

**I. PURPOSE**

- A. This procedure establishes requirements for the lockout of energy isolating devices. It should be used to ensure that the machine or piece of equipment is isolated from all potentially hazardous energy and locked out before employees perform any servicing or maintenance activities where the unexpected energization, start-up or release of stored energy could cause injury.

**II. GENERAL**

- A. Lockout is the primary method of isolating machines or equipment from energy sources. The following procedure is provided to meet these requirements. This procedure may be used when there are limited numbers or types of machine(s) or equipment, or there is a single power source. For more complex systems, a more comprehensive written procedure will be developed, documented and utilized by our facility.
- B. Note: Personal locks shall be used by each individual to insure they have control of all energy sources during servicing and/or maintenance of machines and equipment.
- C. When a lock cannot be used, a tag only may be used as described in Section X, E.

**III. DEFINITIONS**

- A. **Personal Lock**  
A lock issued to an individual permanently marked with first initial and last name. The lock will be keyed separately and the individual will have the only key.
- B. **Tag**  
A laminated tag with the following wording "Danger-Do Not Operate", with a place for the employee's name, department and date. This tag will be used with any department lock or personal lock used for electrical lockout. A tag will not be required for locks attached to a lock box.
- C. **Affected Employee**  
An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under

lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Note: An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this policy.

D. Authorized Employee

A person who locks or implements a tagout system procedure on machines or equipment to perform the servicing or maintenance on that machine or equipment. Certain authorized employees as designated by their department will also be specially trained to open electrical disconnect switches.

E. Capable of Being Locked Out

An energy isolating device will be considered to be capable of being locked out either if it is designed with a hasp or other attachment or integral part of which, or through which, a lock can be affixed, or if it has a locking mechanism built into it. Other energy isolating devices will also be considered to be 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.

F. Energized

Connected to an energy source or containing residual or stored energy

G. Energy Isolating Device

A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

1. Manually operated electrical circuit breaker
2. Disconnect switch
3. Manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and in addition, no pole can operated independently
4. Slide gate
5. Slip blind
6. Line valve
7. Block
8. Any similar device used to block or isolate energy. The term does not include a push button, selector switch and other control circuit type devices.

H. Energy Source

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

- I. 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.
- J. Lockout device  
A device that utilizes a positive means such as a lock to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.
- K. Normal Production Operations  
The utilization of a machine or equipment to perform its intended production function.
- L. Qualified Person  
A person familiar with the construction and operation of the equipment and the hazards involved. The qualified person will have a primary skill as an electrical or instrumentation mechanic.
- M. Servicing and/or Maintenance  
Any workplace activities including, but not limited to, constructing, installing, setting up, adjusting, inspecting, modifying, maintaining and servicing machines or equipment. Included in these activities would be lubrication, cleaning, adjusting, unjamming, or tool changes on any equipment that would expose employees to unexpected energization or startup of equipment and/or the release of hazardous energy.

#### **IV. RESPONSIBILITY**

- A. Affected employees shall be instructed in the safety significance of the lockout procedures, as well as how to use these procedures.
- B. All employees whose work operations are or may be in the area shall be instructed in the purpose and use of the lockout procedure. Affected employees will be notified whenever a lockout will occur, as well as when the equipment is being placed back in service.
- C. The manager/supervisor in charge of the equipment involved shall be notified when it is necessary to lockout equipment in his/her department.

#### **V. PREPARATION FOR LOCKOUT**

- A. Make a survey to locate and identify all isolating devices to be certain which switch, valve, or other energy isolating devices apply to the

equipment to be locked out. More than one energy source (electrical, mechanical, or others) may be involved.

- B. Obtain necessary locks and devices to implement the lockout procedure.

## **VI. SEQUENCE OF LOCKOUT SYSTEM PROCEDURE**

- A. Notify employees in the immediate area that a lockout system is going to be utilized and the reason. The employee locking out (equipment) shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand the hazards involved.
- B. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch etc.)
- C. Lockout the energy isolating devices with assigned personal locks. This shall be performed by trained employees.
- D. Note: Personal locks shall be used for the lockout device or lockbox by each individual to insure they have control of all energy sources during servicing and/or maintenance of machines and equipment.
- E. Operate the switch, valve, or other energy isolating device so that the equipment is isolated from its energy source. 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.
- F. When an authorized person performing a lockout operates a disconnect switch and feels additional checking is required, they may request the assistance of Maintenance.
- G. 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.
- H. **CAUTION: RETURN OPERATING CONTROLS TO NEUTRAL OR OFF POSITION AFTER THE TEST. FAILURE TO DO SO MAY RESULT IN EQUIPMENT STARTUP ON REENERGIZING OF THE BREAKER.**
- I. The equipment is now locked out.

## **VII. RESTORING MACHINES OR EQUIPMENT TO NORMAL PRODUCTION OPERATIONS**

- A. After servicing and/or maintenance is complete and the equipment is ready for normal production operations:
- B. Check the area around the machines or equipment to ensure that no one is exposed
- C. Remove all tools from the machine or equipment.
- D. Reinstall guards
- E. Insure all employees are in the clear.
- F. Remove all lockout devices.
- G. Operate the energy isolating device to restore energy to the machine or equipment

## **VIII. LOCKS AND CHAINS**

- A. Locks and keys, identified with the employee's first initial and last name, will be issued by department supervision to all employees who are required to lockout machines or equipment as part of the lockout procedure.
- B. Locks will be distinguishable and not use for any other purpose than lockout.
- C. In cases where the job will last more than one shift and personnel are scheduled to return to that job, the personnel who has the equipment locked out shall keep their personal lock on until the job is completed or a relieving employee has placed his/her lock on the equipment.
- D. All employees returning to work on the job shall replace the lock of the fellow employee whom they are relieving with their personal lock on the lockout device prior to commencing work.

## **VIII. LOCK REMOVAL**

- A. A lock shall not be removed by anyone other than the employee who placed the lock on the lockout device secure, unless a lockbox procedure is in use or as outlined below. If an employee does not remove their lock before leaving the site they will be contacted and required to return and remove the lock.

- B. In an emergency, when the employee who secured the lockout device is not available and all efforts have been made to contact the employee including calling their residence, the following procedure for lock removal will be followed:
1. The maintenance supervisor and department supervisor/manager will verify by personal observation that the authorized employee who applied the device is not at the facility.
  2. The supervisor/manager will contact proper Management for permission to remove the lock.
  3. Within 24 hours of the lock removal the shift supervisor will submit an emergency lock removal form available from the supervisor. (Appendix A).
  4. The employee must be notified immediately upon their return-to-work by their immediate supervisor/manager of the lock removal and given a copy of the emergency lock removal form (Appendix A).

## **IX. WORK ON ELECTRICAL SYSTEM AND EQUIPMENT**

- A. Only qualified persons may work on electrical systems.
- B. A qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed and shall verify that the circuit elements and equipment parts are de-energized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated backfeed even though specific parts of the circuit have been de-energized and presumed to be safe. If the circuit to be tested is over 600 volts, nominal, the test equipment shall be checked for proper operation immediately before and immediately before and immediately after this test.
- C. In control circuits where fuses or circuit breakers are the means available to kill the control power, they may be removed or turned off and the "dead" wire can be disconnected, taped, and tagged to prevent others from energizing the circuit.
- D. When 120 volt devices can be isolated by disconnecting and taping leads in junction boxes or LB fittings and the qualified mechanic knows he can disconnect them safely, he may do so after obtaining permission from his/her supervisor/manager.
- E. If a lock cannot be applied, a tag, used without a lock, shall be supplemented with at least one additional safety measure. Examples of additional safety measures include:

1. Removal of fuses
2. Blocking of a controlling switch
3. Opening an extra disconnect device
4. Disconnection of feed wires
5. The tag shall be attached with non-reusable tie wrap.

#### **XI. OUTSIDE SERVICE OR CONTRACTOR PERSONNEL**

- A. Outside personnel or contractors involved in operations relating to equipment or machinery lockout, must submit their energy control procedure to the MTE. The procedures must meet MTE's policy at a minimum.

#### **XII. VARIATION**

- A. Any variation from the established lockout procedures as well as this policy must be approved, in advance, by Management and Maintenance.

#### **XIII. LOCKBOX PROCEDURE**

- A. Due to the complexity of equipment being secured, or the time and number of personnel involved, a lockbox procedure may be required. This procedure may be instituted by authorized or appropriate Management.
- B. The lockbox procedure must include:
  1. Maintenance and Operations will verify that all equipment has been locked out with a department lock and tag on each lockout device if both departments are working on the equipment.
  2. The keys for each lock shall then be placed in a properly identified box which can be securely locked.
  3. A copy of the approved lockbox procedure shall be attached to the outside of the lockbox while the procedure is in use.
  4. Each person becoming involved in the equipment or machinery shall then place their personal lock on the box containing all the keys used in the lockbox procedure. This insures that the keys to the locks on any control device cannot be retrieved until all personal locks have been removed from the lockbox.
  5. All personal locks must be properly identified.
  6. One person from the operating department shall remove the lock used in the lockbox procedure.
  7. The maintenance supervisor shall verify that the lockbox procedure has been properly followed and then sign the lockbox sheet in the space provided. The contractor's supervisor shall then immediately place his lock on the lockbox securing the equipment.

#### **XIV. LOCKOUT LIST REVISIONS**

- A. Should a lockout list be found to be inaccurate or need to be revised the revision will be need to be approved by proper Management and Maintenance.
- B. If the situations warrant, this process may be done immediately, otherwise a meeting will be scheduled to review the lockout list.

#### **XV. REFERENCES**

29CFR 1910.147 The control of hazardous energy (lockout/tagout)  
29CFR 1910.333 Selection and uses of work practices

## Menominee Tribal Enterprises EMERGENCY LOCK REMOVAL FORM

Date	
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Date Lock Removed:	
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Name of Person on Lock:			
Person who Placed Lock on Equipment Contacted?			___ Yes ___ No
If yes,	Date Contacted:	Time Contacted:	By Whom:
If no, Explain:			

Removed by:
Equipment Lock Removed From:
Reason Why Lock was Removed:

**Persons Approving Lock Removal:**

Safety Representative	Name	Signature
Maintenance Supervisor	Name	Signature
Operations Supervisor	Name	Signature

**Contractor Lock Removal:**

Maintenance Supervisor	Name	Signature
Contractor Supervisor	Name	Signature

Signature	Date
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This form must be returned to proper Management within 24 hours of cutting the lock from the equipment and a copy given to the employee (whose lock was cut) upon his/her return.