

 <p style="text-align: center;">State of Connecticut Department of Correction</p> <p style="text-align: center;">ADMINISTRATIVE DIRECTIVE</p>	Directive Number 5.5	Effective Date 11/14/2014	Page 1 of 6
	Supersedes The Control of Hazardous Energy, dated 4/1/2011		
Approved By:  Interim Commissioner Scott Semple	Title The Control of Hazardous Energy		

1. Policy. The Department of Correction shall maintain a safe environment by complying with all state and federal laws and regulations concerning the control of hazardous energy.
2. Authority and Reference.
 - A. Connecticut General Statutes, Section 18-81.
 - B. Control of Hazardous Energy (Lockout/Tagout), Federal Register, January 2, 1990.
 - C. Department of Labor, Division of Occupational Safety, 29 CFR (1910.147), Connecticut Occupational Safety and Health Act of 1970.
3. Definitions and Acronyms. For the purposes stated herein, the following definitions and acronyms apply:
 - A. Affected Employee. A staff member whose job requires operation or use of a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires working in an area which such servicing or maintenance is being performed.
 - B. Authorized Employee. A staff member who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.
 - C. Capable of Being Locked Out. An energy isolating device capable of being locked out, e.g., it is designed with a hasp or other attachment or integral part to which or through which a lock can be affixed.
 - D. Energized. A machine or equipment is considered to be energized when it is connected to an energy source or contains residual or stored energy.
 - E. Energy Isolating Device. A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:
 1. Manually operated electrical circuit breaker;
 2. A disconnect switch;
 3. A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded conductors and, in addition, no pole gate can be operated independently;
 4. A slide gate;
 5. A slip blind;
 6. A line valve;
 7. A block; and,
 8. Any similar device used to block or isolate energy, or has a locking mechanism built into it. The term does not include a push button, selector switch and other control circuit type devices.
 - F. Energy Source. Any generator of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other power.
 - G. Hazardous Energy. An energy source that could become harmful if lockout procedures are not properly utilized.

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- H. 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.
- I. Lockout. The placement of a lockout device on an energy-isolating device, in accordance with established procedure, ensuring the energy-isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
- J. Lockout Device. Any device that uses positive means such as a lock, either key or combination type to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment.
- K. Normal Production Operations. The utilization of a machine or equipment to perform its intended production function.
- L. OSHA. Occupational Safety and Health Administration.
- M. 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 startup of the equipment or release of hazardous energy.
- N. Stored Energy. 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.
- O. Tagout. The placement of a tagout device on an energy-isolating device, in accordance with established procedure to indicate the energy-isolating device and the equipment being controlled may not be operated until the device is removed.
- P. Tagout Device. Any 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 established procedure. The tag indicates that the machine or equipment to which it is attached is not to be operated until the tagout device is removed.

4. Presentation.

- A. Employee Protection. OSHA Lockout/Tagout procedures are intended to protect from hazardous energy sources an employee whose job requires them:
 1. As an "Affected" employee, to operate or use machinery or equipment on which servicing or maintenance is being performed under lockout/tagout.
 2. As an "Affected" employee, to work in an area in which servicing or maintenance is being performed.
 3. As an "Authorized" employee, to implement a lockout/tagout on machinery or equipment to perform the servicing or maintenance on that machine or equipment. (NOTE: The employee who implements the lockout/tagout may well be the same person who performs the servicing or maintenance of the machinery or equipment.)
 4. As an "Other" employee, whose work operations are or may be in an area where energy control procedures may be utilized. This category includes all staff and inmates who work in or must transit through an area where lockout/tagout procedures are in place.

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5. Scope of the Standard.

- A. This standard covers the servicing and maintenance of machinery and equipment in which the unexpected energization or start up of the machinery or equipment or release of stored energy could cause injury to employees.
- B. The standard does not apply to:
 - 1. Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or startup of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug's being under the exclusive control of the employee performing the servicing or maintenance.
 - 2. Hot tap operations on gas, steam, water and petroleum products used in transmission and distribution systems, when the employer demonstrates:
 - a. continuity of service is essential;
 - b. shutdown of the system is impractical; and,
 - c. documented procedures are followed.

6. Energy Control Program. Each facility is required to establish an Energy Control Program consisting of an energy control procedure and employee training to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, startup or release of stored energy could occur or cause injury, the machinery or equipment shall be isolated and rendered inoperative in accordance with lockout/tagout procedures.

7. Energy Control Procedures.

- A. Each facility shall develop written energy control procedures which shall clearly and specifically outline the scope, purpose, authorization, rules and techniques to be utilized for the control of hazardous energy and a means to enforce compliance including, but not limited to, the following:
 - 1. A specific statement of the intended use of the procedure.
 - 2. Specific procedures for shutting down, isolating, blocking and securing machines and equipment to control hazardous energy.
 - 3. Specific procedural steps for the placement, removal and transfer of lockout devices, tagout devices and the responsibility for them.
 - 4. Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout/tagout devices.
- B. Lockout/Tagout Devices shall be:
 - 1. Singularly identified.
 - 2. The only devices used to control energy.
 - 3. Used exclusively for controlling energy.
 - 4. Durable.
 - 5. Standardized. The same type of device shall be utilized throughout the facility.
 - 6. Substantial. Sturdy enough to prevent removal without the use of excessive force.

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8. Lockout vs Tagout.

- A. The surest means to ensure deenergization of machines and equipment is with the lockout procedure.
- B. When using a tagout program in those instances where the equipment is capable of being locked out, the employer shall demonstrate that the tagout program shall provide a level of safety equivalent to that obtained when using a lockout program.
- C. When using a tagout program, additional means beyond those necessary for lockout are required. Additional means include:
 - 1. Additional safety measures such as the removal of an isolating circuit element, blocking of a controlling devices or the removal of a valve handle to reduce the likelihood of inadvertent energization.
 - 2. The employer, when using a tagout program, is required to implement an effective means of enforcement of the program.
 - 3. Additional training for all employees is provided.
 - 4. Tagout devices having reusable, non-locking, easily detachable means of attachment (such as string, cord or adhesive) are not permitted.

9. Protective Materials and Hardware. Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided by the employer for isolating, securing or blocking of machines or equipment from energy sources.

10. Testing or Positioning of Machines and Equipment. 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:

- A. Clear the machine or equipment of tools and materials;
- B. Remove employees from the machine or equipment area;
- C. Remove the lockout or tagout devices;
- D. Energize and proceed with testing or positioning; and,
- E. Deenergize all systems and reapply energy control measures to continue the servicing and/or maintenance.

11. Training and Communication. This training shall be provided to employees which ensures that:

- A. Authorized Employees shall receive training:
 - 1. in the recognition of applicable hazardous energy sources.
 - 2. in the type and magnitude of the energy available in the work place.
 - 3. in the methods and means necessary for energy isolation and control.
- B. Affected Employees shall be instructed in the purpose and use of the energy control procedure.
- C. 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 instructed about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.
- D. When tagout systems are used, all employees shall be trained in the following limitations of tags:

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1. Tags are simply warning devices affixed to energy isolating devices and do not provide physical restraint on those devices that it is proved by a lock.
2. Tags should never be removed without authorization of the authorized person responsible for it.
3. Tags are never to be bypassed, ignored or defeated.
4. Tags must be legible and understandable to all employees in order to be effective.
5. Tags must be securely attached so that they cannot be inadvertently or accidentally be detached during use.
6. Retraining shall be provided whenever there is a change of employees, machines, equipment, processes that present a new hazard or a change in the energy control procedures.
7. A record of training, including recertification, shall be maintained on all employees.

12. Implementation of Energy Isolation Procedures.

- A. Implementation of the Lockout/Tagout system shall only be performed by "Authorized Employees".
- B. All "Affected Employees" shall be notified by the employer or "Authorized Employee" of the application or removal of Lockout/Tagout devices.
- C. The "Authorized Employee" shall, in preparation for equipment shutdown, be knowledgeable of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method and means to control the energy.
- D. An orderly shutdown of the machine or equipment shall be performed to avoid any additional or increased hazard(s) to employees as a result of equipment deenergization.
- E. All energy isolating devices needed to control the energy of the machine shall be operated in such a manner as to isolate the equipment form energy sources.
- F. Lockout/Tagout devices shall be affixed in a manner that shall hold the energy isolating devices in a "safe" or "off" position.
- G. Tagout devices, where used, shall be affixed in such a manner that shall clearly indicate that operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.
- H. Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag shall be fastened at the same point at which the lock would have been attached.
- I. If the tag cannot be attached directly to the energy-isolating device, it shall be located as close as possible to the device so that it shall be immediately obvious to anyone attempting to operate the device.
- J. All potentially hazardous stored energy shall be relieved, disconnected, restrained or otherwise rendered safe.
- K. The "Authorized" shall finally verify the isolation and deenergization prior to starting work on the equipment.

13. Release From Lockout/Tagout.

- A. The work area shall be inspected to ensure the equipment components are operationally intact and all non-essential items are removed. (NOTE: The employer, in the absence of the "Authorized Employee", may remove such devices provided specific procedure and training for such removal has been documented and incorporated in the Energy Control Program.)

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- B. Ensure all employees have been informed of the pending lockout/tagout removal and that they are safely positioned during the removal procedure.
- C. The "Authorized Employee" who applied the lockout/tagout should remove his/her own devices/tags.
- D. Finally, a complete testing of the equipment or machine must be conducted prior to putting it back in service.

14. Outside Contractors.

- A. Whenever outside contractors or service personnel are to be engaged in activities covered by the scope and application of this standard, the Facility Maintenance Supervisor and the outside employer shall inform each other of their respective lockout/tagout procedures. Contracts should be drawn up to include a statement that the contractor comply with all OSHA regulations pertaining to the control of hazardous energy.
- B. Each supervisor, in turn, shall ensure that his/her personnel understand and comply with restrictions and prohibitions of the lockout/tagout procedure(s) used during such work.
- C. If the contractor or service personnel do not provide their own lockout/tagout procedure, the facility should ensure that their procedure is used to provide for the safety of all personnel.

15. Group Lockout or Tagout.

- A. 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/tagout device.
- B. An "Authorized Employee" shall be given the responsibility to coordinate the entire lockout/tagout with the various work forces to ensure continuity of protection.
- C. Each "Authorized Employee" shall affix a personal lockout or tagout device to the group lockout device, group lock box, etc. when the employee begins work and shall remove those devices when the employee stops working on the machine or equipment being serviced or maintained.
- D. For "Shift or Personnel" changes, specific procedures shall be utilized to ensure the continuity of lockout or tagout protection, including the orderly transfer of lockout or tagout devices between off-going and on-coming employees.

16. Exceptions. Any exceptions to the procedures in this Administrative Directive shall require prior written approval from the Commissioner of Correction.