



Sample Lockout/Tagout (LOTO)

and Blockout

Standard Operating Procedure

**This model form/template must be customized to meet your Agency’s needs.**

Sample Lockout, Tagout (LOTO) and Blockout

Standard Operating Procedure

Employees must follow Lockout, Tagout, and Blockout procedures during all construction, service and maintenance activities on pressurized/chemical lines, piping, machinery, equipment, or confined space entry where a hazardous release of energy is possible including electrical, mechanical, chemical, hydraulic, pneumatic, and other potential sources.

Employees authorized to perform lockout, tagout, blockout shall be certain as to which switch, valve, or other energy isolating devices apply to the equipment being isolated. More than one energy source (electrical, mechanical, or others) may be involved. Any questionable identification of sources shall be cleared by the employees with their supervisors. Before lockout commences, job authorization must be obtained and the Energy Control Permit (ECP) completed.

1. Follow the District’s Lockout, Blockout, and Tagout Program. Lockout, Blockout, and Tagout may only be performed by a District assigned Authorized Person.
   1. Exceptions to the LOTO Program: electrical troubleshooting performed by qualified electricians wearing appropriate electrical Category PPE.
   2. Hot tapping of water pipelines where line pressure is required to complete tap. Review existing pipeline pressure and reduce to the minimum pressure to safely complete hot tap.
2. Whenever possible, the Authorized Person will obtain and review the approved equipment-specific Energy Control Permit (ECP) for systems, machinery, equipment, processes, facilities, etc. These can be found in the District’s Lockout, Tagout and Blockout Program.
3. If no ECP is available, the area or on-call supervisor shall assign available employee(s) that are the most knowledgeable of the machinery/equipment/facility (Plant/System Operator, Lead Maintenance Supervisor, Electrician, Mechanic, etc.) to work with the Assigned Authorized Person to review LOTO procedures and prepare an ECP.
4. All hazardous energy sources shall be identified and their energy isolation devices (e.g., circuit breakers, valves, etc.), control circuit-type devices (e.g., pushbuttons, selector switches, etc.), blockout points, drain/bleed points and energy indicator devices (e.g., gauges, panel lights) determined. The new ECP form shall be sent to the area supervisor and safety officer for review. A copy of the new ECP shall be incorporated into the District’s Lockout, Blockout, and Tagout Program. Provide training to all affected staff on the new ECP.
5. Contract administrators shall ensure that contractors do not perform work on machinery/equipment/facilities without designating an Assigned Authorized

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Person(s) and complying with Lockout/Tagout/Blockout procedures and reviewing District ECP forms.

1. The Assigned Authorized Person shall notify all affected personnel (including operators of machinery/equipment/facility) during a hazard analysis tailgate meeting before the LOTO activity.
2. Lockout Tagout Steps

a. Shutdown/Notify all Affected Persons

b. Lockout by Authorized Person(s)

c. Tagout by Authorized Person(s)

d. Drain, Bleed, Purge Stored Energy, Voltage Testing by Authorized Person(s)

e. Verification of Lockout by Authorized and Affected Person(s)

f. After work is completed, the Authorized Person(s) shall assess the satisfactory completion of work, approve the machinery/equipment/facility is suitable to return to service, and notify all Affected Person(s).

1. For single-person, single-point isolation or energy source, lockout/tagout steps must be followed; using a lock and tag, but a documented ECP is not required (valve, breakers, shutoff, disconnect, etc.).
2. Machines or equipment not equipped with lockable controls shall be disconnected from their sources of power to prevent inadvertent movement or release of hazardous energy. Tag equipment controls. Implement additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the risk of inadvertent energization.
3. Drain, bleed and purge any stored energy. Coordinate with staff and affected persons to ensure stored or residual energy (such as capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, pressurized air, gas or water systems, chemicals, etc.) are dissipated by methods like grounding, bleeding down, flushing, etc. If necessary, moveable parts shall be mechanically blocked to prevent inadvertent movement.
4. Prior to opening a chemical system, depressurize and drain as completely as possible, thoroughly wash, flush, purge and vent (if safe). Some toxic gases may not be safely vented. For more specific guidance, follow the District’s O&M Line Breaking Procedure, which requires the use of SCBAs when opening aqueous ammonia, ozone, or chlorine systems.
5. All employees are required to work safely and must receive training on the employer’s LOTO Program. If you have any questions or doubts about how to work safely, ask your supervisor right away. For each machine, piece of equipment, or prime mover you have been assigned to work on or around, be sure to follow the manufacturer’s safety and operating guidelines and the District’s Hazardous Energy Control Procedures.