YORK COLLEGE
CITY UNIVERSITY OF NEW YORK

LOCK OUT/TAG OUT
ENERGY CONTROL PROGRAM

To protect employees from unexpected energization, machine start-up, or release of stored energy while performing servicing or maintenance on machinery or equipment at York College of the City University of New York.

Developed by:
York College
Office of Environmental Health & Safety

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(Rev. 10/2012)

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INTRODUCTION

In order to protect personnel health and safety, each department of York college with employees authorized to perform service and maintenance of machinery and equipment--where the unexpected energization, start-up or release of stored energy could cause injury--must implement the following written program and standard operating procedures in compliance with OSHA standard 29 CFR 1910.147--Control of Hazardous Energy (Lockout/Tagout).

SCOPE

The purpose of this program is to establish the minimum requirements and procedures that shall be followed by employees authorized to lockout or tagout energy isolating devices. The lockout/tagout program shall be used by authorized employees to ensure that all machinery or equipment is isolated from any and all potentially hazardous energy sources prior to performing servicing or maintenance activities. Servicing and maintenance includes but is not limited to constructing, installing, setting up, adjusting, inspecting, modifying, lubricating, adjustments.

Locking out is the preferred method for isolating machinery or equipment from an energy source and shall be employed whenever possible. If an energy isolating device is not capable of being locked out, the authorized employee shall utilize a tagout system. Whenever new equipment or machinery is installed or when major replacement, repair or renovation or modification is performed to existing equipment or machinery, the energy isolating devices for said equipment or machinery shall be designed to accept a lockout device.

APPLICATION

This standard operating procedure applies to the control of energy that presents a potential hazard to employees during servicing or maintenance of machinery and equipment where the unexpected energization, start up or release of stored energy can occur. These procedures must also be followed when an employee is required to:

a) Remove or bypass a guard or other safety device.
b) Place any part of his or her body on or into a machine or piece of equipment.
c) Work in an associated danger zone of machinery or equipment.

These procedures do not apply to work on cord and plug connected electrical 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.

It also does not apply to hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines provided that:

1) The continuity of service is essential.
2) Shutdown of the system is impractical.
3) Documented procedures are followed and special equipment is used to provide protection to employees.

Various pieces of machinery and equipment on campus are covered by this standard. The types of equipment and the associated potential hazards include but are not limited to the following:

- Electrical circuits (electrical, thermal)
- Boilers: (thermal, electrical),
- Pumps: (electrical, mechanical, chemical & thermal)
- Fans: (electrical, mechanical),
- Heaters: (electrical, thermal),
- Air Conditioning units: (electrical, mechanical),
- Elevators: (mechanical, electrical)

EMPLOYEE TRAINING AND INFORMATION

College electricians, stationary engineers, maintenance workers, oilers, steamfitters, and plumbers will be provided with training to inform them of the purpose and function of the energy control program and to ensure that the knowledge and skills required for the safe application, usage and removal of the energy controls are acquired by the employees.

Each authorized employee shall receive training in the recognition of hazardous energy sources, the type and magnitude of the energy available in the workplace, and the method and means necessary for energy isolation and control. Each affected employee shall be informed of the purpose and use of energy control procedures.

All other employees whose work operations are or may be in an area where energy control procedures are to be utilized, 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.

RESPONSIBILITIES

Affected Administrators, Supervisors, and staff are responsible for implementing the Lockout/Tagout program. Authorized personnel will be responsible for properly utilizing the Lockout/Tagout equipment and following the procedure in this plan. Each authorized employee must notify their supervisor when lockout/tagout procedures have been initiated or terminated.

Lockout/Tagout kits equipped with appropriate locks, hasps, tags, nylon ties, chains, etc.., and a copy of the energy control program will be kept in each shop. Each kit will be provided with safety padlocks which are keyed separately. Kits will be mounted in the following locations:

- **Boiler Room:**_____

COMPLIANCE WITH LOCKOUT/TAGOUT PROCEDURES

All equipment must be locked out or tagged out whenever an employee is required to service or maintain equipment or machinery in order to prevent the unexpected energization, start-up or release of stored energy which could lead to injury or death. Each employee servicing or maintaining machinery or equipment is responsible to follow the procedures outlined in this written program to protect him/her self and others from injury. **Employees must never attempt to operate any equipment, machinery or energy isolation device that is locked or tagged out without following the equipment restoring procedures outlined below.**

LOCKOUT OR TAGOUT SYSTEM PROCEDURE

The following is the procedure that must be followed in the event that equipment or machinery requires locking or tagging out. The authorized employee shall familiarize him/her self with the type and magnitude of energy utilized by the equipment or machinery and shall understand the potential hazards involved and shall know the methods to control the energy.

1) Notify affected employees that servicing or maintenance is required on a circuit, machine or equipment and that it must be shut down and locked out to perform the servicing or maintenance.
2) Contact the engineer on watch in boiler room to log your name, equipment to be locked out or tagged out, reason and expected duration or shut down, and names of others working on the same equipment, circuit, etc.
3) If the machinery or equipment is operating, shut it down using the normal stopping procedures (e.g. press stop button, open toggle switch, etc.).
4) Isolate the machinery or equipment from its energy source by opening the electrical circuit, closing a valve or by operating other energy isolating devices (e.g., remove fuse or circuit breaker).
5) Lockout the energy isolating device with assigned padlock. A locking device must be used unless an energy isolating device is not capable of being locked out in which case a tagout system will be used. If a tagout system is used, additional protective measures shall be employed such as removing a fuse or circuit breaker, removing a valve handles, etc. If 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 anyone attempting to operate the device.
6) Attempt to operate the machinery or equipment using the normal operating controls (e.g. on switch) to ensure that the unit will not operate. Return controls to the off position after the test.
7) Assure that the equipment is electrically deenergized by using a voltmeter to test each incoming electrical line. All potentially hazardous stored or residual energy shall be relieved, disconnected, restrained and otherwise rendered safe (e.g., bleed off residual steam or compressed air in pipelines).

   Once these procedures have been implemented, the machinery or equipment has been adequately isolated from its energy source.

RESTORING MACHINES OR EQUIPMENT TO NORMAL OPERATING CONDITION

1) Once servicing and or maintenance has been completed, authorized employees shall notify their supervisor and check the immediate area around the machinery or equipment to ensure that no one will be exposed when the system is energized.
2) Once all non-essential items have been removed (tools, etc.), machine guards have been reinstalled and all employees are safely positioned, then each lock and tag shall be removed by each employee who installed their locking device.
3) Start the machinery or equipment using normal operating procedures to ensure that equipment is operating properly.
4) Contact boiler room engineer to log that locks and/or tags have been removed and equipment is operating.

If an authorized employee who installed the energy isolating device is not available to remove the energy isolating device, his/her supervisor may direct another authorized employee to remove it. The steps outlined above must be followed; the authorized employee that originally installed the energy isolating device shall be notified that his lock or tag was removed as soon as possible.

OUTSIDE CONTRACTORS

Whenever outside contractors and servicing personnel are to be engaged in activities covered by this standard, they shall be requested to provide information regarding their lockout/tagout procedure and shall also be informed about the college's procedure.

PROCEDURE FOR MULTI-PERSON LOCKOUT

If more than one individual is required to lockout or tagout equipment, each Person shall place a lock or tag on the energy isolating device. If the energy isolating device cannot accept multiple locks or tags, a hasp will be used. Up to six locks can be installed on each hasp. As each person no longer needs to maintain his/her lockout protection, that person will remove his/her lock from the hasp.

APPENDIX A: LIST OF AUTHORIZED EMPLOYEES
LOCK OUT/TAG OUT PROGRAM

Senior Stationary Engineer
Kenneth Cohen

Stationary Engineers
David Fellows
Joseph Goebel
Meer Lateef
Thomas McAndrews

Oilers
Rudoplh Ogilvie
Konstantin Tomchuk

Thermostat Repairer
Joseph Russo

Electricians
Daniel Rodriguez
Garry Descartes
Anthony Faranda

Electrician Supervisor
Mahamed Hanif

Maintenance
Glen Roew
Kam Chan

Plumber
Paul Whaley