

CITY OF KETTERING

**CONTROL OF HAZARDOUS
ENERGY SOURCES PROGRAM
(LOCKOUT/TAGOUT)**

CITY OF KETTERING
Safety & Health Program

Responsibility for Safety

All City employees are responsible for safety. However, we all have different roles in assuring that the City of Kettering is a safe place to work.

The City Manager:

- Commits to a safe working environment consistent with requirements of applicable laws.
- Assigns the responsibility of complying with this commitment to the individual operating Department Directors.
- Assigns responsibility for coordinating required training to the Director of Human Resources.
- Assigns central record keeping to the Human Resource Department.
- Assigns the Human Resource Director the responsibility to develop and maintain a Safety Committee to coordinate mutual needs including development of safety programs.

Responsibilities of All Employees

Each employee of the City of Kettering has a personal and vital responsibility to work safely and promote safety. Employees are required to perform their work in a way that will prevent injury and illness to themselves and fellow workers, and prevent property damage.

All City employees are responsible for:

- Maintaining active interest and participation in safety.
- Complying with all City safety policies and regulations.
- Reporting all accidents, incidents and injuries immediately.
- Being alert to safety and health hazards and correcting or reporting them.
- Performing all work in a safe manner.
- Operating vehicles and equipment and doing tasks only when trained and competent to do so.
- Using equipment and vehicles safely and for their intended use.
- Attending scheduled safety training programs.
- Encouraging fellow employees to work safely.
- Wearing personal protective equipment when required and when it makes good sense.
- Keeping work areas clean, orderly and free from hazards.
- Setting a good example for others.

Responsibilities of Supervisors

As a supervisor, you are responsible for being sure work is completed in a safe manner by setting a good example, having a positive, supportive attitude toward safety and enforcing safety policies.

Supervisors are responsible for:

- Practicing and promoting safe work practices and compliance with safety regulations.
- Assuring that all operations are conducted safely.
- Assuring that all employees are trained and competent for the jobs they perform.
- Supporting safety training efforts and following-up on information learned in training programs.
- Enforcing safety regulations and City safety policy.
- Taking care of hazards identified by employees.
- Making recommendations to improve the safety performance of the department.
- Making sure employees understand the hazards of the job, necessary precautions and proper use of personal protective equipment.
- Assuring that accident reports are completed and submitted in a timely manner.

Responsibilities of Department Directors

Department Directors are responsible for providing the support, financial resources, and overall safety leadership in the department.

- Enforcing safety rules and regulations.
- Keeping staff informed of new regulations and compliance issues.
- Assigning a safety officer (may be Director or others) to run departmental safety operation and participate on safety committee.

CITY OF KETTERING
Safety & Health Program
Lockout/Tagout Program
OSHA – 20 CFR 1910.147 Controlling Hazardous Energy

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CITY OF KETTERING
Safety & Health Program
Lockout/Tagout Program
OSHA – 20 CFR 1910.147 Controlling Hazardous Energy

1. Policy.

The personal safety of all City employees is of primary importance and must be a part of every operation. This written program is intended to comprehensively address the issues of servicing and maintenance of machines and equipment in which the unexpected energizing or start up of the machine or equipment, or release of stored energy could cause injury to employees. This program establishes minimum performance requirements for the control of such hazardous energy sources. These include electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy-producing sources. Prior to being serviced, powered equipment shall be de-energized, locked or tagged off or otherwise disconnected from all applicable power sources, and further immobilized as necessary to prevent accidental injury or shock. This program is specifically designed to comply with the OSHA Standard 29CFR1910.147 Controlling Hazardous Energy (Lockout/Tagout).

2. Program Changes/Revisions.

This program will be reviewed and evaluated:

- On an annual basis
- When changes occur to 29 CFR 1910.147 that prompt revision to this document
- When facility operational changes occur that require a revision of this document
- When there is an accident or close call that relates to this standard.

3. Responsibilities. Primary responsibility for implementation of this program lies with Department Directors/supervisors. Department directors shall ensure that (a) all their equipment having hard-wired or piped source(s) of power is equipped with approved devices that can be used to lockout the power; (b) a secure and controlled system for issuing safety locks and keys is maintained; and (c) their employees are instructed in and follow the requirements of this program.

Employees must follow prescribed practices and procedures.

4. General Program Requirements.

This program applies to the control of energy during servicing and/or maintenance of machines or equipment operated by employees. The program does not address normal operating periods unless an employee is required to remove a guard or safety device or 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.

Exceptions: This program does not apply to the following conditions:

- Minor tool changes and adjustments that take place during normal operations and are considered routine/repetitive provided effective protection already exists.
 - Work on electrical equipment that has a cord and plug and can be unplugged before performing maintenance/service work and the employee working has exclusive control of the equipment.
 - “Hot Tap” operations on gas, water, steam or petroleum products pressurized pipelines provided that continuity of service is essential, shut down is impractical and documented procedures are followed.
- A. Energy Control Program.** Department Directors and their supervisory staff shall adopt practices and procedures including employee training and periodic inspections to ensure that before an employee performs any service or maintenance activity on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered inoperative.
- B. Lockout/Tagout.** If a machine or piece of equipment or energy isolating device is capable of being locked out, a lockout device will be used, unless it can be demonstrated that the use of tagout will provide equivalent employee protection. If a machine or piece of equipment or energy isolating device is not capable of being locked out, a tagout will be used. (Note: Whenever replacement or major repair, renovation or modification of a machine or piece of equipment is performed or whenever new machines or equipment are installed/used, energy isolating devices for such machines or equipment shall be designed to accept a lockout device.)
- C. Full Employee Protection.** When a tagout device is used on an energy isolating device which is not capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached. Additionally, the tagout procedure should provide a level of safety equivalent to that obtained by using the lockout procedure. To demonstrate that same level of safety such additional elements as removal of an isolating circuit element, blocking of a controllable switch, opening an extra disconnecting device or removal of a valve handle can suffice in order to reduce the likelihood of inadvertent energization.
- D. Energy Control Procedures.** This standard establishes clear and concise procedures for the control of hazardous energy sources. These procedures identify steps of shutting down, isolating, blocking and securing machines or equipment, placement/removal/transfer of lockout and tagout devices and responsibility for

them and specific requirements for testing a machine or piece of equipment to verify the effectiveness of lockout/tagout devices.

E. Energy Control Procedure Exception. If all of the criteria listed below apply to a particular machine or piece of equipment, then the energy control procedure (lockout/tagout) need not be accomplished.

1. 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;
2. The machine or equipment has a single energy source that can be readily identified and isolated;
3. The isolation and locking out of that energy source will completely de-energize and de-activate the machine or equipment;
4. The machine or equipment is isolated from that energy source and locked out during servicing or maintenance;
5. A single lockout device will achieve a locked out condition;
6. The lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance;
7. The servicing or maintenance does not create hazards for other employees;

F. Protective Materials and Hardware. Each department shall be responsible for providing lockout/tagout hardware for isolating, securing or blocking of machines or equipment from energy sources. The lockout/tagout devices shall be clearly identifiable, be used for no other purpose, be the only devices used for controlling energy and be durable, standardized and substantial for their use. Each individual shall have his/her "own" lock and key.

G. Facility Evaluation. An assessment of all City facilities will be accomplished by each Department Director to determine which machines or pieces of equipment require steps for shutting down, isolating, and/or blocking to control hazardous energy. A listing of these machines and equipment is identified in Attachment B. This listing will be reviewed and updated as needed.

H. Periodic Inspections. A periodic inspection of the energy control procedures for each machine or piece of equipment will be conducted at least annually by each department/division.

- The inspection will be performed by a competent authorized employee (a) other than the one(s) utilizing the energy control procedure being inspected and, (b) who has an experience level which qualifies him/her to evaluate those procedures; for example, in the Facilities Department this may be the maintenance foreman;
- All identified discrepancies will be briefed to the Department/Division Director and then corrected as necessary;

- The employee conducting the inspection will certify that the inspection was performed. The certification will identify the machine or piece of equipment inspected, the date of the inspection, the employees included in the inspection, and the employee conducting the inspection.
- I. **Training.** Initial training will be required of all employees to ensure they are provided with the knowledge and skills necessary for safe application, usage and removal of energy controls. Training is the responsibility of the Department Director. Recurring training shall be provided whenever there is a change in job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures. Retraining and procedural review will also be provided whenever there is a “close call” or whenever observation by supervisors indicate an employee needs to be retrained. Training is to be provided to employees depending on their role.
 - J. **Energy Isolation Authorization.** Lockout/tagout shall be conducted only by employees that are both trained and authorized to perform servicing/ maintenance on machines or equipment. Department directors are responsible for identifying those authorized employees.
 - K. **Notification to Employees of Lockout/Tagout Conditions.** Affected employees shall be notified of the application and removal of lockout/tagout devices. Notification shall be given before the controls are applied and after they are removed from the machine or equipment. Responsibility for notification belongs to both Department Directors and the employees performing servicing or maintenance.
5. **Energy Control Procedures (Application of Control).** Lockout/tagout procedures shall cover the following actions and be done in the following sequence:
- A. Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type/magnitude of the energy, the hazard(s) associated with the energy and the methods or means to control the energy.
 - B. The machine or equipment shall be shutdown using the procedures established for that particular machine or equipment. An orderly shutdown must be used to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage. Supervisor’s notification may be required. Refer to individual department procedures.
 - C. All energy isolating devices needed to control the energy on the machine/equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source(s). The use of these devices are as follows:
 - Lockout devices shall be affixed to each energy-isolating device by an authorized employee and in a manner that will hold the energy isolating

device in a “safe” or “off” position. Each authorized employee working on equipment will have her/his own lock and tag.

- Tagout devices shall be affixed in such a manner to clearly indicate that the operation or movement of energy isolating devices from the “safe” or “off” position is prohibited. 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. When a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device in a position that will be immediately obvious to another employee attempting to operate the device.
- D. Following the application of lockout/tagout devices, all potentially hazardous stored or residual energy will be relieved, released, disconnected, or otherwise rendered safe.
- E. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing/maintenance is completed or until the possibility of such accumulation no longer exists.
- F. Prior to starting work on machines/equipment that have been locked/tagged out, the authorized employee shall verify that isolation and de-energization have been accomplished. Supervisor’s notification may be required. Refer to individual department procedures.

6. Lockout/Tagout Device Removal.

- A. Before lockout/tagout devices are removed and energy restored to the machine/equipment, the following actions should be taken by the authorized employee:
 - Remove all non-essential items such as tools and materials from the work area.
 - Check that machine/equipment components are operationally intact.
 - Ensure that all employees are at a safe distance from the affected machine or equipment.
 - Notify affected employees that machine/equipment/processes are going to have the lockout/tagout devices removed.
- B. Only the authorized employee who placed the lock and tag on the machine or equipment will remove it. **Exception:** If the authorized employee that applied the lockout/tagout device to the machine or equipment is not available to remove the lock/tag, then the authorized employee’s supervisor may remove the lockout/tagout device after:
 - Verifying that the authorized employee is not at the facility;
 - Making all reasonable efforts to contact the authorized employee to inform them that their lockout/tagout device is going to be removed; and

- Ensuring that the authorized employee who applied the device will be properly informed that the lockout/tagout has been removed upon returning to work.

7. Additional Requirements.

A. Testing of Machines/Equipment/Components.

In situations where lockout/tagout devices must be temporarily removed from the energy isolating device and the machine/equipment energized to test or position, the supervisor's notification may be required (refer to individual department procedures), and the following sequence of actions will be accomplished:

- Clear the machine/equipment of all tools and materials.
- Remove employees from the machine/equipment work area.
- Remove the lockout/tagout devices according to the particular machine or equipment procedures.
- Energize and proceed with the testing or positioning.
- De-energize all systems and reapply energy control procedures according to the machine/equipment procedures and continue servicing/maintenance.

B. Group Lockout/Tagout Procedures.

When servicing or maintenance on a machine or equipment will be conducted by more than one person, then group lockout/tagout devices will be used to provide protection to all authorized employees. Each authorized employee must have their own individual device as part of the group lockout/tagout device. Locks will be applied to prevent the machine/equipment from being re-energized until all of the individual lockout/tagout devices of each authorized employee have been removed.

One of the authorized employees will be assigned primary responsibility for the entire group's lockout/tagout protection.

The authorized employee with primary responsibility shall be able to ascertain the exposure status of each individual authorized employee within the group, with regard to the locked out/tagged out machine/equipment. When more than one group of authorized employees are working on a machine or equipment, the authorized employee with primary responsibility must be able to coordinate between groups and ensure the continuity of protection for all authorized employees in each group.

C. Shift or Personnel Changes.

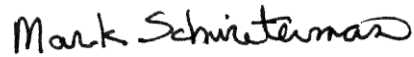
In the event that maintenance crews are changed during the servicing or maintenance of equipment where lockout/tagout procedures are being followed, care shall be taken that the departing crew fully informs the incoming crew of the safety devices in place and safety devices yet to be installed. This practice is essential for a safe transition between crews or individuals. Such coordination is required when similar transitions are made between city crews and outside contractors.

The City Manager hereby delegates the appropriate responsibility and authority to administer this Lockout/Tagout Program to the Department Directors.

Approved:

1/4/07

Date

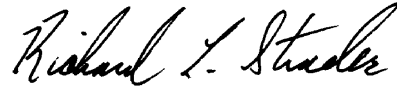


Mark Schwieterman
City Manager

Issued:

1/4/07

Date



Richard L. Strader
Director of Human Resources

— Formulated 12/01; Reviewed 12/02; Revised 12/03; Reviewed 12/04; Reviewed 12/05; 6 Reviewed 12/06; Reviewed 12/07.

ATTACHMENT A

DEFINITIONS

DEFINITIONS

Affected Employee — An employee whose job requires him/her to operate equipment on which service or maintenance is being performed, or whose job requires him/her to work in an area in which service or maintenance is being performed.

Authorized Employee — An employee who locks or implements a lockout/tagout procedure on equipment or processes to perform maintenance or service.

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

Energy Isolating Device — A mechanical device that physically prevents the transmission or release of energy including, but not limited to the following: a manually operated circuit breaker, disconnect switches, line valves, blocks, and any similar devices. Push buttons, selector switches, and other control circuits are not acceptable as energy isolating devices.

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

Hasp — A fastener that allows more than one padlock for lockout and prevents unlocking until all locks are removed. When more than one employee is to work on the equipment, each individual must place a lock and tag on the hasp.

Lockout — The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device — A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.

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 energizing or startup of the equipment or release of hazardous 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, which can be securely fastened to an energy isolating device in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

ATTACHMENT B

LOCKOUT/TAGOUT MACHINE/EQUIPMENT LISTING

LOCKOUT/TAGOUT MACHINE/EQUIPMENT LISTING

CODE DEFINITIONS

Hazard Type

C – Chemical (including natural gas)
H – Hydraulic
P - Pneumatic (Air)
M – Mechanical
E – Electrical
T – Thermal

Manual (Yes or No)

A manufacturer's manual for the particular piece of equipment or machinery is available for employee use.

Exception (Yes or No)

If the following criteria applies to a particular piece of equipment or machinery, then it is exempted from lockout/tagout procedures:

Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.

