Implement on: 10/1/17	**Version:** 9 **Supersedes:** v8	**See Also:** HY010100, SA111110, SA111119
Grant PUD	**POLICY**	
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-175 through 17565

HP010100 - SWITCHING AND CLEARANCE TAGOUT SYSTEM

This policy and related documents (the SOP) establishes the authority, responsibility, and process for controlling hazardous energy sources in electric power generation in the Power Production division.

HP010100

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SWITCHING & CLEARANCE TAGOUT SYSTEM

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SWITCHING & CLEARANCE TAGOUT SYSTEM

*All Forms can also be found at the back of this book in the Forms Appendix.

Implement on: 10/1/17	Version: 9 Supersedes: v8	See Also: HY010100, SA111110, SA111119, HP040400
Grant PUD	**POLICY**	
Approved by: Mark Beattie, Bryan Bird		Regulation: WAC 296-45-175 through 17565

HP010100-POL - SWITCHING AND CLEARANCE TAGOUT SYSTEM

This policy and related documents (the SOP) establishes the authority, responsibility, and process for controlling hazardous energy sources in electric power generation.

1. Power Production Operations Has Jurisdiction And Authority To Issue Clearances For Power Plant Operations

This includes Electrical, Mechanical, Pneumatic, Hydraulic (Including Water), and stored sources of hazardous energy out to the point of separation between Power Delivery and Power Production (see HP010100A-REF).

2. No Work Will Be Performed On Or Around Any Hazardous Energy Source Without A Clearance

Except when working under Energized Electrical Work permit (see HY010100).

See HP010100A-LST for Clearance Requirements, HP010100A-TSK for Requesting A Clearance, HP010100A-PRO for Placing A Clearance, and SA111119 for Protective Grounding.

3. All Energy Isolation Devices Are Under Exclusive Control Of Power Production Operations Personnel

Any device used to ensure energy isolation in a clearance shall be tagged.

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4. The Chief Operator Has Authority To Lift A Clearance During An Emergency

5. Clearance Holder And Operations Personnel Shall Use Three-Way Communication

6. Any Employee May Bring Concerns Regarding A Switching and Clearance Order To The Clearance Holder and/or Chief Operator

7. All Switching Shall Stop If Any Device or Equipment Is Found Out Of Position Or Malfunctions

Including any tag found in a position inconsistent with the switching plan. Switching may resume only when the Chief Operator and Clearance Holder agree it is safe to do so.

8. The Chief Operator Has The Authority To Determine Who May Be Issued A Clearance Including The Limitations Or Boundaries Of That Clearance

Conflicts shall be elevated to the Operations Supervisor. Additionally, the Chief Operator has authority to train and certify employees and contractors in these procedures.

9. Whenever Repair, Replacement, Or Modification Of Equipment Is Performed, It Shall Be Made Lockable

10. All Affected Personnel Must Receive Clearance Training

- Authorized Employees/Contractors will receive annual Clearance Holder Training (HP010100A-JOB, HP010100B-JOB, HP010100C-JOB)
- Affected Workers will receive annual instruction on purpose and use of this SOP
- All other hydro workers will receive annual Clearance Awareness training

11. Retraining Authorized Employees On This SOP Will Occur When:

- The job assignment change includes changes in energy isolation procedures
- A new hazard is identified
- This SOP is revised
- Inspection reveals employee has inadequate understanding of this SOP

12. Maintenance Or Operations Supervisor Shall Conduct Inspections Of This SOP Use Annually

See HP010100C-TSK, HP010100H-FRM

13. Active Clearances Are Documented In The Station Log Using OperLog Clearance Module

If OperLog is down, clearances may be written by hand. See HP010100K-FRM.

14. This Power Production Switching & Clearance Policy And Related Documents Will Be Reviewed Annually By Plant Managers

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Implement on: 10/1/17	Version: 1 Supersedes: v0	See Also: HP010100-POL
LIST		
Approved by: Mark Beattie, Bryan Bird		Regulation: WAC 296-45-17515, 17530, 17550

HP010100A-LST – CLEARANCE REQUIREMENTS

The control of hazardous energy is essential to ensure work may proceed safely. The following requirements are not optional.

List	Description
1.	**Each approved Clearance will be assigned a unique number to distinguish it from other clearances.** This number will be included on all isolation tags associated with the clearance, on the printed Clearance Order, and in station log entries documenting clearance actions.
2.	**Each approved clearance will have a printed Clearance Order which indicates the following:** a) Unique clearance number b) Location c) Equipment or system to be worked on d) Kind of work to be done under clearance e) 'Authorized by' name (inc. time) f) 'Ordered on' by name (inc. time & date) g) 'Placed by' name (inc. time & date) h) 'Issued to' name (inc. time & date) i) 'Transferred to' name (inc. time & date); may be blank if clearance is not transferred j) 'Released by' name (inc. time & date); to be signed when clearance is transferred or is released k) 'Ordered off by' name (inc. time & date); to be signed when clearance has been released l) 'Removed by' name (inc. time & date); to be signed when all tags have been lifted and equipment returned to operating position m) Tag list showing all isolation points, required isolation point position (Open, Closed, Blocked, etc.) including tag number, date tag was hung, date tag was (removed and) destroyed n) Grounds placed (if used) o) Grounds removed (if used) p) Comments area

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3.	**Only authorized personnel may hold a clearance.**
4.	**All Clearance documents requiring signatures/initials must be signed in blue or black ink.**
5.	**Signatures of the Clearance Holder and any employees who will be working under the clearance are required before work may proceed.** • Clearance Holder must sign 'Issued to' line of Clearance Order. • Affected Workers must sign the Clearance Order Supplemental Group Tagout form (HP010100J-FRM) as verification of understanding and agreement that the specified clearance creates a safe environment in which to carry out assigned work. Significant changes to the clearance may require additional supplemental forms (HP010100L-FRM) & Affected Worker signatures.
5a.	Work shall be halted if there are concerns regarding adequacy of the clearance until resolved to the satisfaction of all involved.
6.	**Each isolation point in a clearance will be tagged.**
6a.	Each approved clearance will assign consecutive tag numbers to isolation point(s) in the clearance perimeter and all tags will be listed on the Clearance Order tag list. **NOTE:** No tag number will be repeated (i.e., there cannot be two tag #4s), even when a tag is lifted and destroyed and other tags are added as a clearance perimeter is modified.
7.	**Each approved clearance will use red plastic DO NOT OPERATE weatherproof tags with printed labels to identify isolation points in a clearance perimeter.** These tags are for the sole purpose of identifying a clearance isolation point.

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Tag will include:

- unique tag number,
- unique clearance number,
- the initials of the operator who verified isolation point, put (or verified) isolation point is in position required by the clearance, and placed the tag,
- the name & initials of the clearance holder who verified isolation point and its position is correct as required by the clearance,
- isolation point description,
- required position of isolation point.

7a. When hung, each tag will be initialed by:

- Powerplant Operator who placed the tag, and
- Clearance Holder.

7b. Every tag will be hung with 50lb tensile strength (or greater) zip tie or equivalent.

7c. 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.

	NOTE: Operating equipment that is tagged out, is a major safety violation and employee will be subject to District discipline up to and including termination.
	7d. Tags hung outside in weather will be self-laminating type to prevent label deterioration. **NOTE:** Regular tag may be used if clearance will be brief (one shift).
8.	**Each clearance shall use the minimum number of energy-isolation devices necessary to provide worker safety.**
9.	**For all voltages over 600V a visible open is required.**
10.	**The clearance shall remain in place until all work is complete.**
	10a. The Clearance Holder must be onsite for work to proceed under a clearance. If necessary, the clearance may be transferred to another clearance holder. See HP010100D-PRO, *Transferring A Clearance*.
11.	**There will be a clearance for each crew working around hazardous energy.**
	11a. 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 employees.
	11b. PUD crews will not typically work under a contractor's clearance. However, a PUD employee is permitted to briefly work under a contractor's clearance for the purposes of engineering support, inspections, engineering consults, etc., as long as the contractor clearance holder agrees and PUD employee signs the contractor's group tagout form.

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Implement on: 10/1/17	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17505, 17525, 17535, 17545, 17555

LIST

HP010100B-LST –CLEARANCE HOLDER RESPONSIBILITIES

The Clearance Holder shall:

1.	Be on site while employees perform work under clearance holder's active clearance.
	1a. Appropriately transfer active clearance to another Clearance Holder before leaving work in the event that work is incomplete when Clearance Holder must depart.
2.	Have ensured the perimeter and limits of the clearance are adequate to safely carry out the assigned work *before* signing the Clearance Order.
3.	Communicate to all Affected Workers under their supervision of the perimeters and limits of the clearance they will be working under before work begins.
	3a. Obtain affected worker signatures on Clearance Order Group Tagout (HP010100J-FRM) and keep the signed form at/near jobsite while work continues. **NOTE:** Foreman's office is an acceptable alternate location when posting at jobsite not possible.
	3b. Notify Senior Operator if personnel unsupervised by Clearance Holder and without Clearance Holder's permission, enters the clearance perimeter.
4.	Employ radio communication as an acceptable method of informing affected worker of changes to active clearance, as long as: • 3 way communication is used with each affected worker, and • Each worker initials the work activity log at earliest convenience.
5.	Verify all requested isolation/tag points have been properly identified, isolated, tested, and when appropriate, grounded, prior to starting any work. This includes ensuring that stored energy is released and that

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	any additional safety devices such as pins, blocks, servo-locks, etc., have been properly installed as appropriate.
6.	Communicate, collaborate, and coordinate with other Clearance Holders, as appropriate.
7.	Notify all Affected Workers under their supervision of any changes in conditions or status of the device or equipment included in the clearance, including notification when tags have been removed or added. **NOTE:** Any change in the clearance perimeter requires completion of Clearance Work Activity Log (HP010100L-FRM). Any change in the crew working under the clearance requires completion of Clearance Order Group Tagout (HP010100J-FRM).
	7a. When an Affected Worker is absent during a change in the clearance, his interest must be released on the Group Tagout form by his foreman. If foreman also absent, the supervisor may sign. If both foreman and supervisor are absent, the Chief Operator may sign.
	7b. Inform absent Affected Worker of all changes to clearance made during absence, obtain worker's signature on Group Tagout form before worker rejoins work.
8.	Before making any change to an active clearance,
	Ensure all Affected Workers under their supervision are in the clear and activity log (HP010100L-FRM) or group tagout (HP010100J-FRM) are completed as required (or as stipulated in #4, page 1), all temporary protection such as protective grounds are removed and the equipment is safe and ready for service (as appropriate).
9.	Complete Hydro Switching and Clearance Training annually.

NOTE: The Chief Operator on duty has the authority to determine who may be issued a clearance and the limitations or boundaries of that clearance. Conflicts shall be elevated to Operations Supervisor.

Implement on: 10/1/17 **Version:** 0 **See Also:** HP010100-POL

JOB

Approved by: Mark Beattie, Bryan Bird **Regulation:** WAC 296-45-17505, 17525

HP010100D-JOB – AFFECTED WORKER RESPONSIBILITIES

Persons assigned to work inside a clearance perimeter shall:

1.	Have knowledge of the type and magnitude of powerhouse energy sources, the hazards of the energy, and the method or means of controlling the energy.
2.	Understand powerhouse equipment and systems, including how to isolate, turn off, or shut down safely.
3.	Understand the clearance perimeter under which they will be working and visually verify it is correctly placed before starting work.
4.	Review and sign the appropriate clearance form(s) (Group Tagout and/or Work Activity Log) before starting work.
5.	Bring any safety concerns related to the clearance perimeter to the attention of the Clearance Holder.
6.	Notify Clearance Holder if leaving work prior to job completion or release of clearance.
7.	Release interest in a clearance when re-assigned, or prior to taking personal leave.
8.	Prior to resuming work under a clearance after a period of time off or re-assignment, Verify the clearance perimeter and any changes thereto, including reviewing the Work Activity Log(s).
9.	Complete annual Switching & Clearance Tagout System training.

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Implement on: 12/1/16	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL
PROCEDURE		
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17505(7), 17510

HP010100F-PRO – BECOMING AN AUTHORIZED CLEARANCE HOLDER

For initial (or renewal) of Authorized Clearance Holder status:

Supervisor	1.	**Confirms** employee meets Authorized Clearance Holder qualifications (see HP010100A-JOB).
	2.	**Directs** employee to complete Hydro Switching & Clearance Training, if employee has not already done so.
Employee	3.	**Registers** for and **completes** Hydro Switching & Clearance training course (H-10-20) through the eLearning Center.
	OR	
	4.	**Receives** Hydro Switching & Clearance SOP training from authorized employee.
Authorized Employee		4a **Contacts** Training Department Admin to relay training details to training admin so employee's training record is updated.
Employee	5.	**Contacts** training department to request update to Authorized Clearance Holder List.
Training Department Admin	6.	**Confirms** successful annual completion of training.
	OR	6a. **Enters** training details into employee's account as received from authorized employee.

Training Department Admin	7.	**Updates** Authorized Clearance holder list and **requests** helpdesk post updated Authorized Clearance Holder pdf in S:\Data\PUDForms\DamForms\Clearance
	8.	**Contacts** employee and Supervisor to confirm status update.

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Implement on: 10/1/17	**Version:** 3 **Supersedes:** v2	**See Also:** HP010100-POL
	JOB	
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17530

HP010100A-JOB – AUTHORIZED CLEARANCE HOLDER QUALIFICATIONS

To be eligible to hold a power plant clearance, employee must meet all conditions below:

1.	Has Supervisor's Approval.
2.	Is knowledgeable of the type and magnitude of powerhouse energy sources, the hazards of the energy, and the method or means of controlling the energy.
3.	Understands powerhouse equipment and systems, including how to isolate, turn off, or shut down safely.
4.	Successful completion of Hydro Switching & Clearance Tagout System Training annually.
5.	Employed with the District for a minimum of 6 months.
AND	
6.	Employed as a Power Plant Operator, Power Plant Electrician, Hydro Mechanic, Planner, or I&C Technician.

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Implement on: 12/1/16	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL
PROCEDURE		
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 2296-45-17505

HP010100G-PRO - BECOMING A LIMITED CLEARANCE HOLDER

When a business need exists for employee to become a clearance holder:

Supervisor	1.	**Confirms** employee meets *Limited Clearance Holder (LCH) Qualifications* (HP010100B-JOB).
	2.	**Directs** employee to complete required training: • Hydro Switching & Clearance Tagout • Equipment/system for which LCH is requested.
Employee	3.	**Registers** for and **completes** Hydro Switching & Clearance Tagout System training course in eLearning Center.
	OR	3a. **Attends** Hydro Switching & Clearance Tagout System classroom training.
	4.	**Completes** Limited Clearance Holder (LCH) Request (HP010100C-FRM) per instructions.
	5.	**Forwards** LCH form to supervisor for signature.
	6.	Meanwhile, **Contacts** Operations Supervisor for equipment/system-specific training.
Hydro Operations Supervisor	7.	**Provides** (or **Designates** qualified worker to provide) equipment/system-specific training for employee.

Hydro Operations Supervisor	**OR**	7a. **Verifies** employee's understanding of system/equipment is sufficient for clearance holder status.
Supervisor	8.	**Reviews & Signs** LCH form (line 8).
	9.	**Forwards** form to eLearning Center admin for employee training confirmation.
eLearning Center Admin	10.	**Searches** employee's account for Hydro Switching & Clearance Tagout System training completion date.
	11.	**Completes** line 9 of LCH form and **forwards** to Hydro Operations Supervisor.
Hydro Operations Supervisor	12.	**Reviews** LCH form.
	13.	**Completes** line 10, verifying qualified worker completed employee equipment/system training.
	OR	13a. **Sends** form to qualified worker for completion of line 10.
	14.	**Signs** form granting Limited Clearance Holder status to employee (lines 11 or 12).
		14a. **Forwards** form to sister plant operations supervisor for review/signature, if multiple locations requested on line 4.
	OR	**If request denied,**
	15.	**Contacts** Supervisor with denial or request for additional information. Stop Here.
	16.	**Forwards** signed form to eLearning Center admin.

eLearning Center Admin	17.	**Adds** Limited Clearance Holder certification to employee's training record for specified period not to exceed 1 year from training date.
	18.	**Updates** posted employee Clearance Holder LCH list, including: • Employee's Certification as LCH • Certification expiration date • LCH Project or system • Location (WD, PRD, PEC, QC)
	19.	**Completes** lines 13 & 14 of LCH form.
	20.	**As confirmation of active LCH status, Sends** pdf copy of completed LCH form: • Employee • Employee's supervisor • HOS
	21.	**Files** original form in completed LCH form file.

Implement on: 12/1/16	**Version:** 2 **Supersedes:** 1	**See Also:** HP010100-POL

JOB

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17530

HP010100B-JOB – LIMITED CLEARANCE HOLDER QUALIFICATIONS

All conditions below must be met:

1.	Supervisor's Approval: The approval shall: • include the reason for the employee to hold a clearance. • specify the machinery, equipment, or system on which employee may hold a clearance. • define the time period or expiration date during which the employee can hold a clearance on the machinery, equipment, or system. The detailed information from the supervisor's approval will be entered into the Hydro Authorized Clearance Holder list, so that Operators know the limitations of the employee's Limited Clearance Holder status.
2.	Employed with the District as: • Journeymen with less than 6 months District employment. The new journey-level employee may be converted to Authorized Clearance Holder status after 6 months of District employment and with approval of employee's direct supervisor and successful completion of Switching & Clearance training refresher. • Craft Apprentice with more than 4000 hours of apprenticeship training. • Hydro Maintenance Assistant (HMA) • Fish and Wildlife staff assigned to Hydro • Hydro Division Engineer • Hydro Division Engineering Technician • Construction Inspector or Project Specialist assigned to the Hydro Engineering Department
3.	Successful completion of Hydro Switching & Clearance Training annually.

4.	Is knowledgeable of the 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 granted limited clearance status.
5.	Understands the powerhouse equipment and systems upon which employee will be granted limited clearance holder status, including how to isolate, turn off, or shut down safely.

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Implement on: 12/1/16	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL
PROCEDURE		
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17560

HP010100H-PRO-BECOMING A CONTRACTOR LIMITED CLEARANCE HOLDER

When a business need exists for a contractor employee to become a clearance holder:

Project Manager	1.	**Confirms** contractor employee meets *Contractor Limited Clearance Holder (LCH) Qualifications* (HP010100C-JOB).
	1a.	**Directs** contractor employee to complete Hydro Switching & Clearance for Contractors Training and to present completion certificate to hydro security admin, if employee has not already completed training. **NOTE:** Contractor Training may be found here: http://www.grantpud.org/your-pud/contracting-opportunities/contractor-training
	2.	**Provides** (or **Arranges**) equipment/system-specific training. **NOTE:** may consult with chief operator or operations supervisor.
	3.	**Completes** Limited Clearance Holder Request form (HP010100C-FRM) lines 1-8, 10 and **forwards** to Hydro security admin.
Hydro Security Admin	4.	**Confirms** contractor employee has submitted training completion certificate.
	5.	**Completes** line 9 of LCH request form and

		forwards to Project Manager.
Project Manager	6.	**Sends** Limited Clearance Holder Request (LCHR) form to Hydro Operations Supervisor requesting contractor employee be granted limited clearance holder status. Includes: • Reason contractor employee needs to hold a clearance, • Specific machinery, equipment, system or project on which employee may hold clearance, • Time period during which contractor employee can hold clearance on identified item(s).
Hydro Operations Supervisor (HOS)	7.	**Grants** approval for Contractor Limited Clearance Holder status to employee by signing LCHR form (HP010100C-FRM) line 11.
	OR	7a. **Denies** Contractor Limited Clearance Holder Status for specified reasons and notifies Project Manager of denial.
	8.	If multiple locations are requested on LCH form,
		Forwards form to sister dam HOS for review & approval.
	OR	
	9.	**Sends** LCH form to Hydro Security Admin to update Limited Clearance Holder status so security database can be updated as necessary.
Hydro Security Admin	10.	**Enters** Limited Clearance Holder training date in security database.

Hydro Security Admin		10a. **Makes** LCH status expiration date 1 year from approval date.
		10b. **Records** equipment/system for which LCH is granted in field "Limited To."
	11.	**Completes** line 13 of LCH form.
	12.	**As confirmation of active LCH status,** **Sends** pdf copy of completed LCH form to: • project manager, • contractor employee, • HOS.
	13.	**Files** original form in completed LCH form file.

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Implement on: 12/1/16	**Version:** 1 **Supersedes:** v0	**See Also:** HP010100-POL

JOB

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17505, 17525, 17560

HP010100C-JOB – CONTRACTOR LIMITED CLEARANCE HOLDER QUALIFICATIONS

All conditions below must be met by contractor employee:

1.	Successful completion of the District's Hydro Switching & Clearance Tagout System for Contractors training, annually.
2.	Contractor confirms employee demonstrates knowledge of WAC 296-45.
3.	Employee has read and understands complete Hydro Switching & Clearance Tagout System SOP (HP010100).
4.	Employee understands Clearance Holder Certification will cover the life of the construction project or one year, whichever is shorter.
5.	Knows that a Clearance perimeter will be limited to machinery, equipment, or system on which the contractor works.
6.	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.
7.	Understands the powerhouse equipment and systems upon which employee may be granted limited clearance holder status, including safe means for isolating, turning off, or shutting down.

Contractor Limited Clearance Holder capacity may be further restricted at the discretion of any of the following:

- Chief Operator
- Plant Manager
- Hydro Operations Supervisor

EMAIL

Grant County PUD
Hydro Division

PRINT

LIMITED CLEARANCE HOLDER (LCH) REQUEST FORM

	Request		
1	Today's Date (mm/dd/yy)	LCH Status Needed By: mm/dd/yy	
2	For (name):		
3	Describe the business need for LCH status:		
4	Location (plant):		
5	Specify equipment, project, or system, for which LCH status is sought:		
6	Switching & Clearance Training Completed	◯ Yes ◯ No	Date: mm/dd/yy
7	How long is LCH status needed?	From:	To:
8	Supervisor Signature (or Project Manager)		Print:
	Approval		
9	Hydro Switching & Clearance Training	Yes No	Date: mm/dd/yy By: LMS admin or Security admin name
10	Equipment/System Specific Training	Yes No	Date: mm/dd/yy By: (qualified employee name)
11	Operations Supervisor Signature	Approved ☐	Denied ☐
12	Operations Supervisor Signature	Approved ☐	Denied ☐
13	LCH Certification Added To Employee training record	Date:	By: LMS or Security admin name
14	Authorized Clearance Holder list updated (District employee only)	Date:	By:
	LCH Status Revoked		
15	Operations Signature Revocation Approved		Date:
16	For cause (describe)		
17	Revoked in LMS:	Date:	By:

COMPLETION INSTRUCTIONS ON NEXT PAGE

GUIDELINES FOR COMPLETING LIMITED CLEARANCE HOLDER REQUEST FORM

1. Request for LCH Status. District employee completes required Clearance Holder and specific equipment/system training, completes lines 1-7 & prints form and obtains supervisor signature (see HP010100G-PRO). For contract employee, Project Manager completes lines 1-7, signs line 8 (supervisor signature line) verifying need (see HP010100H-PRO).

2. LCH Limitations/Restrictions. Limited Clearance Holder status is generally sought and granted only for the period of a project or 1 year, *whichever is shorter.* A business case may be made for ongoing or broader status. See Hydro Switching and Clearance Tagout System SOP (HP010100) for specifics.

3. Applicability. Limited Clearance Holder (LCH) status is reserved for craft employees with less than 6 months tenure, or non-craft employee positions with limited need for holding a clearance, or contractor's employee(s). See *Limited Clearance Holder Qualifications* (HP010100B-JOB) and *Contractor Limited Clearance Holder Qualifications* (HP010100C-JOB).

4. Training. Switching & Clearance training to maintain clearance holder status is required **every year**. Training by qualified worker (designated by Operations Supervisor) must also be completed on the system or equipment for which limited clearance holder status will be granted.

5. Routing.
   a. District Employee completes lines 1-7 and gives form to supervisor. Project Manager completes lines 1-8 and gives form to Security Admin.
   b. Supervisor reviews and signs form for permission to be LCH, line 8. Forwards form to eLearning Center admin for employee or to Security Admin, for contractor.
   c. eLearning Center admin completes line 9 for employee requests, Security admin completes line 9 for contractor requests. [If training occurred ≥12 months from form date, admin returns form to supervisor. If training was completed less than 12 months ago] sends form to Hydro Operations Supervisor (HOS) for review & approval.
   d. HOS reviews request. Conducts (or assigns qualified worker to conduct) training on specific equipment/system for which LCH will be granted. HOS or qualified employee completes line 10.
   e. HOS approves employee for certification as LCH by signing lines 11-12, forwards the signed form to either the security admin or eLearning Center admin [or forwards to other HOS for approval when multiple locations requested]. If LCH request is denied, the HOS will contact employee's supervisor with reason for denial.
   f. For contractor employees, the Security admin or for district employees, the eLearning Center admin updates employee certification in appropriate database, updates posted Clearance Holder list (employees only), and completes lines 13 & 14 of form. Files form in Limited Clearance Holder complete file.

6. Revocation of LCH Status. LCH status may be revoked for unsafe acts.

HP010100A-TSK – REQUESTING A CLEARANCE

The Authorized or Limited Clearance Holder, or Foreman on behalf of Clearance Holder, (or Project Manager on behalf of contractor limited clearance holder):

1.	**Determines** the scope of the Clearance (See HP010100A-LST).
	1a. **Consults** with Chief Powerplant Operator as needed to define scope.
2.	**Completes** a written Clearance Request (HP010100A-FRM). **NOTE:** Verbal clearance request for same day, time-sensitive, or simple emergency work may be considered by chief powerplant operator, if time permits.
	If the Clearance Request form is written by Foreman or Project Manager,
	2a. **Reviews** and **understands** clearance request.
3.	**Submits** the Clearance Request Form at least 24 hours in advance to the Senior Operator. Clearances on critical systems/equipment or which impact generation or river control must be submitted at least 48 hours in advance of approved work, please consult HY000011, *Requesting A Generation Outage* for required timeline. **NOTE:** If work is scheduled to start on a Monday, the Clearance Request must be submitted by noon the prior Thursday.

Save & Email

CLEARANCE REQUEST

Request for removal of equipment from service

Print

Requested By:	**Date**	**Time**
For (select one):		

Description of Equipment:

Date and time switching and tagging are to begin: DATE_____ TIME _____
Date and time the work is to start under the clearance issued: DATE_____ TIME _____
Date and time the work is completed, clearance is released, and switching to begin DATE_____ TIME _____
Date and time the equipment scheduled to be returned to service: DATE_____ TIME _____

Clearance issued to (Print Name)_____

Estimated time necessary to return equipment to service in emergency: _____

Purpose of Outage:

List Energy Isolation Points:

Special instructions:

ROUTE:
1. Chief/Senior Operator
2. Requestor

Transformer Clearance – Priest Rapids Dam

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form (aka: 0838).

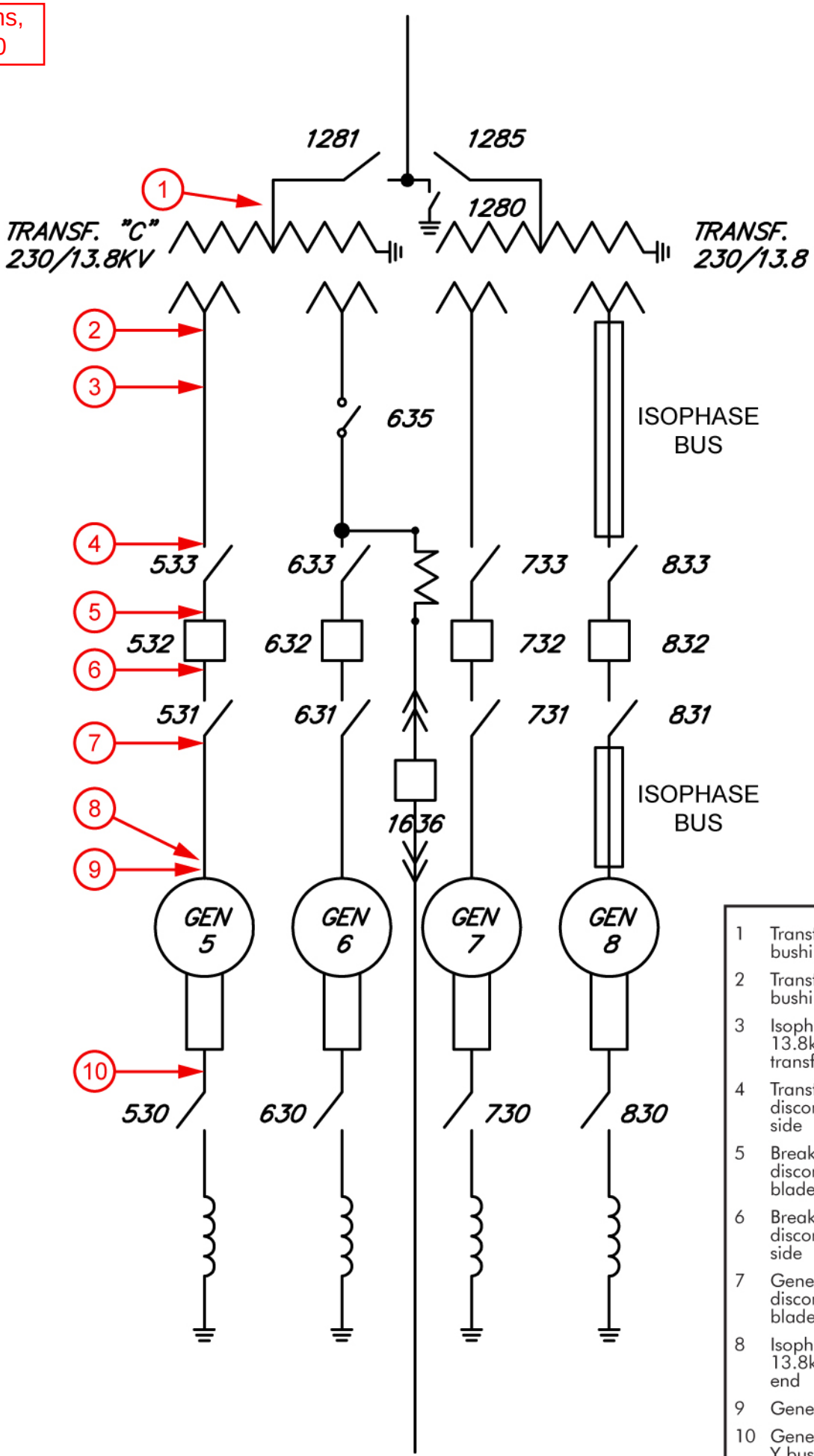
Transformer #	230kV DISCONNECT SW # P-	**OPEN, DECOUPLED & LOCKED**
☐ 230kV M.O. DISCONNECT CONTROL POWER 125VDC BREAKER **OPEN** IN CONTROL ROOM		
☐ 230kV M.O. DISCONNECT CONTROL POWER 125VDC BREAKER **OPEN** @ M.O.		
☐ ISOPHASE DISC. #P- **OPEN**		
UNIT P-___13.8 kV DISCONNECT SW #P	31-P	33 **OPEN**
UNIT P-___13.8 kV DISCONNECT SW #P	31-P	33 **OPEN**
☐ SS #1 13.8kV BKR P1436 **OPEN & RACKED DOWN** (TRANSF. "B" ONLY)	☐ SS #2 13.8kV BKR P1636 **OPEN & RACKED DOWN** (TRANSF. "C" ONLY)	
☐ UNIT P-_____GCB 125VDC CONTROL BREAKER **OPEN** IN CONTROL ROOM		
☐ UNIT P-_____GCB 125VDC CONTROL BREAKER **OPEN** IN CONTROL ROOM		
TRANSFORMER: ☐ RELAYS 125 VDC CONTROL POWER SUPPLY BREAKER **OPEN** ☐ TRANSF. 550 VAC **OPEN** (NORMAL) @ AUX BOARD ODD UNIT P- ☐ TRANSF. 550 VAC **OPEN** (STANDBY) @ AUX BOARD EVEN UNIT P- ☐ DELUGE ISOLATION VALVE **CLOSED** ☐ GENERATOR METER RELAY & SYNC. P.T. DISC (GEN. BUS) @ SURGE CUBICLE **OPEN**		
BCPD GROUND SWITCH **CLOSED**: ☐ PHASE A	☐ PHASE B	☐ PHASE C
UNIT P-_____ SYNC. P.T. TRANSFORMER BUS DRAWER **OPEN** @ UNIT GCB	UNIT P-_____SYNC. P.T. TRANSFORMER BUS DRAWER **OPEN** @ GCB	
UNIT P-_____SYNC. P.T. SECONDARY TRANSFORMER BUS DISC. **OPEN** @ UNIT GCB	UNIT P-_____SYNC. P.T. SECONDARY TRANSFORMER BUS DISCONNECT **OPEN** @ UNIT GCB	

LOCATION OF PROTECTIVE GROUNDS (see page 2)

☐	TRANSFORMER 230kV BUSHINGS OR LEADS		
☐	TRANSFORMER 13.8kV BUSHINGS,		
☐	ISOPHASE BUS 13.8kV BEHIND TRANSFORMER		
☐	TRANSFORMER 13.8kV DISCONNECT	CLIP SIDE	CLIP SIDE
☐	BREAKER 13.8kV DISCONNECT	BLADE SIDE	BLADE SIDE
☐	BREAKER 13.8kV DISCONNECT	CLIP SIDE	

Additional Grounds:

NOTES:



1	Transformer 230kV bushings or leads
2	Transformer 13.8kV bushings
3	Isophase bus 13.8kV behind transformer
4	Transformer 13.8kV disconnect X33 clip side
5	Breaker 13.8kV disconnect X33 blade side
6	Breaker 13.8kV disconnect X31 clip side
7	Generator 13.8kV disconnect X31 blade side
8	Isophase bus 13.8kV generator end
9	Generator leads
10	Generator neutral at Y bus

SAVE PRINT

Hydro Division, Priest Rapids Project

Unit Outage – Priest Rapids Dam

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form.

UNIT# _____

550 VAC Breakers Substation

Substation Feeder to Aux Board: ☐ Bus 1 ☐ Bus 2

550 VAC Breakers Auxiliary Board

Aux Board Main from: ☐ Bus 1 BKR ☐ Bus 2 BKR

Cooling Water M.O. Supply BKR: ☐ Inlet Valve ☐ Discharge Valve

Generator: ☐ Air Cooler Reg. Valve Supply BKR ☐ Heaters Supply BKR

Governor Oil Pump Supply BKR: ☐ No. 1 ☐ No. 2

☐ High Lift Pump Supply Breaker

☐ Transformer Oil Pumps Supply Breaker

Turbine: ☐ Farval Grease Pump Supply Breaker

☐ Sump Pump Supply Breaker

125 VDC Breakers Auxiliary Board

☐ Auxiliary Board Tie Breaker

☐ Exciter Control Power Breaker #

☐ Field Flashing Supply Breaker #

☐ G.C.B. Control Power Breaker @ C/R

☐ Generator CO2 Control Power Breaker

☐ Incoming 125 VDC Supply Breaker

☐ Relay-Gov Control Power Breaker

☐ Turbine Stand-by Sump Pump Breaker

☐ Unit Annunciation Supply Breaker @ C/R

☐ Unit Aux SWBD Supply Breaker @ C/R

115 VAC Breakers (UPS) Auxiliary Board

Actuator: ☐ Selsyn Breaker ☐ Emergency Lights/Exciter Cab lights BKR

☐ Exciter and 64F Relay Breaker #

☐ Transducer & 38 Relay Supply Breaker

☐ Unit Auxiliary SWBD Supply Breaker @ C/R

115 VAC Breakers Turbine Floor, RU Panel

Blade Controller: ☐ Supply Breaker ☐ PLC or SLC Supply Breaker

☐ GOP PLC Control Power Supply Breaker

☐ Governor Auxiliary Relay Supply Breaker

☐ Status Input Board Sourcing Supply Breaker

☐ Wheel Pit Alarm Supply Breaker

☐ Turbine Sump Level Controller Supply Breaker

Disconnect and PTs

☐ Exciter Reference Voltage PT, Disconnect#

Generator: ☐ 13.8 kV Unit Disconnects ☐ Bus Sync PT, Disconnect#

☐ Transformer Bus Sync PT, Disconnect

Governor Oil System

No. 1 Gov. Oil Pump: ☐ 550 VAC Disconnect Switch ☐ Discharge Isolation Valve (GO9) ☐ Unloader Supply Valve (GO25)

No. 2 Gov. Oil Pump: ☐ 550 VAC Disconnect Switch ☐ Discharge Isolation Valve (GO11) ☐ Unloader Supply Valve (GO26)

Governor: ☐ 10” Oil Pressure Header Valve **Closed** ☐ Air Supply Valve **Closed** ☐ 2” Pressure Tank to Sump, Drain Valve **Closed**

☐ 1.5” Bypass Valve **Closed**

☐ 1” Pilot Pressure Valve **Closed**

Governor Actuator Cabinet

Blade: ☐ Cam Stepper Motor, **Decoupled + Rolled Off Cam** ☐ Cam Follower Mechanical **Rolled Off Cam** ☐ Restoring Yoke Oiler Valve

☐ Brakes Blocked On

☐ Brake Air Supply Valve **Closed**

☐ Flyball Drain Valve to Sump **Closed**

☐ Governor Transfer Valve **Blocked**

Kaplan Relay Valve ☐ BR-43 ☐ Bypass Valves (2)

☐ Servo Saddle Installed

Turbine, Mechanical

☐ Auxiliary C/W Supply Valve (CW3)

Draft Tube: ☐ Drain Valve ☐ Fill Valve **Closed**

Generator C/W: ☐ Main Supply Valve (E. of Strainer) (CW1) ☐ M.O. Inlet Valve (CW4) ☐ M.O. Discharge Valve (CW11) ☐ Air Cooler Isolation Dischg Valve (CW12) ☐ Bypass Valve (CW10)

☐ Spiral Case Drain Valve **Open**

Turbine: ☐ Shaft Seal Supply Valve ☐ Guide Bearing Discharge Valve (CW9)

Thrust Bearing C/W: ☐ Inlet Valve (CW5) ☐ Discharge Valve (CW8) ☐ Cross-Over Valve

☐ Vacuum Breaker Valves (2) East & West

Miscellaneous Clearance Points

☐ Bulkhead Fill Valve (Air Line)

☐ CO2 Isolation Valves (2) Initial & Delay **Closed**

☐ Emergency Gantry Wheel Gate Installed

☐ Wicket Gates OPEN to _____%

SPECIAL CONDITIONS

☐ Barrel doors unlocked

☐ GCB local control/HV access

Personal Grounds required for lower air housing work#

When Gen grounds are installed, PT Disconnects will be tagged

GROUNDS INSTALLED:

SAVE/EMAIL

Transformer Clearance – Wanapum Dam

PRINT

NOTE: This form by itself is not adequate clearance documentation and is to be used with Clearance Request Form.

Transformer #	☐ ISOPHASE DISCONNECT W-235 OPEN (Transformer A only)
	☐ ISOPHASE DISCONNECT W-635 OPEN (Transformer C only)
230 kV DISCONNECT SW # W-____ OPEN, DECOUPLED & LOCKED	
UNIT W-___13.8 kV DISCONNECT SW W-____31-W-____33 OPEN	
UNIT W-___13.8 kV DISCONNECT SW W-____31-W-____33 OPEN	
☐ SS #1 BREAKER W1236 OPEN & RACKED OUT (Transformer A only)	☐ SS #2 BREAKER W1636 OPEN & RACKED OUT (Transformer C only)
☐ 230 kV MOTOR OPERATED DISCONNECT 125VDC CONTROL POWER BREAKER IN CONTROL ROOM OPEN	
☐ 575VAC COOLING FANS @AUX BOARD ODD UNIT OPEN	
☐ 575VAC COOLING FANS @AUX BOARD EVEN UNIT OPEN	
☐ 125VDC RELAY SUPPLY BREAKER OPEN	
☐ MUX POINTS ISOLATING DISCONNECTS OPEN	
UNIT W-____ LINE SYNC. P.T. DISC. OPEN @ UNIT GCB	UNIT W-_____LINE SYNC. P.T. DISC. OPEN @ UNIT GCB
BCPD GROUND SWITCH CLOSED: ☐ PHASE A ☐ PHASE B ☐ PHASE C	

GSU TRANSFORMER UPS PANEL (3rd floor, elev. 466 ft)

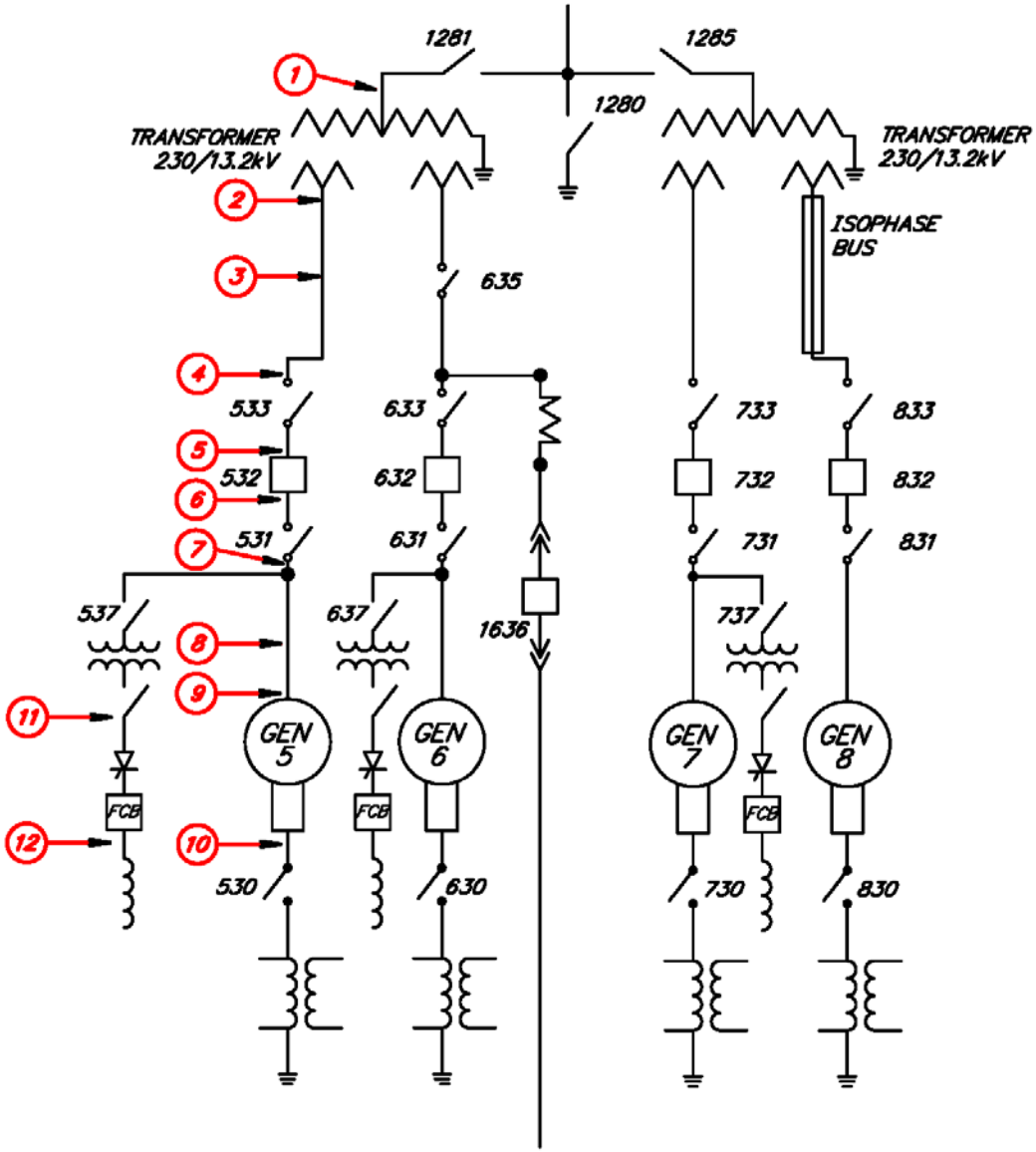
A =	☐ 120VAC SUPPLY BREAKER OPEN	D =	☐ 120VAC SUPPLY BREAKER OPEN
B =	☐ 120VAC SUPPLY BREAKER OPEN	E =	☐ 120VAC SUPPLY BREAKER OPEN
C =	☐ 120VAC SUPPLY BREAKER OPEN		

LOCATION OF PROTECTIVE GROUNDS (see page 2)

☐	TRANSFORMER 230kV BUSHINGS OR LEADS
☐	TRANSFORMER 13.8kV BUSHINGS, W-_____ "EVEN" W-_____"ODD"
☐	ISOPHASE BUS 13.8kV BEHIND TRANSFORMER, W-_____"EVEN" W-____"ODD"
☐	TRANSFORMER 13.8kV DISCONNECT W-_____CLIP SIDE W-_____CLIP SIDE
☐	USE GROUNDING DEVICE TRANSFORMER A (W1236)
☐	USE GROUNDING DEVICE TRANSFORMER C (W1636)

Additional Grounds:

NOTES:



GROUNDING TERMS

1. TRANSFORMER 230kV BUSHINGS OR LEADS
2. TRANSFORMER 13.8kV BUSHINGS
3. ISOPHASE BUS 13.8kV BEHIND TRANSFORMER
4. TRANSFORMER 13.8kV DISCONNECT X33 CLIP SIDE
5. BREAKER 13.8kV DISCONNECT X33 BLADE SIDE
6. BREAKER 13.8kV DISCONNECT X31 CLIP SIDE
7. GENERATOR 13.8kV DISCONNECT X31 BLADE SIDE
8. ISOPHASE BUS 13.8kV GENERATOR END
9. GENERATOR LEADS
10. GENERATOR NEUTRAL AT Y BUS

WANAPUM DAM

11. EA AC DISCONNECT SWITCH, BLADE SIDE
12. EXCITER DC +/– BUS GROUNDS

Save/Email

Grant PUD - Hydro Division

New Unit Clearance – Wanapum Dam

PRINT

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form.

WANAPUM UNIT#_____ (choose fr menu)	**Governor Oil System**
575 VAC - Substation Breakers **OPEN**	☐ **#1** ☐ **#2** Oil Pump 575 VAC Disconnect Switch **OPEN**
☐ Substation Feeder to Aux Unit Swgr Bus 1	☐ **#1** ☐ **#2** Oil Pump Discharge Isolation Valve
☐ Substation Feeder to Aux Unit Swgr Bus 2	☐ **#1** ☐ **#2** Oil Pump Unloader Pressure Supply Valve
575 VAC - Auxiliary Board Breakers **OPEN**	☐ Gov. Sys. Main Pressure Supply Valve **UO240**
☐ MCB Incoming Power Bus 1	☐ Gov. Sys. Main Press Supply Valve Equalizing **UO241**
☐ MCB Incoming Power Bus 2	☐ Accumulator Tank Pressure Valve **UO220**
☐ Governor HPU #1 Oil Pump	☐ Accumulator Tank 2" Drain Valve **UO234**
☐ Governor HPU #2 Oil Pump	☐ Unit Gov. Air Supply Valve
☐ Gen Cooling Water Inlet Valve	**Governor Actuator Cabinet**
☐ Gen Cooling Water Outlet Valve	☐ Governor Control Valve
☐ Gov. Kidney Loop Oil Filter	☐ Pilot Manifold Control Valve
☐ Excitation ABB Cooling Fan	☐ Kaplan Relay Valve ☐ BR-43 ☐ Bypass Valves (2)
☐ Unit Oil Transfer Pump	☐ Brakes **Blocked On**
☐ Thrust Bearing High Lift Pump	☐ Brake Air Supply Valve _____
☐ Generator Space Heaters	☐ Wicket Gate Servomotor Lock **ON**
☐ Turbine Pit A/C Sump Pump	**Turbine, Mechanical**
Guide Bearing Oil A/C Circ Pump: ☐ UGB ☐ LGB ☐ TGB	☐ Turbine Shaft Seal Supply and bypass Valves (2)
	☐ Draft Tube Drain Valve
☐ Transformer Fans & Control Power Supply	☐ Spiral Case Drain Valve
130 VDC - Auxiliary Board Breakers **OPEN**	☐ Draft Tube Fill Valve
☐ MCB Incoming Power 130 VDC Bus #___	☐ Vacuum Breaker Valves (2) East & West
☐ MCB Sister Unit Bus #___ Tie Breaker	☐ Raw Water Header C/W Supply Valve
☐ MCB Sister Unit Bus #___ Tie Breaker at Sister Unit Aux. Board	☐ Main Spiral Case C/W Supply Valve
☐ Excitation ABB Field Flash Breaker	**Miscellaneous Clearance Points**
☐ Wicket Gate Servomotor Lock	☐ Annunciation Disconnects **OPEN**
☐ Sister Unit Excitation ABB Controller at Sister Unit Aux. Board	☐ CO2 Isolation Valves (2), Initial & Delay
Guide Bearing Oil D/C Circ Pump: ☐ UGB ☐ LGB ☐ TGB	☐ CO2 125 VDC Breaker **OPEN**
☐ Excitation ABB Controller	☐ Bulkhead Slide Gate Air Line
☐ Turbine Pit D/C Sump Pump	☐ Servo Locking Nuts **ON**, Wicket Gates **OPEN** _____%
☐ Unit Protection SEL 300 G-1	**Disconnect and PTs**
☐ Unit Protection 300 G-2 at Sister Unit Aux Bd	☐ Generator 13.8 KV Unit Disconnects
☐ Unit Aux. Controller	☐ Line Sync PT. Disconnect
☐ Unit Governor Controller	☐ Metering and Sync PT. Disconnect
130 VDC - Supply Breakers **OPEN -** Control Room	☐ Voltage Regulation PT. Disconnect
☐ Gen___ GCB Control 130 VDC Panel 30	**SPECIAL CONDITIONS**
☐ W___ GCB Trip Coil 2 Supply	☐ Barrel Doors **UNLOCKED**
115 VAC Breakers **OPEN** Turbine Floor, RU Panel	☐ GCB local control/HV Access
☐ GCC Gov PLC Supply	**Grounds Installed**
☐ Wheel Pit EVAC Horn Supply	☐ Breaker 13.8kV Disc. x33 Blade Side
☐ UAX Unit Aux. PLC Supply	☐ Breaker 13.8kV Disc. x31 Clip Side
☐ ABB Static Excitation System Supply	☐ Generator 13.8kV Disc. x31 Blade Side
☐ Generator Monitoring System Supply	☐ Isophase Bus 13.8kv Generator End
☐ Gov. Cabinet RTD Display Supply	☐ Generator Leads

Implement on: 12/1/16	**Version:** 0	**See Also:** HP010100-POL
TASK		
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17505

HP010100D-TSK – PROCESSING CLEARANCE REQUEST

Upon receiving a written or verbal clearance request, the Chief Powerplant Operator:

1.	**Reviews** Clearance request. The scope of a clearance may be determined in concert by the Chief operator and Clearance Holder making the request. The primary goal of any clearance is to make the work safe to perform.
2.	**Resolves** questions regarding scope, clearance perimeter, use of additional safety isolation devices (such as pins, blocks, servo locks, grounds) etc., by discussing with proposed Clearance Holder.
3.	**Advises** proposed Clearance Holder when clearance request cannot be accommodated in requested timeframe.
4.	**Instructs** Senior powerplant operator to prepare Clearance Order with unique clearance order number per *Clearance Requirements* (HP010100A-LST). Includes any perimeter changes approved by proposed Clearance Holder.

Implement on: 12/1/16	**Version:** 0	**See Also:** HP010100-POL
PROCEDURE		
Approved by: Mark Beattie, Bryan Bird		**Regulation:** WAC 296-45-17565

HP010100K-PRO – INCLUDING POS BOUNDARY DEVICE IN A CLEARANCE

When a clearance perimeter includes point of separation (POS) boundary device(s),

Clearance Holder	1.	At least 5 business days in advance, **Submits** hotline/clearance request form to Dispatch requesting a point of separation Do Not Operate tag for specific boundary device(s), cc's control room. **NOTE:** 'Reason for outage or switching' should specify POS – Do Not Operate Tag only
	2.	**Submits** clearance request to control room (see HP010100A-TSK, *Requesting A Clearance*).
Chief Operator	3.	**Completes** HP010100D-TSK, Processing A Clearance Request.
Senior Operator	4.	**Requests** Senior System Operator (SSO) authorize switching of boundary device and hanging of POS Do Not Operate Tag.
	5.	Upon authorization by Senior System Operator, **Enters** following information manually onto POS tag: • DNO No.: [number as issued by SSO] • Station/Plant: [Priest Rapids, Wanapum, QC, PEC] • Name/Number of line or equipment: [ex. W1181 or P1285] • Tagged for: Do Not Operate Tag for Control Room Operator • By order of: [SSO's name]

		NOTE: The POS Tag is always first on and last off.
Senior Operator	6.	**Instructs** journeyman operator/switchman to proceed with switching plan and hang POS Do Not Operate tag on boundary device.
Journeyman Operator/Switchman	7.	**Identifies** boundary device to be tagged.
	8.	**Puts** device in position required (obtains visible open, for example).
	9.	**Hangs** POS Do Not Operate Tag and **completes** the following portion of the tag label: • Date: [date hung] • Time: [time hung] • Tagged by: [operator's initials] • Tag Number___of___
	10.	**Notifies** Senior Operator that boundary device now in required (open, closed, removed) position and POS Tag hung, includes date/time.
Senior Operator	11.	**Records** POS Tag information in station log.
	12	**Notifies** Senior System Operator POS Tag hung, includes date/time/operator name/tag number.
Clearance Holder, Journeyman Operator, Senior Operator	13.	**Completes** *Placing a Clearance* (HP010100A-PRO).
After Work is Complete,		
Clearance Holder, Senior Operator, Journeyman Operator	14.	**Completes** *Releasing A Clearance*, HP010100B-PRO.

Senior Operator	15.	**Verifies** the following with Clearance Holder and Journeyman Operator: • All workers are in the clear • All protective grounds have been removed • All power plant clearance tags have been removed • The boundary device is in a safe operating condition with only the POS tag still attached • All affected workers have been notified of intent to lift POS Do Not Operate Tag from boundary device
	16.	**Informs** SSO at Dispatch of the following: • Operator is releasing the Do Not Operate POS tag for boundary device to the Dispatcher • All personnel are in the clear • All grounds have been removed
	17.	**Receives** authorization from SSO to remove POS tag and return boundary device to operating condition.
	18.	**Directs** journeyman operator/switchman to remove POS tag and return boundary device to operating condition.
Journeyman Operator/Switchman	19.	**Identifies** tagged boundary device to be returned to service.
	20.	**Removes** POS tag and returns boundary device to operating position.
	21.	**Informs** Senior Operator that boundary device has been returned to service.
	22.	**Records** the following on the POS tag: • Removed by: [operator initials] • Date: [date removed] • Time: [time removed]

Journeyman Operator/Switchman	23.	**Returns** tag to control room.
Senior Operator	24.	**Records** POS Tag removed in station log.
	25.	**Notifies** SSO at Dispatch that POS tag removed (date/time/by whom) and boundary device returned to service.

COPY

Implement on: 12/1/16	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL

PROCEDURE

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17505(4), 17505(5), 17515(6), 17525, 17535

HP010100A-PRO – PLACING A CLEARANCE

This procedure establishes the responsibility, authorization, and steps required to ensure that any given clearance properly isolates hazardous energy so work may safely proceed.

Upon receiving clearance request form:

Chief Powerplant Operator	1.	**Confirms** Clearance Request processed (HP010100D-TSK).
	2.	**Authorizes** clearance by signing the Clearance Order.
Senior Powerplant Operator	3.	**Performs** final check of clearance and **directs** switching.
	4.	**Orders** a Clearance 'ON' by signing, dating, and recording time on the Clearance Order.
Powerplant Operator	5.	**Reviews** switching as directed by Senior Powerplant Operator.
	6.	**Identifies** equipment or device that is to be isolated and **confirms** it is in the expected operating position <u>before</u> switching & tagging.
		6a. **Does NOT** proceed if equipment or device is not in expected position or if it malfunctions.
		6b. **Consults** with Chief Operator and Clearance Holder to determine safest course when equipment/ device not in expected position or malfunctions during switching.

Powerplant Operator	7.	**Places** equipment in position required by Clearance Order.
	7a.	**Installs** additional safety devices as needed to ensure isolation/control of /release of stored hazardous energy (pins, servo-saddles/locks, etc.).
	8.	**Initials** and **attaches** the proper clearance tag at each isolation lockable point, or as close thereto as safely possible.
	9.	**Signs** and **dates** the Clearance Order after all clearance tags have been installed.
Chief, Senior, or Powerplant Operator	10.	**Reviews** the clearance perimeter as tagged with the Clearance Holder.
Clearance Holder	11.	**Identifies** equipment or device that is to be isolated and **confirms** it is in the expected operating position.
	11a.	**Does NOT** proceed if equipment or device is not in expected position or if it malfunctions.
	12.	**Confirms** equipment is/has been placed in position required by Clearance Order.
	13.	**Initials** every clearance tag.
	14.	**Signs, dates,** and **records** time on the 'Issued To' line of the Clearance Order.
	15.	**Informs** Affected Employees of the clearance perimeter, including all tagout

		points and any additional tagged devices used to ensure safety.
Affected Employee	Meanwhile,	
	16.	**Completes** task *Verifying Clearance Perimeter* (HP010100E-TSK).
	17.	**Signs** Clearance Order Group Tagout Form (HP010100J-FRM).
Clearance Holder	18.	**Keeps** signed Group Tagout form at jobsite unless infeasible. Alternate location is foreman's office.
Senior Powerplant Operator	19.	**Documents** all switching steps associated with the Clearance in the station log.
	20.	**Files** Clearance Order in Control Room Active Clearance binder.
Powerplant Operator, Clearance Holder	If used,	
	21.	**Verifies** (or **observes** application of) protective grounds, per Protective Grounding Safe Work Practice (SA111119).
Senior Powerplant Operator	22.	**Adds** grounds to clearance order and station log.

GRANT COUNTY PUD #2
P.O. BOX 878 EPHRATA, WA 98823

PRIEST RAPIDS PROJECT
CLEARANCE ORDER

Clearance No:	**Station:**
Additional Clearance Numbers:	**Authorized By:** **Time:**
Clearance On:	
Kind of Work:	**Location:**

	Time	Date		Time	Date
Ordered By			Released By		
Placed By			Ordered Off By		
Issued To			Removed By		

Transferred To			Released By		
Transferred To			Released By		
Transferred To			Released By		
Transferred To			Released By		
Transferred To			Released By		
Transferred To			Released By		
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GRANT COUNTY PUD #2
P.O. BOX 878 EPHRATA, WA 98823

PRIEST RAPIDS PROJECT
CLEARANCE ORDER

Clearance No:	**Station:**
	Authorized By: **Time:**
Clearance On:	
Kind of Work:	**Location:**

TAG #	TAGS HUNG	OPERATIONS REQUIRED	DESTROYED
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

Additional comments/remarks:

Protective Grounds in Place ☐
Grounds Removed ☐

Implement on: 10/1/17	**Version:** 1 **Supersedes:** v0	**See Also:** HP010100-POL

TASK

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17550

HP010100E-TSK – VERIFYING A CLEARANCE PERIMETER

Before beginning work inside a clearance perimeter, or anytime a clearance perimeter is modified, the Affected Worker;

1.	**Reviews** clearance isolation points and proposed work with Clearance Holder.
2.	**Requests** information or modification, if Affected Worker does not feel clearance is sufficient to protect against injury or equipment damage.
3.	**Walks** clearance perimeter with tag list to visually confirm: • All isolation points are tagged, • All isolation points are in the correct position (use all available indicators to verify, but *do not touch or operate*), • Any required safety devices (pins, saddles, locks, etc.) are installed, • Stored energy – if any – has been released. **NOTE #1:** Affected Worker(s) may choose to independently visually verify the perimeter or accompany clearance holder as he/she verifies the perimeter is placed as requested. **NOTE #2:** Any manipulation of tagged-out device or equipment is grounds for discipline up to and including termination.
4.	**Brings** issues to notice of Clearance Holder and/or Senior or Chief Operator (such as incorrect isolation point position, missed tag, etc.) or if there are unresolved safety concerns related to the clearance.

COPY

Grant County PUD, Hydro Division

CLEARANCE ORDER GROUP TAGOUT

Clearance No.:_____ **Location:**_____

Clearance On:_____ _____

Work To Be Done:_____ _____

	I have verified the tag placement and understand the clearance limitations				**I release my interest in this clearance.**			
	DATE	**TIME**	**PRINT NAME**	**INITIAL**	**DATE**	**TIME**	**PRINT NAME**	**INITIAL**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Absent Worker Codes: **VR** – Verbal Release obtained
WB – Released on Worker's Behalf

~ Clearance Holder may attach tag list for crew reference ~

PROCEDURE

HP010100M-PRO – ESCORTING PERSONNEL INSIDE A CLEARANCE PERIMETER

When there is a business need for personnel to enter a clearance perimeter for a momentary visual review of equipment or system;

Employee [making request to enter perimeter]	1.	**Discusses** need to enter perimeter with Clearance Holder (CH).
	2.	**Verifies** previous completion of hydro safety training by all personnel who need to enter perimeter.
Clearance Holder	3.	**Decides** if the request to briefly enter the clearance perimeter can be granted or whether another alternative is safer (such as requesting the personnel to sign in as affected worker).
	4.	**Reviews** any area hazards, including any required PPE, with escorted employee/personnel prior to entering clearance perimeter.
	5.	**Reminds** escorted personnel that no tools, no work is to be done during visual tour. Visual review ONLY.
	6.	**Instructs** the escorted personnel to stay within arm's length of Clearance Holder at all times, once perimeter is entered. **CAUTION:** The Clearance Holder and **only** the Clearance Holder may act as an escort to personnel briefly entering the clearance perimeter.

COPY

Clearance Holder	7.	During morning job brief, **Informs** affected workers of upcoming escort duties inside perimeter.
	8.	**Remains** focused on escorted personnel and does not become distracted, once perimeter entered.
Employee/Personnel being escorted	9.	**Wears** required PPE.
	10.	**Stays** within arm's length of Clearance Holder once clearance perimeter is entered.
	11.	**Understands** escort is limited both in time and in scope and is not to be repeated. **NOTE:** If a need exists for multiple entries by same employee into a clearance perimeter over time or when work will need to be done inside the perimeter, the employee must ask to sign on to the clearance as an affected worker.

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HP010100C-PRO – LIFTING CLEARANCE TAG(S) FOR TESTING

CAUTION: Clearance tags shall never be lifted to energize high voltage equipment (>600V nominal) or to rotate a unit for test (unless a rotating device is used).

For the purpose of meggering or Doble testing, it is permitted to lift tags to temporarily remove 13.8kV grounds.

This procedure establishes the responsibility, authorization, and steps required to ensure safety during the temporary restoration of hazardous energy in order to test equipment or systems.

When equipment is ready for test operation and prior to temporary restoration of energy:

I. When there is only one clearance holder,
(multiple clearance holders, go to Section II, page 4)

Clearance Holder in charge of lift	1.	**Reviews** planned test and isolation points to be restored with Senior Operator.
Senior Operator	2.	**Notifies** Chief Operator of planned test.
Chief Operator	3.	**Reviews** and **approves request to** temporarily lift tag(s) to test.
	OR	3a. **Denies** request to lift tag(s) for test. **Meets** with Clearance Holder(s) to resolve tag lift safety issue(s).
Clearance Holder in charge of lift, [Affected Clearance Holder]	4.	**Discusses** proposed test with Affected Worker(s), **gets** worker initials on Clearance Activity Work Log (HP010100L-FRM).

Clearance Holder in charge of lift, [Affected Clearance Holder]	5.	**Confirms** machine or equipment is clear of tools and materials, and ready for test.
Clearance Holder in charge of lift	6.	**Requests** that the Senior Powerplant Operator temporarily remove specific clearance tag(s) on equipment for testing, using Clearance Order Tag number(s).
Senior Operator	7.	**Directs** Powerplant Operator to lift specific tag(s) and make equipment operational.
Powerplant Operator	8.	**Identifies** correct isolation point(s).
	9.	**Verifies** with Clearance Holder in charge of lift that all personnel are in the clear and ready to proceed, barriers such as red danger tape installed (if needed) to prevent entry.
	10.	**Lifts** tag(s) as directed and **energizes** equipment.
	11.	**Notifies** Senior Operator when tag(s) lifted as directed.
	12.	**Notifies** Clearance Holder in charge of lift when tag(s) lifted and equipment ready for test. **NOTE:** Clearance Holder in charge of lift is responsible for notifying all Clearance Holders with shared isolation points when the tag(s) have been lifted and equipment restored to service.
Clearance Holder in charge of lift,	13.	**Informs** Affected Workers that tag(s) have been lifted and equipment restored to operation and ready for test.

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[Affected Clearance Holder]		
Clearance Holder in charge of lift	14.	**Conducts** operational test(s), check or other activity.
	15.	**Requests** that the Senior Powerplant Operator rehang tag(s) as listed in the clearance order. **NOTE:** Clearance Holder in charge of lift is responsible for notifying all Clearance Holders with shared isolation points when the test has been completed and tag(s) rehung or destroyed.
	OR	15a. **Requests** lifted tag(s) be destroyed as previously discussed & agreed to.
Senior Operator	16.	**Directs** Powerplant Operator to replace tag(s) as requested. **NOTE:** At Clearance Holders' direction all lifted tags must be rehung or destroyed by end of shift.
Powerplant Operator	17.	**Returns** equipment to de-energized position as specified in the Clearance Order.
	18.	**Rehangs** tag(s).
	19.	**Informs** Senior Operator and Clearance Holder in charge of lift when tag(s) are rehung.
Clearance Holder in charge of lift [Affected Clearance	20.	**Verifies** all affected isolation points placed in correct position and clearance tag(s) replaced.

COPY

Holder], Affected Worker(s)		
Affected Worker	21.	**Initials** Clearance Activity Work Log (HP010100L-FRM) for rehung or destroyed tags.
Senior Operator	22.	**Documents** all clearance activity in the Station Log.
II. When there are multiple clearance holders for isolation point(s) affected by a test,		
Clearance Holder in charge of test	1.	**Discusses** planned test and need to lift specific tag(s) with each affected Clearance Holder.
All Clearance Holders affected by lift	2.	**Reviews** planned test and isolation points to be restored.
	2a.	**Offers** safer alternatives (time change, isolation point, etc.), when appropriate.
Clearance Holder in charge of lift	3.	**Requests** permission from all affected Clearance Holders to lift tag(s) needed to accomplish test.
All Clearance Holders affected by lift	4.	**Notifies** Senior Operator that permission to lift tag(s) has been given to Clearance Holder in charge of lift.
	OR 4a.	**Completes** *Permission to Lift Clearance Tag* Form if Clearance Holder will not be on project when specific tag(s) need to be lifted. See HP010100F-TSK.
	5.	**Go to Section I, step 1.**

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Implement on: 10/1/17	**Version:** 1 **Supersedes:** 0	**See Also:** HP010100-POL

TASK

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-175

HP010100F-TSK – GRANTING PERMISSION TO LIFT TAG(S)

When a Clearance Holder with shared isolation point(s) will not be on the project for lift-tag-for-test, but has reviewed and agreed with the proposed test, the Clearance Holder;

1.	**Gives** permission to lift tags to another clearance holder requesting the lift-to-test.
2.	**Grants** permission for a specific task and includes clearance tag numbers provided, for one shift.
3.	**Signs** *Permission To Lift Clearance Tags* (HP010100B-FRM). **NOTE:** This form is typically blue.
4.	**Gives** completed form to Senior Operator for filing in the Active Clearance Binder with the Clearance Order. **NOTE:** Scanning and emailing the completed form is permitted.

COPY

GRANT COUNTY PUBLIC UTILITY DISTRICT
HYDRO DIVISION

PERMISSION TO LIFT AUXILIARY SAFETY TAGS

_____HAS MY PERMISSION TO LIFT TAG(S)

NUMBER(S)_____ON CLEARANCE NUMBER_____

FROM_____ TO _____
Date/Time Date/Time

CLEARANCE HOLDER SIGNATURE_____

HP010100B-FRM
S:\Data\PUDForms\DamForms

Retention: 5 years
Owner: Operations Supervisor

GRANT COUNTY PUBLIC UTILITY DISTRICT
HYDRO DIVISION

PERMISSION TO LIFT AUXILIARY SAFETY TAGS

_____HAS MY PERMISSION TO LIFT TAG(S)

NUMBER(S)_____ON CLEARANCE NUMBER_____

FROM_____ TO _____
Date/Time Date/Time

CLEARANCE HOLDER SIGNATURE_____

HP010100B-FRM
S:\Data\PUDForms\DamForms

Retention: 5 years
Owner: Operations Supervisor

Grant County PUD, Hydro Division

CLEARANCE WORK ACTIVITY LOG

Clearance No.:_____Location:_____

Clearance On:_____

Work to be done:

Activity (see Key)	**Tag#**	**Tag Description** (or Description of Change)	**Crew Initials**	**Date**	**Time**

Key:

A – Tag Added D – Tag Destroyed L – Tag Lifted R – Tag Rehung

T – Clearance Transferred

Implement on: 10/1/17	**Version:** 3 **Supersedes:** v2	**See Also:** HP010100-POL

PROCEDURE

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17525, 17540, 17545

HP010100E-PRO – REQUESTING AN INCREMENTAL PERIMETER MODIFICATION

This procedure establishes the responsibility, authorization, and steps required to ensure the safe modification of a clearance perimeter.

When necessary to change a clearance perimeter as work progresses:

Chief Powerplant Operator **and** Affected Clearance Holder(s)	1.	**Determines** the scope of the Clearance perimeter modification.
Affected Clearance Holder(s)	2.	**Ensures** work area has been inspected, nonessential items have been removed, and that equipment is ready to return to service.
	OR	If perimeter is expanding,
		2a. **Ensures** work area is clear of obstructions and equipment is ready to be removed from service.
	3.	**Notifies** Affected Workers about the planned clearance perimeter modification.
Chief Powerplant Operator and Affected Clearance Holder(s)	4.	**Informs** the Senior Powerplant Operator which clearance tags are to be 'removed and destroyed' (or added) using equipment name, clearance and tag number.
Senior Powerplant Operator	5.	**Notifies** Powerplant Operator of the tags to be removed (or added).
Affected Clearance Holder(s)	6.	Meanwhile, **Confirms** Affected Workers are in the clear.

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Powerplant Operator	7.	**Identifies** isolation point and compares to tag & Clearance Order instruction.
	7a.	**Does NOT** proceed if equipment or device is not in expected position or if it malfunctions.
	8.	**Places** (or **verifies**) isolation point in correct position.
	9.	**Removes** (or **adds**) tag(s) as required.
	10.	**Informs** Clearance Holder of lifted (or added) tag(s) and perimeter modification.
Affected Clearance Holder(s)	**Before resuming work,**	
	11.	**Verifies** clearance tag perimeter modified as directed.
	AND	
	12.	**Confirms** all energy sources made safe by checking: • clearance isolation device in proper position, • use of additional safety devices (pins, saddles, locks, etc.), as needed • any stored energy is released • initials added tags, if applicable
	13.	**Notifies** Affected Workers tag(s) removed (or added) and clearance perimeter modified.
Affected Worker	14.	**Verifies** modified portion of the Clearance Perimeter is correct and safe.
	15.	**Signs** Clearance Work Activity Log (HP010100L-FRM).

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Affected Clearance Holder(s)	16.	**Posts** completed Activity Log (HP010100L-FRM) at jobsite or Foreman's office.
Powerplant Operator	17.	**Informs** Senior Operator when all tags are added.
	18.	**Returns** all removed clearance tags to the Senior Operator.
Senior Powerplant Operator	19.	**Confirms** that all appropriate tags have been removed or added as required in the Clearance Order.
	20.	**Records** the clearance perimeter modification in the Station Log.

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Implement on: 10/1/17	**Version:** 3 **Supersedes:** v2	**See Also:** HP010100-POL

PROCEDURE

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17525, 17540(4), 17555

HP010100D-PRO – TRANSFERRING A CLEARANCE

This procedure establishes the responsibility, authorization, and steps required to ensure the safe transfer of a clearance.

To transfer active Clearance from one clearance holder to another:

I. WHEN CURRENT CLEARANCE HOLDER IS PRESENT:		
Current Clearance Holder	1.	**Notifies** immediate Supervisor and Senior Powerplant Operator of need to transfer clearance.
	2.	**Informs** all Affected Workers at the jobsite of impending transfer to new Clearance Holder.
	3.	**Provides** detailed information about the clearance to the new Clearance Holder.
	4.	**Walks** the clearance perimeter with new Clearance Holder and **ensures** they initial all clearance tags prior to transferring the clearance.
	5.	**Gives** all signed copies of Clearance Order Group Tagout form (HP010100J-FRM) and Clearance Work Activity Log (HP010100L-FRM) to new Clearance Holder.
Both Clearance Holders & Senior Powerplant Operator	6.	**Meets** in person to transfer the clearance.

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Both Clearance Holders & Senior Powerplant Operator	7.	**Agrees** that the new Clearance Holder fully understands the details of the clearance and its perimeter.
New Clearance Holder	8.	**Accepts** the clearance by signing, dating and recording time on the 'transferred to' line of the Clearance Order.
	9.	**Informs** Affected Workers of completed transfer.
	9a.	**Obtains** Affected Worker initials on Clearance Work Activity Log (HP010100L-FRM).
Current Clearance Holder	10.	**Transfers** the clearance by signing, dating and recording time on the 'released by' line, opposite the 'transferred to' line on the Clearance Order.
Senior Powerplant Operator	11.	**Documents** transferred clearance in the Station Log.
II. WHEN CURRENT CLEARANCE HOLDER (CCH) IS ABSENT:		
Chief Powerplant Operator, Senior Powerplant Operator, & Supervisor/Foreman	1.	**Discusses** circumstances regarding the transfer of a clearance from a Clearance Holder who is not available.
Supervisor/Foreman	2.	**Makes** reasonable effort to contact the Current Clearance Holder (CCH) to notify of transfer.
	3.	**Takes** personal responsibility to transfer clearance to New Clearance Holder.

Supervisor/Foreman	**OR**	3a. **Releases** the clearance according to established procedures (see HP010100B-PRO, *Releasing A Clearance*) and **obtains** affected workers release on Group Tagout form.
New Clearance Holder	4.	**Informs** Affected Workers of clearance transfer (or release).
		4a. **Obtains** Affected Worker initials on Clearance Work Activity Log (HP010100L-FRM).
	5.	**Notifies** Senior Powerplant Operator of clearance transfer.
Senior Powerplant Operator	6.	**Documents** the revised clearance status (either transferred or released) in the Station Log.
III. WHEN BOTH CURRENT CLEARANCE HOLDER AND SUPERVISOR ARE ABSENT:		
Chief Powerplant Operator	1.	**Makes** reasonable effort to contact the Current Clearance Holder (CCH) and their Supervisor.
	2.	**If it is not possible** to reach CCH or Supervisor,
		Takes personal responsibility for the transfer of the clearance in accordance with established procedures (see II, previous page).
New Clearance Holder	3.	When clearance is transferred,
		Obtains Affected Worker initials on Clearance Work Activity Log (HP010100L-FRM).

New Clearance Holder	4.	**Notifies** Supervisor/Foreman and CCH of Clearance transfer.
Chief Powerplant Operator	**OR**	**If it is not possible** to reach CCH or Supervisor, at Chief's discretion
	5.	**Obtains** affected worker initials releasing interest in clearance on Clearance Order Group Tagout form (HP010100J-FRM).
	OR	5a. **Signs** on behalf of affected worker if worker, foreman, and supervisor are all absent during release.
	6.	**Releases** clearance (see HP010100B-PRO, *Releasing A Clearance*).
	7.	**Informs** CCH and their supervisor of clearance release.

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Implement on: 12/1/16	**Version:** 2 **Supersedes:** v1	**See Also:** HP010100-POL

PROCEDURE

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17505, 17525, 17540

HP010100B-PRO – RELEASING A CLEARANCE

This procedure establishes the responsibility, authorization, and steps required to ensure that releasing any given clearance and restoring hazardous energy is safely accomplished.

Work completed and equipment ready to return to service:

Clearance Holder	1.	**Informs** affected workers that clearance will be released & **Obtains** affected worker initials releasing interest in clearance on HP010100J-FRM.
	2.	**Inspects** all affected equipment and work area to ensure it is ready to be returned to service. Including, but not limited to inspecting: • Generator air housing prior to removing U/S bulkheads, • Turbine pit prior to filling draft tube to tailwater.
	3.	**Confirms** affected workers are clear of equipment.
Clearance Holder, Powerplant Operator	4.	**Verifies** (or observes removal of) protective grounds per Protective Grounding Safe Work Practice (SA111119).
Clearance Holder	5.	**Releases** the clearance by signing and dating (time) on the 'released by' line of the Clearance Order.
	6.	**Turns** in all signed Clearance Order Group Tagout forms (HP010100J-FRM)

		and Clearance Work Activity Logs (HP010100L-FRM) to Control room.
Senior Operator	7.	**Orders** the clearance 'off' by signing, dating and recording time on the Clearance Order on the 'ordered off by' line.
	8.	**Notifies** Powerplant Operator the clearance has been released and **directs** removal of clearance.
Powerplant Operator	9.	**Inspects** all affected equipment and work area to ensure it is ready to be returned to service.
	10.	**Removes** clearance tags.
	11.	**Returns** equipment to normal operating position and **records** on clearance order.
		11a. **Records** time of high voltage switch (> 600V nominal) operation on the Clearance Order.
	12.	**Returns** all clearance tags to the Senior Operator.
	13.	**Verifies** removal of clearance tags by signing and dating the Clearance Order on the 'removed by' line.
	14.	**Notifies** Clearance Holder when all tags have been removed.
Clearance Holder	15.	**Informs** Affected Workers that all tags are removed and equipment returned to service.

Senior Operator	16.	**Confirms** that all appropriate tags have been removed and **destroys** tags.
	17.	**Enters** released clearance in Station Log. **Including:** Generators and transformer lines available and in service documented in station log with dispatcher name.
	17.	**Archives** Clearance Order & tag list, Clearance Order Group Tagout forms, Clearance Activity Logs received from Clearance Holder(s) in completed clearance binder.

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Implement on: 10/1/17	**Version:** 0	**See Also:** HP010100-POL

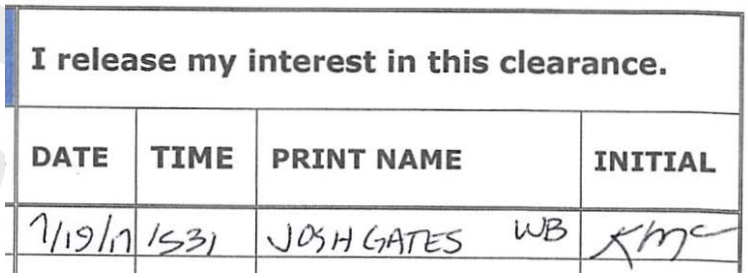
PROCEDURE

Approved by: Mark Beattie, Bryan Bird **Regulation:** WAC 296-45-175

HP010100L-PRO – RELEASING INTEREST IN CLEARANCE ON BEHALF OF ABSENT WORKER

When an affected worker is not physically present to release interest in an active clearance:

Clearance Holder	1.	**Contacts** absent worker's Foreman/ Supervisor to request a release of interest in the clearance on behalf of absent worker.
Foreman/Supervisor	2.	**Confirms** worker is absent from project.
	3.	**Contacts** absent worker to obtain verbal release of interest.
		If unable to contact absent worker,
		3a. **Releases** interest on worker's behalf.
	4.	**Documents** worker's release of interest on Clearance Group Tagout form (HP010100J-FRM), indicating either: • VR for 'verbal release obtained', or • WB for 'on worker's behalf'
Clearance Holder	5.	If affected worker, foreman, and supervisor are all absent,
		Contacts Chief Operator to request a release of interest in the clearance on behalf of absent worker.



I release my interest in this clearance.			
DATE	TIME	PRINT NAME	INITIAL
7/19/17	1531	JOSH GATES WB	KMC

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Chief Operator	6.	**Confirms** worker is absent from project.
	7.	**Contacts** absent worker to obtain verbal release of interest.
		If unable to contact absent worker,
		7a. **Releases** interest on worker's behalf.
	8.	**Documents** worker's release of interest on Group Tagout form (HP010100J-FRM), indicating either: • VR for 'verbal release obtained', or • WB for 'released on worker's behalf'
Clearance Holder	9.	**Notifies** absent worker via email that they have been released from the Clearance by [Foreman, Supervisor, or Chief Operator].

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Implement on: 4/14/16	**Version:** 0	**See Also:** HP010100-POL, HP010100H-FRM

TASK

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17505(6)

HP010100C-TSK – INSPECTING A CLEARANCE

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

1.	**Conducts** inspection of an existing power plant clearance, chosen at random.
2.	**Uses** Clearance Inspection form (HP010100H-FRM) to document inspection.
3.	**Verifies** Clearance Holder and any affected workers have completed Switching & Clearance training within the last 12 months.
4.	**Reviews** Clearance responsibilities with Clearance Holder and each Affected Worker.
5.	If procedural or other deficiencies found during inspection, **Stops** all work until situation is made safe.
	5a. **Schedules** (or **conducts**) remediation.
	5b. **Notifies** employee's foreman or supervisor of exact deficiency(ies).
	5c. **Documents** remediation or remediation plan on inspection form. **NOTE:** If remediation includes revision of Hydro Switching & Clearance SOP, the power plant manager shall receive a copy of the inspection form with suggested edits to the SOP.
6.	**Obtains** signatures on inspection form (clearance holder & supervisor/foreman).

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7.	**Signs** completed inspection form.
8.	**Sends** completed & signed form with any additional attached documents to Hydro Engineering Services & Support Supervisor for filing.

NOTE: A camera is recommended to document good practices as well as problems that may be observed. Photos may be attached to completed inspection form.

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Grant County PUD
HYDRO DIVISION

Clearance Inspection

Inspection Conducted By (please print)			
Inspection Date			
Location/Facility			
Equipment, Machine, or System Isolated			
Clearance Number		Date Issued:	

List Employees Working Under This Clearance & Indicate Hydro Switching & Clearance Annual Training Within 12 Months			
Clearance Holder		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO

	Personnel Questions	(circle one)	
1	Does each employee know where the Hydro Switching & Clearance SOP is located?	YES	NO
2	Has each employee working under this clearance been instructed to treat a clearance tag as a lock?	YES	NO
3	Can all employees working under this clearance identify all energy sources (including stored or kinetic) for this equipment or system?	YES	NO
4	Do all employees working under this clearance understand what the clearance perimeter is?	YES	NO
5	Were all affected employees notified when clearance was active and it was safe to begin work?	YES	NO
6	Can Clearance Holder demonstrate proper steps for identifying, isolating, blocking and securing, then testing equipment necessary for clearance?	YES	NO
	Equipment Questions		
7	Was equipment isolated from every energy source?	YES	NO
8	Was any potential energy (stored or residual) relieved/made safe?	YES	NO
9	Was equipment or system tagged appropriately with unique clearance tag(s) and with 50lb tensile strength ties?	YES	NO
10	Was equipment tested to confirm the right system was isolated and equipment could not be operated?	YES	NO
11	Were grounds installed?	YES	NO
	12a If grounds installed, were they tagged?	YES	NO
12	Do clearance tags include equipment name and clearance holder initials?	YES	NO

Clearance Inspection

Clearance Status			
13	Were affected employees notified of changes in the clearance (including transfer, perimeter change, release of clearance) as verified by signing group tagout and clearance work activity logs?	YES	NO
14	Were affected employees in the clear before clearance was released?	YES	NO
15	Was equipment inspected for proper position/configuration before clearance was released or tags were lifted?	YES	NO
16	Were clearance tags lifted and destroyed as outlined in Hydro Switching & Clearance SOP?	YES	NO
Other Findings			
17			
Problems, Remediation, Follow-up			
18	List any problems or deficiencies found during inspection (explain all 'no' answers):		
19	List corrective action/remediation for above problems:		
20	Describe recommended follow-up (including suggested edits to existing clearance SOP):		
21	Inspector's Signature	Date	
22	Clearance Holder Signature	Date	
23	Foreman/Supervisor's Signature	Date	

NOTE: Photos and/or Clearance documentation may be attached, as appropriate.

Implement on: 12/1/16	**Version:** 1 **Supersedes:** v0	**See Also:** HP010100-POL

TASK

Approved by: Mark Beattie, Bryan Bird	**Regulation:** WAC 296-45-17505

HP010100B-TSK – REVIEWING HYDRO SWITCHING & CLEARANCE TAGOUT SYSTEM

Annual review of this SOP is conducted by the Hydro Maintenance and/or Operations Supervisor, who:

1.	**Ensures** the Clearance Tagout System (HP010100) meets the requirements of WAC 296-45.
2.	**Reviews** any clearance near misses or incidents to determine if revisions to the Hydro Switching & Clearance Tagout SOP may prevent future issues.
3.	**Confirms** Clearance Holder(s) trained in the Hydro Switching and Clearance Tagout SOP adhere to the requirements thereof.
4.	**Provides** (or **causes provision** of) additional training to Authorized Employee, should it be determined through the annual inspection, close call, or safety incident, that an Authorized Employee did not follow the rules and procedures as specified in Hydro Switching and Clearance Tagout System. **NOTE:** Alternately, the authorized employee may be barred from holding a Clearance until such time as training is completed.

HP010100A-REF - SWITCHING & CLEARANCE TAGOUT SYSTEM

I. Switching and Clearance Tagout System Boundary

Power Production Switching and Clearance (HP010100) applies to the District's generation plants.

Operations has the authority and responsibility for power plant operations and exclusive control of all energy sources therein up to the point of separation (POS) boundary devices shown in the following three tables.

Table 1. 230 kV Boundary Point of Separation

Location	Device
Priest Rapids	P1181
	P1185
	P1281
	P1285
	P1381
Wanapum	W1181
	W1185
	W1281
	W1285
	W1381

Table 2. 13.8kV Boundary Point of Separation

Location	Device
Priest Rapids	PR312
Wanapum	J266
	J47

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Table 3. 115kV Boundary Point of Separation

Location	Device
Potholes East Canal	GB83
Quincy Chute	GB400

The Senior System Operator (aka: Dispatcher) has primary responsibility for the operation of the District's transmission and distribution systems including the point of separation boundary devices shown in the three tables above.

Only the Dispatcher may authorize hanging/removing a Do Not Operate tag on a point of separation boundary device and this tag cannot be transferred.

If a clearance perimeter includes a point of separation (POS) boundary device, it must have both a POS Do Not Operate tag issued by Dispatch and a clearance tag issued by the control room.

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

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

The Switching and Clearance procedures for the District's Power Delivery (PD) system are covered in the PD Switching and Clearance Procedure (SOP-OPS-002-SWCL).

The only time a PD-issued clearance will extend into the power plant is when work occurs on a POS boundary device.

A. PD Switching and Clearance Procedures

The following power production locations are covered by PD Switching and Clearance procedures and are exempt from HP010100:

1. Wanapum Switchyard 230kV system
2. Priest Rapids Switchyard

B. LOTO

Some power production locations are exempt from both Switching and Clearance Tagout System (HP010100) and PD Switching and Clearance procedures (SOP-OPS-002-SWCL).

The following locations are covered under LOTO (WAC 296-45-17505) rules and are exempt from HP010100.
Starting at the main distribution panel:

A. Priest Rapids Hatchery
B. Wanapum Heritage Center
C. WMC complex
D. Hydro Office Building (HOB)
E. Archeology Lab
F. Wanapum Living Culture Building

Starting at the meters:

G. Wanapum Indian Village

II. Generation Outage or River Coordination

A. Planned Work (preventive maintenance or PM)

Work on equipment directly affecting generation, critical systems, plant discharge, flow or elevations (headwater or tailwater) must first have an approved outage (see HY000011 – *Requesting A Generation Outage or River Coordination*).

At least 48 hours in advance of this approved work, submit a clearance request to operations.

III. Communication

The term *"**Shall**"* indicates the described procedure (or step in the procedure) is mandatory. The terms "SHOULD" and "MAY" are used to indicate the described procedure is not mandatory because of variations in work conditions.

Verbal orders in connection with switching and clearances shall be given by the Chief or Senior Operator directly to the authorized employee in charge of switch operation or receiving the Clearance.

Clearances, switch orders, clearance orders, and directives shall be repeated word-for-word back to the speaker, using the correct designation of the conductor, cable, station and equipment. The Chief or Senior Operator shall confirm instructions were properly restated (see HP040400, *Communicating Clearly*).

When approved by Chief Operator, Clearances may be issued, released, and/or transferred by radio or telephone from the following remote locations:

- Potholes East Canal (PEC) Project
- Quincy Chute (QC) Project
- Wanapum Switchyard Station Service Equipment

Switching and Clearance terms and definitions are found in Definition of Terms (HP010100C-LST).

COPY

Implement on: 10/1/17	Version: 1 Supersedes: v0	See Also: HP010100-POL
LIST		
Approved by: Mark Beattie, Bryan Bird		

HP010100C-LST – SWITCHING & CLEARANCE GLOSSARY OF TERMS

See Hydro Glossary for more definitions & acronyms.

TERM	DEFINITION
AFFECTED WORKER [AFFECTED EMPLOYEE]	Employee whose job requires him or her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him or her to work inside a Clearance perimeter where such servicing or maintenance is being performed.
AUTHORIZED [APPROVED]	No clearance request can be approved except by Chief Operator after a review of scope of work, proposed clearance perimeter, timeframe.
AUTHORIZED EMPLOYEE	Employee trained by the District in LOTO and Hydro Switching and Clearance Tagout System procedures. Knowledgeable in the operation, maintenance and construction of lines, cables, stations and equipment relative to their current status, including how to turn off or otherwise isolate from energy source. They shall also be fully aware of the hazards associated with lines, cables, stations and equipment. Authorized Employees by definition, include *Clearance Holder*, *Operator*, and *Qualified Electrical Worker.*
CHIEF POWERPLANT OPERATOR	Operator in charge of the power plant with complete operational jurisdiction. The final authority on who will be issued a clearance and the limitations or boundaries of that clearance.
CLEARANCE (for work)	A procedure used to establish, under tightly controlled discipline and authority, a safe environment for maintenance, inspection, or repair of equipment or system. It includes systematically isolating pertinent equipment from all normal sources of hazardous energy (hydraulic, electrical, mechanical, pneumatic, chemical, etc.) and attaching safety tags or locks to appropriate controls. At Hydro: A certification and authorization, with documentation from a Senior Operator, that a specified line, cable, station, or equipment necessary for the reliable, safe operation of the generating facility, is de-energized and isolated from all normal sources of energy and provides field personnel authority to test, ground, and tag the line

TERM	DEFINITION
	or equipment. A Senior Operator shall issue a Clearance through formal procedures releasing control of the line, cable, station, or equipment to the Clearance Holder for inspection, maintenance, modification or repairs.
CLEARANCE HOLDER, AUTHORIZED	An employee who is familiar with the operation, maintenance, and construction of lines, systems, and equipment, including how to isolate, turn off, or shut down safely. Is fully 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 and who has received training in the Hydro Switching & Clearance Tagout System and is authorized to hold a clearance. Authorized Clearance Holders typically are foremen, operations personnel, and journeymen mechanic, electrician, Planner, or I&C technician. 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 Hydro Switching and Clearance training. There will be predefined limits to the clearance these personnel may hold. See Hydro Switching and Clearance Tagout System (HP010100).
CLEARANCE LOG BOOK	Printed Clearance documentation kept in two clearance log books at the Senior Operator's desk in the Control Room, one active and one complete. • The active clearance log book is a binder that contains the Clearance Orders and tag lists for active clearances. • The completed clearance log book is a binder that contains the Clearance Orders of clearances that have been released for the current year. **NOTE:** Although all the hard copy information about clearances will be found in the clearance log binders, the Station Log (OperLog™) will have current information about the status of all clearances.
CLEARANCE ORDER	The master clearance document indicating that equipment has been made safe for the performance of work and is a record of all information pertinent to placing, modifying, transferring and releasing the clearance. The original shall remain in the Control

TERM	DEFINITION
	Room Clearance Log book. A Clearance Order shall be treated as a switch order unless agreed upon switch plans have been developed with the Senior or Chief Operator.
CLEARANCE PERIMETER	The minimum number of points needed to make a particular job safe from energy source(s).
CLEARANCE POINT	A device (switch, breaker, jumper, etc), under control of the powerplant Operator, which has been positioned (opened or closed, etc.) so as to be isolated from all energy and a Clearance Tag installed for the Clearance Holder.
CLEARANCE TAG	A method of identifying circuits, systems, or equipment for the purpose of alerting employees and others that the circuit, system, or equipment is being worked on. **Each tag shall be considered the same as a lock.** Equipment which has been labeled with a clearance tag shall not be operated as long as the clearance tag is attached. When a clearance point has been released and protection removed, the clearance tags are to be removed and destroyed.
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. **NOTE:** De-energized conductors or equipment could be electrically charged or energized though various means, e.g. induction from energized circuits, portable generators, lighting.
DIRECTIVE	An authoritative instruction; a specific order as pertains to switching instructions or Clearance procedures.
EMERGENT WORK	Work that arises unexpectedly, unplanned.
ENERGIZED	Connected to an energy source (electrical, mechanical, hydraulic (including water), or pneumatic energy) with a potential difference or containing residual or stored energy so as to have a potential significantly different from that of earth in the vicinity. "Live" "Alive" and "Hot" are alternate terms in common use.

Implement on: 10/1/17	**Version:** 1 **Supersedes:** v0	**See Also:** HP010100-POL
# LIST		
Approved by: Mark Beattie, Bryan Bird		

TERM	DEFINITION
ENERGY ISOLATION 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, a manually operated switch, a slide gate, a slip blind, 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 devices)
ENERGY SOURCE	Any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal or other energy, including gravity, which could cause injury to personnel.
ESCORTED PERSONNEL	For the purpose of brief visual review (no work or tools involved), and only when accompanied by Clearance Holder as escort, the escorted personnel need not sign on to a clearance to enter the clearance perimeter. **NOTE:** escorted personnel must still complete hydro safety training prior to entering powerhouse or environs.
GROUND	A conducting connection, whether intentional or accidental, between an electric circuit or equipment and the earth, or to some conducting body that serves in place of the earth.
GROUNDED	Connected to earth or to some conducting body that serves in place of the earth. See *Grounded, Effectively*.
GROUNDED, EFFECTIVELY	Intentionally connected to earth through a connection or connections of sufficiently low impedance and having sufficient current-carrying capacity to prevent the buildup of voltages that may result in undue hazards to connect equipment or to persons. Mechanical equipment is suitably grounded when it is connected to an approved ground source in the following priority: 1) dam ground bus, 2) grounded structure (steel tower leg, grounded tower footing, etc.), 3) temporary driven ground rod. **NOTE:** Ground rods shall be used only when no other ground source is available. Mechanical equipment grounded to ground rods shall be considered energized and treated as such.
HAZARDOUS ENERGY	Energy that has the potential to cause injury.
ISOLATED	All energy sources blocked and tagged.

Implement on: 10/1/17	**Version:** 1 **Supersedes:** v0	**See Also:** HP010100-POL
# LIST		
Approved by: Mark Beattie, Bryan Bird		

TERM	DEFINITION
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.
ORDER OFF	Before a clearance can be released, it must first be ordered off by the Senior Operator.
PLACED	The act of putting isolation point(s) in condition directed by the Clearance Order, of ensuring equipment/system is de-energized as part of a clearance perimeter.
POINT OF SEPARATION	Established boundary between District's transmission and distribution system and its connectivity to generation plants, or customer-owned facilities.
QUALIFIED PERSON	Employee who is knowledgeable of the construction, or operation of such lines and/or equipment that concerns his/her position and who is fully aware of the hazards connected therewith, or, one who has passed a journey status examination for the particular branch of the electrical trades with which he/she may be connected. Note 1: An employee must have the training required by WAC 296-45-065(1) in order to be considered a qualified person. Note 2: (Apprentice) Except under WAC 296-45-25510(12), a person who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.
RELEASE	Ending a clearance after work is complete, or ending clearance holder's control of a clearance during a transfer to another clearance holder.
REMOVED	The process which lifts clearance tag(s) and returns equipment to operating position after a Clearance is released.
REVIEW	The process by which the Chief Operator evaluates a clearance request prior to approving or denying the request.

COPY

Implement on: 10/1/17	Version: 1 Supersedes: v0	See Also: HP010100-POL
# LIST		
Approved by: Mark Beattie, Bryan Bird		

TERM	DEFINITION
STATION LOG	The official legal record of power plant operations. Keeping the station log is the responsibility of the Senior power plant operator. All active clearances, including changes in those clearances (transfers, perimeter modification, lifting tags for test, and releases) are documented in the station log.
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 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.
TRANSFER	The process by which a Clearance Holder transmits responsibility for an active clearance to another Clearance Holder.
UNSUPERVISED PERSONNEL	Person(s) not under direct supervision of Clearance Holder, and who enters the clearance perimeter to do work without Clearance Holder's permission.
WORK	Mental or Physical activity including emergent or planned maintenance, servicing, repair, or replacement of equipment or system.

COPY

FORMS APPENDIX

Save & Email

Print

CLEARANCE REQUEST

Request for removal of equipment from service

Requested By:	**Date**	**Time**
For (select one):		

Description of Equipment:

Date and time switching and tagging are to begin: DATE_____ TIME _____
Date and time the work is to start under the clearance issued: DATE_____ TIME _____
Date and time the work is completed, clearance is released, and switching to begin DATE_____ TIME _____
Date and time the equipment scheduled to be returned to service: DATE_____ TIME _____

Clearance issued to (Print Name)_____

Estimated time necessary to return equipment to service in emergency: _____

Purpose of Outage:

List Energy Isolation Points:

Special instructions:

ROUTE:
1. Chief/Senior Operator
2. Requestor

Transformer Clearance – Priest Rapids Dam

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form (aka: 0838).

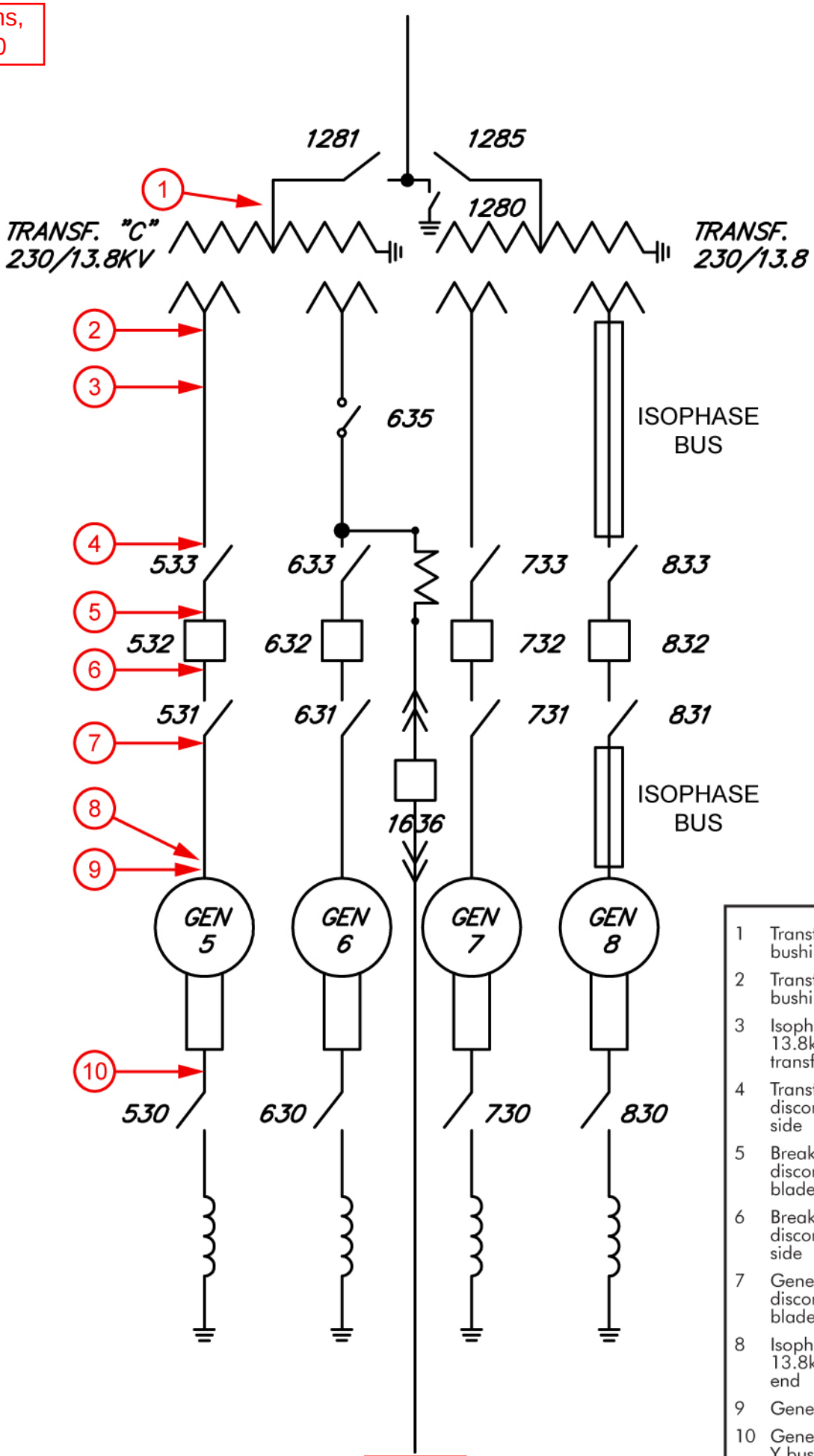
Transformer #	230kV DISCONNECT SW # P-	**OPEN, DECOUPLED & LOCKED**
☐ 230kV M.O. DISCONNECT CONTROL POWER 125VDC BREAKER **OPEN** IN CONTROL ROOM		
☐ 230kV M.O. DISCONNECT CONTROL POWER 125VDC BREAKER **OPEN** @ M.O.		
☐ ISOPHASE DISC. #P- **OPEN**		
UNIT P-___13.8 kV DISCONNECT SW #P	31-P	33 **OPEN**
UNIT P-___13.8 kV DISCONNECT SW #P	31-P	33 **OPEN**
☐ SS #1 13.8kV BKR P1436 **OPEN & RACKED DOWN** (TRANSF. "B" ONLY)	☐ SS #2 13.8kV BKR P1636 **OPEN & RACKED DOWN** (TRANSF. "C" ONLY)	
☐ UNIT P-_____GCB 125VDC CONTROL BREAKER **OPEN** IN CONTROL ROOM		
☐ UNIT P-_____GCB 125VDC CONTROL BREAKER **OPEN** IN CONTROL ROOM		
TRANSFORMER: ☐ RELAYS 125 VDC CONTROL POWER SUPPLY BREAKER **OPEN** ☐ TRANSF. 550 VAC **OPEN** (NORMAL) @ AUX BOARD ODD UNIT P- ☐ TRANSF. 550 VAC **OPEN** (STANDBY) @ AUX BOARD EVEN UNIT P- ☐ DELUGE ISOLATION VALVE **CLOSED** ☐ GENERATOR METER RELAY & SYNC. P.T. DISC (GEN. BUS) @ SURGE CUBICLE **OPEN**		
BCPD GROUND SWITCH **CLOSED**: ☐ PHASE A ☐ PHASE B ☐ PHASE C		
UNIT P-_____ SYNC. P.T. TRANSFORMER BUS DRAWER **OPEN** @ UNIT GCB	UNIT P-_____SYNC. P.T. TRANSFORMER BUS DRAWER **OPEN** @ GCB	
UNIT P-_____SYNC. P.T. SECONDARY TRANSFORMER BUS DISC. **OPEN** @ UNIT GCB	UNIT P-_____SYNC. P.T. SECONDARY TRANSFORMER BUS DISCONNECT **OPEN** @ UNIT GCB	

LOCATION OF PROTECTIVE GROUNDS (see page 2)

☐	TRANSFORMER 230kV BUSHINGS OR LEADS		
☐	TRANSFORMER 13.8kV BUSHINGS,		
☐	ISOPHASE BUS 13.8kV BEHIND TRANSFORMER		
☐	TRANSFORMER 13.8kV DISCONNECT	CLIP SIDE	CLIP SIDE
☐	BREAKER 13.8kV DISCONNECT	BLADE SIDE	BLADE SIDE
☐	BREAKER 13.8kV DISCONNECT	CLIP SIDE	

Additional Grounds:

NOTES:



1	Transformer 230kV bushings or leads
2	Transformer 13.8kV bushings
3	Isophase bus 13.8kV behind transformer
4	Transformer 13.8kV disconnect X33 clip side
5	Breaker 13.8kV disconnect X33 blade side
6	Breaker 13.8kV disconnect X31 clip side
7	Generator 13.8kV disconnect X31 blade side
8	Isophase bus 13.8kV generator end
9	Generator leads
10	Generator neutral at Y bus

SAVE PRINT

Hydro Division, Priest Rapids Project

Unit Outage – Priest Rapids Dam

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form.

UNIT# _____

550 VAC Breakers Substation

Substation Feeder to Aux Board: ☐ Bus 1 ☐ Bus 2

550 VAC Breakers Auxiliary Board

Aux Board Main from: ☐ Bus 1 BKR ☐ Bus 2 BKR

Cooling Water M.O. Supply BKR: ☐ Inlet Valve ☐ Discharge Valve

Generator: ☐ Air Cooler Reg. Valve Supply BKR ☐ Heaters Supply BKR

Governor Oil Pump Supply BKR: ☐ No. 1 ☐ No. 2

☐ High Lift Pump Supply Breaker

☐ Transformer Oil Pumps Supply Breaker

Turbine: ☐ Farval Grease Pump Supply Breaker

☐ Sump Pump Supply Breaker

125 VDC Breakers Auxiliary Board

☐ Auxiliary Board Tie Breaker

☐ Exciter Control Power Breaker #

☐ Field Flashing Supply Breaker #

☐ G.C.B. Control Power Breaker @ C/R

☐ Generator CO2 Control Power Breaker

☐ Incoming 125 VDC Supply Breaker

☐ Relay-Gov Control Power Breaker

☐ Turbine Stand-by Sump Pump Breaker

☐ Unit Annunciation Supply Breaker @ C/R

☐ Unit Aux SWBD Supply Breaker @ C/R

115 VAC Breakers (UPS) Auxiliary Board

Actuator: ☐ Selsyn Breaker ☐ Emergency Lights/Exciter Cab lights BKR

☐ Exciter and 64F Relay Breaker #

☐ Transducer & 38 Relay Supply Breaker

☐ Unit Auxiliary SWBD Supply Breaker @ C/R

115 VAC Breakers Turbine Floor, RU Panel

Blade Controller: ☐ Supply Breaker ☐ PLC or SLC Supply Breaker

☐ GOP PLC Control Power Supply Breaker

☐ Governor Auxiliary Relay Supply Breaker

☐ Status Input Board Sourcing Supply Breaker

☐ Wheel Pit Alarm Supply Breaker

☐ Turbine Sump Level Controller Supply Breaker

Disconnect and PTs

☐ Exciter Reference Voltage PT, Disconnect#

Generator: ☐ 13.8 kV Unit Disconnects ☐ Bus Sync PT, Disconnect#

☐ Transformer Bus Sync PT, Disconnect

Governor Oil System

No. 1 Gov. Oil Pump: ☐ 550 VAC Disconnect Switch ☐ Discharge Isolation Valve (GO9) ☐ Unloader Supply Valve (GO25)

No. 2 Gov. Oil Pump: ☐ 550 VAC Disconnect Switch ☐ Discharge Isolation Valve (GO11) ☐ Unloader Supply Valve (GO26)

Governor: ☐ 10” Oil Pressure Header Valve **Closed** ☐ Air Supply Valve **Closed** ☐ 2” Pressure Tank to Sump, Drain Valve **Closed**

☐ 1.5” Bypass Valve **Closed**

☐ 1” Pilot Pressure Valve **Closed**

Governor Actuator Cabinet

Blade: ☐ Cam Stepper Motor, **Decoupled + Rolled Off Cam** ☐ Cam Follower Mechanical **Rolled Off Cam** ☐ Restoring Yoke Oiler Valve

☐ Brakes Blocked On

☐ Brake Air Supply Valve **Closed**

☐ Flyball Drain Valve to Sump **Closed**

☐ Governor Transfer Valve **Blocked**

Kaplan Relay Valve ☐ BR-43 ☐ Bypass Valves (2)

☐ Servo Saddle Installed

Turbine, Mechanical

☐ Auxiliary C/W Supply Valve (CW3)

Draft Tube: ☐ Drain Valve ☐ Fill Valve **Closed**

Generator C/W: ☐ Main Supply Valve (E. of Strainer) (CW1) ☐ M.O. Inlet Valve (CW4) ☐ M.O. Discharge Valve (CW11) ☐ Air Cooler Isolation Dischg Valve (CW12) ☐ Bypass Valve (CW10)

☐ Spiral Case Drain Valve **Open**

Turbine: ☐ Shaft Seal Supply Valve ☐ Guide Bearing Discharge Valve (CW9)

Thrust Bearing C/W: ☐ Inlet Valve (CW5) ☐ Discharge Valve (CW8) ☐ Cross-Over Valve

☐ Vacuum Breaker Valves (2) East & West

Miscellaneous Clearance Points

☐ Bulkhead Fill Valve (Air Line)

☐ CO2 Isolation Valves (2) Initial & Delay **Closed**

☐ Emergency Gantry Wheel Gate Installed

☐ Wicket Gates OPEN to _____%

SPECIAL CONDITIONS

☐ Barrel doors unlocked

☐ GCB local control/HV access

Personal Grounds required for lower air housing work#

When Gen grounds are installed, PT Disconnects will be tagged

GROUNDS INSTALLED:

SAVE/EMAIL

Transformer Clearance – Wanapum Dam

PRINT

NOTE: This form by itself is not adequate clearance documentation and is to be used with Clearance Request Form.

Transformer #	☐ ISOPHASE DISCONNECT W-235 OPEN (Transformer A only)
	☐ ISOPHASE DISCONNECT W-635 OPEN (Transformer C only)
230 kV DISCONNECT SW # W-____ OPEN, DECOUPLED & LOCKED	
UNIT W-___13.8 kV DISCONNECT SW W-____31-W-____33 OPEN	
UNIT W-___13.8 kV DISCONNECT SW W-____31-W-____33 OPEN	
☐ SS #1 BREAKER W1236 OPEN & RACKED OUT (Transformer A only)	☐ SS #2 BREAKER W1636 OPEN & RACKED OUT (Transformer C only)
☐ 230 kV MOTOR OPERATED DISCONNECT 125VDC CONTROL POWER BREAKER IN CONTROL ROOM OPEN	
☐ 575VAC COOLING FANS @AUX BOARD ODD UNIT OPEN	
☐ 575VAC COOLING FANS @AUX BOARD EVEN UNIT OPEN	
☐ 125VDC RELAY SUPPLY BREAKER OPEN	
☐ MUX POINTS ISOLATING DISCONNECTS OPEN	
UNIT W-____ LINE SYNC. P.T. DISC. OPEN @ UNIT GCB	UNIT W-_____LINE SYNC. P.T. DISC. OPEN @ UNIT GCB
BCPD GROUND SWITCH CLOSED: ☐ PHASE A ☐ PHASE B ☐ PHASE C	

GSU TRANSFORMER UPS PANEL (3rd floor, elev. 466 ft)

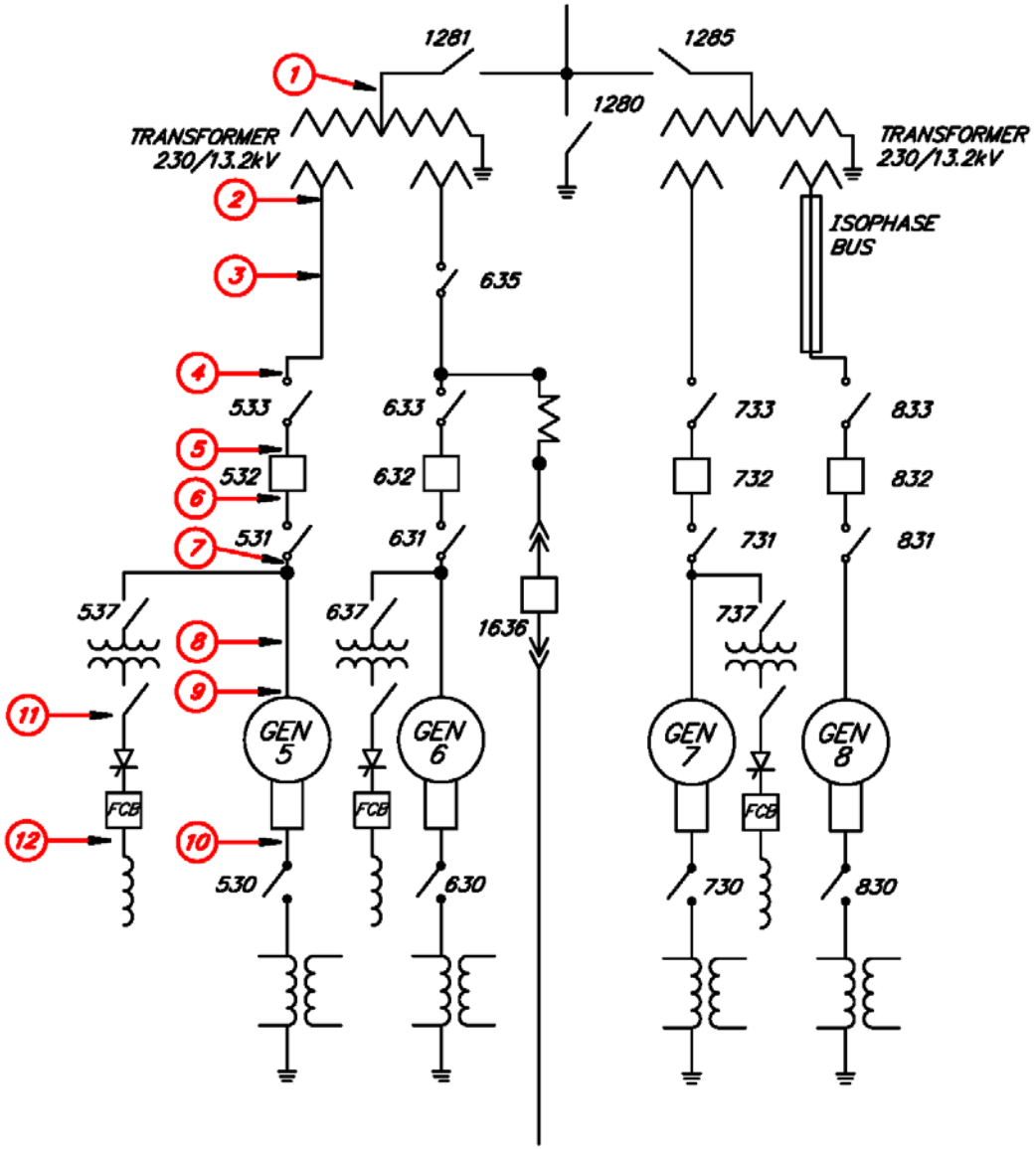
A =	☐ 120VAC SUPPLY BREAKER OPEN	D =	☐ 120VAC SUPPLY BREAKER OPEN
B =	☐ 120VAC SUPPLY BREAKER OPEN	E =	☐ 120VAC SUPPLY BREAKER OPEN
C =	☐ 120VAC SUPPLY BREAKER OPEN		

LOCATION OF PROTECTIVE GROUNDS (see page 2)

☐	TRANSFORMER 230kV BUSHINGS OR LEADS
☐	TRANSFORMER 13.8kV BUSHINGS, W-_____ "EVEN" W-_____"ODD"
☐	ISOPHASE BUS 13.8kV BEHIND TRANSFORMER, W-_____"EVEN" W-____"ODD"
☐	TRANSFORMER 13.8kV DISCONNECT W-_____CLIP SIDE W-_____CLIP SIDE
☐	USE GROUNDING DEVICE TRANSFORMER A (W1236)
☐	USE GROUNDING DEVICE TRANSFORMER C (W1636)

Additional Grounds:

NOTES:



GROUNDING TERMS

1. TRANSFORMER 230kV BUSHINGS OR LEADS
2. TRANSFORMER 13.8kV BUSHINGS
3. ISOPHASE BUS 13.8kV BEHIND TRANSFORMER
4. TRANSFORMER 13.8kV DISCONNECT X33 CLIP SIDE
5. BREAKER 13.8kV DISCONNECT X33 BLADE SIDE
6. BREAKER 13.8kV DISCONNECT X31 CLIP SIDE
7. GENERATOR 13.8kV DISCONNECT X31 BLADE SIDE
8. ISOPHASE BUS 13.8kV GENERATOR END
9. GENERATOR LEADS
10. GENERATOR NEUTRAL AT Y BUS

WANAPUM DAM

11. EA AC DISCONNECT SWITCH, BLADE SIDE
12. EXCITER DC +/– BUS GROUNDS

Save/Email

Grant PUD - Hydro Division

New Unit Clearance – Wanapum Dam

PRINT

NOTE: This form by itself is not adequate clearance documentation and is always used with Equipment Outage Request Form.

WANAPUM UNIT#_____ (choose fr menu)	**Governor Oil System**
575 VAC - Substation Breakers **OPEN**	☐ **#1** ☐ **#2** Oil Pump 575 VAC Disconnect Switch **OPEN**
☐ Substation Feeder to Aux Unit Swgr Bus 1	☐ **#1** ☐ **#2** Oil Pump Discharge Isolation Valve
☐ Substation Feeder to Aux Unit Swgr Bus 2	☐ **#1** ☐ **#2** Oil Pump Unloader Pressure Supply Valve
575 VAC - Auxiliary Board Breakers **OPEN**	☐ Gov. Sys. Main Pressure Supply Valve **UO240**
☐ MCB Incoming Power Bus 1	☐ Gov. Sys. Main Press Supply Valve Equalizing **UO241**
☐ MCB Incoming Power Bus 2	☐ Accumulator Tank Pressure Valve **UO220**
☐ Governor HPU #1 Oil Pump	☐ Accumulator Tank 2" Drain Valve **UO234**
☐ Governor HPU #2 Oil Pump	☐ Unit Gov. Air Supply Valve
☐ Gen Cooling Water Inlet Valve	**Governor Actuator Cabinet**
☐ Gen Cooling Water Outlet Valve	☐ Governor Control Valve
☐ Gov. Kidney Loop Oil Filter	☐ Pilot Manifold Control Valve
☐ Excitation ABB Cooling Fan	☐ Kaplan Relay Valve ☐ BR-43 ☐ Bypass Valves (2)
☐ Unit Oil Transfer Pump	☐ Brakes **Blocked On**
☐ Thrust Bearing High Lift Pump	☐ Brake Air Supply Valve _____
☐ Generator Space Heaters	☐ Wicket Gate Servomotor Lock **ON**
☐ Turbine Pit A/C Sump Pump	**Turbine, Mechanical**
Guide Bearing Oil A/C Circ Pump: ☐ UGB ☐ LGB ☐ TGB	☐ Turbine Shaft Seal Supply and bypass Valves (2)
	☐ Draft Tube Drain Valve
☐ Transformer Fans & Control Power Supply	☐ Spiral Case Drain Valve
130 VDC - Auxiliary Board Breakers **OPEN**	☐ Draft Tube Fill Valve
☐ MCB Incoming Power 130 VDC Bus #___	☐ Vacuum Breaker Valves (2) East & West
☐ MCB Sister Unit Bus #___ Tie Breaker	☐ Raw Water Header C/W Supply Valve
☐ MCB Sister Unit Bus #___ Tie Breaker at Sister Unit Aux. Board	☐ Main Spiral Case C/W Supply Valve
☐ Excitation ABB Field Flash Breaker	**Miscellaneous Clearance Points**
☐ Wicket Gate Servomotor Lock	☐ Annunciation Disconnects **OPEN**
☐ Sister Unit Excitation ABB Controller at Sister Unit Aux. Board	☐ CO2 Isolation Valves (2), Initial & Delay
Guide Bearing Oil D/C Circ Pump: ☐ UGB ☐ LGB ☐ TGB	☐ CO2 125 VDC Breaker **OPEN**
☐ Excitation ABB Controller	☐ Bulkhead Slide Gate Air Line
☐ Turbine Pit D/C Sump Pump	☐ Servo Locking Nuts **ON**, Wicket Gates **OPEN** _____%
☐ Unit Protection SEL 300 G-1	**Disconnect and PTs**
☐ Unit Protection 300 G-2 at Sister Unit Aux Bd	☐ Generator 13.8 KV Unit Disconnects
☐ Unit Aux. Controller	☐ Line Sync PT. Disconnect
☐ Unit Governor Controller	☐ Metering and Sync PT. Disconnect
130 VDC - Supply Breakers **OPEN -** Control Room	☐ Voltage Regulation PT. Disconnect
☐ Gen___ GCB Control 130 VDC Panel 30	**SPECIAL CONDITIONS**
☐ W___ GCB Trip Coil 2 Supply	☐ Barrel Doors **UNLOCKED**
115 VAC Breakers **OPEN** Turbine Floor, RU Panel	☐ GCB local control/HV Access
☐ GCC Gov PLC Supply	**Grounds Installed**
☐ Wheel Pit EVAC Horn Supply	☐ Breaker 13.8kV Disc. x33 Blade Side
☐ UAX Unit Aux. PLC Supply	☐ Breaker 13.8kV Disc. x31 Clip Side
☐ ABB Static Excitation System Supply	☐ Generator 13.8kV Disc. x31 Blade Side
☐ Generator Monitoring System Supply	☐ Isophase Bus 13.8kv Generator End
☐ Gov. Cabinet RTD Display Supply	☐ Generator Leads

GRANT COUNTY PUBLIC UTILITY DISTRICT
HYDRO DIVISION

PERMISSION TO LIFT AUXILIARY SAFETY TAGS

_____HAS MY PERMISSION TO LIFT TAG(S)

NUMBER(S)_____ON CLEARANCE NUMBER_____

FROM_____ TO _____
Date/Time Date/Time

CLEARANCE HOLDER SIGNATURE_____

HP010100B-FRM
S:\Data\PUDForms\DamForms

Retention: 5 years
Owner: Operations Supervisor

GRANT COUNTY PUBLIC UTILITY DISTRICT
HYDRO DIVISION

PERMISSION TO LIFT AUXILIARY SAFETY TAGS

_____HAS MY PERMISSION TO LIFT TAG(S)

NUMBER(S)_____ON CLEARANCE NUMBER_____

FROM_____ TO _____
Date/Time Date/Time

CLEARANCE HOLDER SIGNATURE_____

HP010100B-FRM
S:\Data\PUDForms\DamForms

Retention: 5 years
Owner: Operations Supervisor

EMAIL

Grant County PUD
Hydro Division

PRINT

LIMITED CLEARANCE HOLDER (LCH) REQUEST FORM

	Request		
1	Today's Date (mm/dd/yy)	LCH Status Needed By: mm/dd/yy	
2	For (name):		
3	Describe the business need for LCH status:		
4	Location (plant):		
5	Specify equipment, project, or system, for which LCH status is sought:		
6	Switching & Clearance Training Completed	◯ Yes ◯ No	Date: mm/dd/yy
7	How long is LCH status needed?	From:	To:
8	Supervisor Signature (or Project Manager)		Print:
	Approval		
9	Hydro Switching & Clearance Training	Yes No	Date: mm/dd/yy By: LMS admin or Security admin name
10	Equipment/System Specific Training	Yes No	Date: mm/dd/yy By: (qualified employee name)
11	Operations Supervisor Signature	Approved ☐	Denied ☐
12	Operations Supervisor Signature	Approved ☐	Denied ☐
13	LCH Certification Added To Employee training record	Date:	By: LMS or Security admin name
14	Authorized Clearance Holder list updated (District employee only)	Date:	By:
	LCH Status Revoked		
15	Operations Signature Revocation Approved		Date:
16	For cause (describe)		
17	Revoked in LMS:	Date:	By:

COMPLETION INSTRUCTIONS ON NEXT PAGE

GUIDELINES FOR COMPLETING LIMITED CLEARANCE HOLDER REQUEST FORM

1. Request for LCH Status. District employee completes required Clearance Holder and specific equipment/system training, completes lines 1-7 & prints form and obtains supervisor signature (see HP010100G-PRO). For contract employee, Project Manager completes lines 1-7, signs line 8 (supervisor signature line) verifying need (see HP010100H-PRO).

2. LCH Limitations/Restrictions. Limited Clearance Holder status is generally sought and granted only for the period of a project or 1 year, *whichever is shorter.* A business case may be made for ongoing or broader status. See Hydro Switching and Clearance Tagout System SOP (HP010100) for specifics.

3. Applicability. Limited Clearance Holder (LCH) status is reserved for craft employees with less than 6 months tenure, or non-craft employee positions with limited need for holding a clearance, or contractor's employee(s). See *Limited Clearance Holder Qualifications* (HP010100B-JOB) and *Contractor Limited Clearance Holder Qualifications* (HP010100C-JOB).

4. Training. Switching & Clearance training to maintain clearance holder status is required **every year**. Training by qualified worker (designated by Operations Supervisor) must also be completed on the system or equipment for which limited clearance holder status will be granted.

5. Routing.
   a. District Employee completes lines 1-7 and gives form to supervisor. Project Manager completes lines 1-8 and gives form to Security Admin.
   b. Supervisor reviews and signs form for permission to be LCH, line 8. Forwards form to eLearning Center admin for employee or to Security Admin, for contractor.
   c. eLearning Center admin completes line 9 for employee requests, Security admin completes line 9 for contractor requests. [If training occurred ≥12 months from form date, admin returns form to supervisor. If training was completed less than 12 months ago] sends form to Hydro Operations Supervisor (HOS) for review & approval.
   d. HOS reviews request. Conducts (or assigns qualified worker to conduct) training on specific equipment/system for which LCH will be granted. HOS or qualified employee completes line 10.
   e. HOS approves employee for certification as LCH by signing lines 11-12, forwards the signed form to either the security admin or eLearning Center admin [or forwards to other HOS for approval when multiple locations requested]. If LCH request is denied, the HOS will contact employee's supervisor with reason for denial.
   f. For contractor employees, the Security admin or for district employees, the eLearning Center admin updates employee certification in appropriate database, updates posted Clearance Holder list (employees only), and completes lines 13 & 14 of form. Files form in Limited Clearance Holder complete file.

6. Revocation of LCH Status. LCH status may be revoked for unsafe acts.

Grant County PUD
HYDRO DIVISION

Clearance Inspection

Inspection Conducted By (please print)			
Inspection Date			
Location/Facility			
Equipment, Machine, or System Isolated			
Clearance Number		Date Issued:	

List Employees Working Under This Clearance & Indicate Hydro Switching & Clearance Annual Training Within 12 Months			
Clearance Holder		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO
Affected Worker		YES	NO

	Personnel Questions	(circle one)	
1	Does each employee know where the Hydro Switching & Clearance SOP is located?	YES	NO
2	Has each employee working under this clearance been instructed to treat a clearance tag as a lock?	YES	NO
3	Can all employees working under this clearance identify all energy sources (including stored or kinetic) for this equipment or system?	YES	NO
4	Do all employees working under this clearance understand what the clearance perimeter is?	YES	NO
5	Were all affected employees notified when clearance was active and it was safe to begin work?	YES	NO
6	Can Clearance Holder demonstrate proper steps for identifying, isolating, blocking and securing, then testing equipment necessary for clearance?	YES	NO
	Equipment Questions		
7	Was equipment isolated from every energy source?	YES	NO
8	Was any potential energy (stored or residual) relieved/made safe?	YES	NO
9	Was equipment or system tagged appropriately with unique clearance tag(s) and with 50lb tensile strength ties?	YES	NO
10	Was equipment tested to confirm the right system was isolated and equipment could not be operated?	YES	NO
11	Were grounds installed?	YES	NO
	12a If grounds installed, were they tagged?	YES	NO
12	Do clearance tags include equipment name and clearance holder initials?	YES	NO

Grant County PUD
HYDRO DIVISION

Clearance Inspection

Clearance Status			
13	Were affected employees notified of changes in the clearance (including transfer, perimeter change, release of clearance) as verified by signing group tagout and clearance work activity logs?	YES	NO
14	Were affected employees in the clear before clearance was released?	YES	NO
15	Was equipment inspected for proper position/configuration before clearance was released or tags were lifted?	YES	NO
16	Were clearance tags lifted and destroyed as outlined in Hydro Switching & Clearance SOP?	YES	NO
Other Findings			
17			
Problems, Remediation, Follow-up			
18	List any problems or deficiencies found during inspection (explain all 'no' answers):		
19	List corrective action/remediation for above problems:		
20	Describe recommended follow-up (including suggested edits to existing clearance SOP):		
21	Inspector's Signature	Date	
22	Clearance Holder Signature	Date	
23	Foreman/Supervisor's Signature	Date	

NOTE: Photos and/or Clearance documentation may be attached, as appropriate.

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P.O. BOX 878 EPHRATA, WA 98823

PRIEST RAPIDS PROJECT
CLEARANCE ORDER

Clearance No:	**Station:**		
Additional Clearance Numbers:	**Authorized By:**	**Time:**	
Clearance On:			
Kind of Work:		**Location:**	

	Time	Date		Time	Date
Ordered By			Released By		
Placed By			Ordered Off By		
Issued To			Removed By		

Transferred To			Released By		
Transferred To			Released By		
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PRIEST RAPIDS PROJECT
CLEARANCE ORDER

Clearance No:	**Station:**
	Authorized By: **Time:**
Clearance On:	
Kind of Work:	**Location:**

TAG #	TAGS HUNG	OPERATIONS REQUIRED	DESTROYED
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			

Additional comments/remarks:

Protective Grounds in Place ☐
Grounds Removed ☐

Grant County PUD, Hydro Division

CLEARANCE ORDER GROUP TAGOUT

Clearance No.:_____ **Location:**_____

Clearance On:_____ _____

Work To Be Done:_____ _____

I have verified the tag placement and understand the clearance limitations				**I release my interest in this clearance.**			
DATE	**TIME**	**PRINT NAME**	**INITIAL**	**DATE**	**TIME**	**PRINT NAME**	**INITIAL**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Absent Worker Codes: **VR** – Verbal Release obtained
WB – Released on Worker's Behalf

~ Clearance Holder may attach tag list for crew reference ~

Grant County PUD, Hydro Division

CLEARANCE WORK ACTIVITY LOG

Clearance No.:_____Location:_____

Clearance On:_____

Work to be done:

Activity (see Key)	**Tag#**	**Tag Description** (or Description of Change)	**Crew Initials**	**Date**	**Time**

Key:

A – Tag Added D – Tag Destroyed L – Tag Lifted R – Tag Rehung

T – Clearance Transferred

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