

Industry/TSTF Standard Technical Specification Change Traveler

Open only affected RTCBs when a single channel is inoperable

Priority/Classification 1) Correct Specifications

NUREGs Affected: 1430 1431 1432 1433 1434

Description:

NUREG-1432, LCO 3.3.3 (analog) and LCO 3.3.4 (Digital) Required Action C.1 requires all RTCBs to be opened. This change allows only the affected RTCBs to be opened.

Justification:

When one channel of Manual Trip, RTCBs, or Initiation Logic is inoperable and the associated RTCBs are opened, the channel has performed its associated safety functions. The affected functions are left in a one-out-of-two logic condition, which meets redundancy requirements. Therefore, it is not necessary to open all RTCBs when one channel of Manual Trip, RTCBs, or Initiation Logic is inoperable. Opening the affected RTCBs is sufficient. This change will also provide consistency with the Required Action B.1 which is used in Modes 1 and 2. It will also provide consistency with the Note in Condition C which implies that only the affected RTCBs are opened.

Revision History

OG Revision 0

Revision Status: Active

Next Action:

Revision Proposed by: Palo Verde

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 24-Oct-96

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 24-Oct-96

TSTF Review Information

TSTF Received Date: 04-Nov-96 Date Distributed for Review 20-Jan-97

OG Review Completed: BWOG WOG CEOG BWROG

TSTF Comments:

WOG - Not applicable, accepts
BWOG - Not applicable, accepts
BWROG - Not applicable, accepts

TSTF Resolution: Approved Date: 06-Mar-97

NRC Review Information

NRC Received Date: 27-Mar-97 NRC Reviewer: SCHULTEN,

NRC Comments:
4/7/97 Rec'd pkg.
4/10/97 Forwarded to reviewer.

Final Resolution: NRC Approves

Final Resolution Date: 06-Oct-97

4/2/98

Incorporation Into the NUREGs

File to BBS/LAN Date:

TSTF Informed Date:

TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

Action 3.3.3.C RPS Logic and Trip Initiation (Analog)

Action 3.3.3.C Bases RPS Logic and Trip Initiation (Analog)

Action 3.3.4.C RPS Logic and Trip Initiation (Digital)

Action 3.3.4.C Bases RPS Logic and Trip Initiation (Digital)

4/2/98

TSTF-170

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTE----- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.</p> <p>-----</p> <p>One channel of Manual Trip, RTCBs, or Initiation Logic inoperable in MODE 1 or 2.</p>	<p>B.1 Open the affected RTCBs.</p>	<p>1 hour</p>
<p>C. -----NOTE----- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.</p> <p>-----</p> <p>One channel of Manual Trip, RTCBs, or Initiation Logic inoperable in MODE 3, 4, or 5.</p>	<p>C.1 Open all RTCBs. <i>the affected RTCBs.</i></p>	<p>48 hours</p>
<p>D. Two channels of RTCBs or Initiation Logic affecting the same trip leg inoperable.</p>	<p>D.1 Open the affected RTCBs.</p>	<p>Immediately</p>

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TSTF-170

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. -----NOTE----- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.</p> <p>-----</p> <p>One channel of Manual Trip, RTCBs, or Initiation Logic inoperable in MODE 1 or 2.</p>	<p>B.1 Open the affected RTCBs.</p>	<p>1 hour</p>
<p>C. -----NOTE----- RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.</p> <p>-----</p> <p>One channel of Manual Trip, RTCBs, or Initiation Logic inoperable in MODE 3, 4, or 5..</p>	<p>C.1 Open all RTCBs.</p> <p><i>the affected RTCBs.</i></p>	<p>48 hours</p>
<p>D. Two channels of RTCBs or Initiation Logic affecting the same trip leg inoperable.</p>	<p>D.1 Open the affected RTCBs.</p>	<p>Immediately</p>

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BASES

ACTIONS

B.1 (continued)

Therefore, a Note has been added specifying that the RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.

Required Action B.1 provides for opening the RTCBs associated with the inoperable channel within a Completion Time of 1 hour. This Required Action is conservative, since depressing the Manual Trip push button associated with either set of breakers in the other trip leg will cause a reactor trip. With this configuration, a single channel failure will not prevent a reactor trip. The allotted Completion Time is adequate to open the affected RTCBs while maintaining the risk of having them closed at an acceptable level.

C.1

Condition C applies to the failure of one Initiation Logic channel, RTCB channel, or Manual Trip channel affecting the same trip leg in MODE 3, 4, or 5 with the RTCBs closed. The channel must be restored to OPERABLE status within 48 hours. If the inoperable channel cannot be restored to OPERABLE status within 48 hours, all RTCBs must be opened, placing the plant in a MODE in which the LCO does not apply and ensuring no CEA withdrawal occurs.

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The Completion Time of 48 hours is consistent with that of other RPS instrumentation and should be adequate to repair most failures.

Testing on the OPERABLE channels cannot be performed without causing a reactor trip unless the RTCBs in the inoperable channels are closed to permit testing. Therefore, a Note has been added specifying that the RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.

D.1

Condition D applies to the failure of both Initiation Logic channels affecting the same trip leg. Since this will open

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BASES

ACTIONS
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C.1

Condition C applies to the failure of one Initiation Logic channel, RTCB channel, or Manual Trip channel affecting the same trip leg in MODE 3, 4, or 5 with the RTCBs closed. The channel must be restored to OPERABLE status within 48 hours. If the inoperable channel cannot be restored to OPERABLE status within 48 hours, all RTCBs must be opened, placing the plant in a MODE in which the LCO does not apply and ensuring no CEA withdrawal occurs.

Insert 1 →

The Completion Time of 48 hours is consistent with that of other RPS instrumentation and should be adequate to repair most failures.

Testing on the OPERABLE channels cannot be performed without causing a reactor trip unless the RTCBs in the inoperable channels are closed to permit testing. Therefore, a Note has been added specifying that the RTCBs associated with one inoperable channel may be closed for up to 1 hour for the performance of an RPS CHANNEL FUNCTIONAL TEST.

D.1

Condition D applies to the failure of both Initiation Logic channels affecting the same trip leg. Since this will open two channels of RTCBs, this Condition is also applicable to channels in the same trip leg. This will open both sets of RTCBs in the affected trip leg, satisfying the Required Action of opening the affected RTCBs.

Of greater concern is the failure of the initiation circuit in a nontrip condition (e.g., due to two initiation K-relay failures). With only one Initiation Logic channel failed in a nontrip condition, there is still the redundant set of RTCBs in the trip leg. With both failed in a nontrip condition, the reactor will not trip automatically when required. In either case, the affected RTCBs must be opened immediately by using the appropriate Manual Trip push buttons, since each of the four push buttons opens one set of RTCBs, independent of the initiation circuitry. Caution must be exercised, since depressing the wrong push buttons may result in a reactor trip.

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the affected RTCBs must be opened. In some cases, this condition may effect all of the RTCBs. This removes the need for the affected channel by performing its associated safety function. With the RTCBs open, the affected functions are in a one-out-of-two logic, which meets redundancy requirements.