Specification
for

Lockout / Tagout (LOTO) Program

REVISION

Rev No.	DCN No.	Change Summary	Release Date	DCN Initiator	Document Owner
8	DCN1324	Make document SUNY Poly generic; Add form for Utica	7-20-16	Dan Greenlee	Tom Diamond

Prior revision history, if applicable, is available from the Document Control Office.

1. LOCKOUT/TAGOUT (LOTO) PROGRAM

A hazardous energy control program protects personnel from unexpected energization or startup of equipment, or release of stored energy during service, maintenance, repair, renovation, or installation activities. Minor tool changes, adjustments and servicing activities, performed as part of normal production operations, are exempt from LOTO requirements if they are routine, recurring, or integral to the production operation, and do not expose the operator to inadvertent contact with an identified hazard. Work on plug-and-cord-connected equipment is also exempt if the individual performing the work has exclusive control of the disconnected power cord and plug.

1.1 Scope

This program applies to the servicing and maintenance of machines and equipment in which the unexpected energizing or startup of the equipment or the release of stored energy could cause injury to employees. Lockout/Tagout applies to operations whenever the need exists to remove or bypass a guard or safety device, or place any part of the body in a danger zone which potentially exposes anyone to the release of hazardous energy. This program applies to all facilities of SUNY Polytechnic Institute (SUNY Poly) employees and students. If applicable, tenant employees, contractors and sub-contractors must comply with their own company's program.

2. ROLES AND RESPONSIBILITIES

2.1 **Management (includes supervisors)** – Are responsible for implementing the LOTO program.

2.2 **Authorized Employee** - A person authorized by management who:

a. is responsible for completing necessary training, authorization and adhering to lockout requirements;

b. locks out or tags out equipment in order to perform servicing or maintenance.

2.3 **Affected Employees -** Are responsible for understanding the purpose and use of energy control procedures and never attempting to remove a lockout or tagout device.

2.4 **Other Employees -** Are responsible for never attempting to remove a lockout or tagout device.

2.5 **Site Facilities and Other Organizations Installing Equipment -** Are responsible for providing a point for controlling hazardous energies and meeting local codes and regulations.

2.6 **Environmental Health and Safety (EHS) -** Is responsible for program development and monitoring compliance, as needed.

3. PROGRAM ELEMENTS

Exceptions: Tasks exempted from the requirements of this program include:

a. Minor tool changes, observations, adjustments and servicing activities, performed as part of normal production operations, if they are routine, recurring, or integral to the production operation, and do not expose the individuals to inadvertent contact with an identified hazard.

b. Work on plug-and-cord-connected equipment if the individual performing the work has exclusive control of the disconnected power cord and plug.

c. Installations under exclusive control of the electrical utilities or exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization installations covered by OSHA Standard 29CFR 1910 Subpart S, 1910.333.

NOTE: Additional electrical safe work practices can be found in Electrical Safety and in OSHA Standards 29CFR 1910 Subpart S, 331-335.

3.1 **Training:**

a) **"Authorized Employees"** - Training provides a basic understanding of LOTO as well as **equipment specific training** to ensure that the person performing the lockout has a thorough working knowledge of the equipment and the ability to locate and secure all energy sources involved. The training may be a combination of classroom and hands on or on the job training.

b) **"Affected Employees"** - Training provides a basic understanding of LOTO, the potential hazards of not controlling hazardous energies effectively and the hazards of removing a lockout lock and tag and attempting to restart a piece of equipment. This training is part of Safety Orientation.

c) **"Other Employees"** Awareness training provides understanding of the risks of removing a lockout lock and tag or restarting equipment. This may be completed as part of the notification stage

of the procedure, Safety Orientation, or by other communication method.

d) **Retraining** is required for authorized employees whenever there is a change in their job assignment, the equipment or process that presents a new hazard, the lockout/tagout procedure, or whenever a review, near miss or injury reveals there are deviations from or inadequacies in the employee's use of the procedure.

3.2 **Authorization**: Employees are required to be authorized by their manager prior to performing lockout.

3.3 **Energy Control (Lockout/Tagout) Procedures** shall include the following:

a) Identification of equipment affected by the procedure

b) Isolating hazardous energies

c) Placing, removing, and transferring lockout/tagout devices

d) Testing for verification of lockout effectiveness

e) Returning equipment to normal service

NOTES:

- Energy control procedures are required for equipment containing more than one hazardous energy source.
- The site generic LOTO Procedure can be used for LOTO of equipment by filling in the applicable blanks for the specific equipment or types of equipment. The site generic LOTO Procedure can also be tailored for complex equipment.
- For equipment that cannot be locked out, the tagout must be supplemented by additional measures such as, removing an element of the circuit (remove wires from a component and taping them off) or by opening and tagging of an additional valve or disconnect so that more than one tagout must be violated to put an employee at risk.

Exception: A written procedure for a particular piece of equipment is not required when all of the following elements exist:

a. The equipment has no potential for stored or residual energy or re-accumulation of stored energy after shut down which could endanger employees;

b. The equipment has a single energy source which can be readily identified and isolated;

c. The isolation and locking out of that energy source will completely de-energize and deactivate the equipment;

d. The equipment is isolated from that energy source and locked out during servicing or maintenance;

e. A single lockout device will 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. In utilizing this exception no accidents involving the unexpected activation or re-energizing of the equipment have occurred during servicing or maintenance.

3.4 **Periodic Inspection of the Energy Control (lockout/tagout) Procedure:** The periodic inspection of the lockout/tagout procedure shall:

a) Be conducted at least annually to ensure the procedure is accurate and the requirements of the LOTO program are being followed.

NOTE: Energy control procedures used less frequently than once a year need be inspected only when used Per OSHA Directive: CPL 02-00-147 -29 CFR 1910.147 The Control of Hazardous Energy - Enforcement Policy and Inspection Procedures

b) Be conducted by an **authorized employee** other than the employee(s) using the procedure being inspected.

c) Be used to correct any deviations or inadequacies observed. The results of the review must be shared with all authorized employees for the LOTO procedure being inspected. In the case of a tagout only procedure, the review must include the limitations of tags as an energy control measure.
NOTE: Examples of methods to review the results are a group meeting, one on one with each employee, or an email communication.

d) Document and identify the equipment on which the LOTO procedure was being used, the inspection date, the employees included in the inspection and the name of the person conducting the inspection.

3.5 **Protective Materials and Hardware**: Locks, tags and lockout tagout devices shall be unique to the company's lockout program. Tags and locks shall be:

a) Singularly identified with the employee's name

b) Only used for lockout/tagout (not used for other purposes)

c) Capable of withstanding the environment to which they are exposed for the duration of the lockout without deteriorating or becoming illegible.

d) Tags standardized in print and format, and color, shape or size.

e) Substantial enough to prevent removal without the use of excessive force or unusual techniques. Tagout devices, including their means of attachment (i.e., all environment-tolerant nylon cable tie), must be substantial enough to prevent inadvertent or accidental removal.

f) Provided to employees by management.

NOTE: The lockout device for each SUNY Poly employee shall have an individual key. The unique lockout device (lock) shall be a red lock. The unique tagout device (Tag) shall have the word DANGER in white letters on a red background on both the front and back of the tag, the words "Do Not Operate" in bold lettering on the front and back of the tag.

3.6 **Contractors and Tenants (if applicable):** Provisions must exist for awareness of other lockout/tagout programs used by on-site contractors and tenants:

a) Whenever contractors or tenants are engaged in maintenance or service of equipment, SUNY Poly and the Contractor or Tenant shall inform each other of their respective lockout/tagout requirements or procedures. This may be completed during the evaluation process, by exchanging the SUNY Poly Contractor Safety Guide (Albany Site Only), through designated representatives or by other means.

b) Programs shall be compatible with the requirement for the use of locks and tags; and the supplementing of tagout with additional measures, as required by the SUNY Poly LOTO program, if equipment is not capable of being locked out.

3.7 **New, Relocated, or Modified Equipment:** When equipment is installed, relocated, replaced or undergoes major engineering modification, energy isolating devices shall be designed and installed that will accept a lockout device.

3.8 **Application and Removal of Lockout Tags, Locks and Devices**: Each employee who locks out a piece of equipment for servicing to eliminate the exposed hazard, is required to place his / her own lockout lock and tag on the energy control point. Each lockout or tagout device shall be removed from each energy-isolating device by the employee who applied the device.

Exception: When the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the employee's manager, who must ensure the following and complete the Authorization for Removal of Lockout or Tagout (LOTO) Devices form EHS-00008-F3:

a. Verification by the employer that the authorized employee who applied the device is not at the facility

b. All reasonable efforts are made to contact the authorized employee to inform him/her that his/her lockout or tagout device has been removed; and

c. The authorized employee has this knowledge before he/she resumes work at that facility.

3.9 **Group Lockout/Tagout:** If group lockout/tagout is utilized, the lockout/tagout procedure used must afford a level of protection equivalent to that provided by the implementing of a personal lockout/tagout device. The lockout/tagout procedure used must comply with the following specific requirements:

a) Primary responsibility for implementation of the procedure must be assigned to one lead employee who must attach a group lockout device to each energy-isolating device. Examples of group lockout devices: multi-lock hasp and group lock box.

NOTE: When multiple energy isolating devices require lockout, locks and a lock-box may also be used. The group lockout device must then be attached to the lock-box and each authorized employee must affix his/her personal lock and tag to the group lockout device. The last space in a group lockout device should not be used; instead place another group lockout device in that space.

b) The lead employee must ascertain the exposure status of each of the other employees involved in the group lockout/tagout.

c) When more than one group (e.g., subcontract personnel and SUNY Poly employees) is involved in the maintenance activity, one lead employee must be designated to coordinate the overall activity and ensure continuity of protection.

d) Each employee must affix his/her personal lockout device to each group lockout device or to the lock-box, verify that isolation and de-energization have been effectively accomplished before starting work and must remove their lockout device(s) when he/she stops working on the equipment.

3.10 **Shift or Personnel Changes**: Specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provision for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization or start-up of the machine or equipment, or the release of stored energy.

3.11 **Administrative Control Devices, Locks, Warning Signs, and Tags:** For purposes other than performing service and maintenance (i.e., Lockout/Tagout – red lock and 'danger - do not operate' tag) a non-red control lock and administrative control tag or only an administrative control tag should be used.

4. RECORDS

Training - Managers and EHS must maintain (hardcopy or electronic) employee training records.

Lockout/tagout Procedures – Managers must maintain (hardcopy or electronic) the lockout/tagout procedures.

Lockout/tagout Periodic Inspections – Managers must maintain (hardcopy or electronic) completed lockout/tagout periodic inspections for the current year and prior two years.

5. ASSOCIATED DOCUMENTS

EHS-00008-F1 - Lockout/Tagout Procedure (Albany Only)

EHSU-00008-F1 - Lockout/Tagout Procedure (Utica Only)

EHS-00008-F2 - Lockout/Tagout Periodic Inspection Form

EHS-00008-F3 - Authorization for Removal of Lockout/Tagout Devices

ANT-00004 – SUNY Poly Contractor Safety Guide (Albany Only)

6. DEFINITIONS

6.1 **Authorized Employees** - Those given authorization, responsibility and training to implement a lockout/tagout on equipment in order to perform service or maintenance on that equipment.

6.2 **Affected Employees** - Equipment operators, or those working in an area where lockout/tagout devices are used and affect their ability to operate equipment

6.3 **Other Employees** - Employees who work in areas where implementation of energy control procedures would impact their ability to do their job. Example, securing of an electrical circuit affects their ability to utilize office equipment.

6.4 **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.

6.5 **Energy Control Procedures** - Written procedure providing steps for securing equipment containing more than one source of hazardous energy. Examples are an electric pneumatic press or electrical equipment that contains stored electrical energy after being secured.

6.6 **Equipment** - A term used in this document to denote tools, machines, equipment and systems that utilize or produce energy.

6.7 **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.

6.8 **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; preventing the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

6.9 **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, used to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.