

REACTOR COOLANT SYSTEM

JET PUMPS

LIMITING CONDITION FOR OPERATION

3.4.1.2 All jet pumps shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one or more jet pumps inoperable, be in at least HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

INSERT 1

4.4.1.2.1 Each of the above required jet pumps shall be demonstrated OPERABLE prior to THERMAL POWER exceeding 25% of RATED THERMAL POWER and at least once per 24 hours by determining recirculation loop flow, total core flow and diffuser-to-lower plenum differential pressure for each jet pump and verifying that no two of the following conditions occur when both recirculation loops are operating.

- a. The indicated recirculation loop flow differs by more than 10% from the established flow control valve position-loop flow characteristics for two recirculation loop operation.
- b. The indicated total core flow differs by more than 10% from the established total core flow value derived from two recirculation loop flow measurements.
- c. The indicated diffuser-to-lower plenum differential pressure of any individual jet pump differs from established two recirculation loop operation patterns by more than 10% (20%).

4.4.1.2.2 During single recirculation loop operation, each of the above required jet pumps shall be demonstrated OPERABLE at least once per 24 hours by verifying that no two of the following conditions occur:

- a. The indicated recirculation loop flow in the operating loop differs by more than 10% from the established single recirculation flow control valve position-loop flow characteristics.
- b. The indicated total core flow differs by more than 10% from the established total core flow value derived from single recirculation loop flow measurements.
- c. The indicated ^{diffuser} difference to-lower plenum differential pressure of any individual jet pump differs from established single recirculation loop patterns by more than 10% (20%).

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**REQUEST FOR AMENDMENT TO TECH SPEC SURVEILLANCES 4.4.1.2.1 AND
4.4.1.2.2 FOR JET PUMP OPERABILITY - SUPPLEMENTAL INFORMATION**

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INSERT 1

-----NOTES-----

1. Not required to be performed until 4 hours after associated recirculation loop is in operation.
 2. Not required to be performed until 24 hours after > 25% RATED THERMAL POWER.
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ELECTRICAL POWER SYSTEMS

3/4.8.3 ONSITE POWER DISTRIBUTION SYSTEMS

DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following power distribution system divisions shall be energized with tie breakers open between redundant buses within the unit:

a. A.C. Power Distribution

1. Division 1, consisting of:
 - a) 4160-volt bus SM-7.
 - b) 480-volt bus SL-71 and SL-73.
 - c) 480-volt MCC's 7A, 7A-A, 7B, 7B-A, 7B-B, 7F.
 - d) 480-volt Power Panel PP-7A-B.
 - e) 120/208-volt 3Ø Power Panels PP-7A-G, PP-7A-A-A.
 - f) 120/240-volt 1Ø Power Panels PP-7A-A, PP-7A-F, PP-7A-E, and PP-7A.
2. Division 2, consisting of:
 - a) 4160-volt bus SM-8.
 - b) 480-volt bus SL-81 and SL-83.
 - c) 480-volt MCC's 8A, 8A-A, 8B, 8B-A, 8B-B, 8F.
 - d) 480-volt Power Panel PP-8A-B.
 - e) 120/208-volt 3Ø Power Panels PP-8A-G, PP-8A-A-A.
 - f) 120/240-volt 1Ø Power Panels PP-8A-A, PP-8A-F, PP-8A-E, and PP-8A.
3. Division 3, consisting of:
 - a) 4160-volt bus SM-4.
 - b) 480-volt 3Ø Engine & Gen. Aux. loads Power Panel.
 - c) 120/240-volt 1Ø Power Panel PP-4A.
 - d) 480-volt MCC 4A.

b. D.C. Power Distribution

1. Division 1, consisting of:
 - a) 125-volt D.C. Main Distribution Panel S1-1.
 - b) 125-volt VDC Motor Control Center MC-S1-1D.
 - c) 125-VDC Instr. and Control NSSS Bd. Distr. Panel DP-S1-1A.
 - d) 125-VDC ~~Critical Swgs. &~~ Remote Shutdn. Distr. Pnl. DP-S1-1D.
 - e) 125-VDC Diesel Gen. 1 Dist. Pnl. DP-S1-1E.
 - f) 250-VDC Main Distribution Panel S2-1.
 - g) 250-VDC Motor Control Center MC-S2-1A, Part A and Part B.
 - h) ~~±24-VDC Power Panel DP-S0-A.~~
 - i) ~~125-VDC Critical Swgr. Distr. Pnl. DP-S1-1F.~~
2. Division 2, consisting of:
 - a) 125-volt D.C. Main Distribution Panel S1-2.
 - b) 125-volt VDC Motor Control Center MC-S1-2D.
 - c) 125-VDC Instr. and Control NSSS Distr. Panel DP-S1-2A.
 - d) 125-VDC Critical Swgs. & Remote Shutdn. Distr. Pnl. DP-S1-2D.
 - e) 125-VDC Diesel Gen. 2 Dist. Pnl. DP-S1-2E.
 - f) ±24-VDC Power Panel DP-S0-B.
3. Division 3, consisting of 125-volt D.C. HPCS distribution panel.

INSERT →



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NO SIGNIFICANT HAZARDS CONSIDERATION

The Supply System has evaluated the 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 10CFR50.92. The following evaluation is provided for the three categories of significant hazards consideration standards:

DESCRIPTION

- i. Change in permissible diffuser-to-lower plenum differential pressure of any individual jet pump from established two recirculation loop operation patterns; from 10% to 20%.

NO SIGNIFICANT HAZARDS CONSIDERATION

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated:

- i. The proposed change increases the variance allowed in a surveillance acceptance criteria consistent with the recommendations of General Electric SIL-330 and NUREG/CR-3052. The jet pumps are not assumed to be an initiator of any analyzed event and are therefore not included in safety analysis assumptions described in FSAR Chapters 6.2.1 (Recirculation Line Rupture, Short Term Accident Response), 6.3 (Acceptance for ECCS Performance, Criterion 5), and 15.6.5, which defers to Sections 6.2 and 6.3 for analysis of piping breaks inside containment.

The jet pumps must, however, maintain structural integrity to ensure that any recirculation line break would still allow core flooding to 2/3 of the core height, i.e., the level of the jet pump inlet as described in FSAR Section 1.2.2. (Reactor Recirculation System). Adopting the recommendations, which ensure jet pump operability, will not affect the consequences of an accident since the recommended acceptance criteria still provide adequate assurance of jet pump operability. This change will not alter assumptions relative to the mitigation of an accident or transient event.

Therefore, the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated:

- i. Adopting the recommended acceptance criteria of 20% will not create the possibility of a new or different kind of accident. No new or different type of equipment will be installed. Therefore this change will not physically alter the plant. Nor is the surveillance method changed. Incorporation of the 20% acceptance criteria will conform to the General Electric recommendations provided to ensure operability and will therefore

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not adversely impact jet pump operability. Operation is consistent with the current safety analysis assumptions described in FSAR Chapters 6 and 15. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3) Involve a significant reduction in a margin of safety:
 - i. Modification of acceptance criteria from 10% to 20% is considered a relaxation from existing requirements, however, the margin of safety is not significantly reduced because the proposed changes to the acceptance criteria will continue to verify jet pump operability. The change reflects the recommendations in SIL-330 and NUREG/CR-3052. The safety analysis assumptions are unchanged, therefore no safety margin is impacted. In addition, this change provides the benefit of potentially avoiding an unnecessary shutdown transient when the jet pumps are still capable of performing their safety function and well within accepted criteria for confirming operability.

DESCRIPTION

- ii. & Requested change to surveillance requirements regarding 4 hour grace period and
- iii. requested change to LCO regarding 4.0.4 applicability will be addressed together.

NO SIGNIFICANT HAZARDS CONSIDERATION

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated:
 - ii. & The proposed changes do not increase the probability or consequences of an accident.
 - iii. The jet pumps are not assumed to be an initiator of an analyzed event.

The first note allows time after the loop is placed in service to establish appropriate conditions for test performance. The surveillance can only be performed during jet pump operation, therefore, four hours is allowed to perform the surveillance after the loop is placed in service. This allows time to establish conditions appropriate for data collection and evaluation.

The second note states the surveillance is not required to be performed until 24 hours after greater than 25% RTP. The surveillance does not have to be performed at RTP less than 25% because during low flow conditions, jet pump noise approaches the threshold response of the associated flow instrumentation and precludes the collection of meaningful data. The 24 hours is an acceptable time to establish conditions appropriate to perform this surveillance. The proposed change provides confirmation of jet pump operability within a reasonable time after the jet pumps are required.

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The four hour and 24 hour allowances are justified since, as described in Generic Letter 87-09, it is overly conservative to assume that systems or components are inoperable when a surveillance has not been performed because the vast majority of surveillances demonstrate systems or components are operable. Accordingly, surveillance modification will not increase the probability or consequences of an accident.

In addition, there is no importance placed on the order of the notes; the surveillance is only required to be performed when all the conditions specified in both notes are met.

Performance of the surveillance under the proposed conditions will provide a greater level of confidence that the jet pumps are operable. As a result, the consequences of an accident are not affected by this change, which simply designates time requirements for the verification of operability. This change will not alter assumptions relative to the mitigation of an accident or transient event.

Therefore, the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated:

- ii. & These changes do not create the possibility of a new or different kind of accident from
- iii. any accident previously evaluated. The surveillance requirement is being performed to confirm jet pump operability at the earliest opportunity after the jet pumps are required. No new or different type of equipment will be installed, therefore this change will not physically alter the plant. The changes in methods governing normal plant operation and testing are consistent with the current safety analysis assumptions described in FSAR Chapters 6 and 15.

Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3) Involve a significant reduction in a margin of safety:

- ii. & The margin of safety is not significantly reduced because the changes to the surveillance
- iii. frequency will continue to provide the necessary assurance of jet pump operability. These changes effectively extend the initial performance of the surveillance requirement by 4 or 24 hours and provide the benefit of allowing the surveillances to be postponed until plant conditions exist which permit acquisition of meaningful data. The safety analysis assumption of operable jet pumps will be maintained, thus no safety margin is impacted.

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DESCRIPTION

- iv. & Technical Specification surveillance 4.4.1.2.2.c discussion for diffuser and editorial
- v. change to Technical Specification 3/4.8.3, "Onsite Power Distribution Systems," correcting Technical Specification surveillance 3.8.3.1.b.1 to provide nomenclature clarification for the 125-VDC critical switch gear distribution and remote shutdown distribution panels will be addressed together.

NO SIGNIFICANT HAZARDS CONSIDERATION

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated:
 - iv. Changing the word "difference" to "diffuser" is a purely administrative change which corrects an error in Technical Specification surveillance 4.4.1.2.2.c. This does not have an impact on FSAR accident analysis.
 - v. The proposed change corrects 3.8.3.1.b.1 to provide nomenclature clarification. This is a purely administrative change which corrects an error in the Technical Specification. There is no impact on FSAR accident analysis.

Therefore, the proposed changes will not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated:
 - iv. & The proposed editorial changes are purely administrative changes which correct errors
 - v. in the Technical Specification. No new or different type of equipment will be installed, therefore these changes will not physically alter the plant. The safety analysis assumptions are unchanged.

Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3) Involve a significant reduction in a margin of safety:
 - iv. & The proposed editorial changes do not modify safety analysis assumptions, therefore no
 - v. safety margin is impacted.

Therefore, these changes do not involve a significant reduction in a margin of safety.

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In preparing this request the Technical Specification Bases were reviewed for impact. No changes are necessary to address the proposed changes to the jet pump surveillance requirements or the editorial corrections which are being made.

Based on this review, the Supply System has determined that the three standards of 50.92(c) are satisfied. Accordingly, the Supply System has determined that this amendment request involves no significant hazards consideration.

ENVIRONMENTAL CONSIDERATIONS

As discussed in the No Significant Hazards Consideration, the proposed changes to Technical Specifications surveillances 4.4.1.2.1 and 4.4.1.2.2 "Jet Pumps," and editorial changes to surveillance 4.4.1.2.2.c discussion for diffuser and Technical Specification 3/4.8.3, "Onsite Power Distribution Systems" component description will not involve adverse consequences to the environment. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(C)(9) and, therefore, per 10 CFR 51.22(b), an environmental assessment of this change is not required.