the isolation of the equipment.

- Employee can now perform maintenance/service.

- Once the employee has completed maintenance and/or servicing to the machine or equipment, the machine or equipment has been fully assembled, tools are cleared away, employees have been safely positioned, and lockout/tagout devices have been removed, all affected employees can be notified and equipment re-started.

Inadequacies/Deviations:

<table>
<thead>
<tr>
<th>Authorized Employee Signature</th>
<th>Inspector Signature</th>
</tr>
</thead>
</table>
APPENDIX D
Exchange of Lockout/Tagout Program

The lockout/tagout standard requires that the department exchange energy control procedures with outside employers who service and/or maintain Indiana University equipment/machines that require lockout/tagout. This form is used to notify both parties that they must comply with the restrictions and prohibitions of those procedures. It should be completed by the departmental contact person in conjunction with the outside employer’s representative. The exchange of information must occur before service/maintenance activities begin. If Indiana University employees will also be working on this equipment or in surrounding areas, attach this to the lockout/tagout procedure.

I. Identification of Outside Employer:

Name: ____________________________________________ Phone: __________________
Address: ________________________________________________________________________
Project Name/Equipment: ________________________________________________________

II. ☐ Check here to indicate that energy control procedures for the equipment/machine have been exchanged.

Comments:
______________________________________________________________________________
______________________________________________________________________________

III. After comparing the two Lockout/Tagout Programs, note any additional restrictions/prohibitions below:
______________________________________________________________________________
______________________________________________________________________________

IV. Affected Personnel (listed below) shall understand and comply with these differences.

(Printed Name) (Signature)
__________________________________________  __________________________________________
__________________________________________  __________________________________________
__________________________________________  __________________________________________
__________________________________________  __________________________________________

V. Acknowledged acceptance of the provisions of this form:

Outside Employer Representative: ______________________________ (Signature) (Date)
Indiana University Departmental Contact: ___________________________ (Signature) (Date)

*Acknowledgement is made to Purdue University for its permission to use the “Exchange of Lockout/Tagout Program” form included here.