

I. PURPOSE

The purpose of this procedure is to establish methods for affixing appropriate lockout or tagout devices to energy-isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start-up or release of stored energy in order to prevent injury to employees.

II. EXCLUSIONS

A. LOTO procedures do not apply under the following conditions:

1. Minor tool changes and adjustments and other minor servicing activities that take place during normal production operations if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures that provide effective protection.

Note: This exclusion does not apply under the following conditions:

If an employee is required to remove or bypass a guard or other safety device; or

If an employee is required to place any part of his/her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation); or where an associated danger zone exists during a machine operation cycle.

2. Work on cord and plug-connected electrical equipment, if unplugging the equipment controls all the energy, and the plug remains under the continuous control of the employee performing the servicing, maintenance, or modification.

3. Hot tap operations that involve 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:

- a) Continuity of service is essential, and
- b) Shutdown of the system is impractical, and
- c) Documented procedures are followed, and special equipment is used that will provide proven, effective protection for employees.

4. Electrical systems less than 50 volts to ground that do not increase exposure to electrical burns or to explosion due to electrical arcs.

III. RESPONSIBILITIES

A. All Employees

1. Understand the general reasons for LOTO.
2. Recognize when LOTO is being used.
3. Understand the importance of not tampering with or removing a lock and/or tag.
4. Failure to follow the guidelines of this procedure may result in disciplinary action

B. Authorized Employees

1. Attend LOTO training.
2. Recognize the conditions of work that require LOTO.
3. Recognize the possibility of hazardous release of energy specific to the employee's job.

4. Use the materials and procedures specified in this procedure to implement the LOTO program.

C. Department Directors

Assure that the department complies with the requirements of LOTO.

D. Managers

1. Attend LOTO training.
2. Provide authorization for employees, and maintain records of authorized employees
3. Ensure that authorized employees have attended the LOTO Training Course. Provide additional on-the-job training if the employee is not thoroughly familiar with the equipment and/or written procedure.
4. Provide required LOTO equipment to employees, and ensure that they use it.
5. Control emergency keys for LOTO locks.
6. Remove LOTO devices in case of emergency.
7. Designate knowledgeable staff member to write specific equipment procedures. Assure that this equipment is identified.
8. Conduct periodic inspection of the energy control procedures at least annually to ensure that all equipment has been assessed, procedures have been documented and employees follow the procedures.
9. Maintain records of LOTO events.
10. Ensure that onsite contractors and construction contractors are informed of the County of Wayne LOTO policy.
11. Designate representative to perform periodic inspections with the Employee Safety Coordinator.

E. Wayne County Human Resources/ Safety Division

1. Assure that periodic inspections of the County of Wayne program are performed.
2. Assure that LOTO training is available to employees.

F. Contracting Officers

Enforce the specification section for noncompliance if records of equivalent training cannot be produced, or if LOTO procedures are found not to be in compliance with this document.

G. Onsite and Construction Contractors

Submit, as part of the contract-required Safety Plan, a LOTO program that meets the provisions of this chapter. Provide training and authorization records that meet the requirements.

IV. ADMINISTRATIVE LOCKING

A careful distinction must be made between LOTO and various other locking practices, collectively referred to as Administrative Locking. The LOTO procedure is specifically reserved for those instances in which a zero-energy state must be ensured to allow personnel to service, maintain, or modify equipment. Administrative locking is normally not used as the primary means of protection during a servicing, maintenance, or modification procedure, and is not a substitute for LOTO.

Administrative locking is distinguished from LOTO in both practice and purpose. A group rather than an individual may control an administrative lock. Administrative locking may be performed

for many reasons, including equipment security, programmatic purposes, or general safety. Examples of administrative locking are:

- a) Locked fences around high-voltage transformers.
- b) Locks on overhead-crane disconnect switches.
- c) A locked door to a laboratory that contains hazardous equipment.
- d) A water valve locked in the open position.

V. AUTHORIZATION

Heads of departments will implement the program and insure that the personnel under their supervision are trained in accordance with the established procedures. This responsibility may be delegated to another person or persons within the department providing it is done so in writing and the designated person is qualified and competent. This person will authorize employees to implement the locking and tagging procedure.

Only an authorized employee shall implement a lock or tagout procedure on machines or equipment

1. to perform servicing or maintenance;
2. or on a machine which could cause injury if the machine or equipment unexpectedly energizes or starts-up, or releases stored energy.

VI. RECORDKEEPING REQUIREMENTS

A. Each LOTO event must be fully documented in the department log, project log, or a dedicated LOTO logbook. Records shall be maintained for two years. The following information must be documented:

1. Name of authorized employee who performed LOTO.
2. Date and time LOTO was applied.
3. Equipment and circuit identification.
4. Reason for LOTO.
5. Schematic drawing or print numbers, when available.
6. Date and time of LOTO removal.
7. Name of authorized employee who removed LOTO if different from authorized employee who initiated LOTO.

B. At the discretion of the manager, recordkeeping requirements may be satisfied by an orderly system of archiving completed tags.

VII. RULES

A. Each department shall establish and document site-specific procedures for energy isolation. Specialized lockout devices shall be obtained and kept within the department for its use.

B. If an energy-isolating device is capable of being locked out, the authorized employee shall use lockout, unless the department head or their designated representative can demonstrate that use of a tagout system will provide full employee protection. 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.

C. Lockout devices, used for the implementing this program, shall be accompanied by a standard tag. These devices shall be used for no other purpose than lockout, and shall be substantial enough to prevent removal without the use of excessive force or unusual techniques. Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachments 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.

VIII. TRAINING

A. Authorized, Affected and Other Employees

Manager or their designated representatives are required to provide training to ensure that employees understand the purpose and function of the energy control program. Through training, employees will be required to possess the knowledge and skills to safely use and remove energy controls. Refresher training must be conducted at least annually. Training shall include the following:

1. Authorized employee: Each shall receive training in how to recognize hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods to isolate and control energy sources.
2. Affected employee: Each shall be instructed in the purpose and use of the energy control procedure.
3. All other employees whose work operations are or may be in an area where energy control procedures may be used, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked-out or tagged-out.

B. Tagout Systems

When tagout systems are used, employees shall also be trained in the following limitations of tags:

1. Tags are essentially warning devices affixed to energy-isolating devices, and do not provide the physical restraint on those devices that is provided by lockout.
2. When a tag is attached to an energy-isolating means, it is to be removed only by the manager or the designated key control person, and it is never to be bypassed, ignored or otherwise defeated.
3. 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.
4. Tags and their means of attachment must be made of materials designed to withstand the environmental conditions encountered in the workplace.
5. Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program. Tagout devices shall warn against hazardous conditions if the machine or equipment is energized. The warning should be similar to one of the following; *Do Not Start, Do Not Open, Do Not Close, Do Not Energize or Do Not Operate*. The tag should specify the name of the employee, the department, date and work performed.
6. Tags must be securely attached to energy- isolating devices so that they cannot be inadvertently or accidentally detached during use.

C. Retraining

Retraining shall be provided for all authorized and affected employees whenever there is a change in;

- a) Their job assignments,
- b) Machines, equipment or process that present a new hazard, or
- c) When there is a change in energy control procedures.

Retraining shall establish employee proficiency and introduce new or revised control methods and procedures as necessary or annually, whichever comes first. The department head or the designated representatives 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.

IX. TECHNIQUES

Only authorized employees shall perform lockout or tagout. Manager or their designated representatives of the application and removal of lockout or tagout devices shall notify affected employees. Notification shall be given before the controls are applied, and after they are removed from the machine or equipment. The established procedure for the application of energy control shall cover the following elements and actions and shall be done in the following sequence:

A. Prepare and Notify

1. Prepare for shutdown: Assess the type, magnitude, and hazards of the energy to be controlled.

2. Determine if an Equipment-Specific Written Procedure applies to the task. If so, the employee must get the written procedure, and must follow procedure. If a new written procedure must be developed, contact the supervisor.

3. Determine how to control the energy.

Determine the appropriate methods of controlling the hazardous energy; e.g., disconnect switch or valve. Note: Push buttons, selector switches, interlock circuits, and other control type devices are not energy-isolating devices.

4. Notify all affected personnel.

The authorized employee must notify all affected employees of the impending shutdown and the reasons for it. Notification can be verbal.

B. Shutdown

1. Verify that it is safe to shut down equipment.

2. Perform normal equipment shutdown.

Use established methods to shut down the equipment.

3. Isolate and lockout energy sources.

Operate the energy-isolating device and affix his/her LOTO lock to this device. The lock must be affixed so as to hold the energy-isolating device in an off or safe position that physically prohibits normal operation of the energy-isolating device. Where more than one authorized employee is involved in the job and a *Group LOTO* procedure is not used, each authorized employee must affix his/her own personal lock using a multiple lock hasp.

4. Enter required information on tag and apply the tag.

The authorized employee must complete all appropriate information on the tag. If the placement of the tag would compromise safety by obscuring indicator lights or controls, the tag may be located as close as is safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

5. Stored Energy.

After the lockout or tagout devices are affixed to energy-isolating devices, all potentially hazardous stored energy shall be rendered safe. The authorized employee must completely release or otherwise control any stored energy. The equipment must be in a Zero-Energy State.

- a) Stored mechanical energy- vent valves, spring releases, blocking devices, or equipment repositioning (as appropriate) must be used.
- b) Stored electrical energy - discharge devices must be used.

6. Verify that energy is isolated: Before starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energization of the machine or equipment has been accomplished. If there is a possibility of re-accumulation of stored energy to a hazardous level, continue to verify that energy is isolated until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

- a) Attempt to restart the equipment. The authorized employee must physically attempt to operate the energy-isolating device and attempt to restart the equipment using the normal equipment controls (e.g., start buttons or computer software controls).
- b) If the equipment is electrical, test for Zero Energy State. The authorized employee must additionally test potential electrical energy sources using appropriate instruments or testers. The authorized employee shall use test equipment to verify that the circuit elements and equipment parts are de-energized, and shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back-feed even though specific parts of the circuit have been de-energized and presumed to be safe.
- c) If the employee is not qualified to test the energy being isolated, he/she must ensure that a qualified person tests the energy. The qualified tester, if other than the authorized employee, must be identified in the Remarks section on the tag. If the circuit to be tested is over 600 volts, nominal, verify that the meter or other test equipment works - must check to make sure it works before and immediately after this test.

C. Group LOTO Procedure

For a *Group LOTO* procedure, the responsibility for applying and removing the lockout devices of a group of authorized employees is vested in a single designated authorized employee. When a crew performs servicing, maintenance, or modification, the supervisor may determine that the use of a group LOTO procedure is appropriate. This determination must be made only if the size of the crew and the nature of the work preclude the feasibility of individual LOTO, and if the level of protection provided by the *Group LOTO* procedure is equivalent to that of individual LOTO.

- a) The supervisor must determine that group LOTO is appropriate.
- b) The supervisor must convene a meeting of all members of the group to be covered under the procedure.
- c) The supervisor must describe the tasks to be performed.
- d) The supervisor must delegate primary responsibility to a designated primary employee for a specified group of employees working under the protection of the *Group LOTO*.
- e) The designated primary employee is responsible to ensure that each step of the general or equipment-specific written procedure is completed.

- f) The designated primary employee will place a multi-lock device to the energy-isolating device and indicate on the tag that a "group lockout" is in effect.
- g) The designated authorized employee must communicate to each person in the crew that LOTO is in place and work may commence. If the makeup of the crew changes while work is in progress, the designated authorized employee must inform any new group member that a group lockout is in place and communicate to him/her all the information relating to the group lockout.
- h) The names of the new group members must be added to the log. Anyone leaving the group before the servicing, maintenance, or modification is completed must notify the designated primary employee. The group member leaving must communicate the status of his/her activities to the designated authorized employee.
- i) Each authorized employee shall affix a personal lockout or tagout device to the multi-lock accepting device when they begin work, and shall remove those devices when they stop working on the machine or equipment being serviced or maintained. The primary authorized employee will remove his/her lock and the multi-lock device when all service or maintenance has been completed.
- j) The structure of the group, reasons for the group LOTO, and the names of all group members and the designated authorized employee must be documented in an appropriate LOTO logbook. Each member of the specified group must be trained and authorized.
- k) If there are several groups of employees involved: After each energy isolating device is locked/tagged out and the keys placed into a master lockbox, each servicing/maintenance group "principal" authorized employee places his/her personal lock or tag upon the master lockbox. Then each principal authorized employee inserts his/her key into a satellite lockbox to which each authorized employee in that specific group affixes his/her personal lock or tag. As a member of a group, each assigned authorized employee verifies that all hazardous energy has been rendered safe. Only after the servicing/maintenance functions of the specific subgroup have been concluded and the personal locks or tags of the respective employees have been removed from the satellite lockbox can the principal authorized employee remove his/her lock from the master lockbox.

D. Release from Group LOTO

- a) When the work is completed, the designated primary employee must communicate to each group member that the group LOTO is being considered for removal and:
- b) Must verify with each member that all tasks performed in conjunction with the specific job are complete.
- c) Must verify that the equipment has been returned to a safe restart condition.
- d) After positive verification is received from all employees, the designated authorized employee may remove the group LOTO devices and perform equipment restart.

E. Temporary Removal of LOTO Devices for Testing or Positioning of machines, equipment, or components

In situations where lockout or tagout devices must be temporarily removed from the energy-isolating device and the machine or equipment energized to test or position the equipment or component, the following sequence of actions shall be followed:

- a) Notify the affected employees and area supervisor.
- b) Clear the machine or equipment of tools and materials.
- c) Remove employees from the machine or equipment area and ensure that required tools are safely and properly positioned.

- d) Remove all repositioning and blocking devices and return all vents and valves to their normal operating positions.
- e) Remove all grounding/shorting conductors.
- f) Remove the lockout or tagout devices.
- g) Energize and proceed with testing or positioning.
- h) De-energize all systems and reapply lockout/tagout measures to continue the servicing, maintenance, or modification of the equipment. The original tag may be reused.

F. Before lockout or tagout devices are removed and energy is restored to the machine or equipment, the employee will follow procedures and take actions.

- a) The Machine or Equipment: The work area shall be inspected to ensure that nonessential items have been removed and that machine or equipment components are operationally intact and safe to operate.
- b) Employees: The work area shall be checked to ensure that all employees have been safely positioned or removed. Before lockout or tagout devices are removed and before machines or equipment are energized, affected employees shall be notified.
- c) Clear all tools and personnel. The authorized employee must check the work area to ensure that all tools and personnel are at a safe distance from the equipment.
- d) Remove all isolating and grounding devices. The authorized employee must remove any devices.
- e) Replace safety guards. The authorized employee must check the equipment to ensure that any removed guards are reinstalled.
- f) Remove lock and tag, reset the energy-isolating device, and return the machinery to service.
- g) Notify all affected personnel. The authorized employee must notify all affected employees that the equipment is back in service. Note: If following the above-prescribed sequence compromises safety, the authorized employee may modify the sequence. However, all steps must be performed.

G. Emergency Removal of LOTO Devices.

When the authorized employee who put on a LOTO device is not available to remove it, the manager may remove the device. Due to the extreme responsibility involved, the highest level of supervision appropriate within the division must take responsibility for removing or authorizing removal of the lock. This is considered to be an emergency procedure, to be undertaken only in extreme circumstances.

Extreme care must be taken and the following steps must be performed:

- a) The manager must verify that the authorized employee is not at the facility. If the employee's location cannot be determined, no further action shall be taken.
- b) The manager must make every reasonable effort to contact the authorized employee. This may include a telephone call to the employee's home or other location.
- c) If the employee is contacted, the manager must inform the employee that his/her LOTO devices are being removed.
- d) The manager must verify that it is safe to remove the LOTO devices.
- e) The manager may then use the emergency key to remove the LOTO devices, or the lock may be cut off if the key is not available.
- f) The manager must ensure that the authorized employee is presented with the removed lock immediately upon returning to work, and is informed of the reasons for the emergency removal.

- g) The emergency procedure must be duly recorded in the department's lockout/tagout records and signed by both the manager and the authorized employee.

H. Tag out Only

Any energy-isolating device capable of being locked out must be locked out without exception. However, if a device is incapable of being locked out, a "tagout only" procedure may be used. To use a tagout only procedure, the authorized employee must follow all the steps except putting on the lock. Instead, the authorized employee must use a second means of isolating the hazardous energy, such as

- Remove an isolating circuit element,
- Block a controlling switch,
- Open an extra disconnect device,
- Remove a valve handle.

These are all examples of secondary measures. The second means of isolation must be identified on the tag, and tags must be affixed to both the energy-isolating device, and at the point of the second means of isolation. If a device is incapable of being locked out, and a second means of isolation is not possible, then an equipment-specific written procedure is required to be approved by the manager before implementing the procedure.

X. Equipment-Specific Written Procedures

A. When Required

An equipment-specific written procedure is required if the equipment undergoing servicing, modification, or maintenance:

- a) Has more than one energy source.
- b) Requires the operation of more than one device to isolate the hazardous energy.
- c) Has potential for stored, residual, or accumulated hazardous energy.
- d) Is incapable of being locked out, and a second means of isolation is not possible.

B. Preparing an Equipment-Specific Written Procedure

A written energy-control procedure must be generated by the department, group, or authorized employee most familiar with the equipment. Any authorized employee who will perform LOTO on the equipment must use this procedure.

Supervisors must ensure that equipment that requires a written procedure is so identified, and that the procedure is readily available to the employees authorized to perform LOTO on the equipment.

Any equipment with an equipment-specific written LOTO procedure must be clearly labeled as such. The manager or employee responsible for the equipment may determine the appropriate format and content of the label, for example:

CAUTION--An equipment-specific written procedure exists for the locking and tagging of this equipment. This equipment-specific written procedure may be obtained from the supervisor.

Each step to LOTO the specific equipment must be detailed.

XI. Outside Personnel (contractors, etc.):

Whenever outside servicing personnel are to be engaged in activities covered by LOTO, the representative and the outside employer shall inform each other of their respective lockout or tagout procedures. The designated County of Wayne representative shall ensure that his/her personnel understand and comply with restrictions and prohibitions of the outside employer's

energy control procedures. If the outside employer has no documented lockout or tagout procedures, the outside employer shall ensure that the outside employees understand and comply with the County of Wayne's procedures.

XII. Shift or Personnel Changes if directly working on LOTO:

To insure the orderly transfer of lockout or tagout devices between off-going and on-coming employees and minimize exposure to hazards from unexpected energization, start-up of the machine or equipment, or release of stored energy, these procedures shall be followed:

The authorized employees from both shifts must both be present at the lockout device. The on-coming personnel shall notify the off-going personnel that they are ready to begin work on the machine or equipment.

The off-going authorized employee must remove his/her lock and tag, and the oncoming authorized employee must immediately place his/her lock and tag on the group LOTO device.

The primary authorized employee shall insure that all necessary energy has been rendered safe and that all pertinent co-ordination between off-going and on-coming personnel has been completed before the oncoming authorized personnel begin work on the machine or equipment.

Gaps between Shifts

If the orderly transfer of LOTO devices is not possible because of a gap in shifts, a procedure must be implemented to provide continuity of LOTO protection.

- a) If the authorized employees from both shifts cannot be present simultaneously at the lockout device because there is a gap between their shifts, the authorized employee of the off-going shift may acknowledge, by written logbook entry, prior consent to remove his or her LOTO devices during the oncoming shift. The supervisor of the authorized employee must make a corresponding logbook entry.
- b) The logbook entries must include the authorized employee's and supervisor's printed names and signatures, the equipment identification, maintenance procedure being performed and all other pertinent safety information regarding the equipment and/or procedure.
- c) The supervisor of the oncoming shift must read and understand the logbook entries, and is authorized to remove the LOTO device of the authorized employee from the off-going shift.
- d) The authorized employee of the oncoming shift must apply his/her LOTO devices.
- e) Both the oncoming authorized employee and his/her supervisor must make logbook entries acknowledging the performance of this special procedure.
- f) All subsequent LOTO actions must conform to the standard LOTO policy and procedures.
- g) Before resuming work, the authorized employee who gave prior consent for removal of his/her LOTO devices must be personally informed by the supervisor that the authorized employee's devices have been removed. This authorized employee and supervisor must make confirming logbook entries, and the supervisor must then return the LOTO devices to the employee.

XIII. Periodic Inspections

The Employee Safety Coordinator along with a representative of the division being inspected shall perform periodic inspections and annual certifications of each Department's energy-control procedures. The periodic inspection must be designed to correct any deviations or inadequacies observed. The certification must state that the periodic inspections have been performed. The certification must identify the machine(s) or equipment on which the energy-control procedure

was utilized, the date of the inspection, the employees included in the inspection, and the person who performed the inspection.

XIV. Equipment not to be turned off

Sump pumps, emergency lights, refrigerators, or equipment that must be shut down in a controlled manner fall into a class of equipment that should not be accidentally de-energized. When a circuit breaker, disconnect switch, or energy-securing device is readily accessible to any employee, the circuit breaker or disconnect switch may be tagged to indicate that it is not to be turned off. The energy-securing device must not be locked by any means that would prevent the device from being disconnected in an emergency.

XV. Lockout/Tagout Equipment

The supervisor whose employees perform LOTO is responsible for providing LOTO equipment to those employees, and ensuring that they use it.

A. Padlocks:

Padlocks shall be identified as being used for LOTO. Each padlock shall be identified with the authorized employee's name and employer. Padlock labels can be used for writing in the authorized employee's name and employer. Other means of identification (e.g., engraving) are also permissible. Padlocks must be standardized within the division.

B. Padlock Labels

Each lock must be clearly labeled with the authorized employee's name and employer. Adhesive labels may be used.

C. Keys

Each LOTO padlock is required to have two keys, primary and emergency. The primary key must be in the possession of the authorized employee who applied the lock. The emergency key must be kept in a secured area (e.g., a lock box) with access limited to the authorized employee's immediate manager and one level of management above the authorized employee's manager.

A group of locks with a common key may be used for equipment with multiple energy-isolation devices, if desired. If a group of locks is keyed alike for this purpose, one key only may be issued for use by the authorized employee and a second key may be kept for emergency use, as described above.

D. Tags

The tag must always be used in conjunction with a lock unless the energy-isolating device is not physically capable of being locked.

XVI. References

29 CFR Part 1910.147, The Control of Hazardous Energy (Lockout/Tagout), Department of Labor, Occupational Health and Safety Administration

29 CFR Part 1910, Subpart S, Electrical, Department of Labor, Occupational Health and Safety Administration

APPENDIX A DEFINITIONS

Affected Employee: An employee whose job requires them to operate or use a machine or piece of equipment on which servicing is being performed under lockout or tagout, or whose job requires them to work in an area in which such servicing or maintenance is being performed.

Authorized Employee: A person who locks or implements a tagout system procedure on machines or equipment to perform the servicing or maintenance on that machine or equipment. An 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:

manually operated electrical circuit breaker

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;

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 that 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 to hold an energy-isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

LOTO: acronym for lockout tagout.

Normal production operations: The use of a machine or equipment to perform its intended production function.

Primary Authorized Employee: The authorized employee who has been vested with responsibility for a set number or group of employees performing service or maintenance on machines or equipment subject to lockout or tagout procedures.

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 un-jamming 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.

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

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 that 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.

Zero-energy state: A condition that is reached when all energy sources to or within equipment is isolated, blocked, or otherwise relieved, with no possibility of re-accumulation. Equipment is not safe to work on until it is in a zero-energy state.