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AUTH.NAME AUTHOR AFFILIATION
BEMIS,P.R. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
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SUBJECT: Application for amend to license NPF-21,adding new min reactor vessel pressure versus reactor vessel metal temp (P/T) curves,applicable up to 12 Effective Full Power Years. Changes support vessel leak testing.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM
P.O. Box 968 • Richland, Washington 99352-0968

July 16, 1997
GO2-97-144

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21 REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS TO SUPPORT VESSEL LEAK TESTING**

References:

1) Letter GO2-93-180, dated July 9, 1993, J. V. Parrish (SS) to NRC, "Request for Amendment to the Facility Operating License and Technical Specifications to Increase Licensed Power Level from 3323 MWt to 3486 MWt with Extended Load Line and a Change in Safety Relief Valve Set Point Tolerance"

2) Letter GO2-94-042, dated February 17, 1994, J. V. Parrish (SS) to NRC, "WNP-2 Operating License NPF-21 Request to Amend Technical Specifications to Support Hydrostatic Testing"

3) Letter GI2-95-099, dated May 2, 1995, J.W. Clifford (NRC) to J.V. Parrish (SS) "Issuance of Amendment for Washington Public Power Supply System Nuclear Project No. 2 (TAC Nos. M87076 and M88625)"

4) Letter GI2-94-148, dated May 27, 1994, L.M. Padovan (NRC) to J.V. Parrish (SS) "Issuance of Amendment for Washington Public Power Supply System Nuclear Project No. 2 (TAC No. M88839)"

<u>Request for Technical Specification Amendment</u>

The Supply System hereby requests an amendment to the WNP-2 Technical Specifications in accordance with Title 10, Parts 50.90 and 2.101 of the Code of Federal Regulations.

A001

Specifically, the Supply System requests the addition of new minimum reactor vessel pressure versus reactor vessel metal temperature (P/T) curves, applicable up to 12 Effective Full Power Years (EFPY). The requested Technical Specification changes are necessary to support leak and hydrotesting in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI.

Leak testing is a critical path item during our annual refueling outages. It is anticipated that the change described in this request can reduce the amount of time spent performing leak testing and thereby enhance personnel safety and outage schedule effectiveness. We request, therefore, that the requested amendment be issued in time to support the Spring 1998 refueling outage (R-13). Issuance of the requested amendment on or before May 1, 1998, will support our schedule. Details of the requested change are discussed below.

Previous Requests for Pressure/Temperature Curve Modification

Reference 1 proposed new P/T curves under power uprate conditions for 32 EFPY. The basis for the 32 EFPY curves is found in Reference 1 and is not repeated herein. Reference 2 proposed hydrostatic testing utilizing an 8 EFPY curve that was developed using substantially the same methodology as the 32 EFPY curve. The difference in methodologies was identified on page 4 of Reference 2. The basis for hydrostatic testing is found in Reference 2 and is not repeated herein. The Reference 1 and 2 requests were approved by the NRC in References 3 and 4.

The 12 EFPY curve in this submittal was developed using the same methodology as followed in Reference 2 utilizing a 12 EFPY temperature shift of 83.9° F.

Purpose and Use of Pressure/Temperature Curve

Pressure/Temperature Curves based on 12 EFPY of neutron fluence at power uprate conditions are used only for leak and hydrostatic testing conditions during non-nuclear heatup of the Reactor Pressure Vessel. It is possible to conduct leak and hydrostatic testing using the existing 32 EFPY curve. However, the testing conducted under the proposed 12 EFPY curves will result in a greater margin for worker industrial safety with no adverse impact to the public health and safety.

Enhanced Worker Industrial Safety Margin

Due to the lower total fluence level, the proposed 12 EFPY curves support use of a lower minimum reactor metal temperature at the required test pressure. The required minimum temperature for testing under the 12 EFPY curves is 185 degrees Fahrenheit. This is approximately 41 degrees Fahrenheit lower than that which would be required by testing using the 32 EFPY curve.

Significantly, then, the 185 degree Fahrenheit reactor metal temperature corresponds to approximately a 200-210 degree Fahrenheit average Reactor Coolant System temperature (depending on the heat-up rate achieved and the time spent at the leak test temperature and pressure). The lower temperature of the 12 EFPY curves, therefore, provides a greater margin of industrial safety than would be provided using the 32 EFPY curve. The enhanced industrial safety margin is attributed to lower reactor water temperatures, higher remaining heat sink capacity, and avoidance of steam flashing. The margin of nuclear safety is actually increased by use of the proposed curves due to the lower allowed test temperature which increases the available heat sink for the RCS. Based on the foregoing, the margin of safety for the plant will not be reduced as a result of implementing the new 12 EFPY P/T curves.

<u>No Significant Hazards Consideration Determination</u>

The Supply System has evaluated the proposed change per the requirements of 10 CFR 50.92. The proposed addition of the 12 EFPY P/T curves for testing and non-nuclear heating 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.

   The proposed 12 EFPY curve was developed using the same methodology as that used in the current 32 EFPY curve and the 8 EFPY curve. This methodology is consistent with the guidance provided in Regulatory Guide 1.99, Revision 2.

   Assumptions and parameters were the same as those used in the 8 EFPY curve calculation. However, fluence values used in the calculation were those for 12 EFPY.

   Use of the 12 EFPY curves on or before attainment of 12 EFPY of operation is equivalent to the previously approved use of the 32 EFPY curves on or before attainment of 32 EFPY of operation.

   Therefore, the proposed change does 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.

   The proposed change introduces no credible mechanism for unacceptable radiation release.

   The proposed change does not require physical modification to the plant.

   The 12 EFPY curves are consistent with the previously approved 32 and 8 EFPY curves.

Inservice hydrostatic or leak testing is not assumed to be an initiator of analyzed events. Since approval of the proposed amendment will ensure adequate protection of the reactor pressure vessel, it will not create the possibility of a new or different kind of accident from any previously evaluated.

3) Involve a significant reduction in a margin of safety.

The accident analyses for the plant as described in the FSAR are not affected by this proposed change.

The 12 EFPY curves were developed using the same methodology as the 32 and 8 EFPY curves and thus involve no reduction in the margin of safety as previously evaluated.

The margin of safety, relative to the available heat sink in the Reactor Coolant System, is actually increased by use of the proposed curves due to the lower allowed test temperature.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Assessment Categorical Exclusion

The proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). The proposed change does not involve a significant hazards consideration, have a potential for a change in the types, or increase in the amount, of any effluents that may be released off-site; or involve an increase in individual or cumulative occupational radiation exposure. Therefore, per the requirements of 10 CFR 51.22(b), an environmental assessment of these changes is not required.

Internal and CNSRB Review

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

State Notification

In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

Markup of Proposed Change

Attachment 1 provides copies of the impacted portion of the existing Technical Specifications. A clean version of the change as proposed is provided as Attachment 2. In order to be consistent with the Improved Technical Specifications the new 12 EFPY curves require that the figures in LCO 3.4.11 be renumbered. We have also included proposed changes to the Bases as Attachment 3. These changes are for your information only and will be made by the Supply System upon receipt of the approved amendment. We request thirty days to implement the amendment upon notification of its approval.

Should you have any questions or desire additional information regarding this matter, please call me or D. A. Swank at (509) 377-4563.

Respectfully,

P. R. Bemis (Mail Drop PE23)
Vice President, Nuclear Operations

Attachments

cc: EW Mershoff - NRC RIV
KE Perkins, Jr. - NRC RIV, WCFO
TG Colburn - NRR
CR Wallis - EFSEC
NRC Sr. Resident Inspector - 927N
DL Williams - BPA/399
PD Robinson - Winston & Strawn

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Request for Amendment to TS to Support Vessel Leak Testing

I, P. R. BEMIS, being duly sworn, subscribe to and say that I am the Vice President, Nuclear Operations for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have the 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 July 16, 1997

P. R. Bemis
Vice President, Nuclear Operations

On this date personally appeared before me P. R. BEMIS, 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 16 day of July 1997

SHIRLEY K. BLEK NOTARY PUBLIC STATE OF WASHINGTON COMM. EXPIRES 12-1-97

Shirley K. Blek
Notary Public in and for the
STATE OF WASHINGTON

Residing at Richland, WA.

My Commission Expires 12/97


STATE OF WASHINGTON
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15-1-91

ATTACHMENT 1

Current Technical Specification Pages with Proposed Changes