

B O N N E V I L L E
P O W E R A D M I N I S T R A T I O N



X-ROCH

RULES OF CONDUCT HANDBOOK
FOR
OTHER UTILITY WORKERS

January 2016



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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
- escorted by a person having authorization to enter

3. DEFINITIONS

Alarm Monitoring 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, control houses and all buildings within the substation perimeter. 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.

Escort

A person who has authorized access into, out of, and movement within a BPA energized facility who escorts a non-authorized individual into a BPA energized facility. The authorized individual must have the expertise to observe the escorted individual perform work safely in a high voltage environment.

ID Badge	Department of Energy (DOE/BPA) photo identification badge issued for the purpose of accessing BPA facilities with electronic card readers.
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.
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, who 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.

Qualified Electrical Worker

A Journeyman of an electrical trade such as Electrician, Lineman, Substation Operator, Meter Relay Technician.

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's 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 Utilities 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 OUW coordinator and follow the current BPA application process. "BPA's OUW Unescorted Access Process" is available on the BPA website listed below:

<http://www.bpa.gov/transmission/OperationsReliability/ReliabilityProgramandNERCStandards/Pages/Projects.aspx>.

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

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 CSReliabilityProgram@bpa.gov.

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

An 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 revoke@bpa.gov
- Call the BPA Revocation Office at 503.230.5625
- Notify CSReliabilityProgram@bpa.gov

5. ENERGIZED FACILITY 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.

Entrances must be physically attended, at all times, if unlocked.

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

5.2 Substation Access Protocol

At ECR sites, the first person who enters the facility must disarm the alarm panel.

Each individual with energized access must present their ID Badge and enter their 4-digit PIN at the card reader prior to entry.

Each individual with energized access must present their ID Badge to the exit reader when exiting the facility. Tailgating is now allowed during entry or exit.

If the electronic card reader is not functioning call AMS at **(360.418.2470)** for instructions.

Personnel, who have authorized access and have lost, misplaced or forgot their ID Badge must contact AMS at **(360.418.2470)** for assistance, in order to enter and exit an ECR site. AMS will manually log them in and out electronically.

When exiting an ECR site, the last person to exit must verify that the alarm panel is armed. When the system is armed, there is a 90 second delay, to allow for departure.

Detailed instructions are shown in (Attachment F) and are posted at each ECR site.

In addition to the electronic entry and exit procedure, all personnel entering BPA Energized Facilities must follow the logging requirements outlined in section 5.3 below.

All persons performing work at an energized facility must inform substation operations having jurisdiction, prior to beginning work, and at the conclusion of the work.

District phone numbers for substation operations are listed in

(Attachment D) and on the Substation Information Directory posted at each substation.

At all supervisory controlled substations, both Non-ECR and ECR, entry and exit during normal working hours does not require contacting the control center having jurisdiction, unless BPA is on high alert.

Normal working hours are considered 0600 to 1800, Monday through Friday.

Entry and exit, when responding to facility trouble, 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.

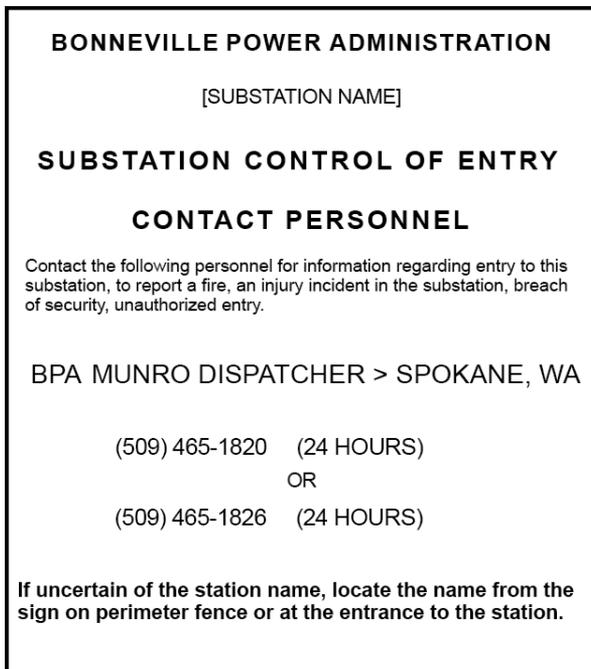


Figure A

Attachment F shows the complete signage at each BPA ECR site and outlines the requirements when entering and exiting the facility.

5.3 Entry, Exit and Work Performed Logging

A Substation Security Log (book) is located at larger energized facilities and all NERC-CIP sites. A Substation Operating Log (book) is located at each Energized Facility.

At ECR sites the Substation Security Log “Attention” insert, (Attachment E) lists the proper sign in and sign out process, which must be followed.

Each person entering an Energized Facility is required to sign in and sign out in the Substation Security Log if one is available or the Substation Operating Log if no Substation Security Log is present. 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.

The person in charge of a crew may sign in for all workers, listing each person’s name with the other required information.

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

The following notice sticker (Figure B) is placed on the front cover of the Substation Operating Log and serves as a reminder of the required information that must be entered into the log.

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

1. Name, organization represented, date and time of entry **and** departure, and reason for **EACH** person entering. (This information **shall** be logged in the Substation Security Log, if provided.)
2. Work performed while in the substation, including changes to equipment.
3. Routine and trouble switching are logged in the sequence they were performed.
4. Switch Orders are entered exactly as they were written. All entries made on 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, include:
 - 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 reported.
 - Weather conditions, if pertinent to the trouble.
7. Following equipment inspections, log problems and abnormal conditions found.

ALL LOG ENTRIES ARE TO BE MADE IN INK. LINE OUT AND INITIAL MISTAKES.

Figure B

A Substation Entry sign must be posted at the entrance to a substation, stating the responsibilities of each person entering a substation. These responsibilities are to be strictly followed and are listed in (Figure C) below.

U.S. DEPARTMENT OF ENERGY - BONNEVILLE POWER ADMINISTRATION
SUBSTATION OPERATIONS

BPA F-6510.21
(10-12)
(Prior edition obsolete)

ATTENTION

SUBSTATION ENTRY OR EXIT

Each person entering this substation is responsible for:

- 1. SIGNING THE SUBSTATION OPERATING LOG BOOK OR SECURITY LOG BOOK**
 - A. DATE AND TIME OF ENTRY AND DEPARTURE
 - B. NAME (Supervisor may list each crew member by name)
 - C. ORGANIZATION REPRESENTED
 - D. REASON FOR ENTRY

- 2. RECORD WORK ACCOMPLISHED IN SUBSTATION OPERATING LOG BOOK**

- 3. ANY PERSON ENTERING OR EXITING A SUBSTATION THAT IS UNATTENDED SHALL CONTACT THE APPROPRIATE DISPATCHER CONTROL CENTER IF ENTRY OR EXIT IS,**
 - A. AFTER NORMAL WEEKDAY WORK HOURS
 - B. ON WEEKENDS AND FEDERAL HOLIDAYS
 - C. FOR SWITCHING OR A CALL OUT
 - D. ANY TIME THE SYSTEM IS ON HIGH SECURITY ALERT

Figure C

5.4 Escorting

5.4.1 General Requirements

Entry into, exit out of, and movement within an energized facility by a Non-Authorized Individual requires an escort.

Escorts must have the expertise which would allow them to perform the work that is being performed by the Non-Authorized Individual(s) (NAI) being escorted.

The intent of this requirement is to ensure that the escort is able to supervise the NAI's work for safety and electrical system integrity. For example:

- A journeyman high voltage electrician could escort anyone for any work in an energized facility.
- A journeyman carpenter or welder, with OUW Energized Access, could only escort NAI's performing work which did not affect the electrical system or for work not in close proximity to the electrical system where contact is impossible.

NAIs require the **continuous** presence of the escort. An escort is responsible for ensuring NAIs follow all applicable rules.

If the individuals being escorted will be entering within 15 feet for voltages up to 345 kV or 20 feet for voltages above 345 kV, on foot or in a vehicle, the escort must provide each NAI with the following information for each substation in which they are being escorted:

- Procedure for identifying energized equipment.
- 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.

NAIs 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 (5) days the NAI must be given the above information again by the escort on re-entry into the substation.

5.4.2 Non-ECR Sites

Personnel providing escort are responsible for accomplishing the requirements of 5.3 above for all individuals being escorted.

5.4.3 ECR Sites

All personnel escorting NAI's at an ECR site must call AMS and notify them they will be escorting NAI's in the facility. AMS will determine, based on information gathered from the escort, whether the escorted individuals will be entering the control house or relays house(s), if any.

If the NAI's being escorted will be entering the control house or relay house(s) at an ECR site the person escorting must provide the following information to AMS for each individual being escorted:

- Time of entry.
- Name of ECR Site.
- Where they will be entering (control house, relay house(s)).
- Escort name.
- First and last name of each person being escorted.
- Organization or Company of person being escorted.
- Purpose for Access.
- Contact number for escort.

Additionally the person providing escort shall sign in all personnel being escorted in compliance with section 5.3 above.

Upon exiting the facility, if the escorted personnel entered the control house or relay house(s), the escort will again call AMS and provide the exit time for all personnel being escorted and sign them out per section 5.3 above.

If the escorted individuals did not enter the control house or relay house(s) then calling AMS on exit of the facility is not required.

Failure to follow the above procedure will violate BPA's Control of Entry rules defined in this document and NERC CIP 006.

5.5 Unauthorized Entry/Breach of Security/Damage/Suspicious Device

Upon discovery of a forced entry or other breach of security, through a door(s), window(s), gate(s), or hole(s) 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 proceed as follows:

- Withdraw to a safe location and call 911.
- Notify the dispatching office having jurisdiction. The Dispatching Office number will be posted on a sign on the front door similar to (Figure A) in section 6.2. Dittmer Dispatch can be reached at 800.392.0816. Munro Dispatch can be reached at 877.836.6632.
- 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 OUWs requiring unescorted access into, out of, and movement within energized facilities must possess the knowledge and skills necessary to distinguish the following:

- Energized parts from non-energized parts of electrical equipment
- The nominal voltage of exposed parts
- The corresponding minimum approach distance.

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

- Station prints – One-line diagrams are found in the station print cabinet. They are the first diagrams in the station print cabinets. They contain information pertaining to voltage levels present in the station.
- Equipment signage located in the switchyard.
- Mimic bus color codes – The mimic bus, on the control panel in the control house, is a representation 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	13.8 kV	Green	69 kV
Yellow	115 kV	Red	230 kV
Red/Blue	287 kV	Black	500 kV
Red/Yellow	345 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 by 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.



**34.5 kV Non-Stacking
Cap & Pin**



33 kV Pin Insulator

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



230 kV Bus Support



115 kV Bus Support

Stacking Cap-and-Pin

These insulators are assembled in stacks to achieve the required voltage rating. They are used in maintenance replacements and some expansions of existing 115 kV, 230 kV, 287 kV, and 345 kV installations. The most common cap-and-pin insulator, TR-140, is stacked as follows:

- Two units for 69 kV
- Three units for 115 kV
- Five units for 230 kV
- Seven units for 345 kV.
- Refer to BPA standard drawings for dimensions.



**115 kV Disconnect
Support**



**230 kV Disconnect
Support**

Station Post Insulators

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 115 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 115 kV installations.



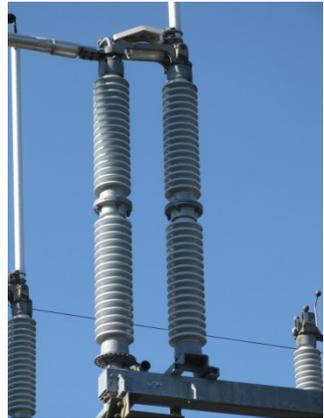
34.5 kV Non-Stacking Post

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**

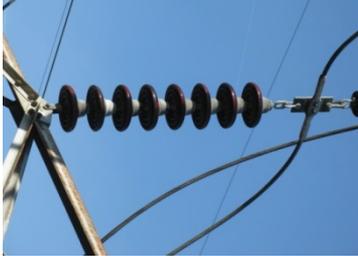


230 kV Disconnect

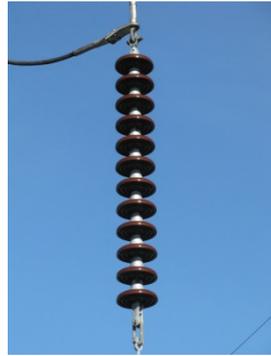
Strain Bus Insulators

The NEMA 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 voltage.



115 kV Strain Bus



**230 kV Riser Bus
in Bridge**



230 kV Line Dead End

6.2 Substation Electrical Hazard Cautions

If you are not a Qualified Electrical Worker:

- Do not operate any switches, other than light switches, attended/unattended switches, ECR PIN pads, or other switches required for entering or exiting Energized Facilities, 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 a 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 turn on lights with an 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 it.
- Do not touch or operate control switches. There are numerous buttons and switches in control houses and switchyards. Only employees who are Qualified Electrical Workers 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 remove covers from relays or control equipment. This task belongs to those whose job it is to operate and maintain this equipment and it is not to be bumped, jarred or tampered with.
- Do not contact any bare conductors, wires, terminals, buses, etc. No individual must contact any high-voltage electrical parts unless this equipment has been properly isolated from the electrical system and grounded. Only Qualified Electrical Workers may make that determination.
- Do not toss or throw objects in or around substations or switchyards. The throwing of any objects in energized facilities, including switchyards, is not allowed at any time. Not only could the object damage energized parts, but it could inadvertently cause an electrical short circuit, possibly cause serious injury to people, and damage property.

- Do not disturb or remove any BPA 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 at site or notify District Substation Operations. BPA Qualified Electrical Workers are identified by the wearing of yellow hard hats. For examples of these tags see Attachment 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 knowledge or unwillingness to follow safe work practices or security requirements.
- Documented cases showing lack of sound and mature judgment.
- Breach of substation security.
- Involvement in an incident that resulted in an accident/incident being investigated by a BPA appointed accident investigator or accident investigation board.

8. SUMMARY OF CHANGES

March 2015

James Vinson – TOZ

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

November 2015

James Vinson – TOZ

1. 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.

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)	First	MI
-------------	-------	----

Step 2 – Choose a PIN number for your access card. Select 4 numeric digits (example – 1130):

- Do not choose numbers that are confidential or Personally Identifiable Information (PII) such as the last four digits of your social security number.
- Numbers that are not accepted include four repeating numbers (e.g. – 5555) or sequential numbers (e.g. – 1234, 9876).

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?

Step 4 – Provide the answer to your security question:

Write (please print legibly) in the answer to the security question you selected above:

--

Step 5 – Return this worksheet, via mail, in a sealed envelope addressed to:

If by First Class Mail:
Bonneville Power Administration
P.O. Box 61409
Vancouver, WA 98666

If by Overnight Delivery Service:
Bonneville Power Administration – TPO/TPP-4
905 NE 11th Avenue
Portland, OR 97232

REMOTE HOLD ORDER PLACKARD AND CONTROLS

HOLD ORDER
DO NOT OPERATE THIS
DEVICE WITHOUT
DISPATCHER'S APPROVAL



1. HOLD ORDER IS ISSUED
WHEN LED IS ON.
2. NO HOLD ORDER WHEN
LED IS OFF.

**SCS
HOLD ORDER
CONTROL**
REMOTE



LOCAL

WORK PERMIT TAG (BPA F 6510.13a)

(FRONT)

BPA 6510.13a
(8-00)

US DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION

WORK PERMIT

THIS TAG DOES NOT PROVIDE
PROTECTION FOR WORKMEN

DO NOT REMOVE
THIS TAG WITHOUT
AUTHORIZATION

FOR DATA

SEE OTHER SIDE

SEE TAG ON _____

(BACK)

BPA 6510.2813a
(8-00)

WORK PERMIT

THIS TAG DOES NOT PROVIDE
PROTECTION FOR WORKMEN

STATION/LOCATION _____

EQUIPMENT/CIRCUIT _____

SWITCHES/DEVICES TAGGED _____

TAGGED FOR _____

CONDITION/REASON _____

TAG PLACED BY _____

hrs. date

TAG REMOVED BY _____

hrs. date

**CAUTION TAG
(BPA F 6510.12)**

<p>(FRONT)</p> <div style="border: 1px solid black; padding: 10px;"> <p style="font-size: small;">BPA 6510.12 (6-06)</p> <p style="font-size: x-small; text-align: center;">US DEPARTMENT OF ENERGY BONNEVILLE POWER ADMINISTRATION</p> <div style="background-color: yellow; text-align: center; padding: 5px; margin: 10px 0;">CAUTION</div> <p style="text-align: center; font-weight: bold; font-size: large;">DO NOT REMOVE THIS TAG WITHOUT AUTHORIZATION</p> <p>FOR DATA</p> <p><input type="checkbox"/> SEE OTHER SIDE</p> <p><input type="checkbox"/> SEE TAG ON _____</p> <p>_____</p> <p>_____</p> </div>	<p>(BACK)</p> <div style="border: 1px solid black; padding: 10px;"> <p style="font-size: small;">BPA 6510.2812 (6-06)</p> <div style="background-color: yellow; text-align: center; padding: 5px; margin: 10px 0;">CAUTION</div> <p>STATION/LOCATION _____</p> <p>EQUIPMENT/CIRCUIT _____</p> <p>_____</p> <p>SWITCHES/DEVICES TAGGED _____</p> <p>_____</p> <p>TAGGED FOR _____</p> <p>CONDITIONS/REASON _____</p> <p>_____</p> <p>TAG PLACED BY _____</p> <p style="text-align: right; font-size: x-small;">hrs. date</p> <p>TAG REMOVED BY _____</p> <p style="text-align: right; font-size: x-small;">hrs. date</p> </div>
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**ELECTRICAL TEST MARKER
(BPA F 6510.40)**





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



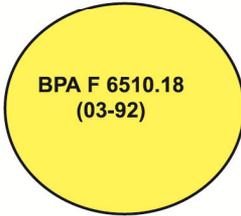
Red Work Clearance Tag (BPA F 6510.15)



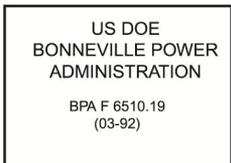
Blue Test Clearance Tag (BPA F 6510.16)



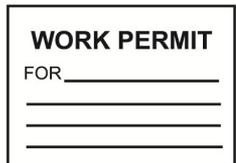
Yellow Caution Tag (BPA F 6510.17)



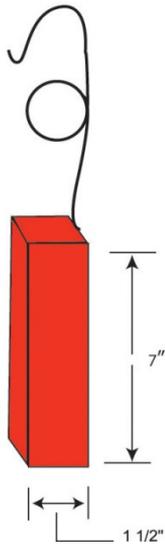
Yellow Hold Order Tag (BPA F 6510.18)



White Work Permit Tag (BPA F 6510.19)



RED WOODEN BLOCK
Catalog ID: 0000197930



Attachment D – Contacts

SUBSTATION OPERATIONS GROUP STAFF

Gary Kelley, Substation Operations Group Manager	(360) 418-2271
Kevin Carman, Lead Substation Operations Specialist	(360) 418-2057
Laura Stanger, Substation Operations Specialist	(360) 418-2644
Rodney Krause, Substation Operations Specialist	(360) 418-2304
John Baker, Substation Operations Specialist	(360) 418-2738
Jacki Sterner, Substation Operations Specialist	(360) 418-2056
Tim Bargaen, Substation Operations Specialist	(360) 418-2370
Ron Rowe, TOZ Contractor	(360) 418-2609
Dan Darr, TOZ Contractor	(503) 798-8698
Jim Vinson, TOZ Contractor	(360) 418-2095
Kathryn (Katie) Emerson, Contractor	(360) 418-8698
Denice White, Contractor, Admin Support	(360) 418-2273

CHIEF SUBSTATION OPERATORS

Alvey- Eugene District	(541) 988-7011
Ashe-Franklin 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 X133
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) 612-3160
Kalispell-Kalispell District	(406) 751-7891
Longview-Longview District	(360) 414-5611
Malin-Redmond District	(541) 723-2325
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 – Security Log Instructions

ATTENTION

This logbook is an Official Record. Strict attention to these instructions is required to ensure that this logbook meets the minimum logging requirements. Each individual entering this facility needs to be listed by **first** and **last** name in the Substation Security Log. If an escort is required for the individual, the escort's **first** and **last** name must be entered in the escort field.

When logging into and out of the substation facility using the Substation Security Log, each field must be completely filled out. The use of ditto marks, arrows, lines and etc. are not allowed. The following table is intended as guidance for how to complete entries in the fields.

Field	Description
DATE	Month/Day/Year
TIME IN/OUT	Use 24 hour clock
NAME	First and Last Name (Please print)
ESCORT NAME (IF APPLICABLE)	First and Last Name (Please print)
ORGANIZATION REPRESENTED	Employees use routing, contractors use routing or company
REASON FOR ENTRY	A brief explanation why you are entering the substation (See examples below)

In most cases people are entering substations to perform work. The reason for entry description should briefly explain what work you will be performing. Some people report to the substation because that is their duty station and they may perform a variety of work during the day. Duty station is an appropriate reason for entry.

Examples of reason for entry descriptions:

substation inspection, switching, visit, filing prints, maintain equipment, relay maintenance, substation upkeep, shop upkeep, communications equipment maintenance

Sample Substation Security Log Entries

DATE	TIME		NAME (First and Last) (Please Print)	ESCORT NAME (First and Last) (If Applicable)	ORGANIZATION REPRESENTED	REASON FOR ENTRY
	IN	OUT				
3/15/13	0700	1530	Rob Widmer		THH	Duty Station
3/15/13	0800	1315	Hezy Waldman		TEH	Caltrans Meters
3/15/13	0845	1330	Sara Adams		TEH	POE 35 maintenance
3/15/13	1245	1530	Andy Busch	Rob Widmer	Busch Group	HRAD Administration

In Addition See Reverse side for Escorting at NERC CIP Facilities

SUBSTATION OPERATIONS TOZ-AMPN-1

Escorting at NERC CIP Facilities

If personnel being escorted will be entering a designated NERC CIP control house or relay house(s), the person providing the escorting is required to call **AMS** and provide the following information on all personnel being escorted:

- Time of entry.
- Name of NERC CIP Facility.
- Where they will be entering (control house, relay house(s)).
- Whether the individual is an employee or visitor.
- Escort name.
- 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 again call **AMS** and provide the exit time for all personnel being escorted. **Failure to accomplish the above procedure will violate BPA's Control of Entry rules and NERC CIP 006.**

If the personnel being escorted will **Not** be entering the control house or relay house(s) then contacting **AMS** will not be required. However the following information shall be entered into the Substation Security Log book by the escort:

- Month/Day/Year
- Time In/Time Out
- First and Last Name (Print)
- Escort First and Last Name (Print)
- Organization or Company Represented
- Reason for Entry

SUBSTATION OPERATIONS TOZ-AMPN-1

Attachment F – Signage at BPA ECR Sites

Signage applied to each BPA Critical Asset Facility.

*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).
2. 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.
5. Open the door and enter the building – Check the Alarm panel and Disarm the alarm (if you are the **FIRST PERSON** inside). ***Some Relay houses also have Alarm panels inside – please check their status after accessing the door.**
6. 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).
7. 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 Critical Asset Facility 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.

Place inside each Control House with alarm panel



Disarming the Alarm and Logging In – NERC CIP Facility

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

If you are the FIRST PERSON entering the building:

1. Make sure the door is closed completely – you have 90 seconds to disarm the alarm.
2. Hold your card key over the "Alarm Shut Off" reader pad by the door.
3. 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).
4. The system will turn off the alarm – (the alarm status light will change from RED to GREEN indicating it is disarmed).
5. 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**).
6. Sign the station logbook before going any further in accordance with the "Rules of Conduct for Persons Entering BPA Energized Facilities."

If you are NOT THE FIRST PERSON entering the building:

1. Check the red alarm panel – it should have a green light – indicating it is DISARMED.
2. If the alarm light is RED follow steps #3, #4, #5 as listed above – you have 90 seconds to disarm the alarm.
3. Sign the station logbook before going any further in accordance with the "Rules of Conduct for Persons Entering BPA Energized Facilities."

All visitors and individuals with unescorted access MUST sign the station logbook prior to proceeding further.

Figure 3. Signage for the Interior of the BPA Facility

The signage shown in Figure 3 is located inside the BPA Critical Asset Facility adjacent to the alarm panel and includes the BPA AMS phone numbers.

Place inside each Relay House with alarm panel



Disarming the Alarm and Logging In – NERC CIP Facility

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

If your Relay House has an Alarm panel:

1. 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).
3. 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.
5. 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).
6. The system will turn off the alarm – (the alarm status light will change from RED to GREEN indicating it is disarmed).
7. 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.

Place inside each Control House with alarm panel



Exit Process and Arming the Alarm – NERC CIP Facility



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

1. Sign out in the station logbook in accordance with the "Rules of Conduct for Persons Entering BPA Energized Facilities".
2. Hold your card key over the Exit card reader by the door (usually about 2 seconds).
3. You should hear the door unlock. Exit the building after the door is unlocked.
4. If you are the next person leaving (and you have energized access) you must also complete step #2 prior to exiting (The door does not need to be closed between individuals leaving the building).
5. 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.
6. After exiting, make sure door closes completely behind you.

All visitors and individuals with unescorted access MUST sign out in the station logbook prior to exiting the facility.

If you are the LAST PERSON leaving the substation, complete the following BEFORE exiting the building:

1. Check to ensure all doors and windows are closed and secured.
2. Sign out of the station logbook in accordance with the "Rules of Conduct for Persons Entering BPA Energized Facilities."
3. Hold your card key over the Alarm Shut Off reader by the door (usually for about 2 seconds).
4. After the beep, enter your 4 digit PIN (Personal Identification Number) on the "Alarm Shut Off" reader (DO NOT USE the red alarm panel).
5. The alarm status light will change from GREEN to RED indicating it is armed.
6. 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.
7. 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.
8. Once armed (Alarm panel will show a RED light), you have 90 seconds to exit the building or the alarm will sound.
9. Hold your card key over the Exit card reader by the door (usually about 2 seconds).
10. You should hear the door unlock. Exit the building after the door is unlocked.
11. 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 prior to exiting the facility.

Figure 5. Exit Procedure for BPA Critical Asset Facilities

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:

1. Hold your card key over the Exit card reader by the door (usually about 2 seconds).
2. You should hear the door unlock. Exit the building after the door is unlocked.
3. 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).
4. 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.
5. 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 **LAST PERSON** leaving the Relay house, complete the following **BEFORE** exiting the building:

1. Check to ensure all doors and windows are closed and secured.
2. Hold your card key over the Alarm Shut Off reader by the door (usually for about 2 seconds).
3. After the beep, enter your 4 digit PIN (Personal Identification Number) on the 'Alarm Shut Off' reader (DO NOT USE the red alarm panel).
4. The alarm status light will change from GREEN to RED indicating it is armed.
5. 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.
6. 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.
7. Once armed (Alarm panel will show a RED light), you have 90 seconds to exit the building or the alarm will sound.
8. Hold your card key over the Exit card reader by the door (usually about 2 seconds).
9. You should hear the door unlock. Exit the building after the door is unlocked.
10. 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 Critical Asset 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.

Put on the Outside facing side of all Doors that have Card Readers and PIN Pads



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



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

B O N N E V I L L E
P O W E R A D M I N I S T R A T I O N



SUBSTATION
OPERATIONS GROUP

December 2015