

FACILITIES MAINTENANCE AND ENGINEERING PROCEDURE		
Subject: LOCKOUT / TAGOUT PROCEDURE	FMEP-P-0011	Rev. No. 0
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1.0 PURPOSE

To describe the basic precautions and methods to assure disconnect of power to equipment scheduled for maintenance, cleaning, adjusting or servicing in accordance with 1910.147. CPL 2.85. STP 1-7.3.

2.0 AUTHORITY AND RESPONSIBILITY

- 2.1 The Deputy Director, Facilities Maintenance and Engineering (FME), has the authority to establish this procedure.
- 2.2 Managers and Shop Foreman are responsible for implementing this procedure.
- 2.3 Records pertaining to this procedure are maintained in the FME Deputy Director’s office.

3.0 PROCEDURE

All equipment shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy-isolating device where it is locked and tagged out.

The following basic precautions must be observed in preparing equipment for repair or maintenance service.

- 3.1 Locate and identify all isolating devices to be certain which switch(es), valve(s), or other energy-isolating devices apply to the equipment to be locked out and tagged out. More than one energy source (electrical, mechanical, or others) may be involved. Identification of isolating devices may be accomplished by referring to building drawings, schematics, etc., or visual walkdowns of the systems.
- 3.2 The main power disconnect switch or valve, or both, controlling the source of power or flow of material shall be locked out or blocked off with a padlock, blank flange or similar device.
- 3.3 Tag the power source, which has been locked out to indicate the person responsible for the lock. The tag should bear a “Caution” warning against tampering with the lock or the equipment.
- 3.4 In confined vessel entry, main circuit breakers are locked out using a padlock. The individual performing the confined vessel entry retains custody of all keys used to lock out vessel services. No duplicate padlock keys should be available.
- 3.5 In cases where two or more groups or departments have persons working on the same job, each group shall apply its lock to the to the open switch.
- 3.6 After work is completed, the person in charger shall ensure that all persons on the job clear (out of harm’s way) before the last lock is removed.
- 3.7 Where equipment has two or more power sources, all power sources shall be opened and locked out. The tag/lock is to be removed only by the individual who has locked out he power source.

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3.8 When craftsmen other than electricians are assigned to work on equipment needing to be locked out, the Electrical Shop should be called to oversee the lockout.

3.9 All foremen must review this policy with their employees at least once a year.

4.0 SEQUENCE OF LOCKOUT / TAGOUT SYSTEM

4.1 Notify all affected employees that a lockout/tagout system is going to be utilized and the reason for the lockout. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards thereof.

4.2 If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).

4.3 Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc.

4.4 Lockout/tagout the energy-isolating devices with individual lock(s) or tag(s).

4.5 After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.

CAUTION: Return operating control(s) to “neutral” or “off” position after the test.

4.6 The equipment is now locked out/tagged out.

5.0 RESTORING MACHINE OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS

5.1 After the servicing and/or maintenance is complete and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.

5.2 After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout/ tagout devices. Operate the energy-isolating devices to restore energy to the machine or equipment.

6.0 PROCEDURE INVOLVING MORE THAN ONE PERSON

6.1 In the preceding steps, if more than one individual is required to lockout/tagout equipment, each shall place his/her own personal lockout device or tagout device on the energy-isolating device(s).

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- 6.2 When an energy-isolating device cannot accept multiple locks or tags, a multiple lockout/tagout device (hasp) may be used. If lockout is used, a single lock may be used to lockout the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it.
- 6.3 Each employee will then use his/her own lock to secure the box or cabinet that contains the lock for the power source. Each employee maintains his/her own key until time to unlock the security box when the process is completed.

7.0 DOCUMENTATION

Form #FME-0011-1 documents the activity of locking out and tagging out equipment. This completed form is submitted to the Deputy Director, FME office.

8.0 REFERENCE

Lockout/Tagout Devices

- 8.1 29 CFR 1910.147(c)(5)(ii)(A) requires that lockout and tagout devices be capable of withstanding the environment to which they are exposed. Devices which are not exposed to harsh environments need not be capable of withstanding such exposure.
- 8.2 29 CFR 1910.147(c)(5)(ii)(C)(2) requires that tagout devices having reusable, non-locking, easily detachable means of attachment (such as string, cord, or adhesive) are not permitted.

9.0 ATTACHMENT

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ATTACHMENT 1

Form No.: FME-0011-1
 SOP No.: FME-0011
 Effective Date: Nov 14, 1994

LOCKOUT/TAGOUT PROCEDURE

Entry No: _____ Documented by/Date

1. Name of Company:
2. Type(s) and Magnitude(s) of energy and hazards:
3. Name(s) Job Title(s) of employees authorized to lockout/tagout:
4. Name(s) Job Title(s) of affected employees and how to notify:
5. Type(s) and Location of energy-isolating means:
6. Type(s) of Stored Energy-methods to dissipate or restrain:
7. Method(s) Selected, i.e. locks/tags, additional safety measures, etc.:
8. Type(s) of Equipment checked to ensure disconnections:
9. Name(s) Job Title(s) of employees authorized for group lockout/tagout:

 Completed by/ Date

 Reviewed by/ Date