



LOCKOUT/TAGOUT PROGRAM

INTRODUCTION

Tate Engineering Systems performs work on a variety of equipment types in diverse facilities owned by our customers where company employees could be exposed to a potential source of hazardous energy. This lockout/tagout program was developed to protect the company's employees from hazardous sources of energy while the service, maintenance or construction work is being performed by establishing procedures for:

- employee training;
- energy control; and
- periodic inspections of the established processes.

This lockout program applies to all company employees assigned to work in close proximity to machinery or processes that could expose the employee to a hazardous source of energy.

EMPLOYEE TRAINING

Before service, maintenance or construction work begins all employees will be trained on the client's documented procedure as follows:

- how to recognize hazardous sources of energy;
- the types of hazardous energy they could be exposed to;
- the magnitude of the energy they could be exposed to;
- the methods necessary to isolate and control potentially hazardous energy; and
- the means necessary to isolate and control potentially hazardous energy.
- the presence, purpose and use of the energy control procedures and the prohibitions against re energizing locked out machines, equipment or processes.

Retraining will be provided for Employees when changes occur that present a new hazard; or when there is a change in the energy control procedure. Retraining will also be provided whenever there is concern about an employee's knowledge or use of the energy control procedures. All Tate LOTO training is documented, signed, and certified by the trainer that it follows this program.

APPLICATION

Hazardous sources of uncontrolled energy including electricity (such as electrical switches), mechanical energy, (such as fans) and thermal energy (such as steam lines) shall be locked and tagged out to keep them from releasing stored energy when working with them or around them presents a hazard to workers. All sources of energy must be locked out, relying solely on tagging out is not acceptable for Tate Engineering Systems.

LOCKOUT PROCEDURE

This procedure establishes the minimum requirements for the lockout/tagout of equipment encountered during service, maintenance or construction work at a client site.



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All employees are required to comply with the restrictions and limitations imposed upon them throughout the use of the lockout procedure by the client. Any employee who is found to be in violation of the procedure will be subject to the disciplinary procedures.

Only Authorized Employees (a worker who is properly trained and designated by his/her supervisor) will perform the lockout in accordance with this procedure. No employee who observes lockout/tagout on a piece of machinery, valve, control, etc. will attempt to start, energize or use it. Only the individual who locks out and /or tags out a source of energy shall remove the lock and/or tag.

LOCKOUT SEQUENCE

1. All affected employees, including employees of the facility we are working in, will be notified by the Tate Engineering Systems employee that service, maintenance or construction work is required on a specific piece of equipment, system, or process and that it must be shut down and locked out.
2. Notification will take place verbally or through a written notice at a pre-lockout meeting before the energy control methods are utilized.
3. The Authorized Employee will refer to the client's documented procedure for identifying the type of hazardous energy and its magnitude with regard to worker safety.
4. The Authorized Employee will understand the hazards associated with the energy.
5. The Authorized Employee will know the methods needed to control the hazardous energy.
6. The Authorized Employee will shut down the machine, equipment or process by the normal stopping procedure such as depressing the stop button, opening the switch, closing the valve, etc.
7. The Authorized Employee will de-activate the energy isolating device(s) such as a circuit breaker or line valve.
8. The Authorized Employee will lockout the energy isolating device(s) with the lockout device(s) such as an assigned individual lock on the breaker box door or grate valve lockout device and assigned individual lock, etc.
9. The Authorized Employee will ensure that the stored or residual energy is dissipated or restrained by an appropriate method such as; bleeding out a steam line, etc.
10. The Authorized Employee will ensure that the machine, equipment or process is disconnected from the energy source(s) by:
 - a. checking to ensure that no one is exposed to a hazard; and
 - b. verifying that isolation has been achieved by attempting to operate/start up the machine
11. The Authorized Employee will return the operating controls back to the neutral or "off" position.

RESTORING TO SERVICE

1. The Authorized Employee will check the machine, equipment or process to ensure that non-essential items have been removed and that all components are operationally in tact.
2. The Authorized Employee will check the work area to ensure that all employees have been safely positioned or removed from the area.
3. The Authorized Employee will verify that the controls are in neutral.
4. The Authorized Employee will remove the lockout device(s) and re-energize the machine, equipment or process.



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5. The Authorized Employee will notify affected employees that the servicing, maintenance or construction has been completed and the machine, equipment or process is ready for use.

GROUP LOCKOUT/TAGOUT

Tate Engineering Systems team members will request the client participate in LOTO of their equipment. When the servicing and/or maintenance of an energized system or equipment will be performed by more than one Tate Engineering Systems Employee, an authorized employee will be assigned the responsibility to coordinate lockout/tagout under the protection of a group lockout or master tagout device. A master tag is a personal tagout device if each employee personally signs on and signs off on it and if the tag clearly identifies each authorized employee who is being protected by it. The responsible authorized employee will monitor the status of individual group members concerning the lockout or tagout of the machine or equipment.

An agreed upon Authorized Employee between Tate Engineering Systems and the client will be assigned the responsibility to coordinate all the affected workforces and ensure continuity of protection.

Group Procedures

1. Before any machine or equipment is shut down, each authorized employee involved during the servicing or maintenance operation will be made aware of the type, magnitude, and hazards related to the energy to be controlled and of the method or means to control the energy. In the event that the machine or equipment is already shut down, the authorized employee will be made aware of these elements before beginning his or her work.
2. An orderly shutdown of the machine or equipment will be conducted according to the Lockout Sequence section of this Plan, which will not create hazards.
3. All energy-isolating devices needed to isolate the machine or equipment will be positioned and/or installed.
4. Each authorized employee will place his or her own lock or tag to the lockout device when he or she begins work and will remove those devices when he or she stops working on the machine or equipment being serviced or maintained at each energy-isolating source. No employee may affix a personal lockout/tagout device for another employee.
5. Following the application of locks or tags, all potentially hazardous stored energy or residual energy will be relieved, disconnected, restrained, and otherwise rendered safe.
6. Verification of energy isolation will be monitored as frequently as necessary if there is a possibility of re-accumulation of stored energy. Monitoring may be accomplished, for example, by observation or with the aid of a monitoring device that will sound an alarm if a hazardous energy level is being approached.
7. Authorized employees will verify that isolation and de-energization have been effectively accomplished before starting servicing/maintenance work. Verification is also necessary by each group of workers before starting work at shift changes.
8. When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, each authorized employee will follow the procedures listed in the Restoring to Service section of this Plan.



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PROCEDURE FOR THE EMERGENCY REMOVAL OF AN ENERGY CONTROL DEVICE

The Service Manager may authorize the removal of a lockout or tagout device in the absence of the Tate Engineering Systems Authorized Employee that applied the device. In the event that a lockout or tagout device must be removed and the authorized employee that applied it is not in the facility, the following procedure will be followed:

1. Verify that the authorized employee who applied the device is not in the facility.
2. Communicate and coordinate the removal with the facility owner and all other parties that may be potentially affected.
3. Make reasonable efforts to advise the authorized employee that the device has been removed.
4. Ensure that the authorized employee is informed of the removal of the device before the employee resumes work at the facility.

PROCEDURES FOR SHIFT OR PERSONNEL CHANGES

The following steps will be followed to ensure continuity of employee protection during shift or personnel changes:

1. All authorized employees involved in the maintenance or servicing activity will be notified that a transfer of personal locks/tags is about to occur.
2. All personnel will move away from hazardous area(s) of equipment.
3. Under the supervision of the shift supervisor or group designee, the off-going employee will remove his or her lock and tag, and the on-going employee will immediately install his or her lock and tag.
4. If more than one employee will transfer work responsibility, locks/tags will be removed and replaced one at a time in order of installation. All authorized employees transferring work responsibility must be present during this exchange.
5. When the transfer of lockout/tagout devices is complete, the effectiveness of all energy-isolating devices will be verified to the satisfaction of all personnel involved.
6. Once the effectiveness of energy isolation protection is confirmed, the service or maintenance operation may continue.

LOCKOUT DEVICES

Lockout is the primary and preferred method for controlling hazardous energy. During servicing or maintenance, a machine utilizing any mechanical power source such as electrical, pneumatic, steam, hydraulic, and/or air will be locked out when the unexpected energizing or start-up of the machine or equipment or release of stored energy could cause injury to employees. The lockout will render the machine inoperative and immovable. Lockout devices will be substantial enough to prevent removal without excessive force (i.e., use of bolt cutters or other metal-cutting tools). Lockout devices will indicate the identity of the employee who applied the device. Tags will warn against hazardous conditions if the machine or equipment is energized and will include a legend such as the following: "Do Not Start," "Do Not Open," "Do Not Close," "Do Not Energize," or "Do Not Operate."



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PLAN REVIEW AND UPDATE

This plan will be reviewed and updated by the Safety Manager at least annually or whenever there is a change in lockout/tagout procedures or in the types of machinery or equipment being serviced, and or the lockout/tagout regulations change. Periodic inspections of the energy control procedure are conducted at least annually to ensure that the procedure is being followed. The inspection can be completed by but is not limited to Service Managers, QA Inspector, Safety Manager, HR representative, WHS Technician. A certified review of the inspection including date, equipment, employees & the inspector should be documented.