

AMENDATORY SECTION (Amending Order 94-07, filed 7/20/94, effective 9/20/94)

WAC 296-24-975 Selection and use of work practices. (1)

General. Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

(a) Deenergized parts. Live parts to which an employee may be exposed shall be deenergized before the employee works on or near them, unless the employer can demonstrate that deenergizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Live parts that operate at less than 50 volts to ground need not be deenergized if there will be no increased exposure to electrical burns or to explosion due to electric arcs.

Note 1: Examples of increased or additional hazards include interruption of life support equipment, deactivation of emergency alarm systems, shutdown of hazardous location ventilation equipment, or removal of illumination for an area.

Note 2: Examples of work that may be performed on or near energized circuit parts because of infeasibility due to equipment design or operational limitations include testing of electric circuits that can only be performed with the circuit energized and work on circuits that form an integral part of a continuous industrial process in a chemical plant that would otherwise need to be completely shut down in order to permit work on one circuit or piece of equipment.

Note 3: Work on or near deenergized parts is covered by subsection (2) of this section.

(b) Energized parts. If the exposed live parts are not deenergized (i.e., for reasons of increased or additional hazards or infeasibility), other safety-related work practices shall be used to protect employees who may be exposed to the electrical hazards involved. Such work practices shall protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object. The work practices that are used shall be suitable for the conditions under which the work is to be performed and for the voltage level of the exposed electric conductors or circuit parts. Specific work practice requirements are detailed in WAC 296-24-960.

(2) Working on or near exposed deenergized parts.

(a) Application. This subsection applies to work on exposed deenergized parts or near enough to them to expose the employee to any electrical hazard they present. Conductors and parts of electric equipment that have been deenergized but have not been locked out or tagged according to this subsection shall

be treated as energized parts, and WAC 296-24-960 applies to work on or near them.

(b) Lockout and tagging. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both according to the requirements of this section. The requirements shall be followed in the order in which they are presented (i.e., (b)(i) of this subsection first, then (b)(ii) of this subsection.

Note 1: As used in this section, fixed equipment refers to equipment fastened in place or connected by permanent wiring methods.

Note 2: Lockout and tagging procedures that comply with chapter ~~((296-24-WAC Part A 4))~~ 296-803 WAC. Lockout/tagout (control of hazardous energy) will also be deemed to comply with (b) of this subsection provided that:

1. The procedures address the electrical safety hazards covered by this part; and
2. The procedures also incorporate the requirements of (b)(iii)(D) and (b)(iv)(B) of this subsection.

(i) Procedures. The employer shall maintain a written copy of the procedures outlined in (b) of this subsection and shall make it available for inspection by employees and by the director and his or her authorized representatives.

Note: The written procedures may be in the form of a copy of subsection (2) of this section.

(ii) Deenergizing equipment.

(A) Safe procedures for deenergizing circuits and equipment shall be determined before circuits or equipment are deenergized.

(B) The circuits and equipment to be worked on shall be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, shall not be used as the sole means for deenergizing circuits or equipment. Interlocks for electric equipment shall not be used as a substitute for lockout and tagging procedures.

(C) Stored electric energy which might endanger personnel shall be released. Capacitors shall be discharged and high capacitance elements shall be short-circuited and grounded, if the stored electric energy might endanger personnel.

Note: If the capacitors or associated equipment are handled in meeting this requirement, they shall be treated as energized.

(D) Stored nonelectrical energy in devices that could reenergize electric circuit parts shall be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.

(iii) Application of locks and tags.

(A) A lock and a tag shall be placed on each disconnecting means used to deenergize circuits and equipment on which work is to be performed, except as provided in subitems (C) and (E) of this item. The lock shall be attached to prevent persons from operating the disconnecting means unless they resort to undue force or the use of tools.

(B) Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.

(C) If a lock cannot be applied, or if the employer can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock, a tag may be used without a lock.

(D) A tag used without a lock, as permitted by subitem (C) of this item, shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by the use of a lock. Examples of additional safety measures include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.

(E) A lock may be placed without a tag only under the following conditions:

(I) Only one circuit or piece of equipment is deenergized; and

(II) The lockout period does not extend beyond the work shift; and

(III) Employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.

(iv) Verification of deenergized condition. The requirements of this subsection shall be met before any circuits or equipment can be considered and worked as deenergized.

(A) A qualified person shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted.

(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 deenergized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage backfeed even though specific parts of the circuit have been deenergized 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 after this test.

(v) Reenergizing equipment. These requirements shall be met, in the order given, before circuits or equipment are reenergized, even temporarily.

(A) A qualified person shall conduct tests and visual inspections, as necessary, to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuits and equipment can be safely energized.

(B) Employees exposed to the hazards associated with reenergizing the circuit or equipment shall be warned to stay clear of circuits and equipment.

(C) Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. However, if this employee is absent from the workplace, then the lock or tag may be removed by a qualified person designated to perform this task provided that:

(I) The employer ensures that the employee who applied the lock or tag is not available at the workplace; and

(II) The employer ensures that the employee is aware that the lock or tag has been removed before he or she resumes work at that workplace.

(D) There shall be a visual determination that all employees are clear of the circuits and equipment.

AMENDATORY SECTION (Amending WSR 99-17-117, filed 8/18/99, effective 12/1/99)

WAC 296-54-57310 Logging machines--Chipping in woods locations. In-woods chipping must be performed according to the following:

(1) Chipper access covers or doors remain closed until the drum or disc stops completely.

(2) Infeed and discharge ports are guarded to prevent contact with the disc, knives, or blower blades.

(3) The chipper is shut down and locked out according to the lockout/tagout requirements of chapter (~~296-24 WAC, Part A-4,~~) 296-803 WAC when an employee performs any servicing or maintenance.

(4) Detached trailer chippers are chocked when used on any slope where rolling or sliding of the chipper is reasonably foreseeable.

AMENDATORY SECTION (Amending WSR 98-07-009, filed 3/6/98,
effective 5/6/98)

WAC 296-45-175 Hazardous energy control (lockout/tagout) procedures. The provisions of this section apply to the use of lockout/tagout procedures for the control of energy sources in installations for the purpose of electric power generation, including related equipment for communication or metering. Locking and tagging procedures for the de-energizing of electric energy sources which are used exclusively for purposes of transmission and distribution are addressed by WAC 296-45-335.

- Note 1: Installations in electric power generation facilities that are not an integral part of, or inextricably commingled with, power generation processes or equipment are covered under chapter 296-24 WAC.
- Note 2: Lockout and tagging procedures that comply with chapter (~~296-24~~) 296-803 WAC will also be deemed to comply with this section if the procedures address the hazards covered by this section.

AMENDATORY SECTION (Amending WSR 99-16-083, filed 8/3/99, effective 11/3/99)

WAC 296-79-220 Deactivating and lockout requirements. (1) Control requirement. Whenever the unexpected startup of machinery, the energizing of electrical circuits, the flow of material in piping systems or the removal of guards would endanger workers, such exposure must be prevented by deactivating and locking out the controls as required by chapter ((296-24 WAC, Part A-4)) 296-803 WAC, Lockout/tagout (control of hazardous energy).

EXCEPTION: In instances where any machine must be in motion for proper adjustment, for removal or replacement of materials from the machine, for machine clothing changes or for roping up, the following precautions must be observed:

- ✎ The machine must be operated at thread or jog speed;
- ✎ Extension tools which minimize personnel exposure must be used where possible;
- ✎ The operating controls must at all times be under the control of a qualified operator or craftsman;
- ✎ All personnel must remain in view of the operator or other means of communication shall be established;
- ✎ All personnel must be beyond the reach of other machine section(s) or element(s) which offer potential exposure. In any instance where such potential exposure exists, such other section(s) or element(s) must be separately locked out.

(2) Group lockout or tagout devices. Procedures must meet the minimum requirements of chapter ((296-24 WAC, Part A-4)) 296-803 WAC, Lockout/tagout (control of hazardous energy). The employer must develop a specific written group lockout or tagout procedure and review it with the local plant labor/management safety committee before it can be utilized.

(3) Temporary or alternate power.

✎ Whenever possible, temporary or alternate sources of power to the equipment being worked on must be avoided.

✎ If the use of such power is necessary, all affected employees must be informed and the source of temporary or alternate power must be identified.

(4) Deactivating piping systems.

(a) Nonhazardous systems must be deactivated by at least locking out either the pump or a single valve.

(b) Lockout of the following hazardous material piping systems must isolate to the worksite and must provide protection against backflow where such potential exists:

- ✎ Gaseous systems that are operated at more than 200 psig;

- ✎ Systems containing any liquid at more than 500 psig;
- ✎ Systems containing any material at more than 130°F;
- ✎ Any cryogenic system,
- ✎ Systems containing material which is chemically hazardous as defined by NFPA 704 1996 Class 3 and 4;
- ✎ Systems containing material classified as flammable or explosive as defined in NFPA Class I.

Such systems must be deactivated by one of the following:

- ✎ Locking out both the pump and one valve between the pump and the worksite;

- ✎ Locking out two valves between the hazard source and the worksite;

- ✎ Installing and locking out a blank flange between the hazard source and worksite. When a blank flange (blind) is used to separate off portions of hazardous material systems from a portion which is in operation, the employer must develop and implement a procedure for installation and removal of the blank flange that will ensure all hazards have been eliminated;

- ✎ Line breaking between the hazard and the worksite;

- ✎ On hazardous chemical systems where the methods already listed are not feasible, or by themselves create a hazard, single valve closure isolation may be used provided that potentially exposed employees are adequately protected by other means such as personal protective equipment.

- ✎ On all steam systems where the methods already listed are not feasible, single valve closure isolation may be used provided that the system is equipped with valves meeting all requirements of ANSI B16.5-1996 and ANSI B16.34-1996. Where single valve isolation is used, the steamline must also be equipped with a bleed valve downstream from the valve closure to prove isolation of the worksite.

Note: Bleeder valves are recommended behind all primary valve closures on hazardous material systems. Consideration should be given to the nature of the material in the system when installing bleeder valves. To assist in preventing plugging, bleeder valves should generally be installed in the top one-third of the pipe. Short exhaust pipes should be installed on bleeder valves to direct the flow of possible escapement away from the position where an employee would normally be when using the bleeder valve.

Chapter 296-803 WAC

LOCKOUT/TAGOUT (CONTROL OF HAZARDOUS ENERGY)

NEW SECTION

WAC 296-803-100 Scope. This chapter applies to the service and maintenance of machines and equipment, including piping systems, if employees could be injured by the:

- Unexpected energization or start up of the machine or equipment;

OR

- Release of stored energy.

Energy sources include mechanical, hydraulic, pneumatic, chemical, thermal, or other energy, including gravity.

Note: ✍ Machines and equipment include those that produce high intensity electromagnetic fields.
 ✍ When other Title 296 WAC standards require the use of lockout or tagout, they have to be used and supplemented by the procedural and training requirements of this part.

Exemption: This chapter does not apply to:
✍ Construction activities covered by chapter 296-155 WAC, Construction work.
✍ Agriculture activities covered by chapter 296-307 WAC, Safety standards for agriculture.
✍ Maritime activities covered by chapter 296-56 WAC, Safety standards--Longshore, stevedore and related waterfront operations and chapter 296-304 WAC, Safety standards for ship repair, shipbuilding and shipbreaking.
✍ Oil and gas well drilling and servicing.
✍ Installations for generating, transmitting, and distributing electrical power (including related communication and metering equipment) that are controlled exclusively by electric utilities.
✍ Hot tap operations on pressurized pipelines used to transmit and distribute substances such as gas, steam, water, or petroleum products if the employer can demonstrate that all of the following apply:
- Continuity of service is essential.
- Shutdown of the system is impractical.
- Proven effective employee protection is provided by following documented procedures and using special equipment.
✍ Service and maintenance of fire alarm and extinguishing systems and their components if:
- Other employees depend on these systems for fire safety;

AND

- Employees working on fire extinguishing systems are protected from the unexpected release of hazardous energy by appropriate alternative measures.

✍ Work on electric equipment receiving power only through a cord and plug if:

- Unplugging the equipment eliminates the possibility of unexpected energization, unexpected start up, or the release of stored energy;

AND

- The plug is kept under the exclusive control of the employee doing the service or maintenance.

✍ Exposure to electrical hazards from electrical work on, near, or with conductors or equipment that is covered by chapter 296-24 WAC, Part L, Electrical.

✍ Service and maintenance during normal production operations, if an employee is not required to:

- Remove or bypass a guard or other safety device;

OR

- Place any body part into the point of operation or any other hazardous area created by machine operation.

✍ Minor tool changes, adjustments, and other minor service during normal production operations if:

- They are routine, repetitive, and integral to the use of the equipment for production;

AND

- The work is done using measures which provide effective protection from hazards.

NEW SECTION

WAC 296-803-200 Summary.

Your responsibility:

To establish an energy control program.

You must:

WAC 296-803-20005 Establish a written energy control program.

NEW SECTION

WAC 296-803-20005 Establish a written energy control program.

You must:

✎ Establish a written energy control program to protect employees that service or maintain a machine or equipment from injury caused by the:

- Unexpected energization or start up of the machine or equipment;

OR

- Release of stored energy.

✎ Make sure the program contains **all** of the following:

- Energy control procedures as described in WAC 296-803-500.

- Employee training as described in WAC 296-803-600.

- Periodic reviews as described in WAC 296-803-700.

✎ Develop and document in writing energy control procedures to protect employees doing service or maintenance of a machine or equipment from potentially hazardous energy.

Exemption: You do not have to have **written** energy control procedures for a particular machine or equipment if **all** of the following apply:

✎ The machine or equipment has a single energy source that is easily identified and can be isolated.

✎ The machine or equipment is completely deenergized and deactivated by isolating and locking out the energy source.

✎ There's no stored or residual energy that could be a hazard to employees, and the machine or equipment cannot reaccumulate such energy after it's been shut down.

✎ The energy source can be locked out with a single lockout device.

✎ The machine or equipment is isolated from the energy source and locked out during service or maintenance.

✎ The authorized employee doing the service or maintenance has exclusive control of the lockout device.

✎ The service or maintenance does not create a hazard for other employees.

✎ The machine or equipment has never been unexpectedly energized or activated during service or maintenance.

You must:

✎ Make sure energy control procedures clearly and specifically outline:

- The scope, purpose, authorization, rules, and techniques to control hazardous energy;

AND

- How you'll make sure employees follow the procedures.

✍ Make sure energy control procedures specifically identify at least the following:

- When the procedure must be used.

- What the specific procedural steps are for:

✂ Shutting down, isolating, blocking, and securing the machine or equipment.

✂ Placing, removing, and transferring lockout or tagout devices and who is responsible for them.

- How to test the machine or equipment to verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

Note: Similar machines and equipment may be covered by a single written procedure if **all** of the following apply:

✍ They use the same type and magnitude of energy.

✍ They have the same or similar types of controls.

✍ The specific machines and equipment covered by the procedure are identified by at least type and location.

NEW SECTION

WAC 296-803-300 Summary.

Your responsibility:

To make sure new or modified machines and equipment can accept lockout devices.

You must:

WAC 296-803-30005 Make sure new or modified machines and equipment can accept lockout devices.

NEW SECTION

WAC 296-803-30005 Make sure new or modified machines and equipment can accept lockout devices.

You must:

✍ Make sure energy-isolating devices designed to accept a lockout device are provided on machines and equipment that:

- Are newly installed.

- Have major repair.

- Are renovated or modified.

NEW SECTION

WAC 296-803-400 Summary.

Your responsibility:

To provide appropriate means to control energy and lockout and tagout devices.

You must:

WAC 296-803-40005 Provide appropriate means to control energy.

WAC 296-803-40010 Make sure lockout and tagout devices meet these requirements.

WAC 296-803-40015 Make sure lockout devices meet these additional requirements.

WAC 296-803-40020 Make sure tagout devices meet these additional requirements.

NEW SECTION

WAC 296-803-40005 Provide appropriate means to control energy.

You must:

 Provide the means necessary to isolate, secure, or block machines and equipment from energy sources.

Note: Examples of means to control energy include:

-  Locks.
-  Tags.
-  Chains.
-  Wedges.
-  Key blocks.
-  Adapter pins.
-  Self-locking fasteners.
-  Blind flanges.
-  Cribbing.

NEW SECTION

WAC 296-803-40010 Make sure lockout and tagout devices meet these requirements.

You must:

✎ Make sure lockout and tagout devices meet all of the following:

- Create **no** additional hazards.
- Have a distinctive design or appearance.
- Are the only devices used for controlling energy.
- Are **not** used for any other purpose.
- Are durable enough to withstand the environment they're used in for the maximum time they're expected to be used.
- Are standardized within the facility by color, shape, or size.
- Identify the person applying the device.

NEW SECTION

WAC 296-803-40015 Make sure lockout devices meet these additional requirements.

You must:

✎ Make sure lockout devices are strong enough so that removing them by other than the normal unlocking method requires:

- Excessive force;

OR

- Unusual techniques such as the use of bolt cutters or other metal-cutting tools.

NEW SECTION

WAC 296-803-40020 Make sure tagout devices meet these additional requirements.

You must:

✎ Make sure all tags:

- Use the same print and format within a facility.
- Are constructed and printed so they will not deteriorate and the message on the tag remains legible when:

✂ Exposed to weather.

✂ Used in wet or damp locations.

✂ Used in corrosive environments such as areas where acid or alkali chemicals are handled or stored.

- Have a warning about **not** energizing the machine or equipment.

Note: The warning on the tag should include wording such as:

✎ Do not start.

- ✎ Do not open.
- ✎ Do not close.
- ✎ Do not energize.
- ✎ Do not operate.

You must:

✎ Make sure tagout devices are strong enough to prevent unintentional or accidental removal.

✎ Make sure the means used to attach the tag to the energy-isolating device meets all of the following:

- Is not reusable.
- Is self-locking.
- Can be attached by hand.
- Cannot be released with a force of less than fifty pounds.
- Is similar in design and basic characteristics to a one-piece, all-environment-tolerant, nylon cable tie.

NEW SECTION

WAC 296-803-500 Summary.

Your responsibility:

To make sure energy control procedures are used and include these requirements.

You must:

ENERGY CONTROL PROCEDURES

WAC 296-803-50005 Use energy control procedures.

APPLYING LOCKOUT OR TAGOUT DEVICES

WAC 296-803-50010 Meet these requirements when applying lockout or tagout devices.

WAC 296-803-50015 Meet these additional requirements when applying lockout devices.

WAC 296-803-50020 Meet these additional requirements when applying tagout devices.

STORED ENERGY

WAC 296-803-50025 Protect employees from the hazards of stored and residual energy.

VERIFYING MACHINE ISOLATION

WAC 296-803-50030 Verify that the machine or equipment is safe before starting work.

REMOVING ENERGY CONTROL DEVICES

WAC 296-803-50035 Meet these requirements when removing lockout or tagout devices and energizing the machine or equipment.

TEMPORARY ENERGIZATION

WAC 296-803-50040 Meet these requirements if it's necessary to temporarily energize a machine, equipment, or component for testing or positioning.

SHIFT OR PERSONNEL CHANGES

WAC 296-803-50045 Protect employees during shift or personnel changes.

GROUP LOCKOUT/TAGOUT

WAC 296-803-50050 Protect employees working in a group.

WAC 296-803-50055 Meet these additional requirements if more than one group is used.

OUTSIDE EMPLOYEES

WAC 296-803-50060 Coordinate with outside employers servicing or maintaining your machines or equipment.

NEW SECTION

WAC 296-803-50005 Use energy control procedures.

You must:

✎ Use energy control procedures to protect employees servicing or maintaining machines and equipment from potentially hazardous energy.

✎ Use a lockout system if an energy-isolating device can be locked out.

Exemption: A tagout system may be used instead of a lockout system if it meets **all** of the following:

- ✎ The tagout device is attached where you would have put the lockout device.
- ✎ The tagout system provides the same level of employee protection as a lockout system.
- ✎ You can demonstrate that the tagout system:
 - Meets all tagout requirements of this chapter.
 - Includes additional safety measures to provide the same level of safety as a lockout system.

Note: Additional safety measures used with the tagout system to provide protection equal to a lockout system could include actions such as:

- ✎ Removing part of the isolating circuit.
- ✎ Blocking a controlling switch.
- ✎ Opening an extra disconnecting device.
- ✎ Removing a valve handle.

You must:

✎ Use a tagout system if an energy-isolating device cannot be locked out.

NEW SECTION

WAC 296-803-50010 Meet these requirements when applying lockout or tagout devices.

You must:

✎ Make sure, before a machine or equipment is turned off, that the authorized employee knows **all** of the following:

- Type and magnitude of the energy.
- Hazards of the energy to be controlled.
- Method or means to control the energy.

✎ Turn off or shut down the machine or equipment using established procedures.

✎ Completely isolate the machine or equipment from its energy sources using the appropriate energy-isolating devices after the machine or equipment has been turned off.

✎ Make sure you or the authorized employee notify affected employees that the machine or equipment is being locked or tagged out before the devices are applied.

✎ Make sure a lockout or tagout device is applied:

- For each energy-isolating device.
- Only by the authorized employee doing the service or maintenance.

NEW SECTION

WAC 296-803-50015 Meet these additional requirements when applying lockout devices.

You must:

✎ Make sure lockout devices hold the energy-isolating device in a "safe" or "off" position.

NEW SECTION

WAC 296-803-50020 Meet these additional requirements when applying tagout devices.

You must:

✎ Make sure a tagout device is put on an energy-isolating device so it clearly shows that moving the energy-isolating device from the "safe" or "off" position is prohibited.

✎ Make sure a tagout device, when used with an energy-isolating device that can be locked out, is fastened to the device at the same point a lock would have been attached.

✎ Make sure a tagout device that cannot be attached directly to an energy-isolating device is located:

- As close as safely possible to the energy-isolating device;

AND

- In a position that is immediately obvious to anyone attempting to operate the energy-isolating device.

NEW SECTION

WAC 296-803-50025 Protect employees from the hazards of stored and residual energy.

You must:

✎ Make sure all potentially hazardous stored and residual energy is relieved, disconnected, restrained, or otherwise rendered safe after the lockout or tagout devices have been put on the energy-isolating devices.

✎ Continue to verify the isolation of machines and equipment that could reaccumulate stored energy to a hazardous level until:

- Service or maintenance is completed;

OR

- The possibility of reaccumulating hazardous energy does not exist.

NEW SECTION

WAC 296-803-50030 Verify that the machine or equipment is safe before starting work.

You must:

✎ Make sure the authorized employee verifies that the machine or equipment that's been locked out or tagged out has been isolated from all energy sources and deenergized before starting work.

Note: The authorized employee can verify that the machine or equipment has been isolated from its energy sources and stored energy has been made safe by using a method or combination of methods that may include, but are not limited to, the following:

✎ Trying to start or energize the machine or equipment (tryout).

✎ Testing with appropriate test equipment.

✎ Visually inspecting switches, valves, circuit breakers, etc., to confirm they have been secured in the "off" or "safe" position.

NEW SECTION

WAC 296-803-50035 Meet these requirements when removing lockout or tagout devices and energizing the machine or equipment.

You must:

✎ Make sure the authorized employee does the following before removing any lockout or tagout device:

- Inspects the work area to make sure nonessential items have been removed;

AND

- Verifies the machine or equipment is in operating condition and ready to energize.

✎ Make sure only the authorized employee who applied a lockout or tagout device removes it.

Exemption: The employer may have the lockout or tagout device removed by someone other than the authorized employee who applied it if **all** of the following conditions are met:

✎ The energy control program has documented, specific procedures and training for this situation.

✎ You can show that the specific procedures used are as safe as having the device removed by the authorized employee who applied it.

✎ The specific procedures include at least the following:

- Verifying the authorized employee who applied the device is not at the facility.

- Making all reasonable efforts to contact and inform the authorized employee that the lockout or tagout device is being removed.

- Making sure the authorized employee is informed, before resuming work at the facility, that the lockout or tagout device has been removed.

You must:

✎ Do the following before energizing or starting the machine or equipment:

- Notify affected employees that the lockout or tagout devices have been removed.

- Check that employees in the area are in positions that make it safe to energize the machine or equipment.

NEW SECTION

WAC 296-803-50040 Meet these requirements if it's necessary to temporarily energize a machine, equipment, or component for testing or positioning.

You must:

✎ Follow your normal energy control procedures to:

- Remove the lockout or tagout devices.

- Energize the machine, equipment, or component.

- Reapply the lockout or tagout devices when testing or positioning is completed.

NEW SECTION

WAC 296-803-50045 Protect employees during shift or personnel changes.

You must:

✎ Use specific procedures for shift or personnel changes to:

- Make sure there's continuous lockout or tagout protection during the change;

AND

- Provide for the orderly transfer of lockout or tagout device protection between employees.

NEW SECTION

WAC 296-803-50050 Protect employees working in a group.

You must:

✎ Make sure your energy control procedures provide each member of a crew, craft, department, or other group with the same level of protection as that provided by an individual lockout or tagout device.

✎ Make sure each authorized employee:

- Puts a personal lockout or tagout device on the group lockout device, lockbox, or comparable mechanism before beginning work;

AND

- Does **not** remove it until they have finished work on the machine or equipment.

✎ Assign a primary authorized employee who:

- Has overall responsibility for the service or maintenance;

- Attaches their lockout or tagout device to the energy-isolating device when the equipment is deenergized and before any work begins;

AND

- Is the last person to remove their lockout or tagout device when the job is completed.

Definition:

The **primary authorized employee** is the authorized employee who has overall responsibility for meeting the requirements of the lockout/tagout procedures.

NEW SECTION

WAC 296-803-50055 Meet these additional requirements if more than one group is used.

You must:

 Do **all** of the following if more than one group works on a machine or equipment that has to be locked or tagged out:

- Assign an authorized employee as the group coordinator with overall responsibility to:

 Coordinate the different work groups;

AND

 Maintain continuous lockout or tagout protection.

- Assign a primary authorized employee in each group who has:

 Responsibility for the group of employees who are protected by a group lockout or tagout device;

AND

 A way to determine which employees of the group are exposed to the machine or equipment that's locked or tagged out.

NEW SECTION

WAC 296-803-50060 Coordinate with outside employers servicing or maintaining your machines or equipment.

You must:

 Do the following before allowing another employer's personnel to service or maintain machines or equipment if your energy control procedures require they be locked or tagged out:

- Inform the outside employer of your lockout or tagout procedures.

- Make sure the outside employer informs you of their lockout or tagout procedures.

- Make sure you and the outside employer confirm that all employees understand and will follow the restrictions of the other employer's energy control program.

NEW SECTION

WAC 296-803-600 Summary.

Your responsibility:

To train employees on your energy control program.

You must:

WAC 296-803-60005 Provide and document employee training on the energy control program.

WAC 296-803-60010 Provide additional training if you use tagout devices.

WAC 296-803-60015 Retrain employees when necessary.

NEW SECTION

WAC 296-803-60005 Provide and document employee training on the energy control program.

You must:

✎ Train employees to make sure that they:

- Understand the purpose and function of the energy control program;

AND

- Have the knowledge and skills necessary to carry out their program responsibilities.

✎ Train each authorized employee in:

- The type and magnitude of energy available in the workplace.

- Recognizing hazardous energy sources that apply.

- Methods and means to isolate and control energy.

✎ Instruct each affected employee in the purpose and use of the energy control procedures.

✎ Instruct all employees who work or may work where energy control procedures might be used about the:

- Procedures being used;

AND

- Prohibition against attempting to restart or reenergize a machine or equipment that's locked out or tagged out.

✎ Document that employee training has been done and kept up to date.

- Include the employee's name and the training date.

NEW SECTION

WAC 296-803-60010 Provide additional training if you use tagout devices.

You must:

- ✎ Make sure employees are trained in the following:
 - Tags are warning devices and do not provide the same level of physical restraint as a lock.
 - When attached to energy-isolating devices, tags are not to be:
 - ✂ Removed without the approval of the authorized person responsible for it;
- OR
- ✂ Bypassed, ignored, or otherwise defeated.
 - Tags need to be legible and understandable to be effective.
 - Tags may evoke a false sense of security.
 - The meaning of tags needs to be understood as part of the overall energy control program.
 - Tags and their means of attachment must be:
 - ✂ Securely attached to energy-isolating devices so they cannot be inadvertently or accidentally detached;
- AND
- ✂ Made of materials that will withstand the environmental conditions they will be exposed to.

NEW SECTION

WAC 296-803-60015 Retrain employees when necessary.

You must:

- ✎ Retrain authorized and affected employees to introduce new or revised control methods and procedures when there's a change in **any** of the following:
 - Job assignments.
 - Machines, equipment, or processes that present a new hazard.
 - Energy control procedures.
- ✎ Retrain employees to reestablish proficiency when:
 - A periodic inspection shows the employee deviates from, or has inadequate knowledge of, the energy control procedures;

OR

- The employer has reason to believe retraining is necessary.

NEW SECTION

WAC 296-803-700 Summary.

Your responsibility:

To do periodic reviews to make sure employees know and use your energy control procedures.

You must:

WAC 296-803-70005 Perform and document periodic reviews to verify employees know and follow the energy control procedures.

WAC 296-803-70010 Do periodic reviews of procedures using lockout devices.

WAC 296-803-70015 Do periodic reviews of procedures using tagout devices.

NEW SECTION

WAC 296-803-70005 Perform and document periodic reviews to verify employees know and follow the energy control procedures.

You must:

 Do a periodic review at least annually to:

- Make sure employees know and can apply the energy control procedures.

- Correct any deviations or inadequacies identified.

Exemption: Energy control procedures used less frequently than once a year only need to be reviewed before being used.

You must:

 Have the periodic review done by an authorized employee other than the ones using the energy control procedure being reviewed.

 Document that periodic reviews have been done.

- Include all of the following:

 Machine or equipment the energy control procedure was used for.

 Date of the review.

 Employees included in the review.

 Person doing the review.

NEW SECTION

WAC 296-803-70010 Do periodic reviews of procedures using lockout devices.

You must:

 Make sure, if a periodic review involves lockout devices, the reviewing employee reviews responsibilities with each authorized employee who uses the procedure.

Note: Periodic reviews of authorized employees using energy control procedures involving only lockout devices can be done in a group meeting if desired.

NEW SECTION

WAC 296-803-70015 Do periodic reviews of procedures using tagout devices.

You must:

 Make sure, if a periodic review involves tagout devices, the reviewing employee reviews with each authorized and affected employee the:

- Employee's responsibilities under the procedure;

AND

- Limitations of tagout devices.

Note: Periodic reviews of authorized and affected employees using energy control procedures involving tagout devices have to be done with each employee individually.

Reference: See WAC 296-803-60010, Provide additional training if you use tagout devices, in this chapter for the limitations of tagout devices.

NEW SECTION

WAC 296-803-800 Definitions.

Affected employee. An employee who's required to operate, use, or be in the area where a machine or equipment is locked or tagged out for service or maintenance.

Authorized employee. An employee who locks or tags out a machine or equipment to do service or maintenance.

Can be locked out. An energy-isolating device that can be locked in the "off" or "safe" position.

Energized. Connected to an energy source or containing residual or stored energy.

Energy-isolating device. A mechanical device that physically prevents transmitting or releasing energy. This includes, but is not limited to:

- ✎ Manually operated electrical circuit breakers.
- ✎ Disconnect switches.
- ✎ Manually operated switches that disconnect the conductors of a circuit from all ungrounded supply conductors if no pole of the switch can be operated independently.
- ✎ Line valves.
- ✎ Blocks.
- ✎ Similar devices used to block or isolate energy.

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

Hot tap. A procedure which involves welding on pressurized pipelines, vessels, or tanks to install connections or accessories. It's commonly used to replace or add sections of pipeline used in air, gas, water, steam, and petrochemical distribution systems without interrupting service.

Lockout. Placing a lockout device on an energy-isolating device using an established procedure to make sure the machine or equipment cannot be operated until the lockout device is removed.

Lockout device. A device that uses a positive means, such as a key or combination lock, to hold an energy-isolating device in the "safe" or "off" position. This includes blank flanges and bolted slip blinds.

Normal production operations. Using a machine or equipment for its intended production function.

Primary authorized employee. An authorized employee who has overall responsibility for meeting the requirements of the lockout/tagout procedures.

Service and maintenance. Activities such as constructing, installing, setting-up, adjusting, modifying, maintaining, and servicing machines or equipment. It also includes lubricating, cleaning, unjamming, and making tool changes.

Setting-up. Work done to prepare a machine or equipment for normal production operations.

Tagout. Placing a tagout device on an energy-isolating device using an established procedure to indicate that the energy-isolating device and the machine or equipment being controlled may not be operated until the tagout device is removed.

Tagout device. A prominent warning device, such as a tag and a means of attachment. It can be securely fastened to an energy-isolating device to indicate that the energy-isolating device and the machine or equipment being controlled may not be operated until the tagout device is removed.

AMENDATORY SECTION (Amending WSR 96-17-056, filed 8/20/96, effective 10/15/96)

WAC 296-155-429 Lockout and tagging of circuits. (1)

Controls. Controls that are deactivated during the course of work on energized or deenergized equipment or circuits shall be tagged and padlocked in the open position.

(2) Equipment and circuits. Equipment or circuits that are deenergized shall be rendered inoperative and have tags and locked padlocks attached at all points where such equipment or circuits can be energized.

(3) Tags. Tags shall be placed to identify plainly the equipment or circuits being worked on.

(4) Lockout and tagging. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both according to the requirements of this section. The requirements shall be followed in the order in which they are presented (i.e., (a) of this subsection first, then (b) of this subsection).

Note 1: As used in this section, fixed equipment refers to equipment fastened in connected by permanent wiring methods.

Note 2: Lockout and tagging procedures that comply with chapter ((296-24 WAC, Part A 4)) 296-803 WAC will also be deemed to comply with this subsection provided that:

1. The procedures address the electrical safety hazards covered by this part; and
2. The procedures also incorporate the requirements of (c)(iv) and (d)(ii) of this subsection.

(a) Procedures. The employer shall maintain a written copy of the procedures outlined in this subsection and shall make it available for inspection by employees and by the director and his/her authorized representative.

Note: The written procedures may be in the form of a copy of this section, WAC 296-155-429.

(b) Deenergizing equipment.

(i) Safe procedures for deenergizing circuits and equipment shall be determined before circuits or equipment are deenergized.

(ii) The circuits and equipment to be worked on shall be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, shall not be used as the sole means for deenergizing circuits or equipment. Interlocks for electric equipment shall not be used as a substitute for lockout and tagging procedures.

(iii) Stored electric energy which might endanger personnel shall be released. Capacitors shall be discharged and high

capacitance elements shall be short-circuited and grounded, if the stored electric energy might endanger personnel.

Note: If the capacitors or associated equipment are handled in meeting this requirement, they shall be treated as energized.

(iv) Stored nonelectrical energy in devices that could reenergize electric circuit parts shall be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.

(c) Application of locks and tags.

(i) A lock and a tag shall be placed on each disconnecting means used to deenergize circuits and equipment on which work is to be performed, except as provided in (c)(iii) and (v) of this subsection. The lock shall be attached to prevent persons from operating the disconnecting means unless they resort to undue force or the use of tools.

(ii) Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.

(iii) If a lock cannot be applied, or if the employer can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock, a tag may be used without a lock.

(iv) A tag used without a lock, as permitted by item (iii) of this subsection, shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by the use of a lock. Examples of additional safety measures include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.

(v) A lock may be placed without a tag only under the following conditions:

(A) Only one circuit or piece of equipment is deenergized; and

(B) The lockout period does not extend beyond the work shifts; and

(C) Employees exposed to the hazards associated with reenergizing the circuit or equipment are familiar with this procedure.

(d) Verification of deenergized condition. The requirements of this subsection shall be met before any circuits or equipment can be considered and worked as deenergized.

(i) A qualified person shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted.

(ii) 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 deenergized. The test shall also determine if any energized conditions exist as a result of

inadvertently induced voltage or unrelated voltage backfeed even though specific parts of the circuit have been deenergized 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 after this test.

(e) Reenergizing equipment. These requirements shall be met, in the order given, before circuits or equipment are reenergized, even temporarily.

(i) A qualified person shall conduct tests and visual inspections, as necessary, to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuits and equipment can be safely energized.

(ii) Employees exposed to the hazards associated with reenergizing the circuit or equipment shall be warned to stay clear of circuits and equipment.

(iii) Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. However, if this employee is absent from the work place, then the lock or tag may be removed by a qualified person designated to perform this task provided that:

(A) The employer ensures that the employee who applied the lock or tag is not available at the work place; and

(B) The employer ensures that the employee is aware that the lock or tag has been removed before he or she resumes work at that work place.

(iv) There shall be a visual determination that all employees are clear of the circuits and equipment.

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-24-110	The control of hazardous energy (lockout/tagout).
WAC 296-24-11001	Scope, application, and purpose.
WAC 296-24-11003	Definitions applicable to this part.
WAC 296-24-11005	General.
WAC 296-24-11007	Application of control.
WAC 296-24-11009	Release from lockout or tagout.
WAC 296-24-11011	Additional requirements.
WAC 296-24-11013	Reserved.
WAC 296-24-11015	Reserved.
WAC 296-24-11017	Reserved.
WAC 296-24-119	Appendices.