DEPARTMENT OF CORRECTIONS

Policy Number:	**105.120**
Title:	**Lockout/Tagout Program**
Effective Date:	**10/15/19**

PURPOSE: To provide energy control procedures, employee training, and periodic inspections, ensuring that machines or equipment are isolated from any energy source and rendered inoperative before any employee performs any servicing or maintenance. To outline the scope, responsibilities, authorization, rules, and techniques to be utilized for the control of potentially hazardous energy, and the means of enforcing compliance.

APPLICABILITY: All facilities

DEFINITIONS:

Affected employee – an employee whose job requires the employee to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires the employee to work in an area where such servicing or maintenance is being performed. An affected employee becomes an authorized employee when the employee's duties include performing servicing or maintenance.

Authorized employee – an employee who locks out or tags out machines or equipment in order to perform the servicing or maintenance on that machine or equipment.

Capable of being locked out – an energy isolating device with a built-in locking mechanism, hasp, or other means of attachment to which, or through which, a lock may be affixed, or which is capable of being locked out without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Electric power disconnects – any main power disconnect that controls a source of power or material flow locked out with a lockout device whenever employees are maintaining, cleaning, adjusting, or servicing machinery or equipment. If the disconnect is not in clear sight of the employee, a "Do Not Start" tag must be affixed to any and all operating controls.

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 such examples as the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit may be disconnected from all ungrounded supply conductors and, in addition, no pole may 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 devices are not energy isolating devices.

Energy source – any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other form of energy.

Group lockouts –a lock box used by all employees to secure the keys that open all locks locking out multiple hazardous energy sources, when more than one individual is performing servicing or maintenance and there is more than one hazardous energy source that needs to be locked out.

Hot tap – a procedure involving a weld on a piece of pressurized equipment (pipelines, vessels or tanks) 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.

Individual lockouts – when more than one employee is engaged in working on machinery or equipment, each employee affixes the employee's individual lockout device or lock to the disconnect switch or power supply.

Lockout – the placement of a lockout device on an energy isolating device to ensure that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device – a device that uses either a key or combination lock to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment. Examples of lockout devices are blank flanges and bolted slip blinds.

Normal production operations – the use of a machine or equipment to perform its intended production function.

Servicing and/or maintenance – workplace activities when the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy, such as constructing, installing, setting up, adjusting, inspecting, and modifying machines or equipment; or lubrication, cleaning, or unjamming of machines or equipment; and making adjustments or tool changes.

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 to indicate that the energy isolating device and the equipment being controlled must 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 may be securely fastened to an energy isolating device to indicate that the energy isolating device and the equipment being controlled are not operated until the tagout device is removed.

Zero energy state – a physical test of the equipment to ensure that all energy sources are de-energized including electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other.

PROCEDURES:

A. Management responsibilities

1. The warden of each facility ensures that authorized employees are trained in, supplied with, and required to use approved devices and techniques to minimize the risk of injury or death due to an unexpected energization or release of stored energy in a machine or piece of equipment. Servicing and/or maintenance which takes place during normal production operations is covered by this policy only if an employee is required to remove or bypass a

guard or other safety device, or place any part of the employee's body into the point of operation of any machine or piece of equipment, or any associated danger zone during a machine operating cycle.

2. Written energy control procedures (lockout/tagout procedures) must be provided for machines or equipment, except when all of the following elements exist:
   a) The machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees;
   b) The machine or equipment has a single energy source which may be readily identified and isolated;
   c) The isolation and locking out of that energy source completely de-energizes and deactivates the machine or equipment;
   d) The machine or equipment is isolated from that energy source and locked out during servicing or maintenance;
   e) A single lockout device may achieve a locked-out condition;
   f) The lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance;
   g) The servicing or maintenance does not create hazards for other employees; and
   h) The employer, in utilizing this exception, has had no accidents involving the unexpected activation or re-energization of the machine or equipment during servicing or maintenance.

3. This policy does not apply to:
   a) Minor tool changes, adjustments, and servicing activities which 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 which provide effective protection;
   b) Maintenance on corded and plug-connected electric equipment which is controlled by the unplugging of the equipment from the energy source, when the plug is under the exclusive control of the employee performing the maintenance; and
   c) Hot tap operations involving pressurized pipeline transmission systems for gas, steam, water, or petroleum products, provided the facility determines that:
      (1) Continuity of service is essential;
      (2) Shutdown of the system is impractical;
      (3) Documented safety procedures are followed; and
      (4) Proven effective protection is provided using specialized equipment.

B. Employee responsibilities
1. The warden/superintendent of each facility:
   a) Ensures compliance to the procedures of this policy; and
   b) Ensures all authorized employees receive the required training.

2. All authorized employees must:
   a) Read and understand this policy;
   b) Ensure that all energy sources are neutralized and/or secured in a safe position prior to setting up, adjusting, maintaining, testing, or repairing any equipment; and
   c) Not remove a lockout/tagout device without first contacting the party who installed it.

3. All employees must be familiar with general lockout/tagout procedures.

4. The facility safety administrator must:
   a) Review and update facility lockout/tagout procedures annually; and
   b) Evaluate and authorize the use of specific lockout/tagout devices.

5. All facility supervisors must:
   a) Be familiar with lockout/tagout procedures;
   b) Ensure that all authorized employees are trained to perform, and are proficient in performing lockout/tagout procedures;
   c) Ensure that lockout/tagout procedures are observed by all employees;
   e) Develop and maintain written energy control procedures for machines or equipment as stated in this directive;
   f) Ensure periodic inspections of all energy control procedures are performed at least annually to ensure the procedures and requirements of this directive are being followed. The Periodic Inspection Certification form (attached) is used for this process. The periodic inspection must be performed by an authorized employee other than those utilizing the energy control procedure being inspected;
   g) Ensure the inspector corrects any identified deviations or inadequacies;
   h) Review, or have the inspector review, with each authorized or affected employee the employee's responsibilities under the energy control procedure being inspected;
   i) Document performance of periodic inspections, the machine or equipment that utilized the energy control procedure, date of inspection, employees included in inspection, and the person performing the inspection;
   j) Retain documentation of annual review of compliance with procedures by authorized employees; and
   k) Retain documentation of specific energy control procedures.

C. Rules

1. Pneumatic and hydraulic lines
   The pressure must be eliminated from any pneumatic and hydraulic lines which activate a mechanism or machine, and the valve holding back the activating substance must be locked before an employee works on that mechanism or machine.

2. Spring tension mechanisms
   Mechanisms under spring tension or compression must be blocked, clamped, secured in position, or the compression/tension totally relieved before an employee services the mechanism.

3. Suspended mechanisms
   Suspended mechanisms or parts that normally cycle through a lower position must be placed at the lowest position and be clamped, blocked, or otherwise secured in position before being serviced by an employee.

4. New machines or equipment
   Whenever new machines or equipment are installed, energy isolating devices must be designed to accept a lockout device.

D. Lockout procedure
   For any equipment undergoing maintenance or service, staff must lock it out at the energy source isolating control, or tag it out at the point of operation, using an approved lockout/tagout device.

The site safety administrator and physical plant director, or their designees, must list the location of machinery or equipment that has two or more energy sources, by building, and in sequential order. Both must maintain and retain a copy of the list.

1. The authorized employee must inform the equipment operator(s) and/or the area supervisor that the lockout/tagout procedure is to commence.

2. The authorized employee identifies the type and magnitude of the energy, the hazards of the energy to be controlled, the means to control the energy, and other potential hazards.

3. The authorized employee prepares the equipment for shut down, using the facility procedures established for the equipment.

4. The authorized employee must shut down equipment in an orderly manner to minimize hazards to employees due to equipment stoppage.

5. The authorized employee must release all stored energy in the equipment, and test it to ensure that zero energy (electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other) remains.

6. The authorized employee must isolate energy source(s) and apply lockout device(s).
   a) Lockout devices, when used, must be affixed in a manner that holds energy isolating devices in a safe or off position.

   b) Tagout devices, when used, must be affixed in a manner that clearly indicates that the movement of energy isolating devices from the safe or off position is prohibited.

   c) When a tag cannot be affixed directly to the energy isolating device, the tag must be located as safely as possible in a position that is immediately obvious to anyone attempting to operate the device.

7. The authorized employee must complete all servicing, maintenance, or repair. Should it become necessary to test or reposition the machine, equipment, or component, the employee must follow Procedures D.8 through D.10 and then repeat Procedures D 1 through D.6.

8. After reassembling equipment, the authorized employee ensures the machine or equipment components are operationally intact, ensures that all safety devices and guards are in place, and accounts for all tools and parts.

9. The authorized employee must notify other employees in the work area that the machine is going to be test operated. The authorized employee ensures all employees are safely positioned.

10. The authorized employee removes lockout/tagout device(s) and tests the operation of the equipment.

11. The authorized employee must inform the equipment operator(s) and/or area supervisor that work is completed.

E. Tagout procedure

1. The authorized employee must place tags at disconnect points when lockout devices are in use and during any lockout procedure.

2. The authorized employee enters the following information on the tag:
   a) Name of the worker who placed the tag;
   b) Date/time work began;
   c) Nature of work being performed; and
   d) Procedures for restoring energy to the equipment.

3. If the disconnect is not in clear sight of the employee, a "Do Not Start" tag must be affixed to any and all operating controls.

4. When the use of a lockout device is physically impossible or when it has been determined that a tag alone may effectively prevent an accidental start-up, tags must be utilized and attached in the same location that a lockout device would have been installed.

5. Tags do not lock out energy, but provide a warning about danger. Tags must be regarded as locks and must not be moved without authorization, disregarded, bypassed, or reused.

6. Tags may be attached by hand and are self-locking. They are designed so as to require a force of 50 lbs. or greater to remove them.

F. Group lockout or tagout

When a crew, craft, department, or other group is servicing or providing maintenance for machines or equipment, the members of the group must use a procedure which affords the employees and other workers a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device. Group lockout or tagout devices must be used in accordance with the following specific requirements.

1. An authorized employee is vested with primary responsibility to use a group lockout or tagout device (such as an operations lock.)

2. The authorized employee must determine the group members exposed to the machine being locked or tagged out.

3. When more than one entity such as a crew, craft, or department is involved, an authorized employee must have overall lockout and/or tagout control responsibility to ensure continuity of protection.

4. Each authorized employee affixes a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when the authorized employee begins work, and must remove the personal device when the employee stops working on the machine or equipment being serviced or maintained.

5. The authorized employee must ensure the orderly transfer of lockout/tagout protection between off-going and on-coming employees.

G. Lockout/tagout override

1. Any employee having affixed a lockout/tagout device must inform the area supervisor of the location and equipment that has been locked or tagged out prior to leaving the work area.

2. The supervisor must attempt to verbally contact the employee before removing the employee's lockout/tagout device.

3. If the supervisor cannot verbally contact the employee, the supervisor must call master control to determine whether the employee's keys have been turned in.

4. If the employee's keys have been turned in, or if all attempts to locate the employee in the facility have been unsuccessful, the supervisor must visually inspect the affected lockout area to ensure that the employee is not present.

5. The supervisor removes the lockout device by cutting the lock.

6. The supervisor must notify the facility safety administrator.

7. The supervisor must notify the employee that the employee's lock was cut and removed. The supervisor must ensure that a replacement lock is provided to the employee.

H. Training and communication

1. The department provides initial training for employees that include the following elements:
   a) The purpose, use and function of the energy control program;
   b) Knowledge and skills required for the safe application, usage, and removal of the energy controls;
   c) Recognition of applicable hazardous energy sources;
   d) Type and magnitude of the energy available in the workplace; and
   e) Methods and means necessary for energy isolation and control.

2. Employees must be retrained as needed to maintain proficiency, or when there is a change in:
   a) Job assignments;
   b) Machines, equipment, or processes; or
   c) Energy control procedures; or
   d) Whenever a periodic inspection identifies deviations or inadequacies in the employees' knowledge or use of energy control procedures.

3. Each facility must document employee training using the agency-approved electronic training management system, noting each employee’s name and date(s) of training.

I. Authorized devices

The facility safety administrator singularly identifies a lockout/tagout device as the only device(s) used for controlling energy. Lockout/tagout devices must not be used for other purposes and must meet the following requirements:

1. Lockout/tagout devices must be capable of withstanding the environment for the maximum period of time, as determined by the facility safety administrator.

2. Tagout devices must be constructed and printed so that exposure to wet and damp conditions does not cause the tag to deteriorate or become illegible.

3. Tagout devices must not deteriorate when used in corrosive environments such as in the presence of acid and alkali chemicals.

4. Lockout/tagout devices must be standardized within the facility, in at least one characteristic such as color, shape, or size. Print and format must be standardized on tagout devices.

5. Lockout devices must be designed substantially enough to resist unauthorized removal without the use of bolt cutters or other tools.

6. Tagout devices, including the means of attachment, must be substantial enough to prevent accidental removal. Tagout devices must be attached with non-reusable, self-locking means (such as a nylon cable tie) that are capable of resisting at least 50 pounds of force.

7. Lockout/tagout devices must indicate the identity of the employee who applied the device.

8. Tagout devices must warn against hazardous conditions if the machine or equipment is energized and include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate.

J. Contractors

Whenever non-departmental individuals (e.g., contractors) are engaged in activities covered by the scope of this program, the physical plant director and the contractor must inform each other of their respective lockout/tagout procedures. The physical plant director must ensure that the employees understand and comply with the restrictions and prohibitions of the contractor's energy control program. The physical plant director ensures contractors follow proper lockout/tagout procedures.

INTERNAL CONTROLS:

A. Training records are maintained in the agency-approved electronic training management system.

B. Documentation of periodic inspection certifications is retained by the area supervisor.

C. Documentation of specific energy control procedures, and annual or more frequent inspections of compliance with those procedures, is retained by the area supervisor.

D. The site safety administrator and physical plant director retain copies of the list of the location of machinery or equipment that has two or more energy sources.

ACA STANDARDS: None

REFERENCES:

29 CFR 1910.147 (1996), Occupational Safety and Health Administration (OSHA) Standards
Minn. R. 5207.0600 (2008), "Lockout Devices"
Minn. R. 5206.1000 (2008), "Labeling Hazardous Substances"
Minn R. Ch. 5206 (2008), "Hazardous Substances; Employee Right-to-Know"
29 CFR 1910.146 (1998), "Confined Space Entry"
29 CFR 1910.145 (1996), "Specifications for Accident Prevention Signs and Tags"
Policy 105.125, "A Work Place Accident and Injury Reduction (AWAIR)"

Policy 105.117, "Confined Space Entry"

REPLACES: Division Directive 105.120, "Lockout/Tagout Program," 10/7/14.
All facility policies, memos, or other communications, whether verbal, written or transmitted by electronic means, regarding this topic.

ATTACHMENTS: Periodic Inspection Certification (105.120C)

APPROVALS:
Deputy Commissioner, Community Services
Deputy Commissioner, Facility Services
Assistant Commissioner, Operations Support
Assistant Commissioner, Facility Services