ENERGY NORTHWEST

P.O. Box 968 ■ Richland, Washington 99352-0968

May 16, 2000
GO2-00-095

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21**
RELIEF REQUEST RP08 FROM ASME/ANSI
OMa-1998 Part 6 CODE REQUIREMENT

Section 50.55a of Title 10 of the Code of Federal Regulations requires that Inservice Testing (IST) of American Society of Mechanical Engineers (ASME) Code class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code. Pursuant to Section 50.55a(a)(3)(ii) of Title 10 of the Code of Federal Regulations, Energy Northwest hereby requests specific relief from the Code requirements as described in Attachment 1. The proposed relief request pages for the WNP-2 IST program plan are included for your information. Approval of this relief from testing is requested by January 15, 2001.

Energy Northwest has followed the guidance given in Generic Letter 91-18 for this non-conforming condition. An operability assessment has determined that the ASME Code noncompliance has not resulted in a failure to meet a Technical Specification Limiting Condition for Operation nor has it affected the ability of the Reactor Core Isolation Cooling system to perform its safety function.

Should you have any questions or require additional information pertaining to this request, please contact PJ Inserra or me at (509) 377-4147.

Respectfully,

AE Mouncer
Acting Vice President, Operations Support/PIO
Mail Drop PE08

Attachments

cc: EW Merschoff - NRC-RIV
JS Cushing - NRC-NRR
TC Poindexter - Winston & Strawn
NRC Sr. Resident Inspector - 927N
DL Williams - BPA/1399

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Background

The safety classification of the water leg pump for the Reactor Core Isolation Cooling (RCIC) system has been changed; it is now considered to have an active Safety Related function. This change in safety classification places it within the scope of the Inservice Testing (IST) pump and valve testing program. The purpose of the RCIC water leg pump is to maintain the RCIC-P-1 discharge piping full of water to prevent water hammer and minimize the time between RCIC pump start and injection into the reactor vessel.

The IST program at Energy Northwest complies with the requirements of the 1989 American Society of Mechanical Engineers (ASME) Code, Section XI, Subsection IWP-1100 that requires performance of pump testing in accordance with ASME/ANSI OMa-1988 (Part 6). Relief from flow and pressure measurement and analysis requirements of sections 5.2(b) and 5.2(d) of ASME/ANSI OMa-1988 (Part 6) is requested for RCIC-P-3. Similar relief has been granted to LaSalle County Station Units 1 & 2 in a Safety Evaluation report dated July 6, 1998 (Dockets 50-373 and 50-374).

Justification for Relief from Code Requirement

The design of the RCIC system does not feature installed flow instrumentation or pressure taps to measure the flow rate or differential pressure of the water leg pump. Measurement of these parameters is necessary to comply with flow and pressure measurement requirements of sections 5.2(b) and 5.2(d) of ASME/ANSI OMa-1988 (Part 6). Clamp-on flow instrumentation cannot be used to meet the Code requirements due to the low flow rate and Code required accuracy limitations. Compliance with the Code is impracticable because of the design limitations and imposition of the Code requirement would require significant system redesign and modification.

The RCIC water leg pump is in continuous operation and its function is monitored by control room operators via a low pressure alarm on the RCIC pump discharge header. A failure of the pump would be readily identified as an operational anomaly. Compliance with vibration measurement and analysis as described in Section 5.2(d) of ASME/ANSI OMa-1988 (Part 6) will be maintained. This vibration data is trended to assess pump performance and predict required corrective maintenance. The preventive maintenance program for RCIC-P-3 includes additional activities to detect degradation and ensure continued operational readiness. Pump oil level is regularly monitored and the pump is periodically refurbished to maintain reliability. The Code required vibration testing combined with the surveillance and preventive maintenance activities ensure an acceptable level of safety and quality.

Because of the plant modification required to comply with the Code and programmatic assessment of pump performance, imposition of the Code flow and pressure testing requirements would be burdensome with no resultant increase in the level of quality and plant safety.

Relief Request -- **RP08**

Pump	Code Class	P&ID Dwg. Number	System(s)
RCIC-P-3	2	M519 C14	REACTOR CORE ISOLATION COOLING

ASME/ANSI OMa-1988 Part 6 Code Requirement For Which Relief is Requested

Paragraph 5.2(b) and 5.2(d), Pressure and Flow measurement and analysis.

Function

The purpose of the RCIC water leg pump is to maintain the RCIC-P-1 pump discharge piping full of water to prevent water hammer and minimize the time between RCIC-P-1 pump start and injection into the reactor vessel.

Basis for Relief

1) The RCIC keep fill system does not have flow instrumentation and pressure taps to measure the flow rate and the differential pressure as required by the Code. Use of a clamp-on flow meter does not provide an accurate and repeatable flow rate due to the low flow rate and Code required accuracy limitations. Measurement of these parameters is necessary to comply with flow and pressure measurement requirements of sections 5.2(b) and 5.2(d) of OM Part 6. System modification to install flow instrumentation and differential pressure taps places undue burden on WNP-2 without demonstrating any increase in the level of plant safety.

2) The RCIC-P-3 pump is in continuous operation and its performance is monitored in the control room by a low pressure alarm on RCIC pump discharge header.

3) Compliance with vibration measurement and analysis as described in section 5.2(d) of OM Part 6 will be maintained. This vibration data is trended to assess pump performance and predict required corrective maintenance.

Relief Request -- **RP08** (Continued)

4) The preventive maintenance program for RCIC-P-3 includes additional activities to detect degradation and ensure continued operational readiness. Pump oil level is regularly monitored and the pump is periodically refurbished to maintain its reliability. The Code required vibration testing and the preventive maintenance activities ensure an acceptable level of safety and quality.

5) WNP-2 Technical Specification SR 3.5.3.1 verifies the system is full by verifying water flow through a high point vent on a monthly basis.

IST Testing to be Performed

The vibration measurements shall be taken under normal operating conditions and evaluated in accordance with OM Part 6. Vibration data shall be analyzed by comparison to the corresponding reference values. Deviations from the reference values shall be compared with the limits in Table 3 and corrective actions taken as specified in paragraph 6.1.

Quality/Safety Impact

Design of the WNP-2 RCIC keep fill system and lack of installed instrumentation make it impracticable to measure differential pressure and flow rate of the water leg pump as required by the OM Code. Vibration testing, coupled with RCIC system discharge line pressure monitoring, and routine preventive maintenance activities provide adequate assurance that pump degradation will be detected. These measures ensure the operational readiness of RCIC-P-3. Relief from flow and pressure measurements will not affect plant safety or the quality of the RCIC system.

References

FSAR 5.4.6.2.5.5
Technical Specification SR 3.5.3.1