

REACTIVITY CONTROL SYSTEMSLIMITING CONDITION FOR OPERATION (Continued)ACTION: (Continued)

b. With a "slow" control rod(s) not satisfying ACTION a.1, above:

1. Declare the "slow" control rod(s) inoperable, and
2. Perform the Surveillance Requirements of Specification 4.1.3.2.c at least once per 60 days when operation is continued with three or more "slow" control rods declared inoperable.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

c. With the maximum scram insertion time of one or more control rods exceeding the maximum scram insertion time limits of Specification 3.1.3.2 as determined by Specification 4.1.3.2.c, operation may continue provided that:

1. "Slow" control rods, i.e., those which exceed the limits of Specification 3.1.3.2, do not make up more than 20% of the 10% sample of control rods tested.
2. Each of these "slow" control rods satisfies ACTION a.1.
3. The eight adjacent control rods surrounding each "slow" control rod are:
 - a) Demonstrated through measurement within 12 hours to satisfy the maximum scram insertion time limits of Specification 3.1.3.2, and
 - b) OPERABLE
4. The total number of "slow" control rods, as determined by Specification 4.1.3.2.c, when added to the total number of ACTION a.3, as determined by Specification 4.1.3.2.a and b, does not exceed 7.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.1.3.2 The maximum scram insertion time of the control rods shall be demonstrated through measurement with reactor coolant pressure greater than or equal to 950 psig and, during single control rod scram time tests, the control rod drive pumps isolated from the accumulators:

- a. For all control rods prior to THERMAL POWER exceeding 40% of RATED THERMAL POWER following CORE ALTERATIONS or after a reactor shutdown that is greater than 120 days,
- b. For specifically affected individual control rods* following maintenance on or modification to the control rod or control rod drive system which could affect the scram insertion time of those specific control rods, and
- c. For at least 10% of the control rods, on a rotating basis, at least once per 120 days of POWER OPERATION.

*The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 2 provided this surveillance is completed prior to entry into OPERATIONAL CONDITION 1.

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4.1.3.2 The maximum scram insertion time of the control rods shall be demonstrated and, during single control rod scram time tests, the control rod drive pumps shall be isolated from the associated scram accumulator:

- a. For all control rods with reactor coolant pressure greater than or equal to 950 psig and prior to THERMAL POWER exceeding 40% of RATED THERMAL POWER following CORE ALTERATIONS or after a reactor shutdown that is greater than 120 days,
- b. For each affected control rod after work on the control rod(s) or control rod drive system that could affect scram time:
 1. At any reactor coolant pressure prior to declaring control rod(s) OPERABLE, and
 2. With reactor coolant pressure greater than or equal to 950 psig*; and
- c. For at least 10% of the control rods, on a rotating basis, at least once per 120 days of POWER OPERATION, with reactor pressure greater than or equal to 950 psig.

* The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITIONS 1 and 2 provided this surveillance is completed prior to THERMAL POWER exceeding 40% of RATED THERMAL POWER.

REACTIVITY CONTROL SYSTEMSBASES3/4.1.3 CONTROL RODS

The specification of this section ensure that (1) the minimum SHUTDOWN MARGIN is maintained, (2) the control rod insertion times are consistent with those used in the safety analyses, and (3) limit the potential effects of the rod drop accident. The ACTION statements permit variations from the basic requirements but at the same time impose more restrictive criteria for continued operation. A limitation on inoperable rods is set such that the resultant effect on total rod worth and scram shape will be kept to a minimum. The requirements for the various scram time measurements ensure that any indication of systematic problems with rod drives will be investigated on a timely basis.

Damage within the control rod drive mechanism could be a generic problem, therefore with a control rod immovable because of excessive friction or mechanical interference, operation of the reactor is limited to a time period which is reasonable to determine the cause of the inoperability and at the same time prevent operation with a large number of inoperable control rods.

Control rods that are inoperable for other reasons are permitted to be taken out of service provided that those in the nonfully-inserted position are consistent with the SHUTDOWN MARGIN requirements.

The number of control rods permitted to be inoperable could be more than the eight allowed by the specification, but the occurrence of eight inoperable rods could be indicative of a generic problem and the reactor must be shutdown for investigation and resolution of the problem.

The control rod system is designed to bring the reactor subcritical at a rate fast enough to prevent the MCPR from becoming less than the Safety Limit MCPR during the limiting power transient analyzed in Chapter 15 of the USAR. This analysis shows that the negative reactivity rates resulting from the scram with the average response of all the drives as given in the specifications, provide the required protection and MCPR remains greater than the Safety Limit MCPR. The occurrence of scram times longer than those specified should be viewed as an indication of a systematic problem with the rod drives and therefore the surveillance interval is reduced in order to prevent operation of the reactor for long periods of time with a potentially serious problem.

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B1

The scram discharge volume is required to be OPERABLE so that it will be available when needed to accept discharge water from the control rods during a reactor scram and will isolate the reactor coolant system from the containment when required.

Control rods with inoperable accumulators are declared inoperable and Specification 3.1.3.1 then applies. This prevents a pattern of inoperable accumulators that would result in less reactivity insertion on a scram than has been analyzed even though control rods with inoperable accumulators may still be inserted with normal drive water pressure. Operability of the accumulator ensures that there is a means available to insert the control rods even under the most unfavorable depressurization of the reactor.

INSERT B1:

For control rod drive scram time testing at less than 950 pounds per square inch - gauge (psig), the following scram times to notch position 13 should be used as acceptance criteria:

0 psig - .94 seconds
600 psig - 1.13 seconds
950 psig - 1.40 seconds

Acceptable scram times when testing at pressures between the values given above should be linearly interpolated.

DISCUSSION OF CHANGES

CTS: 3.1.3.2 - CONTROL ROD MAXIMUM SCRAM INSERTION TIMES

TECHNICAL CHANGE - MORE RESTRICTIVE

M.1 The Surveillance Requirement "for specifically affected" CRDs is proposed to have the flexibility (provided by current footnote *) to delay post maintenance testing until "prior to entry into OPERATIONAL CONDITION 1," deleted. This proposed modification is to ensure adequate testing is performed prior to declaring the control rod OPERABLE, and entering MODE 2. In support of this proposed additional restriction, along with deleting the existing flexibility, an additional surveillance is proposed (SR 3.1.4.3). This new surveillance will require a scram time test, which may be done at any reactor pressure, prior to declaring the control rod OPERABLE (and thus, enabling its withdrawal during a startup).

To allow testing at less than normal operating pressures, additional scram time limits will be contained in plant procedures. These limits are reasonable for application as a test of OPERABILITY at these conditions. Since this test, and therefore any limits, are not applied in the existing Specification, any value could be construed as being more restrictive. Furthermore, the existing scram time test requirement (performed at normal operating reactor pressure) is still required to be performed prior to exceeding 40% power. It is noted that if the control rod remained inoperable (which would require it to be inserted and disarmed) until normal operating pressures, a single scram time test would satisfy both Surveillance Requirements.

TECHNICAL CHANGE - LESS RESTRICTIVE

"Generic"

LA.1 A "representative sample" of control rods is required to be tested each 120 days of power operation (existing Surveillance 4.1.3.2.c). Additionally, a limit on the number of "slow" control rods in this sample is imposed (existing ACTION c.1). The existing Surveillance and ACTION specifically delineate the scope of this sample and the statistical limit for "slow" control rods in the sample. The proposed change adopts the BWR Standard Technical Specification, NUREG-1434, position that these details be located within plant procedures and summarized in the Bases for the surveillance.

LA.2 This comment number is not used for this station.

GENERIC NO SIGNIFICANT HAZARDS CONSIDERATIONS
FOR THE CURRENT TECHNICAL SPECIFICATIONS

MORE RESTRICTIVE CHANGES

("Mx" Labeled Comments/Discussions)

PNPP has evaluated this proposed Technical Specification change and has determined that it involves no significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The following evaluation is provided for the three categories of the significant hazards consideration standards:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change provides more stringent requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements continue to ensure process variables, structures, systems and components are maintained consistent with the safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with assumptions made in the safety analysis and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The imposition of more restrictive requirements either has no impact on or increases the margin of plant safety. As provided in the discussion of the change, each change in this category is by definition providing additional restrictions to enhance plant safety. The change maintains requirements within safety analyses and licensing bases. Therefore, this change does not involve a significant reduction in a margin of safety.

GENERIC NO SIGNIFICANT HAZARDS CONSIDERATIONS
FOR THE CURRENT TECHNICAL SPECIFICATIONS

ENVIRONMENTAL CONSIDERATION

This proposed Technical Specification change has been evaluated against the criteria for and identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. It has been determined that the proposed change meets the criteria for categorical exclusion as provided for under 10 CFR 51.22(c)(9). The following is a discussion of how the proposed Technical Specification change meets the criteria for categorical exclusion.

10 CFR 51.22(c)(9): Although the proposed change involves changes to requirements with respect to inspection or surveillance requirements:

- (i) the proposed change involves no Significant Hazards Consideration (refer to the Significant Hazards Consideration section of this Technical Specification Change Request),
- (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite since the proposed change does not affect the generation of any radioactive effluents nor does it affect any of the permitted release paths, and
- (iii) there is no significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Based on the aforementioned and pursuant to 10 CFR 51.22(b), no environmental assessment or environmental impact statement need be prepared in connection with issuance of an amendment to the Technical Specifications incorporating the changes proposed in this request.