

BIMONTHLY, STAGGERED BASIS, REACTOR TRIP BREAKER SHUNT AND  
UNDervOLTAGE TRIP INDEPENDENCE TEST - TRAIN B

A. STATEMENT OF APPLICABILITY:

The purpose of this procedure is to verify the operation of the shunt trip and the undervoltage trip of the Train B Reactor Trip Brkr and the Train A Rx Trip bypass Brkr in Modes 1, 2, 3\*, 4\*, and 5\* every 62 days and after maintenance or adjustment of the Reactor Trip Brkrs. Completion of the entire surveillance will insure the compliance with the Table 4.3-1 Note 11 (18 month Independent Verification of both undervoltage and shunt trips actuation requirements).

\* With the Reactor Trip Brkrs closed and the Control Rod Drive System capable of Rod Withdrawal.

B. REFERENCES:

1. Technical Specifications 3.3.1.
2. Westinghouse Solid State Protection System Vendor's manual F-108.
3. 6/20 E-1-403ORD06
4. 6/20 E-1-403ORD07
5. 6/20 E-1-4208A
6. 6/20 E-1-4208B
7. 6/20 E-1-4030EF67
8. 6/20 E-1-4030EF/3

C. PREREQUISITES:

1. Receive permission from the Shift Engineer or designated SRO licensed assistant prior to performing this surveillance by having the Data Package Cover Sheet signed and dated.
2. Communications must be established between the main control room, the auxiliary electrical equipment room (1PA10J) and the reactor trip switchgear panel (1RD05E).
3. Test Equipment.
  - a. Pushbutton switch with leads.

D. PRECAUTIONS:

1. This surveillance may be performed on Reactor Trip Breaker B and Bypass Trip Breaker A only.

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2. No radio communications shall be used in the Auxiliary Electrical Equipment room.
3. This procedure will open Reactor Trip Breaker A. Bypass Trip Breaker B must be closed during execution of steps 4 through 18 to avoid a reactor trip.

E. LIMITATIONS AND ACTIONS:

1. In the event that the acceptance criteria is not met during the performance of this surveillance, IMMEDIATELY notify the Shift Engineer to initiate LCOAR 1BOS 3.1-1a.
2. The two hour time limit for surveillance testing begins when Reactor Trip Bypass Breaker B (BYB) is racked to CONNECT position and CLOSED.

F. MAIN BODY:

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*****
*                                CAUTION                                *
* DO NOT PROCEED WITH THIS PROCEDURE UNLESS THE GENERAL              *
* WARNING ANNUNCIATOR 04B03 IS CLEAR                                   *
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- \_\_\_ 1. VERIFY that MCB General Warning annunciator 04B03 is CLEAR

UNDervOLTAGE TRIP

- \_\_\_ 2. VERIFY/RACK to CONNECT and CLOSE Reactor Trip Breaker - B (RTB) at 1RDO5E.
- \_\_\_ 3. RACK to the TEST and CLOSE Reactor Trip Bypass Breaker A (BYA) at 1RDO5E.

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*****
*                                NOTE                                *
* The two hour time limit for surveillance testing begins              *
* when the Train B Reactor trip bypass breaker is racked              *
* to CONNECT and CLOSED.                                              *
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- \_\_\_ 4. RACK to CONNECT and CLOSE. Reactor Trip Bypass Breaker B (BYB) at 1RDO5E and record the time. TIME: \_\_\_\_\_
- \_\_\_ 5. PLACE the "Logic A" Test Switch at 1PA10J, Logic Test Panel in position 7.
- \_\_\_ 6. DEPRESS and HOLD any two of the four Manual Test Input push buttons at 1PA10J Logic Test Panel to actuate the Undervoltage Trip and VERIFY the following:
  - a. Reactor Trip Breaker B (RTB) is OPEN at 1RDO5E.
  - b. Reactor Trip Bypass Breaker A (BYA) is OPEN at 1RDO5E.

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PART II  
BRAIDWOOD STATION

Item 2.1

Applicant needs to submit detailed information describing its vendor interface program for reactor trip system components. Information supplied should state how the program assures that vendor technical information is kept complete, current, and controlled throughout the life of the plant and should also indicate how the program will be implemented at Byron/Braidwood.

Response

Braidwood's VETIP program is currently under development. An administrative procedure, BWAP 1340-5, has been written, and is currently undergoing the station's review process. This procedure has been written to implement the Nuclear Stations Division Directive MO-2, Control of Vendor Equipment Technical Information. This procedure applies to both safety related and non-safety related equipment. BWAP 1340-5 prescribes that all vendors manuals, safety-related and non-safety related, be controlled by the Central Files Supervisor. All satellite files are likewise controlled. It defines the review criteria, including effects on station procedures, for vendor initiated revisions to equipment manuals. Also addressed in this procedure is the vendor manual update process, which is initiated when a plant modification is undertaken.

Item 2.2.2

Applicant needs to present its evaluation of the NUTAC program and describe how it will be implemented at Byron/Braidwood. The staff found the NUTAC program fails to address the concern about establishing and maintaining an interface between all vendors of safety-related equipment and the utility. Accordingly the applicant will need to supplement its response to address this concern. This additional information should describe how current procedures will be modified and new ones initiated to meet each element of the item 2.2.2 concern.

Response

CECo's representative in the NUTAC program was from Nuclear Stations Division, a Corporate level organization. To implement the Vendor Equipment Technical Information Program at each nuclear station, NSD issued a directive, NSDD-MO2, based on the NUTAC program and INPO

Good Practice MA 304. The directive defines the minimum requirements for implementation of the program and serves as our corporate statement on the control of vendor information. A copy is attached at the end of Part I for your review.

In addition, Braidwood has a formal review process established for vendor-initiated notices (Technical Bulletins, O&MRs, etc.) This process serves to alert responsible station departments to the most current vendor information available. The modification of procedures based on vendor input is described in BwAP 1340-5.

#### Item 4.5.2

Applicant needs to describe design modifications that will permit on-line test of the RTS and provide an implementation schedule.

#### Response

Braidwood Station was designed with on-line test capabilities. The RTS design modification which the station has committed to, the Westinghouse automatic shunt trip, will also have this capability.

The Braidwood Reactor Trip System employs two diverse trip features an undervoltage trip and a shunt trip. Any time a reactor trip signal is generated, power is removed from the undervoltage trip attachment which in turn will trip the reactor trip breaker. In addition, the shunt trip relay will be energized to supply the breaker with a redundant trip.

The system is designed such that on-line testing is accomplished through the use of a bypass breaker in parallel with the main trip breaker. When testing is performed, the bypass breaker is placed in the connect position and the main breaker is placed in the disconnect position. With the main trip breaker out-of-service, both undervoltage and shunt trip devices can be tested. During this testing, the bypass breaker can be tripped by similar undervoltage and shunt trip devices.

As can be seen by the above description, modifications will be made to enable Braidwood to accomplish on-line testing of reactor trip breakers. The only design modification is the addition of the shunt trip coil, but it should be noted that replacement undervoltage trip attachments are being supplied by Westinghouse for installation at Braidwood.