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Washington Public Power Supply System

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August 18, 1986
G02-86-0762

Docket No. 50-397

Director of Nuclear Reactor Regulation
Attn: E. G. Adensam, Project Director
BWR Project Directorate No. 3
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

Subject: NUCLEAR PLANT NO. 2
OPERATING LICENSE NPF-21, REQUEST FOR AMENDMENT
TO TECHNICAL SPECIFICATION 3/4.3.8, TURBINE
OVERSPEED PROTECTION SYSTEM

Reference: Westinghouse report entitled "Safety Evaluation
For the Impact of Reduced Turbine Valve Testing
on the Operation of WNP-2", dated July 2, 1985

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, the Supply System hereby requests an amendment to the WNP-2 Technical Specifications (T/S). Specifically, the Supply System is requesting that the turbine valve test interval as specified in 3/4.3.8 be revised from weekly to monthly.

The seven day test schedule presently contained in the T/S was based on the recommendation of the turbine vendor (Westinghouse) to ensure reliability of operation. The Supply System has been informed by Westinghouse of previously performed evaluations which are applicable to plants with BB296 turbines (the same as WNP-2) which provide a justification for reducing the frequency of turbine valve testing. The recommended turbine valve test interval has been revised from weekly to monthly for the type of turbine system installed at WNP-2. The Westinghouse evaluation has been previously applied successfully to seven other nuclear units including Farley, McGuire, Crystal River and St. Lucie (all BB296 turbines) to extend their turbine valve testing intervals from weekly to monthly. Westinghouse has performed a WNP-2 plant-specific Safety Evaluation, a copy of which is attached.

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This recommendation (revise weekly to monthly) is based on the high reliability of the turbine overspeed and trip system which has been demonstrated by plant experience, and which is supported by the above-mentioned evaluation(s). It has been demonstrated that there is no significant difference in the valve failure rate between valves tested weekly and those tested monthly.

An additional result of these studies was to demonstrate that there is an increase in the total yearly hypothetical turbine missile generation probability when the test interval is changed from weekly to monthly (7.6×10^{-6} to 9×10^{-6}). However, this increase is small and considered acceptable given that it is still less than the historically accepted NRC guidelines of 1×10^{-4} per year, as well as the more recent proposed requirement of 1×10^{-5} per year. Based on experience with nuclear turbine steam valves, testing intervals are no longer a major contributor in determining hypothetical turbine missiles.

The Supply System has reviewed this request per 10CFR50.59 and 50.92 and has determined that no unreviewed safety questions or significant hazards will result relative to the proposed change because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because the probability for occurrence remains within acceptable limits and it does not modify the configuration of the plant.
- 2) Create the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report because this does not change the existing design.
- 3) Involve a significant reduction in the margin of safety for any technical specification as demonstrated by the results of the Westinghouse analyses for WNP-2.

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870) of amendments that are considered not likely to involve significant hazards consideration. In this case, the proposed change is similar to example (iv), in that it relates to a relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet demonstrated. This assumes that the operating restriction and the criteria to be applied to a request for relief have been established in a prior review and that it is justified in a satisfactory way that the criteria have been met.

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The turbine valve test interval stipulated in the WNP-2 technical specifications was derived from the historic Westinghouse recommended test interval. This test interval was developed for fossil units and carried over to early nuclear units due to similarity in design. The importance of frequent valve testing to maintenance of the integrity of systems necessary for the safe operation of nuclear plants was not clearly established. Since implementation of the historic recommended test interval, improved valve design and secondary chemistry techniques in existence at WNP-2, and an increase in the knowledge concerning turbine valve reliability eliminated the original reasons for frequent valve testing. For these reasons an evaluation of the importance of turbine valve testing interval was undertaken and it was shown that with less frequent testing published acceptance criteria was still met.

This change has been reviewed and approved by the WNP-2 Plant Operations Committee and the Supply System Corporate Nuclear Safety Review Board.

In accordance with 10CFR170.21, an application fee of One hundred fifty dollars (\$150.00) accompanies this request. In accordance with 10CFR 50.91, the State of Washington has been provided a copy of this letter.

If you have any questions, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,

for R B Sorensen
for G. C. Sorensen, Manager
Regulatory Programs

HLA/bk

cc: JO Bradfute - NRC
JB Martin - NRC RV
C Eschels - EFSEC
E Revell - BPA
NS Reynolds - BLCP&R
NRC Site Inspector

