LOCKOUT/TAGOUT PROGRAM

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PURPOSE

This program is following the guidelines, established in this reference, the University of Texas at Austin control of hazardous energy Lockout/Tagout Program, September 20, 1996.

The goal of this organization is to operate efficiently and effectively - a goal that cannot be accomplished without operating safely. To ensure a safe working environment, our organization is doing everything we can do to be certain that all our employees are trained with safety in mind.

As part of this commitment, this program will be used for all personnel who deal with the control of hazardous energy - both experienced and new operators. The purpose of this document is to describe the control of hazardous energy (lockout/tagout) program for The Division of Housing and Food Service. This program consists of energy control procedures, employee training and periodic inspections. The goal is to ensure that before any employee performs service or maintenance of machines and 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. Those trained in this program will be the only employees to use lockout/tagout procedures.

Operator training is only part of our overall plan to reduce injuries. The other part is management commitment to maintaining the working environment in the safest condition possible. Attached is the Division of Housing and Food Service Safe Clearance Lockout/Tagout program.

We encourage everyone to do their part - management, supervisors, and other personnel - to help ensure a safe working environment for all of us.
TRAINING

1. Only authorized employees shall be allowed to perform lockout/tagout procedures.

2. Prior to setting up, adjusting, repairing, servicing, installing or performing maintenance work on equipment, machinery or processes, the proper lockout/tagout steps per this policy and procedure shall be taken to assure that an employee is not exposed to injury due to unintended machine motion or release of energy.

3. All affected employees shall receive training in the recognition of applicable hazardous energy sources including an awareness of this policy and procedure. Each authorized employee shall be instructed in the recognition of applicable hazardous energy sources, in the use of adequate methods and means of their isolation and the purpose and use of hazardous energy (lockout/tagout) control procedures including an awareness of this policy and procedure.

4. All employees receiving training shall process written verification of such training and these records shall be kept on file in departmental personnel folders.

5. Supervisory personnel of authorized employees shall insure that authorized employees comply with published lockout/tagout procedures. They may insure compliance by frequent and close personal observation. As an alternative to close and frequent observations, periodic (at least annual) inspections by supervisory personnel shall be performed in order to ensure compliance with this policy and procedures by authorized employees. The employer (Shop Supervisor or Department Head) 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.

6. Re-training shall be provided to authorized employees when there is a change in job assignment, machines, or processes that present a new hazard, or when there is a change in energy control procedures.
LOCKOUT/TAGOUT TRAINING AGENDA

GOAL: To ensure that the purpose, operation and procedures of The Division of Housing and Food Service Lockout/Tagout program are understood.

OBJECTIVE: Employees will obtain the knowledge and skills required for safe application, usage and removal of the energy controls on the job.

DOCUMENTATION: Records of training are to be maintained in Department of Housing Food Service

1. Review of Housing and Food Service’s written Lockout/Tagout program.
   A. Purpose
   B. Training
   C. Training Agenda
   D. Definitions
   E. Safe Clearance
   F. Electrically Energized Circuits
   G. Exceptions
   H. General Procedures
   I. Responsibilities

2. Video
   A. Recognition of applicable hazardous energy sources
   B. Methods and means necessary for energy isolation and control
   C. Tags and their limitations

3. Specific energy control and startup procedures unique to each shop and hands-on demonstrations.
DEFINITIONS

1. **Affected Employee** – An employee whose job requires him/her to operate or use a machine or equipment on which servicing maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such serving or maintenance is being performed.

2. **Authorized Employee** – A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

3. **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 had a locking mechanism built into it.

4. **Energized** – Connected to an energy source or containing residual or stored energy.

5. **Energy Isolating Device** – A mechanical device that physically prevents the transmission or release of energy.

6. **Energy Source** – Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy source.

7. **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.

8. **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.

9. **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 a safe position and prevent the energizing of a machine or equipment.

10. **Normal Production Operations** – The utilization of a machine or equipment to perform its intended production function.

11. **Servicing and/or Maintenance** – Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment.

12. **Setting Up** – Any work done to prepare a machine or equipment to perform its normal production operation.
13. **Tagout** – The placement of a tag out 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 tag out device is removed.

14. **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 tag out device is removed.
SAFE CLEARANCE

1. Safe Clearance must be established prior to working on, and in some cases near electrical equipment or lines; pressure systems, vessels, and lines; or equipment containing hazardous material that can be energized, pressured, activated or released remotely or by mistake.

   a. Hazardous or dangerous systems must be locked out, tagged out otherwise removed from service by a person acting individually or as the representative for a crew before performing any work.

   b. The person establishing the safe clearance must be clearly identified on the lockout/tagout device by name and trade or shop, with the telephone number, pager number or radio communications identity.

   c. No person will remove the lockout/tagout device of another person without the clear and specific authorization of the person that established the safe clearance.

   d. In cases in which more than one person working individually or more than one crew is involved, each individual or crew will lock out/tag out the dangerous circuits or systems on the job. Service will not be restored until the last lockout/tagout device is removed from the work.

   e. Each person establishing safe clearance on equipment or systems must notify the appropriate maintenance shop.

      (1) provide name, shop and telephone number or pager/radio identity,
      (2) inform the person on duty when the system is being locked out/tagged out,
      (3) notify the person on duty when the individual or crew work in completed and the lockout/tagout for that work is removed.

2. Whenever possible lockout/tagout shall be accomplished by the use of a positive safety lockout device, systems, or equipment and a padlock to establish self-clearance.

   A. The safety lockout will:
      (1) be sturdily constructed of steel, steel and plastic or a fracture proof plastic that it is tamper proof and cannot be easily removed except after the removal of all padlocks.
      (2) constructed so that the shank of the safety lock out is perforated to accept one or more padlocks.
      (3) remain on the equipment for which safe clearance has been established until the last crew or individual’s padlock has been removed.

   B. The padlocks will be:
      (1) provided with a label that positively identifies the individual
that established safe clearance by name, shop and telephone number, pager, or radio identification.
(2) individually keyed with keys issued only to persons whom the lock is assigned. Shop locks or department locks will not be used.

3. Every reasonable effort will be made to provide a positive lockout method for hazardous or dangerous lines or equipment.

   A. Values and other devices that are not by their nature normally equipped to accept a safely lock out will be secured with chains or specially designed reusable covers that will accept a padlock.
   B. Installed equipment will not normally be subjected to major modifications so as to accept a padlock. Every reasonable effort will however be made to accommodate each situation with universal or reusable positive lock out devices.

4. Tagout procedures may be used only in situations in which positive lockout is not possible, and the control switch, valve or other device is not exposed to the general public.

   A. Tag out involves the use of a plastic or laminated paper tag, normally red or red striped, clearly marked with “Danger”, “Lock Out” or “Do Not Remove” and the name, shops and radio and / or pager numbers of the person establishing the safe clearance. The tag will be plainly visible and firmly fixed to the control device with a clip, wire or strong twine.
   B. When lock out procedures cannot be used because of the equipment configuration or other good and proper reason, tag out procedures may be used.
   C. If the control switch, valve or other device is in an area exposed to the general public, tag out alone may not provide safe clearance. In these cases, it may be necessary to supplement the tag out with a person to supervise the control device while work is being performed on the system.
ELECTRICALLY ENERGIZED CIRCUITS

1. Working on energized circuits or devices.
   
   A. Each worker will carry a tester to verify whether circuits and/or equipment are electrically live or dead.
   
   B. Do not routinely work electrical circuits, electrical equipment or lighting ballast while circuits are energized. Power to circuits will normally be turned off to perform any electrical work or work on electrically driven equipment or control circuitry. The circuit will be locked and/or tagged out using the proper lock out/tagout procedures.
   
   C. If for some reason a circuit cannot be de-energized at the time, arrange for an outage at an appropriate time or contact your shop supervisor for guidance. All efforts will be made to arrange for an appropriate outage.
   
   D. If electrical circuits, electrical equipment or lighting ballast must be worked while fully or partially energized, this may be done only by a minimum of two persons, at least one of whom must be a qualified technician, and only after the approval of either the shop supervisor, the assistant shop supervisor to the craft trade leader. All suitable protective equipment and appropriate insulated tools for the work must be used.

2. Working in the vicinity of an exposed energized circuit.

   A. Each worker will carry a tester to identify whether circuits and/or equipment are electrically energized or not.

   B. The following tests may be performed.

   (1) In electrical enclosures (i.e., panel boards, switchboards, or safety switches) knockouts can be punched and conduit fastened there to providing said work is done on that part of the enclosure opposite or away from the line terminals of equipment within the enclosures.

   (2) Fish tapes fed into or from an enclosure with energized parts shall be non-metallic and shall, if possible, be fed from the enclosures.

   (3) Stab-on type devices (i.e., circuit breakers or bus duct switches) may be removed from or installed on energized bus.

   (4) Only insulated conductors size #1 AWG and smaller may be pulled into an enclosure with live parts.

3. Testing and inspecting energized circuits.

   A. Low voltage circuits may be tested using voltmeters, ammeters or other appropriate test equipment for the purpose of calibrating, trouble shooting
electrical circuits and equipment or circuit identification that cannot be accomplished with equipment de-energized.

B. Panel boards, switchboards, safety switches, J-boxes, etc., may be opened in order to visually inspect the availability of spare breakers, sizes of wires, number of wires, etc.

C. During PMI infrared scanning of panels and enclosures, branch circuit wires and load-side of breakers which may be found loose, may be tightened with the panel or enclosure energized only if it is determined by a qualified technician that there is no way for the tool to slip and cause contact with another phase or ground. The on-site technician shall consider all aspects of safety and ensure the use of insulated tools.

D. Such testing and inspecting will be performed only while standing on and in contact with dry surfaces, also taking care not to contact pipe or conduit which may be a direct ground.
EXCEPTIONS

Employees need not document required procedures for a particular machine or piece of equipment when all of the following elements exist:

1. The machine/equipment has no potential for stored energy or re-accumulation of stored energy after shutdown, which would endanger employees.

2. The machine/equipment has a single energy source that can be readily identified and isolated.

3. The isolation and locking out of the energy source will completely de-energize the machine/equipment.

4. The machine/equipment is isolated from that energy source and is 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. In utilizing this exception, authorized personnel have had no previous accidents involving the unexpected activation or re-energization of the machine during service or maintenance.
GENERAL PROCEDURES

1. Before shutting down any piece of equipment or machine that will have a discernable and immediately adverse effect upon the campus, the supervisor shall notify the zone supervisor of Physical Plant and administrator(s) of the area(s) where work is being performed. In many cases, advance notice of the shutdown must be given and approval received.

   NOTE: In emergency situations, nothing in these procedures shall preclude supervisors from taking immediate action to shut down equipment or machines without prior notification in emergency situations.

2. Before an authorized employee shuts down a machine or piece of equipment, that employee shall have knowledge of the type and magnitude of that energy, the hazards of the energy, the hazards of the energy to be controlled and the correct lockout/tagout procedures.

3. The machine or piece or equipment shall be shut down using procedures established for that piece of equipment. An orderly shut down must be utilized to avoid any additional or increased hazards to employees as a result of the equipment stoppage.

4. All energy isolating devices needed to control the energy to the equipment or machine shall be physically located and operated in such a manner as to isolate that piece of equipment or machine from the energy source(s).

5. The appropriate lock/tagout devices shall be applied to the device by each authorized employee working on the equipment or process. The authorized employee shall utilize lockout/tagout, unless the hazardous energy source cannot be locked out and the supervisor shows that tag out only will provide the same level of protection.

6. When tag out systems are used, employees shall be trained in the following limitations of tags: Except as specifically provided for in EXCEPTION under ¶ 14 below, when a tag is attached to an energy isolating means, it is not to be removed without permission of the authorized person responsible for it. It is never to be by-passed, ignored or otherwise defeated.

7. Tags must be legible and understandable by all authorized employees, affected employees and all other employees whose work operations may be in the area.

8. Tags and their means of attachment must be made of materials which will withstand the environmental conditions of the workplace.

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

10. Lockout devices shall be attached to the energy isolating devices to prevent unintended reactivation of the energy isolating device and to meet the following requirements:
A. Lockout devices shall be attached in such a manner so as to hold the energy isolating devices in a safe position.
B. Lockout devices shall be standardized in at least one of the following criteria: color, shape or size and additionally, in the case of tags, print and format.
C. Lockout devices shall be substantial enough to prevent removal without the use of excessive force (bolt cutters).
D. Lockout and tagout devices shall indicate the identity of the employee applying the device.

11. Following the application of lockout/tagout devices, all potentially hazardous stored or residual energy shall be relieved, disconnected and otherwise rendered safe.

12. Prior to starting work on equipment that has been locked or tagged out, the authorized employee shall verify that isolation and de-energization of the machine has been accomplished by attempting to activate.

13. Procedure for removal of lockout/tagout devices:
   A. Before lockout/tag out devices are removed, authorized employees shall ensure that all non-essential items such as tools and materials have been removed from the equipment/machine operating area.
   B. Ensure that equipment/machine components are operationally intact.
   C. Prior to re-energization, employees who could be injured when equipment/machinery is re-energized, must remain at a safe distance from the affected machine or equipment.
   D. Affected personnel are notified the equipment/processes are going to be re-energized and restart up is going to commence.

14. Lockout/tagout device shall be removed from each energy-isolating device by the authorized employee who applied the device.

   EXCEPTION: The authorized employee’s supervisor may remove the lockout/tagout device after:
   
   A. Verifying the authorized employee applying the device is not available.
   B. Verifying step 13 has been performed.
   C. Ensuring the authorized employee who applied the device will be properly informed upon returning to work.
RESPONSIBILITIES

1. Management Responsibilities

   A. Each supervisor or designated individual shall train new employees and periodically instruct all of their employees regarding provisions and requirements of this lockout/tag out procedure. Training records shall be kept by the Department of Housing and Food Service.

   B. Each supervisor shall effectively enforce compliance of this lockout/tagout procedure including the use of corrective disciplinary action when required. When frequent and close personal observation of adherence to proper lockout/tagout procedures by supervisory personnel is not performed, adherence to this policy will be monitored annually by inspecting individual personnel use and knowledge of the lockout/tag out procedures. Written verification of this audit function shall be documented on site and records shall be kept in that individual’s personnel folder. If deficiencies are found, then re-training of the individual is required.

   C. Each supervisor shall ensure that the devices required for compliance with the lockout/tagout procedure are provided to their employees and meet the requirements outlined within this program.

   D. Prior to setting up, adjusting, repairing, servicing, installing or performing maintenance work on equipment, machinery or processes, the supervisor shall determine and instruct the employees of the steps to be taken to assure they are not exposed to injury due to unintended machine motion or release of energy.

   E. Each supervisor shall promptly investigate, report and inform the Department of Housing and Food Service of all on-the-job accidents and/or job related health problems and request medical treatment, if required.

2. All contractors hired by The University of Texas at Austin that will be working near areas affected by this program will be provided a copy of this program. A copy of this form shall be kept by the project manager who is responsible for the work to be performed by the contractor.

   A. Employees shall comply with this lockout/tagout procedure.

   B. Employees shall consult with their supervisors or other appropriate knowledgeable management personnel whenever there are any questions regarding their protection.

   C. Employees shall obtain and care for the locks and other devices required to comply with the lockout/tagout procedure.
D. Employees shall report any job-related injuries or illness to the supervisor and seek prompt medical treatment.

E. Employees shall refrain from the operation of any mechanical or electrical equipment without both proper instructions and authorization.

F. Employees shall identify hazardous energy sources that require specific documented procedures.