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SUBJECT: Application for amend to License NPF-21, changing jet pump
Surveillance 4.4.1.2.1 to require operability
demonstration within 12 h of exceeding 25% rated thermal
power.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

January 14, 1992
G02-92-011

Docket No. 50-397

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION SURVEILLANCES
4.4.1.2.1 & .2, JET PUMP OPERABILITY AND CORRECTION
OF TECHNICAL SPECIFICATION DISCREPANCIES

Reference: General Electric Service Information Letter No. 330, "Jet Pump Beam Cracks", dated June 9, 1980

In accordance with the Code of Federal Regulations, Title 10 Parts 50.90 and 2.101, the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications. Specifically, this proposal requests that jet pump surveillance 4.4.1.2.1 be changed to require an operability demonstration within 12 hours of exceeding 25% rated thermal power (RTP) and at least once per 24 hours thereafter (see attached). Presently the operability demonstration is required prior to exceeding 25% RTP. Due to the masking of the flow instrumentation signal by jet pump noise at low power levels the collection of repeatable and meaningful data is frequently precluded. Also low power/low flow conditions closely approach the threshold response of the flow instrumentation. As a consequence test results are sometimes in question and an inordinate amount of resource is lost confirming operability.

Additionally, this request proposes that the acceptable range of variability for jet pump diffuser-to-lower plenum differential pressure be changed from 10% to 20%. Also this request identifies two discrepancies unrelated to this change, one in the electrical distribution description and the other in the table of contents, that require correction.

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REQUEST FOR AMEND. TO TS SURVEILLANCE
4.4.1.2.1 & .2, JET PUMP OPERABILITY

Jet pumps are part of the reactor coolant recirculation system and are designed to provide forced circulation through the core to remove heat. Because the jet pump suction elevation is at two-thirds core height, the vessel can be reflooded and coolant levels maintained to at least two-thirds core height even with a complete break of a recirculation loop pipe located below the jet pump suction elevation. Accordingly, jet pump operability is an explicit assumption in the design basis loss of coolant accident analysis (LOCA) of the WNP-2 Safety Analysis Report. If a jet pump becomes displaced the resulting core reflood elevation would be lower and WNP-2 would be unable to meet the assumptions of the LOCA analysis. As a result, the intent of the subject surveillance is to detect significant degradation in jet pump performance that could be indicative of jet pump failure. Jet pump plugging is also of concern because it would add flow resistance and affect flow coastdown and core conditions when recirculation flow was stopped.

The surveillance indicates significant degradation if more than one of three criteria (total core flow compared to expected, recirculation loop flow versus flow control valve position and individual jet pump diffuser-to-lower plenum differential pressures) deviate from established patterns or relationships. However, due to the low flow conditions and the "threshold" of operation characteristics of the flow instrumentation the repeatability and validity of the data is at times in question. For these reasons the Supply System is requesting that the surveillance be required within 12 hours of exceeding 25% RTP and at least once per 24 hours thereafter. At these power/flow conditions the flow instrumentation provides repeatable data and is within a valid operating range. As presently required (at less than 25% RTP) it could be possible to obtain incorrect data satisfying the jet pump operability surveillance and proceed to higher power when a deficiency actually exists. This change then provides a higher degree of confidence that the jet pumps are operable than that presently obtained. The interval of time between performing the surveillance at less than 25% to performing it within 12 hours of exceeding 25% is not significant as in most cases this interval will be less than or very near the 24 hours presently allowed between operability checks at higher power levels after the initial check. The ability to obtain more reliable data from the extended time period is acceptable given the small probability of an event occurring when the operability of the jet pumps has not been demonstrated. This change is similar to a recently approved amendment to the Fermi, Detroit Edison Technical Specifications.

The change in acceptability range from 10% to 20% for diffuser-to-lower plenum differential pressure accounts for the relationship between flow and differential pressure. The referenced General Electric Service Information Letter (SIL) recommended that 10% be used for those plants measuring flow over the diffuser-to-lower plenum area and 20% for those plants measuring differential pressure. WNP-2 measures pressure and, by an oversight, 10% was used for WNP-2 when 20% should have been the recognized acceptability range. Due to the relationship between flow and differential pressure this change has no impact on the intent of the Technical Specification. Using an acceptability range of 20% for differential pressure measurements provides the same confidence level as using 10% for flow measurements.

REQUEST FOR AMEND. TO TS SURVEILLANCE
4.4.1.2.1 & .2, JET PUMP OPERABILITY

It should be noted that Technical Specification page 3/4 4-4, affected by this request, is also affected by another change request submitted on February 25, 1991, Supply System letter G02-91-039 (TAC No. 79898). This submittal requests that the phrase "at the same flow control valve position," in Surveillance Requirement 4.4.1.2.1 be deleted. As discussed therein, with deletion of the phrase, the intent of the specification is met and a potential for noncompliance is avoided. There is no conflict in these requests and both can be approved and implemented independently.

The Supply System has evaluated this amendment request per 10 CFR 50.92 and determined that it does not represent a significant hazards consideration because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because the change does not result in any hardware or operating procedure changes. The jet pumps are not assumed to be an initiator of any analyzed event. Their role is to maintain structural integrity to allow reflooding of the core following a design basis LOCA. The change does not delete the surveillance of the jet pumps but postpones it until adequate conditions are achieved for performing a meaningful test. The time period is acceptably short taking into consideration the small probability of a loss of jet pump integrity when the OPERABILITY of the jet pumps has not been demonstrated. It also acknowledges that the most probable result of the surveillance performance is the verification of OPERABILITY. The consequences of any analyzed events are unaffected because the change does not alter any system or component design assumptions or operation. Therefore, no significant increase in the probability or consequences of an accident previously evaluated will be involved.

The change in acceptability range from 10% to 20% for differential pressure measurements does not involve a significant increase in the probability or consequences of an accident previously evaluated because the confidence level remains the same as that obtained for flow measurements using 10%. The reference Service Information Letter (SIL) noted that either measurements could be used but due to the relationship between pressure and flow in a fluid system a 20% acceptability range for differential pressure provided the same confidence level as 10% for flow measurements. By oversight the 10% was applied to WNP-2. This change returns the surveillance requirement to that originally intended. Hence, there is no 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 because the proposed change introduces no new modes of plant operation nor does it require physical modification to the plant. Hence, no new or different kind of accident is credible.

The change in acceptability range (10% to 20%) does not create the possibility of a new or different kind of accident from any previously evaluated because it does not change modes of plant operation or require physical modifications. No new or different kind of accident is credible.

- 3) Involve a significant reduction in a margin of safety because the deletion of the requirement to perform jet pump surveillances below 25% RTP does not involve a significant reduction in a margin of safety. The time allowed to operate prior to performing the jet pump surveillance is acceptably short based on the small probability of a loss of jet pump integrity occurring when the jet pumps may not be operable. The requested extension allows sufficient time to achieve a power level and flow where meaningful jet pump testing can be performed. Additionally, inservice inspections performed after refueling prior to startup serve to ensure jet pump structural integrity/operability is maintained. Therefore, this change does not represent a significant reduction in a margin of safety.

The change in acceptability range from 10% to 20% does not involve a significant reduction in a margin of safety because the same confidence level intended by the SIL is preserved. A 20% acceptability range for differential pressure provides the same level of confidence as a 10% acceptability range applied to the flow measurement. Hence, the margin of safety intended by the SIL remains unaffected.

As discussed above, the Supply System considers that this change does not involve a significant hazards consideration, nor is there a potential for significant change in the types or significant increase in the amount of any effluents that may be released offsite, nor does it involve a 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) and therefore, per 10 CFR 51.22(b), an environmental assessment of the change is not required.

In addition to these changes the Supply System has identified two unrelated discrepancies, an electrical distribution description clarification and a table of contents change, that require correction (see attached).

The requested corrections to 3.8.3.1.b.1.d) & i) is the same as that approved in Amendment 4 to the WNP-2 Technical Specifications (entrys 3.8.3.2.b.1.d) & i)). Amendment 4. recognized that DP-S1-1D is the Division 1 remote shutdown distribution panel and not a critical switchgear and remote shutdown distribution panel. Amendment 4 correctly added DP-S1-1F as the 125-VDC critical switchgear distribution panel and changed the descriptor for DP-S1-1D. Through oversight this same correction was not made to 3.8.3.1.b.1. It should be noted that plant procedures verify the operability of both distribution panels and direct the operator to the appropriate Technical Specification Action statements if operability is not confirmed.

The second correction identifies the correct page numbering for sections 3/4.7.8 and 3/4.7.9.

Both of these changes are administrative and have no technical impact on the plant or plant operations. They have been included in this request because the change to jet pump operability represents an opportune time to also administratively change these two portions of the Technical Specifications.

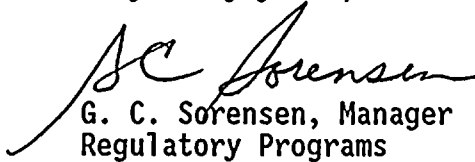
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REQUEST FOR AMEND. TO TS SURVEILLANCE

4.4.1.2.1 & 2, JET PUMP OPERABILITY

This Technical Specification change request has been reviewed and approved by the WNP-2 Plant Operations Committee (POC) and the Supply System Corporate Nuclear Safety Review Board (CNSRB). In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

Very truly yours,



G. C. Sorensen, Manager
Regulatory Programs

PLP/bk
Attachments

cc: RG Waldo - EFSEC
JB Martin - NRC RV
NS Reynolds - Winston & Strawn
PL Eng - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A

STATE OF WASHINGTON

COUNTY OF BENTON

) Subject:

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Request for Amendment to Tech Spec
Surveillances - Jet Pump Operability
and Correction of Tech Spec Discrepancies

I, G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief the statements made in it are true.

DATE: 13 January, 1992

G. C. Sorensen
G. C. Sorensen, Manager
Regulatory Programs

On this date personally appeared before me G. C. SORENSEN, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 13th day of January 1992.

Lilani Ballayher
Notary Public in and for the
STATE OF WASHINGTON

My Commission Expires April 29, 1995

