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SUBJECT: Application for amend to License NPF-21, annotating encl Table 3.3.2-1 to reflect transfer of RHR V-8 to alternative remote shutdown panel during normal operation & clarifying Action a.2 on encl Table 3.6.3-1. Fee paid.

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G02-88-002
January 5, 1988
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 TECHNICAL SPECIFICATION
AMENDMENT, TABLE 3.3.2-1 ISOLATION
ACTUATION INSTRUMENTATION

Reference:

1) Letter, GW Knighton (NRC) to GC Sorensen (SS), "Compliance with Requirements of Appendix R to 10 CFR Part 50 Relating to Prevention of LOCAS at High/Low Pressure Interfaces", dated 5/13/87

2) NEDC-31339, "BWR Owners' Group Assessment of Emergency Core Cooling System Pressurization in Boiling Water Reactors", dated November 1986. Submitted on cover letter, BWROG-8655 TA Pickens (BWROG) to CJ Helfemes (AEOD-NRC), dated 12/10/86

3) RHR-V-8 & V-9 Chronology of Events (Attached)

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, the Supply System is requesting that Table 3.3.2-1 (attached) be annotated to reflect that, due to postulated Control Room Appendix R fire concerns (refer to Reference 3), control of RHR V-8 is transferred to the Alternate Remote Shutdown panel during normal operation. It is also necessary to modify Table 3.6.3-1 (attached) in order to clarify that Action a.2 under LCO 3.6.3 is not applicable to RHR-V-8.

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The need for this technical specification change arises in the resolution of a postulated fire in the control room that conceivably could simultaneously penetrate two panels 32 feet apart, selectively short the appropriate wires in each panel prior to transferring control at the Remote Shutdown Panel, and permit both RHR-V-8 and V-9 to open spuriously. The concern stems from the resultant potential rupture of the low pressure piping down stream of the valves and the theoretical inability to close the valves due to fire damage (Reference 1).

The Supply System has determined that the preferred method of resolution is the modification of the existing transfer switch for RHR-V-8 at the Alternate Remote Shutdown panel. The modification allows control of RHR-V-8 during normal operation only from the local station and therefore it is not influenced by the effects of a Control Room fire. The Alternate Remote Shutdown Room has been evaluated as accessible during post-LOCA conditions in response to NUREG 0578, WNP-2 FSAR Shielding Evaluation. Therefore, there is no impact on the ability to respond as previously evaluated.

In the proposed configuration, RHR-V-8 would remain closed in the event of a Control Room fire. However, with RHR-V-8 controlled at the Alternate Remote Shutdown panel, the interlocks associated with Shutdown Cooling Mode Isolation Actuation Instrumentation are bypassed and RHR-V-8 will not isolate in response to any of the trip functions in Table 3.3.2-1, Section 5. Therefore, Isolation Actuation Instrumentation Table 3.3.2-1, Section 5 "RHR System Shutdown Cooling Mode Isolation", requires annotation to indicate that the logic permissive is not required to be in service for the RHR-V-8 valve during operational conditions 1, 2 & 3 except in support of RHR Shutdown Cooling operation. A similar note is required in LCO 3/4.6.3 (Table 3.6.3-1 attached) given the inability to execute the action statement which conflicts with the conclusions of the shielding analysis. Specifically, deactivation (power removal) of the valve would be necessary given the inoperable automatic isolation function. However, power removal requires access to the Reactor Building concluded to be inaccessible post-LOCA. Hence, in order to execute the preferred method, the proposed technical specification amendment is necessary. We are proceeding with execution of the transfer switch modification, but are unable to operate in local control without entering the associated action statements.

As described in the Technical Specification bases section 3/4.3.2, the subject specification "ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by prescribing the Operability trip setpoints and response times for isolation of the reactor systems". During plant operation, RHR-V-8 will remain in the containment isolation position as required by LCO 3/4.6.3. The proposed change will neither alter this normal lineup nor affect the isolation function of RHR-V-9; therefore, the intent of the technical specification will continue to be met with the requested change.

It is the transfer of control of RHR-V-8 to the Alternate Remote Shutdown Panel during normal plant operation that requires staff review and approval prior to full execution of the proposed technical specification amendment.

The Supply System has reviewed the transfer of RHR-V-8 control to the Alternate Remote Shutdown panel and the resultant bypassing of the interlocks and concludes that: 1) it does involve an unreviewed safety question in that it does change the licensing bases of WNP-2 previously approved by the Staff, and 2) it does not represent a significant hazards consideration. The Supply System has evaluated this request per 10CFR 50.92 and provides the following in support of the finding for no significant hazards consideration.

1) The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated because sufficient redundancy remains in the design by a single device not affected by a control room fire and a redundant isolation device with operable isolation instrumentation to preclude the High/Low pressure interface system LOCA of concern. Both RHR-V-8 and V-9 must open to create the LOCA contemplated in Reference 1. Additionally the low pressure piping must rupture with both valves open and NEDC-31339, Reference 2) concludes that adequate margins exist to provide assurance against gross failure. The probability of a control room fire causing an intersystem LOCA as postulated is decreased by implementing the proposed change.

2) The proposed change does not create the possibility of a new or different kind of accident from any previously evaluated because the proposed change only alters the control of the RHR-V-8 valve from the control room. Acceptable alternate means to control as required to respond to a design bases condition are provided. An inadvertent opening during non-control room fire conditions would require a combination of failures in excess of the two active failures postulated and therefore is not considered a new accident not bounded by this evaluation. In order for this to occur, the interlock on RHR-V-9 must fail to prohibit opening with reactor pressure high coincident with two operator errors; an open command on RHR-V-8 from the Alternate Remote Shutdown panel and an open command on RHR-V-9. Given these three events must occur, the probability of both valves opening is not significantly increased by this change.

3) The proposed change does not involve a significant reduction in a margin of safety because, as discussed above, the design has sufficient redundancy to preclude the LOCA scenario discussed in Reference 1. The affected valve remains in the normal containment isolation position and, as reported in Reference 2, the margin of safety related to pipe rupture in the low pressure system is adequate to prevent pipe rupture. The proposed change also prevents the control room fire from inadvertently causing the intersystem LOCA. As a result, the proposed change does not constitute a significant reduction in safety margin.

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 cummulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10CFR 51.22 (c)(9) and therefore, per 10CFR 51.22(b), an environmental assessment of the change is not required.

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

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.

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

Very truly yours,

R B Glasscock

for G. C. Sorensen, Manager
Regulatory Programs

PLP/bk
Attachments

cc: C Eschels - EFSEC
JB Martin - NRC RV
NS Reynolds - BCP&R
RB Samworth - NRC
DL Williams - BPA
NRC Site Inspector - 901A

TS amendment

Subject: Isolation Actuation Instrumentation

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

I, R. B. Glasscock, being dully sworn, subscribe to and say that I am the Director, Licensing & Assurance 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 1/15, 1988

R B Glasscock

R. B. Glasscock, Director
Licensing & Assurance

On this day personally appeared before me R. B. Glasscock 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 15 day of January 1988.

S. R. Michael

Notary Public in and for the STATE OF WASHINGTON

Residing at Richland, WA.
Dec. 89.