# **Lockout/Tagout Program**

#### 1.0 Introduction

This Lockout/Tagout information applies to Battelle—Pacific Northwest Division (PNWD) staff and non-staff working in Battelle-owned, -operated, or -leased facilities. All staff and non-staff must comply with facility-specific requirements. The PNWD Lockout/Tagout program applies to the installation, servicing, and maintenance of machines, equipment, and systems in which the unexpected release of hazardous energy or startup of the machines, equipment, and systems could cause injury to personnel. When it is determined there is no potential for release of hazardous energy during such service and maintenance activities, no lockout/tagout is required by this program.

Lockout/tagout involves the installation of a lock and tag (or locks and tags) so that work can be performed safely. A lock and tag is placed on each isolating point so the device and the equipment or system that is isolated and/or controlled cannot be operated until the lock and tag is removed. Staff must use the correct personal protective equipment for hazardous energy while the lockout/tagout boundary is being established and lock and tag installed.

There are two important roles involved in lockout/tagout: Controlling Organization and authorized worker.

- The Controlling Organization is that organization, or an individual delegated by the organization, who is responsible for the operation of the building, utility, facility, system, or equipment associated with the work to be performed. For example, Building Managers are assigned responsibility for several categories of key operating systems or equipment. In those instances, the Building Managers are considered to be the Controlling Organization. A researcher who has been assigned responsibility for laboratory equipment is considered to be the Controlling Organization for that equipment. In the event that multiple organizations are involved in the need for lockout/tagout, a single organization needs to assume Controlling Organization lockout/tagout responsibility. Individuals assuming Controlling Organization responsibilities MUST be PNWD staff members and authorized workers.
- The authorized worker is the individual who actually conducts the work and, for their personal safety, places their individually assigned lock and tag prior to initiating the work activity.

The information provided in this procedure addresses the roles of authorized workers, Controlling Organizations, and their delegates in the lockout/tagout process. The Controlling Organization's role is illustrated in the <a href="Controlling Organization Lockout/Tagout Process">Controlling Organization's role is illustrated in the Controlling Organization Lockout/Tagout Process</a> flowchart (PDF). The authorized worker's role is described in the Authorized Worker Requirements exhibit.

Whenever outside utility service personnel are to be engaged in activities covered by the scope of the Lockout/Tagout program, PNWD's Controlling Organization and the outside utility must hold a prejob meeting to inform each other of their respective Lockout/Tagout procedures. Both parties must agree on the procedures that are to be followed and inform their respective workers of any changes to normal procedures.

Lockout/Tagout does not address the use of cord and plug for control of electrical energy and work on energized equipment. Information on the use of cord and plug where the hazard is controlled by unplugging the equipment from the energy source and keeping the plug within arm's reach and line of sight of the authorized worker performing the servicing or maintenance, is provided in the *Electrical* 

Equipment and Systems, Working on or near subject area. Work on equipment where the servicing or maintenance requires the equipment to be energized (e.g., troubleshooting activities, voltage or current checks) is also covered in the *Electrical Equipment and Systems, Working on or near* subject area.

Regardless of activity type, potential hazards are identified and assessed. Assessments involve examination of objective evidence and estimation of the degree of risk associated with hazards.

When the significance of risk has been completely assessed, controls are assigned to the hazards. A graded approach identified in *Section 2.3 Hazard Control* of the Hazard Assessment Program Description provides a description of this approach.

#### 2.0 Definitions

See Appendix A, "Glossary," for the complete definition of terms used in this procedure.

## 3.0 Planning for Lockout/Tagout

## 3.1 General Requirements

The Controlling Organization or their delegate must determine the level of control and verify the adequacy of isolation boundaries required for work activities involving lockout/tagout (see the Controlling Organization Lockout/Tagout Process exhibit [PDF]). The equipment owner/operator is normally considered to be the Controlling Organization. Where the owner is not an authorized worker, the owner must delegate Controlling Organization responsibility to Facilities and Operations via the service request system or to another PNWD authorized worker, and support the determination of proper isolation boundaries.

For exposure to electrically energized circuits or components, verification involves the use of test equipment by a qualified electrical worker to test the circuit elements and electrical parts of equipment to which employees will be exposed. The purpose of this testing is to determine that the circuit elements and equipment parts are de-energized and that no 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. Interlocks must not be used as a substitute for lock and tag. If equipment, machinery or systems cannot be locked out, it must be tagged out with a level of safety equivalent to that of a lockout.

For verification of electrically-driven rotating or moving equipment, see Section 1.2 of the <u>Hazardous Energy Isolation Practices</u> exhibit. All prospective lockouts/tagouts must receive some degree of prejob planning to fully understand the energy sources involved, potential impacts to other activities, responsibilities, work sequence, and action assignments. The level of prejob planning and formality of documentation is dependent on the complexity and inherent risks of the activity. Where an authorized worker is not qualified to perform the necessary inspection or test, he may witness it being performed by an authorized worker who is qualified. Where work is performed within a radiation area, confined space, flash boundary, or similar hazardous work environment that presents an increased exposure or risk, a designated authorized worker(s) may perform a safe-to-work check on behalf of the others away from the hazard with their consent. Consent must be documented in the Job Planning

Package (JPP) or written lockout/tagout instructions. If they elect to do so, an authorized worker is allowed to witness or perform the safe-to-work check.

Staff and non-staff must complete the PNWD Lockout/Tagout Program training before performing any authorized worker functions.

As part of the planning process, the Controlling Organization or their delegate who is an authorized worker, determine if lockout/tagout is needed (see the <u>Hazards Analysis Process</u> exhibit) and, if required, how to safely isolate the equipment (see the <u>Hazardous Energy Isolation Practices</u> exhibit). In making this decision, the Controlling Organization identifies work that could potentially expose staff to

- inadvertent or unexpected release of energy during the temporary setup, alignment, maintenance, or inspection of equipment and/or systems
- unexpected startup of machines or equipment.

Controlling Organizations or delegates making determinations of lockout/tagout applicability must be familiar with the hazards of the specific equipment they are responsible for, as well as additional environmental factors that could influence the potential hazards (e.g., fall from a ladder). Using knowledge and experience, identify those aspects of work that have the potential to cause injury in accordance with the process described in the <a href="Hazards Analysis Process">Hazards Analysis Process</a> exhibit.

The key factor for determining whether an energy source must be considered hazardous is whether an inadvertent energy release can harm workers. The table in the <u>Hazards Analysis Process</u> exhibit provides energy thresholds where lockout/tagout is mandatory and energy levels at which the use of lockout/tagout is dependent on the interaction of the energy and the work environment.

If the requirements of this program cannot be met, a job-specific local plan must be written. The plan must be approved by the PNWD Lockout/Tagout Committee and the Controlling Organization, and communicated to the authorized workers prior to performing work.

The Controlling Organization identifies the scope of work to be performed, identifies associated hazards according to the Hazards Analysis Process exhibit, and determines if lockout/Tagout is required (see the Exceptions to Lockout/Tagout Requirements exhibit for more information.)

The following thresholds apply to the forms of energy listed. Other energy forms (e.g., chemical, mechanical motion) must be assessed on a case-by-case basis to determine the use of lockout/tagout.

 Table 1. Thresholds and Forms of Energy Applied

Form of Energy	Lockout/Tagout is Required*
Electricity	less than 50 V and greater than 1000 W,
(AC or DC)	less than 10 J stored energy in a capacitor
	or
	equal to or greater than 50 V and equal to or greater than 5 mA,
	less than 10 J stored energy in a capacitor
	or
	greater than 10 J stored energy in a capacitor
	(moderate/high risk category)

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Thermal Energy (Hot)	liquids equal to or greater than 52°C (120°F)
Thermal Energy (Cold)	liquids equal to or less than -3°C (27°F)
Pneumatic Energy	greater than 150 psi
Hydraulic Energy	greater than 150 psi

<sup>\*</sup>Unless de-energizing the source introduces additional or increased hazards or is infeasible due to equipment design or operational limitations.

The Controlling Organization performs a technical review to determine the isolation boundary and level of control required when lockout/tagout is required.

**Note:** It is recommended that staff step back and take a second look to confirm that the hazards in the work environment have been identified and mitigated. See the <u>Reviewing Work Process – Taking a Second Look for Safety</u> exhibit, for more information.

The Controlling Organization decides which of the four lockout/tagout processes apply to the work situation. The key questions are whether written instructions are required, and whether the authorized worker and/or the Controlling Organization is placing the tag. The <a href="Decision Chart - What Lockout/Tagout Process Must Be Followed">Decision Chart - What Lockout/Tagout Process Must Be Followed</a> exhibit shows what section to read to apply the correct process.

**Note:** When a Controlling Organization delegates its lockout/tagout responsibilities to an authorized worker, they outline the delegate's responsibilities and their expectations.

## 4.0 Authorized Worker – Verbal Authorization Only

### 4.1 Applicability

This information applies when the work activity meets the eight criteria for proceeding with verbal authorization (See <u>The Decision Chart – What Lockout/Tagout Process Must Be Followed</u> exhibit) only and the Controlling Organization does not choose to place their lock and tag.

#### 4.2 Required Procedure

PNWD and contractor personnel must be protected from injury due to the inadvertent or unexpected release of an energy source during the temporary setup, alignment, maintenance, or inspection of a utility, system, or equipment.

The authorized worker must perform a safe-to-work check before the work begins.

The authorized worker obtains verbal authorization from the Controlling Organization to proceed with the work.

The Controlling Organization notifies all affected workers of the lockout/tagout.

**Note:** The responsibility to make these notifications may be delegated to the authorized worker.

The authorized worker turns off or shuts down the machine or equipment as directed by the Controlling Organization.

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The authorized worker applies an individually assigned lock and tag and proceeds with the work activity in accordance with the requirements in the <u>Authorized Worker Requirements</u> exhibit, and the <u>Hazardous Energy Isolation Practices</u> exhibit.

**Note:** If you do not have the appropriate lock or tag, see the <u>Acquiring Locks and Tags</u> exhibit, for instructions to obtain one. To see what the tags look like, see the <u>Images of the Lockout/Tagout Danger Tags</u> exhibit.

The authorized worker is not required to remove their lock and tag if work will continue the following work day. If the authorized worker will not be able to complete the job (e.g., going on vacation) and there is an unsafe condition, the authorized worker notifies the Controlling Organization to arrange for transfer of control.

The authorized worker performs the following after completion of work:

- confirm that the machine or equipment is in a safe condition
- confirm that staff are in a safe location
- confirm that the equipment is cleared of tools and materials
- confirm that affected employees are informed that the equipment is being re-energized
- remove lock and tag
- notify the Controlling Organization that the work is complete.

# 5.0 Authorized Worker – Written Instructions Required

## 5.1 Applicability

This information applies when the work activity does not meet the eight criteria for proceeding with verbal authorization only and the Controlling Organization does not choose to place their lock and tag.

#### 5.2 Required Procedure

Workers must be protected from injury due to the inadvertent or unexpected release of an energy source during the temporary setup, alignment, maintenance, or inspection of a utility, system, or equipment.

The Controlling Organization plans and documents specific steps of the lockout/tagout work to be performed if the eight criteria for proceeding with verbal authorization only are not met. (See the <u>Written Instructions on Lockout/Tagout</u> exhibit.)

The authorized worker must perform a safe-to-work check before the work begins.

The Controlling Organization provides written instructions on lockout/tagout to the authorized worker.

The authorized worker obtains approval from the Controlling Organization to proceed with the work.

The Controlling Organization notifies all affected workers of the lockout/tagout.

**Note:** The responsibility to make these notifications may be delegated to the authorized worker.

The authorized worker turns off or shuts down the machine or equipment in accordance with written instructions.

The authorized worker applies an individually assigned lock and tag and proceeds with the work activity in accordance with the requirements in the Authorized Worker Requirements and the Hazardous Energy Isolation Practices exhibits.

**Note:** If you do not have the appropriate lock or tag, see the <u>Acquiring Locks and Tags</u> exhibit, for instructions to obtain one. To see what the tags look like, see the <u>Images of the Lockout/Tagout Danger Tags</u> exhibit.

The authorized worker is not required to remove their lock and tag if work will continue the following work day. If the authorized worker will not be able to complete the job (e.g., going on vacation) and there is an unsafe condition, the authorized worker notifies the Controlling Organization to arrange for transfer of control (see section 1.9 of this procedure, Transfer and Temporary Removal of Lockouts/Tagouts).

The authorized worker performs the following after completion of work:

- confirm that the machine or equipment is in a safe condition
- confirm that staff are in a safe location
- confirm that the equipment is cleared of tools and materials
- confirm that affected employees are informed that the equipment is being re-energized.
- remove lock and tag.
- notify the Controlling Organization that the work is complete.

# **6.0** Controlling Organization and Authorized Worker – Verbal Authorization Only

#### 6.1 Applicability

This information applies when the work activity meets the eight criteria for proceeding with verbal authorization only and the Controlling Organization chooses to place their lock and tag.

## **6.2** Required Procedure

Workers must be protected from injury due to the inadvertent or unexpected release of an energy source during the temporary setup, alignment, maintenance, or inspection of a utility, system, or equipment.

The authorized worker must perform a safe-to-work check before the work begins.

The Controlling Organization prepares tag and enters the required information in the logbook. (See the <u>Preparing Controlling Organization Tags and Entering Logbook Information</u> exhibit.)

The Controlling Organization notifies all affected workers of the lockout/tagout.

**Note:** The responsibility to make these notifications may be delegated to the authorized worker.

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The Controlling Organization places lock and *Danger – Do Not Operate* tag.

The authorized worker obtains verbal authorization from the Controlling Organization to proceed with the work.

The authorized worker applies an individually assigned lock and tag and proceeds with the work activity in accordance with the requirements in the <u>Authorized Worker Requirements</u> and <u>Hazardous Energy</u> <u>Isolation Practices exhibits</u>.

**Note:** To view the tags, see the Images of the Lockout/Tagout Danger Tags exhibit.

The authorized worker is not required to remove their lock and tag if work will continue the following work day. If the authorized worker will not be able to complete the job (e.g., going on vacation) and there is an unsafe condition, the authorized worker communicates the status of the job and the unsafe condition to the Controlling Organization and delegate. The Controlling Organization or delegate must change the Do Not Operate tag to reflect the unsafe condition and the authorized worker must initial the tag to indicate concurrence before leaving.

The authorized worker performs the following after completion of work:

- confirm that the machine or equipment or system is in a safe condition
- remove lock and tag
- notify the Controlling Organization that the work is complete.

After the work is completed (and all authorized worker locks and tags are removed), the Controlling Organization confirms:

- that the machine or equipment is in a safe condition
- staff are in a safe location
- the equipment is cleared of tools and materials
- affected employees are informed that the equipment is being re-energized.

The Controlling Organization removes lock and tag.

The Controlling Organization returns the machine or equipment to service.

**Note:** When the Controlling Organization delegates its lockout/tagout responsibilities, the delegate is required to obtain authorization from the Controlling Organization before removing the Controlling Organization's lock and *Danger – Do Not* Operate tag.

The Controlling Organization notes in the log book that the lock and tag has been removed.

# 7.0 Controlling Organization and Authorized Worker – Written Instructions Required

## 7.1 Applicability

This information applies when the work activity does not meet the eight criteria for proceeding with verbal authorization only and the Controlling Organization chooses to place their lock and tag.

## 7.2 Required Procedure

Workers must be protected from injury due to the inadvertent or unexpected release of an energy source during the temporary setup, alignment, maintenance, or inspection of a utility, system, or equipment.

The Controlling Organization plans and documents specific steps of the lockout/tagout work to be performed when the eight criteria for proceeding with verbal authorization only are not met. (See the Written Instructions on Lockout/Tagout exhibit.)

The authorized worker must perform a safe-to-work check before the work begins.

The Controlling Organization provides written instructions on lockout/tagout for the authorized worker.

The Controlling Organization prepares tag and enters the required information in the logbook. (See the <u>Preparing Controlling Organization Tags and Entering Logbook Information</u> exhibit.)

Note: To view the tags, see the Images of the Lockout/Tagout Danger Tags exhibit.

The Controlling Organization notifies all affected workers of the lockout/tagout.

**Note:** The responsibility to make these notifications may be delegated to the authorized worker.

The Controlling Organization applies lock and tag.

The authorized worker obtains approval from the Controlling Organization before proceeding with the work.

The authorized worker turns off or shuts down machine or equipment in accordance with written instructions.

The authorized worker applies individually assigned lock and tag and proceed with the work activity in accordance with the requirements in the <u>Authorized Worker Requirements</u> and <u>Hazardous Energy Isolation Practices</u> exhibits.

The authorized worker is not required to remove their lock and tag if work will continue the following work day. If the authorized worker will not be able to complete the job (e.g., going on vacation) and there is an unsafe condition, the authorized worker communicates the status of the job and the unsafe condition to the Controlling Organization and delegate. The Controlling Organization or delegate must change the

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Do Not Operate tag to reflect the unsafe condition and the authorized worker must initial the tag to indicate concurrence before leaving.

The authorized worker performs the following after completion of work:

- confirms that the machine or equipment or system is in a safe condition
- removes lock and tag
- notifies the Controlling Organization that the work is complete.

After the work is completed (and the authorized worker locks and tags are removed), the Controlling Organization Confirms that:

- the machine or equipment is in a safe condition
- staff are in a safe location
- the equipment is cleared of tools and materials
- affected employees are informed that the equipment is being re-energized
- removes lock and tag
- returns the machine or equipment to service.

**Note:** When the Controlling Organization delegates its lockout/tagout responsibilities, the delegate is required to obtain authorization from the Controlling Organization before removing the Controlling Organization's lock and *Danger – Do Not Operate* tag.

The Controlling Organization notes in the log book that the lock and tag has been removed.

## 8.0 Temporary Removal (Lifts) of Lockouts/Tagouts

## 8.1 Applicability

This information applies to Controlling Organizations temporarily removing a lockout/tagout for testing, troubleshooting, and for safety reasons. It may also occur when a system is being returned to service following repair or maintenance and does not operate as expected.

## **8.2** Required Procedure

There are situations, especially during construction, maintenance, and inspection activities, when testing and troubleshooting of equipment or systems must be conducted. The temporary removal of a lockout/tagout is conducted in accordance with the following information.

The Controlling Organization approves all temporary removals of lockout/tagouts.

The Controlling Organization conducts temporary removal of lockout/Tagout only under the following circumstances:

- temporary removal occurs only during the limited time necessary for testing, troubleshooting and for safety reasons (e.g., parking lot lights)
- affected staff are informed that the equipment is being re-energized

- all staff are in a safe location
- the equipment is cleared of tools and materials
- the lockout/Tagout is removed and retained.

The Controlling Organization documents removal of lock and tags on a Lockout/Tagout Temporary Lift Tag (Word) attached to or with the Controlling Organization tag.

The Controlling Organization and/or authorized worker reinstalls the lockout/Tagout after completion of the temporary re-energization.

**Note:** When testing or troubleshooting results in a situation where the equipment or system is repaired or operational, and is also in a safe condition, it may be returned to service or to the Controlling Organization without de-energizing and relocking or re-tagging the equipment or system.

The authorized worker performs the following after completion of work:

- confirm that the machine or equipment or system is in a safe condition
- remove authorized worker lock and tag (if not already removed)
- notify the Controlling Organization that the work is complete.

The Controlling Organization performs the following after completion of work:

- confirm that the machine or equipment is in a safe condition
- confirm workers are in a safe location
- confirm the equipment is cleared of tools and materials
- confirm affected staff are informed that the equipment is being re-energized
- remove the Controlling Organization lock, and the *Danger Do Not Operate* tag, and the *Lockout/Tagout Temporary Lift* tag.
- destroy the tags after removal.

**Note:** When the Controlling Organization delegates its lockout/tagout responsibilities, the delegate is required to obtain authorization from the Controlling Organization before removing the Controlling Organization lock and the tag.

The Controlling Organization notes in the logbook on the instructions that the lock and tags have been removed.

# 9.0 Lockout/Tagout Transfers

#### 9.1 Applicability

This information applies to authorized workers transferring lockouts/tagouts to other authorized workers.

### 9.2 Required Procedure

Lockouts/tagouts must be transferred during shift or staff changes in a way that maintains worker safety and work boundary isolations. The Controlling Organization must approve transfer of lockout/tagouts. This can be accomplished with verbal or written approval.

The following information is provided for transferring lockouts/tagouts and transferring lockouts/tagouts when the responsible authorized worker is not available:

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• transferring Lockouts/Tagouts

• transferring Lockouts/Tagouts when responsible authorized worker is not available.

## 9.3 Transferring Lockouts/Tagouts

The outgoing and incoming authorized workers walk down the job jointly.

The incoming authorized worker verifies that the energy is isolated.

**Note:** When a job extends over multiple shifts, safe-to-work checks are advisable after the shift change, especially when there have been changes that affect the control boundary (e.g., temporary removal of locks and tags, during the previous shift). When there is any doubt, test before you touch.

The incoming authorized worker(s) place their lock(s)/tag(s) and the outgoing worker(s) remove their lock(s)/tag(s).

**Note:** When it is known that the lockouts/tagouts will extend over multiple shifts, the lockbox (group lockout/tagout) option provides an orderly transfer process. This option is described in the <u>Hazardous Energy Isolation Practices</u> exhibit.

**Note:** When neither of the above methods is feasible, transfer instructions for the specific transfer are developed and documented. The transfer instructions include the following information at a minimum:

- name/ position of the person responsible for authorizing and enforcing the transfer process
- signature of each incoming individual (including date and time)
- provisions for identifying special instructions to confirm the integrity of the energy isolations
- methods of key control (e.g., lockbox).

#### 9.4 Transferring Lockouts/Tagouts when Responsible Authorized Worker is not Available

Normally, an authorized worker lock and tag can only be removed by the authorized worker who originally installed them. When this authorized worker is not on site, the lock and tag may be removed under the direction of the authorized worker's management as follows:

The Controlling Organization determines that there is a compelling need to remove the lock and tag that cannot be postponed until the authorized worker is available.

The manager of the authorized worker confirms that the authorized worker is not onsite.

The manager of the authorized worker takes reasonable efforts to reach and inform the authorized worker of the proposed action. A phone conversation with the original authorized worker is considered adequate when documented. The system status and conditions required for safe restart must be documented on the Management Removal of Lock and Tag form.

The authorized worker provides information on system status and any related hazards.

The Controlling Organization assesses the system status and any unsafe conditions prior to removing the authorized worker's lock and tag if contact with the authorized worker is not possible.

The manager of the authorized worker and Controlling Organization documents the system status and conditions required for safe restart and any supplementary information and signs the Management Removal Lock and Tag form authorizing the Controlling Organization to remove the lock and tag.

The Controlling Organization authorizes the work to be performed and provides the Management Removal of Lock and Tag form to the work team leader.

The work team leader communicates the information on the Management Removal of Lock and Tag form to workers performing subsequent service or maintenance or putting the system back into service.

**Note:** The completed Management Removal of Lock and Tag form will be retained by the work team leader or kept with the job planning package, if one exists, until the system is restored to service.

The manager of the authorized worker provides a copy of the Management Removal of Lock and Tag form to the missing authorized worker upon return to work, when prior contact with the missing authorized worker has not been possible.

## 10.0 Inspections and Reviews

#### 10.1 Applicability

This information applies to PNNL Worker Safety & Health staff.

## **10.2** Required Procedure

PNNL Worker Safety & Health staff perform a programmatic evaluation of the lockout/tagout program with support as necessary by Safety & Health Representatives, Controlling Organizations, and third-party assessors to assess program effectiveness in the following areas:

- The process described in this procedure are being followed.
- Staff involved know their responsibilities for the process. The authorized employee performing this evaluation observes and talks with a representative number of authorized employees implementing the process in order to obtain a reasonable reflection of how lockout/tagout is being implemented.
- The process provides the necessary protection. Where weaknesses are identified, changes are also identified.

PNNL Worker Safety & Health representatives will determine the scope of the programmatic evaluation and enlist necessary support from organizations performing lockout/tagout.

## 11.0 Training

## 11.1 Required Procedure

All PNWD staff, Non-Staff, and Contractors are considered affected workers and will receive an initial lockout/tagout general awareness briefing before they begin work for PNWD and an annual refresher briefing thereafter.

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To become an authorized worker, PNWD staff must complete PNWD's Lockout/Tagout Program training (Course 692) before performing lockout/tagout activities, and must be retrained biennially. (This training complies with PNWD and Washington Industrial Safety and Health Act (WISHA)/Occupational Safety and Health Administration (OSHA) requirements.) After completing the training, the staff member is considered to be an "authorized worker."

To assume Controlling Organization responsibilities, an individual must be a PNWD staff member trained as an authorized worker.

To be qualified as authorized workers in PNWD facilities, non-PNWD Staff and/or Contractors) must have taken the PNWD Lockout/Tagout Program training (Course 692) within the previous 2 years OR completed both a WISHA/OSHA compliant Lockout/Tagout training and PNNL's Lockout/Tagout Gap training (course 1992) within the previous 2 years. They must participate in the pre-job and be briefed on the specific lockout/tagout requirements to be followed. Non-PNWD service employees cannot act as Controlling Organization delegates.

An alternative to becoming a PNWD authorized worker or short-term authorized worker is for the non-PNWD service employee to remain outside the control boundary and direct a PNWD authorized worker to perform the work.

#### 12.0 References

29 CFR 1910.147, The Control of Hazardous Energy (Lockout/Tagout).

29 CFR 1910.333, Selection and Use of Work Practices.

29 CFR 1926, Safety and Health Regulations for Construction.

Hazard Assessment Program Description

WAC Chapter 296-803, Lockout/Tagout (Control of Hazardous Energy).

WAC 296-155-429, Lockout and Tagging of Circuits.

WAC 296-155-429, Lockout and Tagging of Circuits (for Construction).

#### 13.0 Records

None.

#### **14.0** Forms

Lock and Tag Logsheet (Word)

Lockout/Tagout Inspection Form (Word)

Lockout/Tagout Written Instruction Form (Word)

Management Removal of Lock and Tag (Word)

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## 15.0 Exhibits

Acquiring Locks and Tags (Word)

Authorized Worker Requirements (Word)

Controlling Organization Lockout/Tagout Process (PDF)

**Decision Chart** (PDF)

Eight Criteria for Proceeding with Verbal Authorization Only (Word)

Exceptions to Lockout/Tagout Requirements (Word)

<u>Hazardous Energy Isolation Practices</u> (Word)

<u>Hazards Analysis Process</u> (Word)

Images of the Lockout/Tagout Danger Tags (Word)

Lockout/Tagout Temporary Lifts Tag (Word)

Preparing Controlling Organization Tags and Entering Logbook Information (Word)

Program Overview for Short-Term Authorized Workers (Word)

Reviewing Work Process - Taking a Second Look for Safety (Word)

Written Instructions on Lockout/Tagout (Word)