# BONNEVILLE POWER ADMINISTRATION



# X-ROCH

RULES OF CONDUCT HANDBOOK FOR OTHER UTILITY WORKERS

October 2023



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#### 1. PURPOSE

The Rules of Conduct Handbook for Other Utility Workers (X-ROCH) defines the policies and procedures governing access and movement within Bonneville Power Administration (BPA) energized facilities, and for obtaining unescorted access authorization.

#### 2. POLICY

No person is allowed to enter a BPA energized facility unless they have one of the following:

- a BPA issued Permit
- granted access by BPA by completing the requirements in accordance with this document
- an Escort, as defined in section 3

#### 3. DEFINITIONS

Alarm M	onitoring
Station (	(AMS)

Monitors all security alarm and video feeds at BPA Energized Facilities with Electronic Card Readers (ECR). AMS phone number is **360.418.2470**.

### **Energized Facilities**

BPA Substations, including substation control houses, all buildings included as part of the substation perimeter or contained within the substation and the high voltage switchyard having energized equipment connected to the high voltage power system.

# Facilities with Electronic Card Readers (ECR)

All facilities requiring an electronic card reader for entry. Control and relay houses, at ECR sites, have more stringent sign-in requirements for personnel being escorted. See section 5.4.3, for requirements. Also known as a NERC/CIP Site.

#### **Escort**

A permitted person providing escorted access and movement for a non-permitted person within a BPA energized facility whose permit is appropriate to the level of work or supervision of work to be performed by the non-permitted person.

#### Escort (5:1) Ratio

A ratio limiting the maximum number of non-permitted persons to be escorted to five (5) visitors at a time in an Energized facility, switchyard, or NERC CIP physical security perimeter (PSP).

## ID Badge/ Proximity Card

DOE/BPA (photo) identification badge issued for the purpose of accessing BPA facilities.

Proximity card issued by BPA for the purpose of Access into facilities with electronic access controls

# Minimum Approach Distance (MAD)

Minimum distance required between energized conductors and workers or equipment that must be maintained, unless tools or work methods identified in the Accident Prevention Manual (APM) are utilized.

# **NERC CIP Site**

A Building which contains Critical Cyber Assets as defined by NERC. At substations, these are the control and relay house(s). The substation switchyard is not a NERC CIP Site.

# Non-Authorized Individual (NAI)

A person who does not have BPA issued unescorted access to BPA energized facilities. Non-authorized individuals must be escorted by holders of a BPA issued Permit or an ID Badge issued to an Other Utility Worker (OUW) in accordance with the requirements of this handbook.

#### Non-ECR Site

Facilities without electronic card reader controlled entry.

#### Normally Energized

High-voltage power system equipment is considered "normally energized" or could become energized by the closing of an isolating device.

North American Electric Reliability Corporation-Critical Infrastructure Protection (NERC-CIP) training Annual security awareness training required for unescorted access into BPA energized facilities or communication sites which have been designated as NERC-CIP sites.

# Other Utility Worker (OUW)

An employee of an electrical utility, having equipment in a BPA energized facility, which

requires unescorted access to the facility to maintain or operate their equipment.

# OUW Energized Access

Permission for unescorted access to BPA energized facilities, with Electronic Card Readers (ECR), utilizing the individually issued OUW ID Badge. Entry into energized facilities is considered restricted access.

# Physical Security Perimeter (PSP)

The physical border surrounding locations in which BES Cyber Assets, BES Cyber Systems, or Electronic Access Control or Monitoring Systems reside, and for which access is controlled. Also known as a NERC CIP Site.

## Qualified Electrical Worker

A person knowledgeable in the construction and operation of electric power generation, transmission. distribution equipment and involved, along with the associated hazards. To be considered a QEW, a person must have completed an approved apprenticeship or program with demonstrated training experience and competency in their respective craft as determined by management, and the training required by DOL/OSHA 1910.269 (a)(2)(ii). Only QEW with an Electrical Worker Permit (EWP) is authorized to wear a yellow hard hat.

#### 4. GENERAL OUW ENERGIZED ACCESS INFORMATION

The rules and requirements governing OUW's in BPA facilities, both ECR and Non-ECR sites are covered in sections 4 through 7 of this document.

#### 4.1 Access to BPA Non-ECR Sites

BPA Chief Substation Operators have delegated authority, from the Substation Operations Group, to authorize OUW access to Non-ECR sites within their Operating District.

Requests by Other Utilities for unescorted entry to Non-ECR sites should be made from the Utility directly to the Chief Substation Operator having jurisdiction.

The Chief Substation Operator will work with the requesting Utility to establish a reasonable access process. This is normally accomplished by installing the utility's padlock in parallel with a BPA energized facility padlock on the entrance gate.

#### 4.2 Access to BPA ECR Sites

OUW Energized Access, with an ID Badge, is required for all OUW personnel, who require unescorted access to BPA ECR Sites for work or observation. Unescorted access will only be granted to those persons with a need to enter energized facilities.

# 4.2.1 Obtaining OUW Energized Access Authorization

To obtain an individual ID Badge, OUWs will work with their company's OU Coordinator and follow the current BPA application process. "BPA's OUW Unescorted Access Process" is available on the BPA website listed below:

https://www.bpa.gov/energy-and-services/transmission/reliability-nerc-standards

In addition, each OUW requesting an ID Badge must complete the following:

- An initial Personnel Risk Assessment (PRA), including a Personal Identity Verification (PIV) and favorable Criminal History Check (CHC)
- Annual NERC CIP training that meets the criteria established by NERC CIP requirements
- "OUW Entry Escort Exit" training video will be viewed prior to obtaining access to BPA facilities. The video will be provided by BPA. A password protected email will be provided separately.

 If OUW has not accessed BPA facility within 365 days the training video and XROCH will be reviewed by OUW before accessing any BPA facilities.

Additional forms and processing time are required to provide ID Badges for Foreign Nationals. Foreign national instructions and questions can be sent to the BPA Customer Service Reliability Program Team at <a href="mailto:CSReliabilityProgram@bpa.gov">CSReliabilityProgram@bpa.gov</a>.

### 4.2.2 Electronic Access to BPA Energized Facilities

Electronic access to BPA facilities with ECRs will be assigned to an ID Badge. ID Badges must have a personalized PIN code assigned to it for the card to work at energized facility card readers. If the PIN code is missing from an ID Badge, contact AMS Security for instructions on how to assign a personalized PIN code.

### 4.2.3 OUW Energized Access Expiration

OUW Energized Access is valid until BPA is informed that the access is no longer needed for the individual or if the Criminal History Check (CHC), Personal Identity Verification (PIV), or Annual NERC CIP Training dates become expired.

# 4.3 Revocation of OUW Energized Access

BPA requires notification, within 8 hours, from the time OUW access is no longer needed. The OU coordinator will:

- Email <u>revoke@bpa.gov</u>
- Call the BPA Revocation Office at 503.230.5625
- Notify <u>CSRliabilityProgram@bpa.gov</u>

#### 5. SUBSTATION SECURITY

# 5.1 Responsible Party

Security of a BPA Energized Facility is the responsibility of the individual unlocking the entrance. Do not allow unauthorized individuals to enter the Energized Facility.

While unlocked, doors or gates must be physically attended at all times.

The last person out of an energized facility assumes the responsibility of making certain that all perimeter entrances and windows are closed and locked.

At NERC CIP sites, the first person who enters the facility must disarm the alarm panel. Each person with energized access must use their ID or proximity card and PIN prior to entry at the card reader and PIN pad. Tailgating is not allowed for entry or exit of an energized facility. Each person with energized access must present their ID or proximity card to the exit reader prior to exiting the facility.

Personnel who are authorized access but have lost, misplaced, or forgotten their ID or proximity card must call AMS at 360-418-2470 when they enter and exit a NERC CIP site to have AMS manually log the person in and out. At NERC CIP sites, personnel must verify that the alarm panel is armed prior to exit. Detailed instructions are posted at each NERC CIP site.

#### 5.2 Substation Access Protocol

Personnel entering a Substation who are unfamiliar with the facility or are infrequent visitors to the facility shall contact District Substation Operations prior to entry for information on known hazards.

All persons performing work at an energized facility shall inform the Substation Operator having jurisdiction prior to beginning work and at the conclusion of the work. District phone numbers for District Substation Operations are listed in Attachment D of this document and on the Substation Information Directory posted at each substation.

Entry and exit during normal working hours does not require contacting the control center having jurisdiction, unless BPA is on a high alert (SECON 1, Severe). Entry and exit outside of normal working hours requires contacting the control center having jurisdiction. Normal working hours are considered 0600-1800, Monday through Friday.

When responding to trouble at any time, entry requires contacting the control center having jurisdiction. Contact numbers are posted on the Substation Control of Entry sign (Figure A) located on the substation entry door or gate.

Control of entry and exit to a facility under construction is the responsibility of the Construction and Maintenance Services

Group, within Transmission Field Services or the Project Contractor until any portion of the station is released to System Operations.

The name of the construction supervisor or the Test and Energization Engineer in charge is prominently posted in the control house and/or temporary project headquarters. Control of entry to a facility in which any part has been released to System Operations is the responsibility of the district Substation Operations. The Chief Substation Operator is responsible for posting "Substation Control of Entry" signs.

#### **BONNEVILLE POWER ADMINISTRATION**

[SUBSTATION NAME]

# SUBSTATION CONTROL OF ENTRY CONTACT PERSONNEL

Contact the following personnel for information regarding entry to this substation, to report a fire, an injury incident in the substation, breach of security, unauthorized entry.

BPA MUNRO DISPATCHER > SPOKANE, WA

(509) 465-1820 (24 HOURS) OR

(509) 465-1826 (24 HOURS)

If uncertain of the station name, locate the name from the sign on perimeter fence or at the entrance to the station.

# Figure A

# 5.3 Entry, Exit and Work Performed Logging

# 5.4 All Energized Facilities

A Substation Operating Log is required at each substation. A Substation Security Log is required at NERC CIP substations and may be used at other substations. Each person entering an energized facility is required to sign in and sign out of the Substation Security Log or the Substation Operating Log if the Substation Security Log is not used.

The required information to enter into the log book, when signing in is:

- First and last name of each person entering
- Date and time of entry and departure
- Reason for entry
- Organization represented
- Escort's name if applicable
- Escort Location (checkbox; Yard, and/or PSP)

All work performed in a substation is to be documented in the Substation Operating Log.

The person in charge of a crew may sign in and out all workers, listing each person's name with other required information stated above.

The following Instructions (Figure B) are located inside the front page of the Substation Operating Log and serves as a reminder of the required information that must be entered into the log.



## INSTRUCTIONS

#### THE FOLLOWING INFORMATION SHALL BE ENTERED IN THE SUBSTATION **OPERATING LOG:**

- 1. Name, organization represented, date, time of entry and departure, escort name (if applicable) and reason for EACH person entering. (This information shall be logged in the Substation Security Log, if one is provided.)
- 2. Work performed while in the substation, including adjustment or changes to equipment.
- 3. Routine and trouble switching in the sequence it was performed.
- Switch Orders are logged exactly as they were written on the Switching Order form. All portions of the Switching Order form shall be logged by the switchman completing the Switching Order.
- 5. PCB operations, including reason for operation, time, and counter reading.
- 6. Automatic PCB operations:
  - Time of operation and counter reading.
  - Reason for operation.
  - Relay targets, abnormal meter readings, equipment temperatures and voltages.
  - Name, location and title of person(s) to whom the trouble is
- Weather conditions, if pertinent to the trouble.
- 7. Following equipment inspections, log the status: normal, problems found, and/or abnormal conditions found.
- ALL LOG ENTRIES ARE TO BE MADE IN INK. IF A MISTAKE IS MADE, IT IS TO BE LINED OUT AND INITIALED.
   LOG THE FOLLOWING USING RED INK:
- - AUTOMATIC POB OPERATIONS.
    GROUND SWITCH OPERATIONS.
    CLEARANCES AND HOLD ORDERS ISSUED BY OR RELEASED TO THE OPERATOR.

Figure B

A Substation Entry sign (Figure C) shall be posted at the entrance to a substation, stating responsibilities of each person entering a substation. These responsibilities are to be strictly followed. Please note: Failure to arm the alarm panel upon departure is the most common violation.

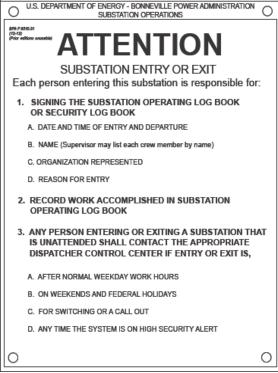


Figure C

# 5.4.2 NERC CIP Sites – Security Log

At NERC CIP Sites the Substation Security Log will contain an Escort Location column to designate whether persons being escorted will be entering the Physical Security Perimeter (PSP) and/or Yard. The PSP is the building(s) containing critical cyber assets officially designated as the NERC CIP Site.

If the person(s) being escorted will not be entering the control house or relay house, then check the box under "Yard." If they will be entering the control house or relay house, then check the box under "PSP." If they will be entering the yard and control/relay house, then check both the "Yard" & "PSP" boxes.

### 5.4.3 Escorting

### 5.4.4 5.4.1 All Energized Facilities

Entry into, exit out of, and movement within an energized facility by a non-permitted person requires an Escort. Escorts must hold a Permit which would allow them to perform work at or above the level of the work to be performed by the person(s) being escorted. Non-permitted persons require the continual presence of the Escort.

A ratio limiting the maximum number of non-permitted persons to be escorted to five (5) visitors at a time in an Energized Facility, switchyard, or NERC CIP physical security perimeter (PSP).

An authorized Escort providing access and escorting duties is responsible for adherence of non-permitted persons to all applicable rules including, but not limited to:

- Access to energized facilities
- Escorting
- Substation security
- Applicable Accident Prevention Manual (APM) rules and procedures
- Knowledge and understanding of the Contractor Safety and Health Requirements for Prime and Subcontractors

If the persons being escorted will be entering within 15 feet of voltages up to 345 kV or 20 feet for voltages above 345 kV, on foot or in a vehicle, the escort shall provide each non-permitted person the following information for each substation in which they are being escorted:

- Procedure for identifying energized equipment in accordance with OSHA 1910.269 (a)(2)(i) and (a)(2)(ii)
- All voltages present in the yard and how to identify voltage level of specific equipment
- The Minimum Approach Distance for all voltages in the yard
- The hazards associated with violation of the Minimum Approach Distances

Non-permitted persons who are working continuously at the same location need only be given the above information on the first day. If their work at the location is interrupted for more than five days, the Non-permitted person must be given the above information again by the Escort on re-entry into the substation.

Contractors needing an Escort for Permit related training or exam shall be provided an Escort by the sponsoring work group or Contracting Officer.

Personnel providing escort shall be responsible for adherence to the requirements of all parts of Section 5.3 for all persons being escorted.

### 5.4.5 5.4.2 NERC CIP Sites - Escorting

If personnel being escorted will be entering a control house or relay house at a NERC CIP Site the person providing escort, in addition to fulfilling the requirements of Section 5.3, will be required to call AMS at 360-418-2470 and provide the following information on all personnel being escorted:

- Time of entry
- Escort Name
- Name of NERC CIP Site
- Where they will be entering; the PSP (control house, relay house) and/or Yard
- Is the person an employee (with energized access) or a visitor
- First and last name of each person being escorted
- Organization or Company of person being escorted
- Purpose for Access
- Contact number for escort

Upon exiting the facility, the escort will call AMS and provide the exit time for all personnel being escorted. Calling AMS is only required on the initial entry and final exit. Failure to accomplish the above procedure will violate BPA's Control of Entry rules and NERC CIP-006.

If personnel being escorted will not be entering a control house or relay house, contacting AMS is not required.

# 5.5 Unauthorized Entry, Breach of Security, Damage, Suspicious Object

Upon discovery of an indication of forced entry or other breaches of security through a door, window, gate, or hole cut in the perimeter fence, or any suspicious object found or damage or destruction of the facility that is a result of actual or suspected intentional human action:

- Withdraw to a safe location and call 911
- Notify the Control Center having jurisdiction. The Control Center number will be posted on a sign on the front door similar to Figure A in Section 5.2. Dittmer Control Center can be reached at 800-392-0816 Munro Control Center can be reached at 877-836-6632
- Contact AMS at 360-418-2470
- Contact the District Chief Substation Operator. (Attachment D)
- If contacted by the news media, refer them to BPA Public Affairs at 503-230-5131

## 6. SUBSTATION ELECTRICAL HAZARD AWARENESS

### 6.1 Voltage Identification

All persons requiring unescorted access into, out of, and movement within energized facilities must possess the knowledge and skills necessary to distinguish energized parts from non-energized parts of the electrical equipment, nominal voltage of exposed parts and corresponding Minimum Approach Distances.

Some of the resources available for identifying voltages in energized facilities are:

- Station prints one-line diagrams are found in the station print cabinet and are the first diagrams in the station prints.
- Mimic bus color codes The mimic bus on the control panels is a representation of the layout of the equipment located in the switchyard. The color of the mimic bus indicates the nominal voltage of that equipment.

COLOR	NOMINAL VOLTAGES	COLOR	NOMINAL VOLTAGES
Orange	11.5 kV - 13.8 kV	Purple	34.5kV
Green	69 kV	Yellow	115 kV
Red	230 kV	Red/Blue	287 kV
Red/Yellow	345 kV	Black	500 kV

Letter designations for voltage classifications:

• 230 kV, 287 kV, and 345 kV class - letter designation "A"

- 115 kV, 138 kV and 161 kV class letter designation"B"
- 69 kV class and below letter designation "L"
- 500 kV class and above have no letter designation but uses numbers ranging from 4000 to 6999.

Number and size of insulators – The higher the nominal voltage, the more insulators that are required to keep the voltage from shorting to ground. The following are examples of some of the types of insulators used on the BPA system for different voltages:

### Cap-and-Pin and Pin Insulators

Cap-and-pin insulators were used before the development of station post insulators. BPA does not use cap-and-pin insulators in new projects but many are still in service and are nearing end of life. Special solid-core station post replacements for cap-and- pin insulators may be used in the field, when standard station posts cannot be used.

A single, non-stacking cap-and-pin insulator is used up to and including 46 kV.



Cap & Pin

For voltages 69 kV and above, cap-and-pin insulators are assembled in stacks to provide for higher insulator levels.





## Stacking Cap-and-Pin

These insulators are assembled in stacks for the required voltage rating. They are used for like-replacement and some expansion work of existing 115 kV, 230 kV, 287 kV, and 345 kV installations. They are stacked as follows:

- Two units for 69 kV
- Three units for 115 kV
- Five units for 230 kV
- Seven units for 345 kV

NOTE: Refer to BPA standard drawings for insulator dimensions.



Support **Station Post Insulators** 



Support

The three main components are the metal end-castings, the porcelain body, and the cementing media between the metal and the porcelain. Station post-type insulators are customarily classified in two groups:

- Non-stacking or single-unit designs from 7.5 kV to 230 kV.
- Stacking units from 115 kV and above.

# **Outdoor Non-stacking Post Type**

These insulators are single-unit with threaded holes in the cap and base for cap screw mounting. Non-stacking post insulators are used in 12.5 kV through 230 kV installations.



34.5 kV Non-Stacking Post

# **Outdoor Stacking Post Type**

These insulators are comprised of multiple sections bolted together into a stack. Insulators for use at 500 kV may have a BIL of 1550 kV or 1800 kV depending upon the substation requirements.



115 kV Disconnect



230 kV Disconnect Hinge End



230 kV Disconnect

## **Strain Bus Insulators**

The American National Standards Institute (ANSI) standard insulator most commonly used is the ball-and-socket suspension type.

The number of units used in a string is approximately proportional to the line-to-ground voltage times 10.



115 kV Strain Bus



230 kV Riser Bus in Bridge



230 kV Line Dead End

#### 6.1 Substation Electrical Hazard Cautions

If you do not hold an Electrical Worker Permit:

- Do not operate any switches, other than light switches, Attended/Unattended switches, NERC CIP pin pads, or other switches required for entering or exiting substation sites, without permission of a Qualified Electrical Worker. Light switches are normally toggle type wall switches. At some locations, control of the building interior lights may be an air circuit breaker (ACB) in an electrical panel. If the ACB's in the panel are not clearly labeled or there is a question as to the proper ACB to operate do not attempt to operate any ACB. Attended/Unattended switches are normally a small toggle type switch on a panel and should be clearly labeled. If the toggle switch is not clearly identified do not operate the switch.
- Do not touch or operate control switches. There are numerous buttons and switches in control houses and switchyards. Only qualified employees operate these control switches.
- Do not touch or reset relay targets, annunciator windows, or alarms. Relay targets, annunciator indications, and alarms help the Substation Operator and power system Dispatcher to ascertain and analyze substation and power system trouble.
- Do not bump, jar, tamper with, or remove covers from relays or control equipment. Removal of relay and equipment covers is a task to be performed by those who operate and maintain them.
- Do not contact any bare conductors, terminals, busses, etc. No person shall contact any high voltage electrical parts unless this equipment has been properly isolated from the electrical system and grounded, as determined by a Qualified Electrical Worker.
- Do not throw or toss objects in or around substations or switchyards. Throwing or tossing objects in energized facilities including switchyards is not allowed at any time.

 Do not disturb or remove any tags. Tags are placed on controls and equipment to provide protection to workers and ensure proper operation of equipment. If a tag is found on the floor or on the ground, report it to a BPA Qualified Electrical Worker. For examples of these tags see Appendix C.

#### 7. WITHDRAWAL OF OUW ENERGIZED ACCESS

OUW Energized Access may be revoked at any time by a responsible BPA management official for failure to follow these procedures, including, but not limited to:

- Demonstrated lack of skill or knowledge or unwillingness to follow established safety rules, procedures or safe work practices.
- Documented cases showing lack of sound and mature judgment.
- Breach of BPA security policy or established NERC CIPO entry procedures, as outlined in the X-ROCH.
- Individuals under investigation by Federal OSHA or state OSHA-equivalent, or a BPA appointed Incident Assessment Team (IAT).

#### 8. SUMMARY OF CHANGES

March 2015

James Vinson - TOZ

- Added section 4.1 defining requirements for access to Non-ECR sites.
- Revised section 6.1 to reflect present insulator types being used by BPA.

#### November 2015

James Vinson - TOZ

- Section 4.3 Added section on Revocation of OUW Energized Access.
- 2. Section 5.4.3 (Escorting) ECR Sites changed requirement for calling AMS.
- 3. Section 8.4.1 Added requirement that escorts give NAIs being escorted information on voltage identification.
- 4. Attachment A & B Added new forms.

#### December 2015

John Baker - TOZ

- 1. Reformat entire document.
- 2. Rewrite entire document for clarity.
- 3. Correct grammatical errors.

## January 2017

Jim Vinson/Craig Adams – TOZ

- Section 3, Definitions- added and defined PhysicalSecurity Perimeter and NERC-CIP.
- 2. Edits throughout the document for correction and clarity.
- 3. Section 5.2, Substation Access Protocol- added SECON1, Severe in reference to "high alert".
- 4. Section 5.3, Entry, Exit and Work PerformedLoggingadded PSP reference and corrected for newprocess.
- 5. Section 5.4.3, ECR Sites, Escorting- added escort duties and logging requirements for PSP entry.
- Section 5.5, Unauthorized Entry/Breach of Security/Damage/Suspicious Device- added notification of AMS.
- 7. Attachment D- updated Substation Operations Group Staff information.
- 8. Attachment E- removed Substation Security Log form, since it is no longer used.

#### April 2017

### Ken Lanehome/Donna Fields - TPCR

- 1. Correct grammatical errors.
- 2. Edits throughout the document for correction and clarity.
- 3. Section 6.3, Added Arc Flash Hazards
- 4. Added most common violation in Section 5.2

#### October 2018

#### Ken Lanehome/Donna Fields - TPCR

1. Correct grammatical errors.

#### December 2019

Ken Lanehome/Donna Fields - TPCR

- 1. Updated Sections 5 and 6 to be consistent with ROCH sections 8 and 9 dated November 2019.
- 2. Added safety staff list.
- 3. Updated contacts.

## February 2020

Deborah Dunn - TPCR

- 1. Switch caption on Cap and PinInsulator.
- 2. Updated dates, page numbers and formatted document.

#### October 2021

Ron Sporseen, Deborah Dunn, Lani Haloulos

- 1. Reformatted and updated, realigned, grammatical corrections.
- 2. Escort Ratio 5:1-Added definitions and section 5.4.0.
- 3. Updated Attachment D-Contacts.

#### October 2022

Ken Lanehome, Deborah Dunn, Lani Haloulos

- 1. Reformatted and updated, realigned, grammatical corrections.
- 2. Updated Section 4.2.1 to include OU Coordinator wording and added bullet to address "OUW Entry Escort Exit" video process.
- 3. Updated Safety Staff Contacts

# October 2023 Deborah Dunn/Lani Haloulos/Carlwin Windom

- 1. Reformatted and updated, realigned, grammatical correction.
- 2. Added requirement to contact the District Chief Substation Operator regarding Unauthorized entry, Breach of Security, Damage, Suspicious Object (section 5.5).
- 3. Updated Attachment D-Contacts.
- 4. Replaced NEMA with ANSI under Strain Bus Insulator description.
- Added updated Pin and Challenge form.
- 6. Section 6.1 corrected descriptions for pin insulator and non stacking cap and pin to match ROCH.
- 7. Included link to the external BPA Reliability & NERC Standards site for access to the BPA Work Standard BPA-WS-11-6
- 8. Updated definitions to better match the ROCH.
- 9. Updated Access form (attachment A) with most current document.
- 10. Removed Arc Flash protection guidance.

# Attachment A - Other Utility/Contractor/Vendor Worker Access Request

3PA F 1400.22a

U.S. DEPARTMENT OF ENERGY-BONNEVILLE POWER ADMINISTRATION (BPA)

OMB Control Number: 1910-5188 Expiration Date: 5/31/2026

OTHER UTILITY/CONTRACTOR/VENDOR WORKER ACCESS REQUEST Authority: 42 U.S.C. 7101, et seq. and Homeland Security Presidential Directive 12. Privacy Act Statement

Purpose: BPA will use this information to identity proof and register applicants and determine the suitability of issuance of a DOE security badge

by BPA to document complance with NERC CIP Standards, which requires that personnel having authorized cyber or authorized unescorted physical access to BPA's Critical Cyber Assets, including contractors and service vendors, have an appropriate level of personnel risk assessment, training, and security awareness. Records may be disclosed to: BPA employees and contractors as required consent, except to fulfill the purpose for collection or as legally required. The information requested on this form is used to complete job duties; to necessary parties if the security or confidentiality of the information in the records is compromised; and to the Department of Energy and other agencies to investigate potential violations of law, and as necessary to minimize harm when information security has been compromised. Additional disclosures are listed in DOE-63 and GSA/GOVT-7. Routine Uses: We do not disclose your information to third parties without your

Disclosure: Providing information on this form is voluntary. However, failure to provide the information requested herein will result in the denial of a security badge for the individual's physical or cyber access to certain BPA information and/or facilities.

Other Utility/Contractors/Vendors will not be permitted limited BPA unescorted access without the completion of a background check, required compliance training and providing a photo for identification and badging purposes.

Other Utility Worker/Contractor/ven	dor companies are required to submit tr	Other Othinty worker/Contractor/Vendor Companies are fequired to submit this completed form to: Carella DirryProgram @ Daa.gov
BPA's TPC Office will send this form to	o Non-Government Employee Processing	BPA's TPC Office will send this form to Non-Government Employee Processing and Card Key Access. For recertification, please complete process again.
1. Other Utility/Contractor/Vendor completes	or completes	
Check one: Initial Request Re-Certification	Re-Certification	
Legal Name of Other Utility Work	Legal Name of Other Utility Worker/Contractor/Vendor (Last, First, Middle Initial)	(ddle Initial)
Position Title	Company Name	Company Street Address (ID Badge to be sent to)   Company Phone Number   Company FAX Number
List of facilities needing access to:		Will you require 24-hour access?  Yes Ino
Has Other Utility/Contractor/Ven Criminal History Check?	tor/Vendor Successfully Passed National	Has Other Utility/Contractor/Vendor Successfully Passed National Has Other Utility/Contractor/Vendor completed Annual Training? (Includes Security and CIPS Criminal History Check?  Overview)  Yos No If yes, Date Completed  If yes, Date Completed
Has Other Utility/Contractor/Veng	dor Successfully Completed Personal	Has Other Utility/Contractor/Vendor Successfully Completed Personal Identity Verification (PIV)   Yes   No if was Date Completed

Date E-mail Address Signature of Manager from Other Utility/Contractor/Vendor Company retained by Other Utility Worker/Contractor/Vendor employer and provide upon BPA's request. Required Signature - Manager from Other Utility/Contractor/Vendor Company Name (Print or Type)

t hereby certify that the information provided regarding the Other Utility Worker/Contractor/Vendor is accurate and documentation to support this information will be

Other Utility/Contractor/Vendor/Worker Photo attached to the form submittal  $\square$  Yes

and the setting elling this source, gatering and marketing and external percented provides encoperations to setting provides encoperation of information and information in the control of information and inf with a collection of information suspect to the requirements of the Paperwork Peduation Act unless that collection of information displays a currently valid DNIB control number. (DMB) before undertaking a collection of information directed to 10 or more persons of the general public, including persons invalved in or supporting the operations of Govern son is required to respond b, nor shall any person be subject to a penalty for falure to comply with a collection each. Federal agency to seek and obtain approval from the Office of Management and Budget (CMB) before

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# Attachment B - OUW PIN & Challenge Questions Worksheet



# Bonneville Power Administration OUW PIN & Challenge Question Worksheet

Purpose: This worksheet is to be used only by Other Utility Workers (OUWs) who have a need to access Bonneville Power Administration (BPA) controlled areas where a PIN is required for entrance.

BPA's Physical Access Control System (PACS) requires the use of a 4-digit PIN code for access to specifically identified areas within BPA. These areas include, but are not limited to NERC CIP field sites. OUWs who require physical access permissions for these areas need to establish a personalized PIN, which will be associated with the access card issued to the OUW.

Note: The following responses will be required from the OUW during the access card verification and activation process

#### 1. PIN RETRIEVAL

If an OUW forgets their PIN, they can contact a designated POC to retrieve their PIN. The POC will ask the OUW their security question and the OUW will provide the answer to their security question in order to validate their identity. The following POC's may be contacted to retrieve PINs:

Alarm Monitoring Station (primary) - 360-418-2470

The Badging & Access Hotline (alternate) — 503-230-4382			
2. PIN SELECTION			
Step 1 - Print your name (Please print legibly):			
Name (Last) Fi	rst MI		
Step 2- Choose a PIN number for your access card. Select 4 numeric digit:	s (example – 1130):		
<ul> <li>Do not choose numbers that are confidential or Personally Identifiable Information (PII) such as the last four digits of your social security number.</li> </ul>			
<ul> <li>Numbers that are not accepted include four repeating numbers (e.g. – 5555) or sequential numbers (e.g. – 1234, 9876).</li> </ul>			
Write in your selected PIN below:			
Step 3 – Select one of the three security questions identified below as your security question:  What was your first car?  What was your first pet's name?  What is your favorite movie or book?			
<u>Step 4</u> – Provide the answer to your security question:			
Write (please print legibly) in the <u>answer</u> to the security question you selected above:			
Step 5 – Return this worksheet, via mail, in a sealed envelope addressed to:			
	If by Overnight Delivery Service: Bonneville Power Administration		
PO Box 3621	905 NE 11th Avenue		
Portland, OR 97208 Portland, OR 97232 Employee Badging NNP-B1 Employee Badging NNP-B1			

# Attachment C – Tags DO NOT OPERATE TAG (BPA F 6510.11)



#### HOLD ORDER TAG (BPA F 6510.28) (FRONT) (BACK) BPA 6510.28 (8-06) BPA 6510.28 (8-06) US DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION HOLD ORDER HOLD DO NOT OPERATE THIS DEVICE WITHOUT DISPATCHER ORDER APPROVAL STATION/LOCATION EQUIPMENT/CIRCUIT DO NOT OPERATE THIS **DEVICE WITHOUT DISPATCHER APPROVAL** SWITCHES/DEVICES TAGGED DO NOT REMOVE THIS TAG WITHOUT TAGGED FOR AUTHORIZATION CONDITIONS/REASON FOR DATA SEE OTHER SIDE TAG PLACED BY SEE TAG ON hrs. date TAG REMOVED BY hrs. date

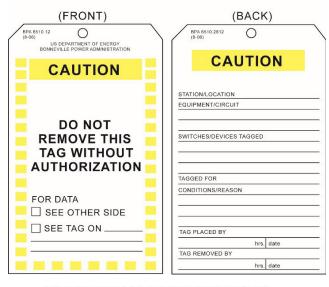
#### REMOTE HOLD ORDER PLACKARD AND CONTROLS



# WORK PERMIT TAG (BPA F 6510.13a)

(FRONT)	(BACK)
BPA 8510 138  (8-08) US DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION	BPA 6510.2813a (9-06)
WORK DEDMIT	WORK PERMIT
THIS TAG DOES NOT PROVIDE	THIS TAG DOES NOT PROVIDE PROTECTION FOR WORKMEN
PROTECTION FOR WORKMEN	STATION/LOCATION
DO NOT REMOVE THIS TAG WITHOUT AUTHORIZATION	EQUIPMENT/CIRCUIT  SWITCHES/DEVICES TAGGED  TAGGED FOR CONDITION/REASON
FOR DATA SEE OTHER SIDE SEE TAG ON	TAG PLACED BY  hrs. date  TAG REMOVED BY  hrs. date

# CAUTION TAG (BPA F 6510.12)



# ELECTRICAL TEST MARKER (BPA F 6510.40)





Red Do Not Operate Tag with black border (BPA F 6510.14)





Red Work Clearance Tag (BPA F 6510.15)

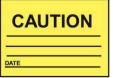




Blue Test Clearance Tag (BPA F 6510.16)



BPA F 6510.17 (03-92) Yellow CautionTag (BPA F 6510.17)



BPA F 6510.18 (03-92)

Yellow Hold Order Tag (BPA F 6510.18)

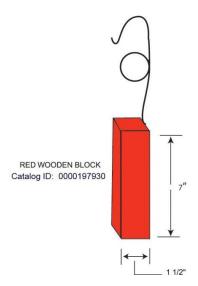


US DOE BONNEVILLE POWER ADMINISTRATION

> BPA F 6510.19 (03-92)

White Work Permit Tag (BPA F 6510.19)

<b>WORK PERMIT</b>
FOR



# **Attachment D - Contacts**

SUBSTATION OPERATIONS GROUP STAFF		
Dave Pruitt, Supervisory Substation Operations Specialist	(360) 418-8071	
Kristin Taylor, Substation Operations Specialist-Permitting	(360) 418-2644	
Justin Wimer, Substation Operations Specialist-Permitting	(360) 418-2415	
Chris Burt, Substation Operations Analyst-Permitting	(360) 418-1698	
Angela Black, Substation Operations Specialist-Technical	(503) 682-6268	
Eric Cobb, Substation Operations Specialist-Technical	(360) 563-3695	
Darron Rassum Substation Operations Specialist-Technical		
Jason Duckwall, Substation Operations Specialist-Technical		
Suzi Stone, Substation Operations Analyst	(360) 418-2524	

SAFETY STAFF			
Safety Organization main line – Vancouver	(360) 418-2397		
Director of Field Safety	(360) 418-2865		
Director of Construction Safety and Contract Oversight	(360) 418-8535		
Director of Corporate Safety	(360) 418-2390		
North Safety Manager	(360) 418-2398		
East Safety Manager	(509) 822-4586		
South Regional Safety Manager	(360) 418-2398		
Eugene/Salem District Safety Specialist	(503) 304-5924		
Olympia/Longview District Safety Specialist	(360) 418-2364		
Tri-Cities District Safety Specialist	(509) 544-4705		
Redmond/The Dalles District Safety Specialist	(541) 516-3228		
Ross Complex Safety Specialist	(360) 418-2022		
Snohomish/Covington District Safety Specialist	(425) 866-4050		
Spokane/Wenatchee District Safety Specialist	(509) 468-3105		
Kalispell/Idaho Falls District Safety Specialist	(406) 751-7814		

CHIEF SUBSTATION OPERATORS		
Alvey- Eugene District	(541) 988-7011	
Ashe-Tri-Cities District	(509) 546-5060	
Bell-Spokane District	(509) 468-3129	
Big Eddy, - The Dalles District	(541) 296-5114 X134	
Celilo-The Dalles District	(541) 296-3615 X386	
Chemawa-Salem District	(503) 304-5912	
Covington-Covington District	(253) 638-3713	
Franklin-Tri-Cities District	(509) 542-5401	
Idaho Falls-Idaho Fall District	(208) 612-2111	
Kalispell-Kalispell District	(406) 751-7891	
Longview-Longview District	(360) 414-5611	
Malin-Redmond District	(541) 723-2325	
McNary District	(541) 922-6812	
North Bend-Eugene District	(541) 751-4011	
Olympia-Olympia District	(360) 570-4311	
Redmond-Redmond District	(541) 516-3211	
Ross-Longview District	(360) 418-2424	
Sickler-Wenatchee District	(509) 886-6015	

**Snohomish-Snohomish District** 

(360) 563-3613

# Attachment E - Signage at BPA ECR Sites

Signage applied to each BPA NERC CIP Site.

Place outside each Control House/Relay door with card reader/PIN pad. (Some Relay houses may have more than a single card reader/PIN pad.)



#### Initial Entry - NERC CIP Facility



Each person with access to energized facilities MUST use their card key and PIN prior to entry.

- 1. Hold your card key over the entrance card reader by the door (usually about 2 seconds).
- After the beep, enter your 4 digit PIN (Personal Identification Number) on the keypad.
- 3. You should hear the door unlock.
- 4. If the system does not respond repeat steps #1 and #2.
- Open the door and enter the building Check the Alarm panel and Disarm the alarm (if you are the <u>FIRST PERSON</u> inside). \*Some Relay houses also have Alarm panels inside – please check their status after accessing the door.
- If you are the next person entering (and you have energized access) you must also complete steps #1 and #2 prior to entry (The door does not need to be closed between individual access).
- If the system is not working after the second attempt, use your physical key to enter the station. (After entering with the physical key, you have 90 seconds to contact the AMS (Alarm Monitoring Station) at (360) 418-2470 or DATS 922-71-2470 or the alarm will sound.) – AMS will disarm the alarm.

All visitors and individuals with unescorted access MUST sign the station logbook after entering the facility.

Figure 1. Access Signage for Control House / Relay Door

The Signage on the outside of the door shows the access procedure and the contact numbers to notify the Alarm Monitoring Station (BPA AMS).

Special door sticker – On the outside facing side for ALL doors that are NOT the main entry point for a Control House or Relay House



#### **DID YOU LOG IN?**

Each individual with unescorted access to energized facilities must use their issued card key and 4 digit PIN prior to entry when there is a Card Reader and PIN pad present.

Before using this door, you MUST have already used your key card and PIN to enter through the main entrance in addition to signing the logbook.

Figure 2. Special Signage Applied to All Secondary Doors

Anyone entering a BPA NERC CIP Site must first enter by the primary door. The signage shown as Figure 2 is applied to the secondary doors to remind authorized personnel to first enter through the primary door so that the BPA AMS is alerted to their presence.

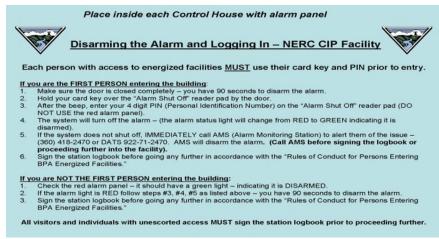


Figure 3. Signage for the Interior of the BPA Facility

The signage shown in Figure 3 is located inside the BP NERC CIP Site adjacent to the alarm panel and includes the BPA AMS phone numbers.



#### If your Relay House has an Alarm panel:

- Check the Alarm panel (if present) to determine if it is armed or disarmed (status color will be RED for armed and GREEN for disarmed).
- 2. If is it disarmed do nothing (status color is GREEN).
- If it is armed (status color is RED), make sure the door is closed completely you have 90 seconds to disarm the alarm.
- 4. Hold your card key over the "Alarm Shut Off" reader pad by the door.
- After the beep, enter your 4 digit PIN (Personal Identification Number) on the "Alarm Shut Off" reader pad (DO NOT USE the red alarm panel).
- The system will turn off the alarm (the alarm status light will change from RED to GREEN indicating it is disarmed).
- If the system does not shut off, IMMEDIATELY call AMS (Alarm Monitoring Station) to alert them of the issue (360) 418-2470 or DATS 922-71-2470. AMS will disarm the alarm. (Call AMS before signing the logbook or proceeding further into the facility).

All visitors and individuals with unescorted access MUST sign the station logbook.

Figure 4. Signage Installed Inside Relay House

The signage shown as Figure 4 provides detailed instructions on how to gain access to the Relay House and the process for de-activating the Alarm if it is activated.

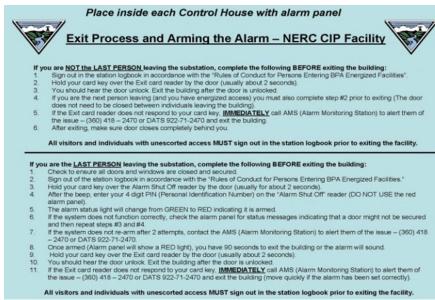


Figure 5. Exit Procedure for BPA NERC CIP Site

The signage shown in Figure 5 is the process for exiting the BPA Facility and to activate the Alarm.

#### Place inside each Relay house with alarm panel



# Exit Process and Arming the Alarm - NERC CIP Facility



If you are NOT the LAST PERSON leaving the Relay House, complete the following BEFORE exiting the building:

- Hold your card key over the Exit card reader by the door (usually about 2 seconds) You should hear the door unlook. Exit the building after the door is unlocked.
- - If you are the next person leaving (and you have energized access) you must also complete step #1 prior to exiting (The door does not need to be closed between individuals leaving the building).
- If the Exit card reader does not respond to your card key, IMMEDIATELY call AMS (Alarm Monitoring Station) to alert them of the issue - (360) 418 - 2470 or DATS 922-71-2470 and exit the building.
- After exiting, make sure door closes completely behind you.

All visitors and individuals with unescorted access MUST sign out in the station logbook.

#### If you are the $\underline{\textbf{LAST PERSON}} \text{ leaving the Relay house, complete the following BEFORE exiting the building:}$

- Check to ensure all doors and windows are closed and secured.

  Hold your card key over the Alarm Shut Off reader by the door (usually for about 2 seconds).
- After the beep, enter your 4 digit PIN (Personal Identification Number) on the "Alarm Shut Off" reader (DO NOT USE the red alarm panel).
- The alarm status light will change from GREEN to RED indicating it is armed.
- If the system does not function correctly, check the alarm panel for status messages indicating that a door might not be secured and then repeat steps #3 and #4.
- If the system does not re-arm after 2 attempts, contact the AMS (Alarm Monitoring Station) to alert them of the issue (360) 418 - 2470 or DATS 922-71-2470.
- Once armed (Alarm panel will show a RED light), you have 90 seconds to exit the building or the alarm will sound.
- Hold your card key over the Exit card reader by the door (usually about 2 seconds). You should hear the door unlock. Exit the building after the door is unlocked.
- If the Exit card reader does not respond to your card key, IMMEDIATELY call AMS (Alarm Monitoring Station) to alert them of the issue (360) 418 2470 or DATS 922-71-2470 and exit the building (move quickly if the alarm has been set correctly).

All visitors and individuals with unescorted access MUST sign out in the station logbook.

Figure 6. Exit Procedure for BPA NERC CIP Site Relay Houses

The signage shown in Figure 6 is the process for exiting BPA Relay Houses and to activate the Alarm.

# Recommended LABEL stickers for key equipment (for inside devices):



Figure 7. Recommended Labeling of the Alarm Card Readers inside the BPA Facility

Figure 7. Is an example of an Alarm Card Reader inside the BPA facility.



Figure 8. Additional Personnel Instructions Found on the Exterior Face of Primary Doors for BPA Facilities

Figure 8. Reminds all personnel granted Unescorted Access privileges that each person must 'badge-in' individually to the BPA Facility.

Special door sticker – doors that are used for equipment movement use ONLY or those entry points not intended for normal traffic – usually left closed/locked – ALARMED or NOT

NOT INTENDED FOR NORMAL USE DOORS

RESTRICTED USE ONLY!
This door may be alarmed. Use of this door is monitored and restricted to special or emergency use only.

You must contact the substation Chief Operator or the Alarm Monitoring Station (AMS) at (360) 418 – 2470 or DATS 922-71-2470 before use.

Figure 9. Signage Installed on Special Use Doors of BPA Facilities

# BONNEVILLE



# SUBSTATION OPERATIONS GROUP

October 2023