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1.0 PURPOSE AND SCOPE

1.1 Purpose

1.1.1. This procedure establishes the authority, responsibility, and process necessary to protect employees from injury caused by the unexpected energization, start up, or release of stored energy during service or maintenance of Power Production equipment.

1.2 Scope

1.2.1. This procedure covers Lockout Tagout Clearance Activities at Power Production facilities. This includes Priest Rapids, Wanapum, Wanapum Switchyard Station Service, Quincy Chute, and Potholes East Canal, up to and including the Point of Separation Devices between Power Production and Power Delivery jurisdictions.

2.0 REFERENCES AND COMMITMENTS

2.1 Performance References

2.1.1. None

2.2 Developmental References

2.2.1. Washington Administrative Code (WAC) chapter 296-45 & 296-803

2.3 Commitments

2.3.1. "The Department of Labor and Industries is the sole and paramount administrative agency responsible for the administration and interpretation of this chapter (WAC 296-45, the basis of this procedure) and the Washington Industrial Safety and Health Act of 1973." WAC 296-45-005.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Precautions

WARNING

Failure to develop and implement an adequate Clearance Perimeter to isolate workers from hazardous energies can result in injury and/or death.

3.2 Limitations

3.2.1. None

4.0 PREREQUISITES AND INITIAL CONDITIONS

4.1 Prerequisites

4.1.1. None

4.2 Initial Conditions

4.2.1. None

5.0 INSTRUCTIONS

5.1 CLEARANCE ORDER PREPARATION AND DEVELOPMENT

Perform the following to prepare, review, and develop a Clearance for planned work.

5.1.1. Clearance Requester:

1. **DETERMINE** the need for a clearance based on job scope and risk.

2. **DEVELOP** a Clearance Perimeter using prints, procedures, job plans, etc.

> **NOTE**
>
> More information about Point of Separation and Power Delivery jurisdiction can be found in Attachment 2, General Clearance Requirements

3. **IF** the Clearance Perimeter includes a Point of Separation (POS) Device,

   THEN COORDINATE with Dispatch to include POS tags with the Clearance.

> **NOTE**
>
> Verbal clearance requests for same day, time-sensitive, or simple emergent work may be considered by the Chief Operator.

4. **SUBMIT** the Clearance request by 1200 Wednesday prior to the work week the Clearance is required.

5.1.2. Senior Operator:

1. **REVIEW** the Clearance request.

2. **DETERMINE** if the Clearance Perimeter will provide worker protection based on the scope of work and risk.

3. **EVALUATE** the impact on plant operation.

4. **IF** the Clearance does not meet standards,

   THEN RETURN to the Clearance Requester for revision.

5. **APPROVE** the Clearance request and forward it to the Chief Operator for review and verification.

5.1.3. Chief Operator:

1. **REVIEW** the Clearance request.

2. **VERIFY** that the Clearance Perimeter will provide worker protection based on the scope of work and risk.

3. **EVALUATE** the impact on plant operation.

4. **IF** the Clearance does not meet standards,

   THEN RETURN to the Clearance Requester for revision.

5. **APPROVE** the Clearance request and forward it to the Senior Operator for processing.

5.1.4. Senior Operator:

1. **DEVELOP** the Clearance using the Clearance Module of the Station Log.

5.2 PLACING A CLEARANCE

Perform the following to isolate Hazardous Energy using a Clearance.

5.2.1. Clearance Holder:

1. **REVIEW** the job plan.
2. **ENSURE** the Clearance will protect workers based on job scope and risk.
3. **ENSURE** planned work is ready to begin by verifying the following:
   a. Personnel are available to perform the work.
   b. Tools and equipment are staged and ready.
4. **REQUEST** the Clearance Order be placed.

5.2.2. Senior Operator:

> **NOTE**
>
> More information about Point of Separation and Power Delivery jurisdiction can be found in Attachment 2, General Clearance Requirements.

1. **IF** the Clearance Order includes a Point of Separation (POS) device,

   THEN REQUEST Dispatcher authorizes the switching/tagging of the POS.
2. **PROVIDE** the Clearance Order, Clearance Tags, and POS tags (if applicable) to the Chief Operator for review and approval.

5.2.3. Chief Operator:

1. **REVIEW** Clearance Order, Clearance Tags, and POS Tags (as applicable) to verify:
   a. The correct clearance is being hung.
   b. Tags match clearance number.
   c. Clearance Perimeter is adequate.
   d. Tagged positions are appropriate.
   e. Clearance will not adversely affect plant operations.
   f. The Clearance Holder's qualification is current.
2. **ENDORSE** the Clearance Order at "Authorized By".

3. **RETURN** the Clearance documents to the Senior Operator.

5.2.4. Senior Operator:

1. **ENDORSE** the Clearance at "Ordered By".

2. **ORDER** the Clearance be placed.

5.2.5. Operator:

1. **REVIEW** the Clearance Order and tags with the Senior/Chief Operator, as appropriate.

NOTE
Only the first tag placed on an Energy Isolating Device will require a locking device and lock.

2. **GATHER** locks, locking devices, and keys, as applicable.

3. **IF** the Clearance includes a Point of Separation (POS) device,

   THEN PERFORM the following:

   a. **COORDINATE** with the Senior Operator to **POSITION** the POS device as directed by Dispatch.

   b. **PLACE** the POS tag on the POS device.

4. **ENSURE** the Energy Isolating Device is positioned as directed by the Clearance Order Tag List.

NOTE
More information about Stored Energy can be found in Attachment 3, Stored Energy and Zero Energy Checks.

5. **ENSURE** Stored Energy is discharged.

6. **IF** NO other tags/locks are Placed at an Energy Isolation Device,

   THEN INSTALL a locking device and lock.

7. **ATTACH** the appropriate Clearance tag to the locking device.

8. **INITIAL** the Clearance tag.

9. **WHEN** all Energy Isolating Devices on the Tag List are positioned, Locked & Tagged,

   THEN ENDORSE the Clearance Order at "Placed By".

5.2.6. Clearance Holder:

1. **INDEPENDENTLY VERIFY** the following:

   - All Clearance Points on the Clearance Tag List are positioned as ordered.
   - Stored Energy is discharged.
   - Locking devices are installed.
   - Locks are Placed.
   - Clearance Points are tagged as ordered.

2. **INITIAL** each tag.

3. **WHEN** all Energy Isolating Devices are verified as positioned, Locked, and Tagged,

   THEN ENDORSE the Clearance Order at "Issued To".

5.2.7. Senior Operator:

1. **UPDATE** the Clearance Status in the Clearance Module of the Station Log.

5.2.8. **IF** Grounds are required for worker protection:

THEN PERFORM the following:

1. Clearance Holder:

   a. **ARRANGE** to have Grounds installed by electricians.

   b. **NOTIFY** Operations when Grounds are ready to be installed.

2. Senior Operator:

   a. **ENSURE** the installation of Grounds is safe for the given Clearance Perimeter.

   b. **PROVIDE** Ground tags and Tag List to Chief Operator for review and Approval.

3. Chief Operator:

   a. **VERIFY** installation of Grounds is safe for the given Clearance Perimeter.

b. **AUTHORIZE** installation of Grounds, as appropriate.

4. Senior Operator:

   a. **ORDER** Grounds installed per the Clearance Order Tag List.

5. Electricians:

   a. **ENSURE** electricians are signed onto a Clearance that provides protection for Ground installation.

   b. **PEER CHECK** Ground placement is correct per the Tag List.

   c. **INSTALL** Grounds.

6. Operator:

   a. **VERIFY** Grounds are installed per the Tag List.

   b. **TAG** each Ground device as ordered.

   c. **INITIAL** the Ground tag.

   d. **NOTIFY** the Senior Operator that Grounds are installed and Tagged.

7. Senior Operator:

   a. **UPDATE** the Ground Tag status in the Clearance Module of the Station Log.

   b. **NOTIFY** Clearance Holder that Grounds are installed and Tagged.

8. Clearance Holder:

   a. **VERIFY** Grounds are installed and Tagged per the Tag List.

   b. **INITIAL** each Ground tag.

5.2.9. Clearance Workers:

1. **ENSURE** the Clearance Holder has granted permission to work under the Clearance Order.

2. **REVIEW** the job plan and Clearance Order with the Clearance Holder.

3. **IF** there are concerns about the Clearance Perimeter and job scope,

   THEN ADDRESS concerns with the Clearance Holder and/or Operations.

4. **VERIFY** the following:

   - All Clearance Points on the Tag List are positioned as ordered.
   - Stored Energy is released.
   - Locking Devices are installed.
   - Locks are Placed.
   - Clearance Points are tagged as ordered.

NOTE

Signing onto the Clearance Order Group Tagout form is acknowledgement that the Clearance Worker agrees that the Clearance Perimeter is adequate for the associated work.

5. **ENDORSE** the "Clearance Order Group Tagout" form under the left-hand column.

5.3 CHIEF OPERATOR CLEARANCE

Perform the following to place damaged equipment on Clearance when a craft Clearance Holder is not available:

5.3.1. Chief Operator:

1. **DEVELOP** a Clearance Perimeter using prints, procedures, system walk-down, etc.

2. **DISCUSS** required Clearance Points with the Senior Operator.

5.3.2. Senior Operator:

1. **DEVELOP** a Chief Operator Clearance in the Clearance Module of the Station Log.

2. **INCLUDE** "Chief's Clearance" in the title block.

5.3.3. **PLACE** the Clearance per sections 5.2.2, 5.2.3, 5.2.4, & 5.2.5

5.3.4. **PROHIBIT** work from being performed under a Chief Operator Clearance.

5.4 MODIFYING A CLEARANCE PERIMETER

Perform the following to modify a Clearance Perimeter by adding or removing Clearance Points.

5.4.1. Clearance Holder:

1. **DETERMINE** how to modify the Clearance Perimeter using prints, procedures, job plans, etc.

2. **DISCUSS** the following with the Chief Operator:

   a. Purpose for modifying the Clearance Perimeter.

   b. The applicable Clearance Points.

   c. The impact on plant operations.

3. **IF** the Chief Operator agrees to modify the Clearance Perimeter,

   THEN perform the following:

   a. **UPDATE** the Clearance Work Activity Log.

   b. **NOTIFY** Clearance Workers of the change to the Clearance Perimeter and have them initial the Clearance Work Activity Log.

   c. **ENSURE** workers, tools, and equipment are in the clear.

   d. **GRANT** permission to the Senior Operator to modify the clearance Perimeter.

5.4.2. Chief Operator:

1. **AUTHORIZE** modifying the Clearance Perimeter, as discussed with the Clearance Holder.

5.4.3. Senior Operator:

1. **ORDER** the modified Clearance Points either hung OR destroyed, as authorized by the Chief Operator.

5.4.4. Operator:

1. **REVIEW** the modified Clearance Points with the Senior/Chief Operator, as appropriate.

2. **INSPECT** the job site to verify it is safe to modify the Clearance Perimeter.

3. **IF** Clearance Point tags are to be destroyed,

   THEN perform the following:

   a. **REMOVE** tags, as ordered.

   b. **IF** there are no tags remaining on the Energy Isolating Device,

      THEN REMOVE lock and restore component to its normal configuration.

4. **IF** Clearance Point tags are to be added,

   THEN PLACE locks and tags per step 5.2.5

5. **NOTIFY** the Senior Operator that the Clearance has been modified, as ordered.

6. **RETURN** any destroyed tags to the Senior Operator for verification.

5.4.5. Senior Operator:

1. **UPDATE** the Clearance Point configurations in the Clearance Module of the Station Log.

2. **INFORM** the Clearance Holder that the Clearance Module has been updated.

5.4.6. Clearance Holder:

1. **IF** Clearance Point tags were added,

   THEN INDEPENDENTLY VERIFY the following:

   - All Clearance Points on the Tag List are positioned as ordered.
   - Stored Energy is released.
   - Locking devices are installed.
   - Locks are Placed.
   - Clearance Points are tagged.

2. **INITIAL** each tag.

5.5 LIFTING CLEARANCE TAGS FOR TESTING (Lift to Test)

Perform the following to temporarily lift locks/tags for testing:

5.5.1. Clearance Holder:

1. **IF** there are multiple Clearance Holders for a Clearance Point(s),

   THEN Perform the following:

   a. **DISCUSS** the planned test and need to lift specific tag(s) with each applicable Clearance Holder.

   b. All Clearance Holders: **REVIEW** the planned test and lift points to ensure the Lift to Test is safe to perform.

   c. **REQUEST** permission from all applicable Clearance Holders to lift tag(s) needed to accomplish test.

   d. All applicable Clearance Holders shall:

   - **NOTIFY** the Senior Operator that permission to lift tag(s) has been given, **OR**
   - **COMPLETE** "Permission to Lift Auxiliary Safety Tags" form **IF** the applicable Clearance Holder will not be onsite.

2. **DISCUSS** the Clearance Points that require Lift to Test with the Senior Operator.

5.5.2. Senior Operator:

1. **IF** the Senior Operator agrees that the Lift to Test is safe to perform,

   THEN DISCUSS the plan with the Chief Operator.

5.5.3. Chief Operator:

NOTE

- Removal of 13.8kV Grounds for electrical testing is allowed using Lift to Test.
- Rotating a unit with a rotation device is allowed using Lift to Test.

1. The following conditions **SHALL NOT** be approved for Lift to Test:

   a. Isolation points that are greater than 600V nominal.

   b. Lift to Test requests for rotating a unit with water.

2. **REVIEW** and **APPROVE** request to Lift to Test **IF** it is safe to do so.

5.5.4. Clearance Holder:

1. All affected Clearance Holders: **DISCUSS** proposed test with Clearance Worker(s), and get Clearance Worker initials on the Clearance Work Activity Log.

2. **IF** a Clearance Worker is absent,

   THEN PERFORM the following (Foreman/Chief Operator):

   a. **CONTACT** absent Clearance Worker to obtain verbal release of interest.

   b. **IF** unable to contact absent Clearance Worker

      THEN RELEASE interest on Clearance Worker's behalf.

      (1) **NOTIFY** absent Clearance Worker by email that they have been released from the Clearance by Foreman/Chief Operator.

3. **CONFIRM** machine or equipment is clear of tools and materials, and ready for test.

4. **ENSURE** safety barricades are in place, as required.

5. **REQUEST** that the Senior Operator Lift to Test tags and locks on equipment for testing, using Clearance Order tag number(s).

5.5.5. Senior Operator:

1. **ORDER** the Lift to Test be performed as authorized by the Chief Operator.

5.5.6. Operator:

1. **REVIEW** the Lift to Test Clearance Points with the Senior/Chief Operator, as appropriate.

2. **VERIFY** with the Clearance Holder requesting Lift to Test that all personnel are in the clear and ready to proceed.

3. **REMOVE** lock(s) and tag(s) as ordered.

4. **COORDINATE** with the Clearance Holder to restore energy through the lifted Clearance Points.

5. **NOTIFY** Senior Operator and Clearance Holders of time when tag(s) were lifted.

5.5.7. Clearance Holder:

1. **INFORM** Clearance Workers that tag(s) has been lifted and equipment restored to operation and ready for test.

2. **COORDINATE** testing with Operator.

3. **WHEN** testing is complete,

   THEN PERFORM the following:

   a. **IF** the lifted Clearance Points need to be reisolated,

      THEN REQUEST the Senior Operator order tags/locks rehung.

   b. **IF** the Clearance Points are no longer needed for the work activity,

      THEN request the Senior Operator order the tags destroyed.

4. Senior Operator:

   a. **ORDER** the tags/locks rehung **OR** destroyed, as requested by the Clearance Holder.

5. Operator:

   a. **IF** the Senior Operator orders tags/locks rehung,

      THEN ISOLATE, **LOCK** and **TAG** lifted Clearance Points.

   b. **IF** the Senior Operator orders tags destroyed,

      THEN ENSURE the Energy Isolation Devices are restored to their normal configuration.

   c. **NOTIFY** Senior Operator and Clearance Holders of the time tags/locks were rehung **OR** destroyed.

   d. **RETURN** any destroyed tags to the Senior Operator for verification.

6. Senior Operator:

   a. **VERIFY** the correct tags have been destroyed, as applicable.

   b. **UPDATE** the Clearance status in the Clearance Module of the Station Log.

7. Clearance Holders:

   a. **IF** tags/locks were rehung,

      THEN VERIFY the applicable Energy Isolating Devices are in the correct position, Locked and Tagged.

   b. **NOTIFY** Clearance Workers of the changes to the Clearance Order.

   c. **UPDATE** the Clearance Work Activity Log.

5.5.8. **ENSURE** all lifted tags/locks are rehung OR destroyed by the end of shift.

5.6 ESCORTING PERSONNEL INSIDE A CLEARANCE PERIMETER

Perform the following if an individual requires an escort within a Clearance Perimeter.

NOTE

- This section is intended for personnel that require entrance into a Clearance Perimeter for a one-time escort of short duration.
- The Clearance Holder is not obligated to perform escorts.

WARNING

Clearance Holders are directly responsible for the safety of personnel that are being escorted. Escorted personnel have a higher risk of injury as they may not understand the hazards within the Clearance Perimeter.

5.6.1. Employee requesting escort:

1. **ENSURE** that Hydro Safety Training has been completed by all personnel needing escort.
2. **UNDERSTAND** that only the Clearance Holder may perform an escort within a Clearance Perimeter.
3. **UNDERSTAND** that escorted personnel shall follow all directions given by the Clearance Holder within the Clearance Perimeter.
4. **DISCUSS** the need to enter the Clearance Perimeter with the Clearance Holder.

5.6.2. Clearance Holder:

1. **EVALUATE** if it is safe to escort personnel based on the current working conditions within the Clearance Perimeter.
2. **IF** it is safe to perform the escort **AND** the Clearance Holder has agreed to do so,

   THEN INFORM the escorted personnel of the following:

   - All hazards within the Clearance Perimeter.
   - Required PPE
   - Escorted personnel shall not perform any work.
   - Escorted personnel may perform visual inspection and image capture only.

- Escorted personnel shall remain within the immediate vicinity of the Clearance Holder.
- If directed to do so, the escorted personnel shall exit the Clearance Perimeter immediately.
- Agreeing to escort personnel is a one-time occurrence.

3. **FOCUS** on the safety of escorted personnel for the duration of the escort, without becoming distracted by ongoing work.

4. **ENSURE** escorted personnel follow all safety rules, including wearing appropriate PPE.

5.7 TRANSFERRING A CLEARANCE

Perform the following to transfer a Clearance between Clearance Holders:

5.7.1. Off-Going Clearance Holder:

1. **NOTIFY** Foreman that the Clearance will be transferred.
2. **UPDATE** the Clearance Work Activity Log.
3. **INFORM** the Clearance Workers of the transfer and have them initial the Clearance Work Activity Log.
4. **PROVIDE** detailed information about the clearance to the new Clearance Holder.
5. **TURNOVER** applicable "Clearance Order Group Tagout" and "Clearance Work Activity Log" forms to on-coming Clearance Holder.

5.7.2. On-Coming Clearance Holder:

1. **REVIEW** the Clearance Order and applicable "Clearance Order Group Tagout" & "Clearance Work Activity Log" forms with the off-going Clearance Holder.
2. **INDEPENDENTLY VERIFY** the following:
   - All Clearance Points on the Clearance Tag List are positioned as ordered.
   - Stored Energy is released.
   - Locking Devices are installed.
   - Locks are Placed.
   - Clearance Points are tagged as ordered.
3. After verification, **INITIAL** each tag.
4. **INFORM** the Senior Operator that the Clearance will be transferred.
5. **ENDORSE** the "Transferred To" line of the Clearance Order.

5.7.3. Off-Going Clearance Holder:

1. **ENDORSE** the "Released By" line of the Clearance Order.

5.7.4. Senior Operator:

1. **PROCESS** the Clearance Holder change in the Clearance Module of the Station Log.

5.7.5. **IF** a Clearance must be transferred to a different Clearance Holder **AND** the off-going Clearance Holder is absent,

THEN PERFORM the following:

NOTE
The order of preference for taking responsibility for an absent off-going Clearance Holder is the Foreman and then the Chief Operator.

1. Foreman/Chief Operator:

   a. **REQUEST**, via telephone, that the absent off-going Clearance Holder verbally release their interest in the Clearance Order.

   b. **IF** the off-going Clearance Holder cannot be contacted,

      THEN the Foreman or Chief Operator should take responsibility to transfer the Clearance on behalf of the absent off-going Clearance Holder.

   c. **TRANSFER** the Clearance per step 5.7.1, with the Foreman or Chief Operator performing duties as the off-going Clearance Holder.

   d. **NOTIFY** the off-going Clearance Holder, Foreman, and Supervisor, via email, that the Clearance has been transferred.

5.8 RELEASING A CLEARANCE

Perform the following when work is complete, and a Clearance is no longer required.

5.8.1. Clearance Holder:

1. **INFORM** Clearance Workers that the Clearance will be Released.

2. **DIRECT** Clearance Workers to release interest in the Clearance by endorsing the "Clearance Order Group Tagout" under "I release my interest in this clearance".

NOTE

The order of preference for taking responsibility for an absent Clearance Worker is the Foreman and then the Chief Operator.

3. **IF** a Clearance Worker is absent,

   THEN PERFORM the following (Foreman/Chief Operator):

   a. **CONTACT** absent Clearance Worker to obtain verbal release of interest.

   b. **IF** unable to contact absent Clearance Worker

      THEN RELEASE interest on Clearance Worker's behalf.

      (1) **NOTIFY** absent Clearance Worker by email that they have been released from the Clearance by Foreman/Chief Operator.

4. **INSPECT** applicable equipment and work areas. Examples include:

   - General housekeeping.
   - Tools and equipment are Removed from the equipment.
   - Systems are closed up and ready for service.
   - Foreign Material Exclusion logs are reconciled.

5.8.2. **IF** Grounds were installed for worker protection,

THEN PERFORM the following:

1. Clearance Holder:

   a. **ARRANGE** to have Grounds Removed by electricians.

   b. **NOTIFY** Operations that Grounds are ready to be Removed.

2. Senior Operator:

   a. **NOTIFY** Chief Operator that Grounds have been requested Removed.

   b. **ORDER** Grounds Removed per the Tag List.

3. Operator:

   a. **REMOVE** Ground tags as ordered on the Tag List.

4. Electricians:

   a. **ENSURE** electricians are signed onto a Clearance that provides protection for Ground removal.

   b. **PEER CHECK** Ground removal is correct per the Tag List.

   c. **REMOVE** Grounds.

5. Operator:

   a. **VERIFY** Grounds have been Removed per the Tag List.

   b. **NOTIFY** Senior Operator that Grounds were verified off.

   c. **RETURN** Ground tags and Tag List to Senior Operator for verification.

6. Senior Operator:

   a. **VERIFY** the correct Ground tags were Removed by comparing the returned tags to the Tag List.

   b. **UPDATE** the Ground tag status in the Clearance Module of the Station Log.

5.8.3. Clearance Holder:

1. **ENDORSE** the "Released By" line of the Clearance Order.

5.8.4. Senior Operator:

1. **ENDORSE** the "Ordered Off" line of the Clearance Order.

2. **ORDER** the Clearance be Removed.

5.8.5. Operator:

1. **REVIEW** the Clearance Order and Tag List with the Senior Operator/Chief Operator, as appropriate.

2. **INSPECT** applicable equipment and work area to ensure it is ready to be returned to service.

3. **REMOVE** tags, as ordered.

4. **IF** there are no tags remaining on the Energy Isolating Device,

   THEN REMOVE lock and locking device.

5. **IF** there are no other locks/tags on the applicable Energy Isolating Devices,

   THEN RESTORE the Energy Isolating Devices to their normal configuration.

6. **RETURN** tags and Tag List to the Senior Operator for verification.

7. **ENDORSE** the "Removed By" line of the Clearance Order.

5.8.6. Senior Operator:

1. **VERIFY** the correct tags were Removed by comparing the returned tags to the Clearance Tag List.

2. **UPDATE** the Clearance status in the Clearance Module of the Station Log.

3. **ARCHIVE** the Clearance Order, Tag List, and applicable Clearance Order Group Tagout & Clearance Work Activity Log sheets in the completed clearance binder.

5.8.7. **IF** the Clearance includes a Point of Separation (POS) Device,

THEN PERFORM the following:

1. Senior Operator:

   a. **INFORM** Dispatch of the following:

      - Request to release the POS tag.
      - All personnel are in the clear.
      - All grounds have been Removed.

   b. **WHEN** authorized by Dispatcher,

      THEN ORDER the removal of the POS locks/tags.

2. Operator:

   a. **REMOVE** the POS locks/tags.

b. **COORDINATE** with the Senior Operator to **POSITION** the POS device as ordered by Dispatch.

c. **RETURN** the POS tags to the Senior Operator for verification.

3. Senior Operator:

a. **NOTIFY** Dispatch the POS Device has been positioned as ordered.

b. **ROUTE** the POS tags to the Operations Supervisor for review.

END of Instructions

6.0 RECORDS

- None

7.0 REVISION HISTORY

Location	Description of Change
N/A	Major rewrite. Condensed previous versions into current format.
Attachment 6, section A	Added clarifying statement to annual training requirements: “Refresher training shall be completed within the next calendar year.”

Attachment 1, Definitions

CHIEF OPERATOR: Operator in charge of the power plant with complete operational jurisdiction. The Chief Operator on duty has the authority to determine who may be issued a clearance and the limitations or boundaries of that Clearance.

CLEARANCE: A condition achieved when all known hazardous energy sources are Isolated, stored energy is released, and energy control points are Locked/Tagged.

CLEARANCE HOLDER: A person that is trained and qualified to administratively control a Clearance. They shall be aware of the type and magnitude of power plant energy sources, the hazards of the energy, and the method or means of controlling the energy. They will receive training in the Lockout Tagout Clearance Process and are authorized to hold a Clearance. Clearance Holders typically are Foreman, Operators, Mechanics, Electricians, Planners, or I&C Technicians. See also Limited Clearance Holder.

CLEARANCE HOLDER, LIMITED: This designation reserved for: newly hired journey-level (operator, electrician, mechanic, or I&C technician) employee, non-journey level hydro employees, or contractor employee after completion of Lockout Tagout Clearance training. There shall be predefined limits to the Clearances these personnel may hold.

CLEARANCE LOG BOOK: Printed Clearance documentation kept in two Clearance log books at the Senior Operator's desk in the Control Room, one with Placed Clearances, and one with Removed.

CLEARANCE ORDER: An administrative practice to establish safe working conditions for maintenance and repair activities. A Clearance Order consists of the authorization process by Operations personnel, the establishment of administrative control by the Clearance Holder, and a "Tag List" of Energy Isolation Points that are positioned, Locked, and Tagged by Operations to remove Hazardous Energies.

CLEARANCE PERIMETER: A series of Clearance Points that isolate workers, within the Clearance Perimeter, from hazardous energies. The Clearance Perimeter is dictated by the Clearance Order.

CLEARANCE POINT: An Energy Isolating Device that has been designated by a Clearance Order to control hazardous energies. Clearance Locks/Tags are placed at Clearance Points to control configuration in order to maintain safe conditions within the Clearance Perimeter. An Energy Isolation Device becomes a Clearance Point when Locks/Tags are hung.

CLEARANCE MODULE: An application within the Station Log in which Clearances are administratively controlled.

CLEARANCE REQUESTER: Person that is trained and qualified to submit Clearance Requests. Clearances may be developed and requested by personnel in the following roles: Clearance Holder, Limited Clearance Holder, Foreman representing the Clearance Holder, and Project Manager representing a contractor Limited Clearance Holder.

CLEARANCE TAG: A method of identifying Clearance Points and notifying employees that the component shall not be operated.

CLEARANCE WORKER: Employee trained by the District in Lockout Tagout procedures in order to safely work under a Clearance Holder's Clearance. Performing duties as a Clearance Worker requires knowledge in the operation, maintenance and construction of lines, cables, stations and equipment relative to their current status. They shall also be fully aware of the hazards associated with the equipment they perform maintenance on while working under a Clearance Holder's Clearance.

DE-ENERGIZED: Free from any connection to intentional sources of energy or electrical supply, to a source of potential difference and/or from electric charge; not having a potential difference from that of the earth.

DISPATCH (DISPATCHER): A person who has been designated by the employer as having authority over switching and Clearance of high voltage lines and station equipment.

ENERGIZED: Electrically connected to a source of potential difference, or electrically charged so as to have a potential significantly different from the of earth in the vicinity.

ENERGY ISOLATING DEVICE: A physical device that prevents the transmission or release of energy, including but not limited to, the following: A manually operated electric circuit breaker, a disconnect switch, gate, an isolation valve, blocks, and any similar device with a visible indication of the position of the device (push buttons, selector switches, and other control-circuit-type devices are not energy isolating device). An Energy Isolating Device becomes a Clearance Point when Locks/Tags are hung per a Clearance Holder.

ENERGY SOURCE: Any electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy, including gravity, which could cause injury to personnel.

ENSURE: To make a comparison with stated requirements and take action, as needed, to satisfy the requirements.

GROUND: A conducting connection, whether intentional or accidental, between an electric circuit or equipment and the earth, or to some conducting body that serves the place of the earth.

GROUNDED: Connected to earth or to some conducting body that serves in place of the earth.

HAZARDOUS ENERGY: Energy that has the potential to cause injury.

INDEPENDENT VERIFICATION: The act of checking, by a separate qualified person, that a given operation or component position conforms to established criteria. No action shall be taken if the condition does not conform, other than notification to Operations.

ISOLATED: A system condition in which hazardous energy has been removed and controlled by an Energy Isolating Device(s).

LOCKED: A condition in which the position of an Energy Isolating Device has been controlled using padlocks. Along with tags, locks are used to maintain the configuration of an Energy Isolating Device as a Clearance Point.

MAY: Denotes permission, is neither a requirement nor a recommendation.

ORDER ON: Before a Clearance can be placed, it must be reviewed and approved by the Chief Operator and Ordered On by the Senior Operator. Ordered-On means that direction has been given to Place a Clearance.

ORDER OFF: Before a Clearance can be Released, it must first be ordered off by the Senior Operator.

PEER CHECK: A Human Performance tool in which two workers do self-checking in parallel. This is accomplished by both workers agreeing that the correct action is being performed on the correct component, the performer takes the agreed-upon action, and the peer confirms that the action taken is correct.

PLACED: The act of configuring Energy Isolating Devices as Clearance Points, securing the position with locks, and identification with tags.

POINT OF SEPARATION (POS): An established boundary device between the District's transmission and distribution system and connected generation plants or customer-owned facilities. A POS device delineates switching jurisdiction between Power Production and Power Delivery.

RELEASED: Relinquishing control of a Clearance by the Clearance Holder.

REMOVED: The process which removes/destroys Clearance tag(s) and returns equipment to operating position after a Clearance is Released.

REVIEW: The process by which a Clearance request is evaluated prior to approving, denying, or accepting the request.

SHALL: Denotes a requirement or mandatory action.

SHOULD: Denotes a recommendation that is to be performed unless specific conditions preclude it.

STATION LOG: The official legal record of power plant operations. All active Clearances, including changes in those Clearances (transfers, perimeter modification, lifting tags for test, and releases) are documented within the Clearance Module of the Station Log.

STORED ENERGY: Energy that resides or remains in a plant system. Examples include hydraulic pressure, electric charge, and elevated loads.

Attachment 1, Definitions (continued)

TAG LIST: The section of a Clearance Order that dictates which Energy Isolating Devices are to be used as Clearance Points, and the positions they will be configured to perform that function.

TAGGED: 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 and a means of attachment. It can be securely fastened to an energy-isolating device and the machine or equipment being controlled may not be operated until the tagout device is Removed.

THREE-WAY-COMMUNICATION: Communication method in which the message sender first states their message to the receiver clearly and concisely. Next, the receiver acknowledges the communication by repeating the message to the sender. If the receiver does not understand the sender's message, he or she must ask for clarification. Finally, the sender acknowledges the receiver's reply and verbally confirms to the receiver that the message is correct and properly understood.

VISIBLE OPEN: An electrical Energy Isolating Device that is designed such that it is obvious by casual observation of what position it is in. Open High Voltage aerial disconnects, and racked out breakers are examples of Visible Opens.

ZERO ENERGY: The point at which equipment has been safely Isolated from any chance of re-energization or release of residual energy.

Attachment 2, General Clearance Requirements

A. Lockout Tagout Clearance Process Scope:

1. Lockout Tagout Clearance Process HP-OPS-ADM-01 applies to Power Production Facilities. Operations has the authority and responsibility for power plant operations and exclusive control of all energy sources therein up to the following Point of Separation (POS) boundary devices:

2. 230kV Points of Separation:

   a. Priest Rapids Dam:

      (1) P1181, P1185, P1281, P1285, & P1381

   b. Wanapum Dam:

      (1) W1181, W1185, W1281, W1285, & W1381

   c. 115kV Points of Separation:

      (1) Potholes East Canal:

         (a) GB83

      (2) Quincy Chute:

         (a) GB400

   d. 13.8kV Points of Separation:

      (1) Priest Rapids:

         (a) PR312

      (2) Wanapum:

         (a) J255 & J47

3. The Dispatcher has primary responsibility for the operation of the District's transmission and distribution systems including the Point of Separation boundary devices.

4. Only the Dispatcher may authorize hanging/removing a “Point of Separation Do Not Operate Tag” on a point of Point of Separation device and this tag cannot be transferred.

Attachment 2, General Clearance Requirements (continued)

5. If a Clearance Perimeter includes a Point of Separation device, it must have both a "Point of Separation Do Not Operate" tag issued by Dispatch and a Clearance tag issued by the control room.

6. If maintenance or repair is required on a POS device, the Clearance will be issued from Dispatch for the work.

7. The POS Tag is always first on and last off all boundary devices.

8. The only time a Power Delivery issued Clearance will extend into Power Production's jurisdiction is when work occurs on a POS boundary device.

B. Communication:

1. Verbal orders for Clearance activities shall be given by the Chief or Senior Operator directly to the Operator Placing or Removing the Clearance.

2. The Chief Operator may Issue, Release, or Transfer Clearances via radio or telephone communication when it is impractical to perform those activities in person (e.g., work at Wanapum Switchyard, Quincy Chute, or Potholes East Canal).

3. Clearance Holder and Operations personnel shall use Three-Way Communication.

C. General Requirements:

1. Operators shall use the Tag List when placing, modifying, lifting, or removing a Clearance. Tags are normally hung in the order listed and removed in reverse order, unless otherwise directed by the Senior/Chief Operator.

2. No work will be performed on or around any hazardous energy source without a Clearance, except when working under an Energized Electrical Work Permit.

3. All Energy Isolating Devices are under exclusive control of Power Production Operations personnel.

4. The Chief Operator has authority to lift a Clearance during an emergency and may permit the Emergency Response Team to enter a Clearance Perimeter for medical emergencies.

5. All Clearance Activity shall stop if any device or equipment is found out of position or malfunctions, including any tag found in a position inconsistent with the Clearance Order. Clearance Activity may resume only when the Chief Operator and Clearance Holder agree it is safe to do so.

Attachment 2, General Clearance Requirements (continued)

6. It is not possible or necessary to lock some components as the Isolated condition is inherently resistant to inadvertent operation. Examples include GCB Disconnects, Slide Gates, Flex Links, etc. When a component is found to be "unlockable", the Chief Operator will be informed, and a Work Order generated to document the condition. A database of unlockable components will be maintained by the Operations Coordinator.

7. Whenever replacement or major repair, renovation, or modification of a machine or equipment is performed, and whenever new machines or equipment are installed, Energy Isolating Devices for such machines or equipment must be designed to accept a lockout device.

8. The Chief Operator has the authority to determine who may be issued a Clearance including limitations or boundaries of that Clearance. Additionally, the Chief Operator has authority to train and certify employees and contractors in this procedure.

9. Each tag will be hung at the equipment/device lockout point. Where this cannot be done, the tag shall be located as close as safely possible to the device and in a position immediately obvious to anyone attempting to operate it.

10. Operating equipment that is Locked/Tagged is a major safety violation and subject to discipline up to and including termination.

11. Tags hung outside in weather will be self-laminating type to prevent label deterioration.

12. A Visible Open is required for Clearance Points that are over 600V nominal.

13. The Clearance shall remain in place until all work is complete.

14. The Clearance Holder must be onsite for work to proceed under a clearance. If necessary, the clearance may be transferred to another Clearance Holder.

15. There will be a Clearance for each crew working around hazardous energy.

    a. Except when the protection required is identical to an existing Clearance on the same or related equipment and Clearance Holder agrees to be responsible for additional Clearance Workers.

    b. PUD crews will not typically work under a Contractor's Clearance except for inspections or commissioning support.

16. Prior to taking planned Personal Leave, Clearance Holders and Clearance Workers shall release interest in any Clearance Orders they are signed onto.

Attachment 3, Stored Energy and Zero Energy Checks

A. Stored Energy Discussion:

1. Stored Energy is accumulated energy that can release suddenly, potentially causing serious injury or death.

2. Stored energy can have many forms, including gravitational potential energy, pressurized gases and liquids, stored mechanical energy, and stored electrical energy. It is particularly dangerous because the hazard still remains, even though the original source of the energy may have been Isolated.

3. Examples of Stored Energy at Power Production include:

   - Windmilling ventilation fans
   - Tensioned springs.
   - Pressurized hydraulic systems.
   - Charged capacitors/battery banks.
   - Suspended loads and equipment.
   - Compressed air systems.

B. Protecting Workers from Stored Energy

1. All potentially hazardous stored energy must be relieved, disconnected, restrained, and rendered safe before the servicing or maintenance can be conducted.

2. Examples of methods to release Stored Energy:

   - Isolate and depressurize accumulators and air receivers.
   - Install Grounds to dissipate induced voltage.
   - Lower loads to deck level.
   - Release breaker charging spring tension.

3. Additionally, steps must be taken to prevent stored energy from reaccumulating. An example would be to lock/tag open an air bleed-off on an accumulator to ensure the accumulator tank pressure stays equalized with the environment.

Attachment 3, Stored Energy and Zero Energy Checks (continued)

C. Verification that Stored Energy is released (Zero Energy checks):

1. Simple equipment can be Test/Try operated after isolation to verify Zero Energy.

   a. Examples of equipment that can be test operated after the Clearance is hung:

      (1) Pump motors

      (2) Lighting circuits

      (3) Spillway gates

      (4) Elevators

      (5) Cranes

2. More complex systems may require the use of instrumentation to perform a Zero Energy check.

   a. Examples of equipment that Test/Try cannot be used to verify Zero Energy:

      (1) Slide Gates

      (2) Governor Oil Hydraulic systems

      (3) Unit Exciters

   b. Using installed instrumentation to verify Zero Energy:

      (1) Observe the following types of installed instrumentation before and isolation to ensure energy is released:

         (a) Pressure instruments.

         (b) Level instruments.

         (c) Voltmeters.

         (d) Indicating lights.

   c. Using test instrumentation (e.g., Live-Dead-Live voltage checks, or the use of portable pressure instruments) is an option if installed instrumentation, Test/Try, or system observation cannot verify Zero Energy.

Attachment 4, Operations Lock Administration

A. Lockset Inventory

1. Locksets are to be ordered to be keyed alike for each of the following facilities:
   a. Priest Rapids Dam
   b. Wanapum Dam and Switchyard
   c. Quincy Chute
   d. PEC
2. Operations Supervisor shall:
   a. **LOG** the receipt of locks and keys in the Key and Lockset Log.
   b. **DESIGNATE** keys for use in Control Room of destination facility.
      (1) Wanapum and Priest Rapids Control Rooms shall have 7 keys available in each control room.
      (2) Quincy Chute and PEC shall have 2 keys available in each control room.
   c. **DESIGNATE** keys to be retained by Security for replacement as needed and authorized by Plant Manager or designee.
      (1) 7 spare keys to be retained for each lockset for Wanapum and Priest Rapids.
      (2) 2 spare keys to be retained for each lockset for PEC and Quincy Chute.
   d. **ENSURE** the permanent and irreversible destruction of all remaining keys.
   e. **UPDATE** the Key and Lockset Log to identify the number of keys that have been delivered to each location, and the destruction of remaining keys.
3. If additional locks are needed due to lack of sufficient inventory, **CONTACT** Operations Supervisor. No person other than the Operations Supervisor is authorized to order replacement locks.
   a. If replacement of locks within the lockset is necessary, **ORDER** additional locks of same keyset.

Attachment 4, Operations Lock Administration (continued)

B. Key Management

1. Control Room Keys:

   a. All keys are to be retained in a locked storage container in the Control Room when not in use.

   b. Employees shall not maintain possession of lockset keys throughout their shift and are only to be checked out to perform Clearance activities.

   c. When a key is checked out, the following must be logged:

      (1) Employee's name

      (2) Key number

      (3) Date and Time of key checkout/return

2. Lost/Damaged Keys

   a. When a Lockset Key is lost or damaged, **NOTIFY** the Operations Supervisor and they will assess if Clearance activities need to be stopped.

   b. The Employee that was responsible for the lost or damaged key must **COMPLETE** a Lost/Damaged Key Report that is delivered to the Operations Supervisor and routed to the Plant Manager.

   c. If the key was damaged:

      (1) The Plant Manager may **AUTHORIZE** Security to release a replacement key.

      (2) The Operations Supervisor shall **UPDATE** the Key and Lockset Log.

   d. If the key was lost:

      (1) The Plant Manager will evaluate the circumstances of the lost key and the risk of potential loss of lockset integrity and at their discretion, either:

         (a) **ORDER** the replacement of the entire Lockset with a new keyed Lockset.

         (b) **AUTHORIZE** Security to release a replacement key.

3. Spare Keys

Attachment 4, Operations Lock Administration (continued)

a. All spare keys are to be retained by Security.

b. If a spare key is required at any point, it can only be released if authorized by the Plant Manager and the Key and Lockset Log must be updated accordingly.

c. Operations Supervisor can coordinate the replenishment of spare keys by ordering new locks of the same keyset and providing the new keys to Security as needed.

Attachment 5, Auditing Lockout Tagout Process

A. Inspecting a Clearance

1. At least annually, the Hydro Maintenance and/or Operations Supervisor shall:

   a. **CONDUCT** inspection of an existing power plant clearance, chosen at random.

   b. **USE** the Clearance Inspection form to document inspection.

   c. **VERIFY** Clearance Holder and any Clearance Workers have completed Lockout Tagout Clearance Process training withing the last 12 months.

   d. **REVIEW** Clearance responsibilities with the Clearance Holder.

   e. If procedural or other deficiencies are found during inspection,

      (1) **STOP** all work until situation is made safe.

      (2) **SCHEDULE** (or conduct) remediation.

      (3) **NOTIFY** employee's Foreman or Supervisor of exact deficiency(ies).

      (4) **DOCUMENT** remediation or remediation plan on inspection form.

      (5) **IF** remediation includes revision of the Lockout Tagout Clearance Process SOP, **THEN**, Power Plant Manager shall receive a copy of the inspection form with suggested edits to the SOP.

   f. **OBTAIN** signatures on inspection form (Clearance Holder and Supervisor/Foreman).

   g. **SIGN** completed inspection form.

   h. **SEND** completed and signed form to the Operations Coordinator for records retention.

   i. **PERFORM** a Lockset and Locking Device inventory.

B. REVIEWING LOCKOUT TAGOUT CLEARANCE PROCESS HP-OPS-ADM-01

1. Annually, the Maintenance and/or Operations Supervisor shall review the Lockout Tagout Clearance Process as follows:

   a. **ENSURE** the Lockout Tagout Clearance Process (HP-OPS-ADM-01) meets the requirements of WAC 296-45.

Attachment 5, Auditing Lockout Tagout Process (continued)

b. **REVIEW** any Clearance near misses or incidents to determine if revisions to the Lockout Tagout Clearance Process SOP may prevent future issues.

c. **CONFIRM** Clearance Holder(s) trained in the Lockout Tagout Clearance Process SOP adhere to the requirements thereof.

d. **PROVIDE** additional training to the Clearance Holder, should it be determined through the annual inspection, close call, or safety incident, that a Clearance Holder did not follow the rules and procedures as specified in the Lockout Tagout Clearance Process.

Attachment 6, Lockout Tagout Training Requirements

A. Clearance Workers, Clearance Requesters, Project Managers, Engineers, and all other personnel that perform or supervise Clearance work shall complete annual training on the Lockout Tagout Clearance Process. Refresher training shall be completed within the next calendar year.

B. Clearance Holder Qualification Requirements:

1. Must have Operations Supervisor approval.
2. Been employed with GCPUD for >6 months.
3. Must be a Power Plant Operator, Operations Coordinator, Hydro Electrician, Hydro Mechanic, Planner, or I&C Technician.
4. Annual completion of Lockout Tagout Clearance Process Training
5. Understanding of powerhouse systems, including how to isolate and shutdown equipment safely.
6. Knowledgeable of the type and magnitude of powerhouse energy sources, the hazards of that energy, and the method used to control hazardous energies.
7. Be placed in the Approved Clearance Holder list by the Operations Coordinator.

C. Limited Clearance Holder Qualification Requirements:

1. Limited Clearance Holders are made up of the following roles:
    a. Contract Employees
    b. Journeymen with <6 months experience
    c. Apprentices
    d. Fish and Wildlife personnel
    e. Engineers and Engineering Technicians
    f. Construction Inspectors/ Project Specialists
    g. Operations Technical Advisors
    h. Hydro Maintenance Assistants (HMAs)
2. Knowledge Requirements:
    a. Demonstrated knowledge of WAC 296-45

Attachment 6, Lockout Tagout Training Requirements (continued)

b. Understands the powerhouse equipment and systems upon which employee will be granted Limited Clearance Holder status, including safe means for isolating, turning off, or shutting down.

c. Knows type and magnitude of powerhouse energy sources, the hazards of the energy, and the method or means of controlling the energy for which they are/may be granted limited Clearance status.

3. Training Requirements:

a. Annual completion of Lockout Tagout Clearance Process Training.

b. Annual completion of System/Equipment Specific Training.

4. Limited Clearance Holder (LCH) Application Process.

a. The supervisor or project manager will direct the LCH applicant to complete Lockout Tagout Clearance Process Training.

b. The supervisor or project manager will complete the top portion of "Limited Clearance Holder (LCH) Application" form, including the following information:

(1) LCH applicant's name.

(2) The Company they work for (GCPUD for District employees).

(3) The work location.

(4) A description of the work they will be performing.

(5) The systems and equipment the LCH will require a Clearance.

c. The Operations Coordinator will perform the following:

(1) Verify Lockout Tagout Clearance Training is complete.

(2) Ensure that equipment/system specific training has been provided.

(3) Request approval from the Operations Supervisor.

(4) Update the list of Approved Limited Clearance Holders.