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 RECIP. NAME: RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to license NPF-21 TS 3/4.4.2 &  
 3/4/3/7/5 recognizing redundancy in SRV position indication.  
 Direct reading SRV stem position indicator to be installed  
 in outage in addition to acoustic monitoring indication.

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February 21, 1992  
G02-92-046

Docket No. 50-397

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

Subject: WNP-2, OPERATING LICENSE NPF-21  
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS  
3/4.4.2, SAFETY/RELIEF VALVES AND 3/4.3.7.5, ACCIDENT  
MONITORING INSTRUMENTATION

- References: 1) Letter, G02-92-032, GC Sorensen to NRC, "Acoustic Monitors for Safety Relief Valve Position Indication", dated February 4, 1992
- 2) NUREG-0892, Safety Evaluation Report for WNP-2, dated March 1982

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. This proposal requests that Specifications 3.4.2, Safety Relief Valves and 3.3.7.5, Accident Monitoring Instrumentation, be revised to recognize recently installed redundancy in SRV position indication. A direct reading SRV stem position indicator will be installed during the 1992 refueling outage. This system will be in addition to the presently installed acoustic monitoring position indication instrumentation. As such, the proposed changes provide the flexibility of allowing inoperability of either the stem position indicator or acoustic monitor instrument associated with a specific SRV without invoking compensatory action (see attached).

Action c of Specification 3.4.2, Safety Relief Valve and Action 80.a for Technical Specification Table 3.3.7.5-1, Accident Monitoring Instrumentation, require compensatory actions, including shutdown, should an SRV position indicator fail. Further, Specification 3.0.4 prohibits entry into OPERATIONAL CONDITIONS unless the conditions for the Limiting Condition for Operation are satisfied. As stated in Reference 1, the Supply System is installing a direct

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REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS  
3/4.4.2, SAFETY/RELIEF VALVES AND 3/4.3.7.5, ACCIDENT  
MONITORING INSTRUMENTATION

reading valve stem position indicator during the 1992 refueling outage. The system utilizes linear voltage differential transformers mounted directly on the relief valves to provide a closed/not closed indication and annunciation. The design is safety grade with seismic and environmental qualifications and is powered from a 1E source.

Both the presently installed acoustic monitoring system and the valve stem position indicator system satisfy the same design requirements (see below). As such, failure of one device has no impact on the ability to provide adequate SRV position indication. Accordingly, the attached changes provide the flexibility of using either instrument to satisfy the ACTION statement and SURVEILLANCE REQUIREMENTS of Technical Specification 3/4.4.2. with respect to SRV position indication.

For Accident Monitoring Technical Specification 3.3.7.5, the operability of the SRV position monitoring instrumentation is based on providing assurance that sufficient information is available on selected plant parameters (e.g., SRV position indication) to monitor and assess important variables following an accident. TMI Action Plan Item II.D.3 "Direct Indication of Relief and Safety-Valve Position" requires that "reactor coolant system relief and safety valves shall be provided with a positive indication in the control room derived from a reliable valve-position detection device or a reliable indication of flow in the discharge pipe." Both the present acoustic monitoring system and the valve stem position indicator satisfy this requirement. The changes to Specification 3.3.7.5 propose to use either instrument to satisfy the requirement.

Presently Technical Specification 3.3.7.5 stipulates two instrumentation channels for providing this parameter. One channel is the acoustic monitor, the second channel, a backup, is a thermocouple in the SRV discharge tailpipe that detects a temperature increase indicative of flow past the valve. The thermocouples do not fully satisfy the requirements of TMI Action Plan Item II.D.3, however in combination with other plant instrumentation they can provide indirect indication of the SRV position. Supplement 4 to Reference 2, paragraph 7.5.2.5 documents review and approval of the acoustic monitors with the tailpipe temperature backup. As a result, upon failure of either monitor, Specification 3.3.7.5 presently invokes a seven day, restore operability or shutdown, ACTION statement. Failure of both invokes a 48 hour restore operability or shutdown ACTION. Because the SRV stem position indication instrument is equal to and independent of the acoustic monitor, a new ACTION statement (82) in addition to a change to the REQUIRED NUMBER OF CHANNELS column of Table 3.3.7.5-1 is proposed that maintains the same ACTION statement requirements as presently required.

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS

3/4.4.2, SAFETY/RELIEF VALVES AND 3/4.3.7.5, ACCIDENT  
MONITORING INSTRUMENTATION

As discussed above, failure of either the stem position indicator or acoustic monitor does not impact compliance to TMI Action Plan Item II.D.3. Hence, the change to Table 3.3.7.5-1 proposes that the REQUIRED NUMBER OF CHANNELS be changed from "2" to "1" such that both stem position indicator and acoustic monitoring instruments must fail before an ACTION statement is entered. With one of the two independent channels operable compliance to TMI Action Item II.D.3 is not compromised. The associated ACTION statement change from 80 to the proposed 82 retains the present seven day and 48 hour, restore or shutdown, requirements by verifying the operability of the backup tailpipe temperature monitor and directing plant response accordingly. These changes provide the same plant response as presently required when compliance to II.D.3 cannot be met, yet a forced shutdown and the concomitant plant exposure to potential transient events during a shutdown and startup maneuver is avoided. The addition of the SRV stem position indicator increases the reliability of the SRV position indication system and, with the proposed Technical Specification changes, enhances overall plant safety.

The change in REQUIRED NUMBER OF CHANNELS from "2" to "1" on Table 3.3.7.5-1 implies that only one channel of position indication (stem position indicator or acoustic monitor) will be required in order to proceed into OPERATIONAL CONDITIONS 1 and 2. The present Technical Specifications require both acoustic and tailpipe temperature monitors. However, Regulatory Guide 1.97, revision 2 (the bases for TMI Action Plan Item II.D.3) identified SRV position indication as a category two, Type D variable. Category two, Type D variables are not required to be redundant. As such the requirement to have two channels is overly restrictive and beyond the recognized guidelines for assuring SRV position indication. (Technical Specifications for LaSalle 2, Susquehanna 1 & 2, Fermi, and Limerick all require "1" channel per valve). Although the tailpipe temperature thermocouples in combination with other plant indications are a reliable backup method of indirect valve position indication, they were not designed as safety related. Relying on the operability of non-safety grade equipment for movement into Operational Conditions is overly restrictive and beyond the intent of the Technical Specifications. While the change from "2" to "1" represents a slight decrease in the present requirement, the enhanced plant safety achieved by using either stem position or acoustic monitor indication offsets this decrease. In support of this change a note stating, "Either the acoustic monitor or valve stem position indicator satisfies these requirements" has been added to Technical Specification Tables 3.3.7.5-1 and 4.3.7.5-1.

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

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because no credit is taken for SRV position indication functioning in the initiation or mitigation of any analyzed accident. Although no credit is taken for operator action as a result of SRV position indication alarm and annunciation, the addition of a second qualified instrument increases the probability that the Operator will be

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS  
3/4.4.2, SAFETY/RELIEF VALVES AND 3/4.3.7.5, ACCIDENT  
MONITORING INSTRUMENTATION

alerted to an open SRV well before the point that the accident analysis presently recognizes (high suppression pool temperature). Hence, the addition of the stem position indicator represents a decrease in the probability or consequences of an accident previously evaluated. The change in REQUIRED NUMBER OF CHANNELS from "2" to "1" for movement into Operational Conditions is offset by enhanced overall plant safety in the avoidance of forced shutdowns and the exposure to potential transient events in the shutdown and startup maneuvers. Further, the proposed change preserves at least the same level of SRV position indication reliability as presently provided. Therefore, this 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 because SRV operation, including the ADS function, remains unaffected. No new modes of operation of any equipment result due to this change. The addition of the SRV stem position indication is a non-intrusive design that does not affect the operation of the SRV. Therefore this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.
- 3) Involve a significant reduction in a margin of safety because, as discussed above, the changes preserve at least the same level of SRV position indication reliability as presently required by the Technical Specifications. Further, the addition of a second qualified instrument and the flexibility provided by this change avoids possible forced shutdown situations (on failure of one instrument). Startup and shutdown maneuvers expose the plant to more transient conditions than steady state operation does. Hence, avoidance of an unnecessary shutdown enhances the margin of safety. The change in REQUIRED NUMBER OF CHANNELS from "2" to "1" for movement into Operational Conditions is offset by the above enhancement to overall plant safety. Therefore, this change does not involve a significant reduction in the margin of safety.

As discussed above, the Supply System considers that these changes do 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 do they involve a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet 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 these changes is not required.

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.

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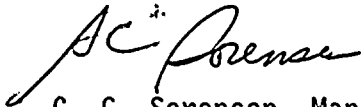


Page Five

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS  
3/4.4.2, SAFETY/RELIEF VALVES AND 3/4.3.7.5, ACCIDENT  
MONITORING INSTRUMENTATION

It is requested that this change be approved prior to restart from the 1992 refueling outage. Restart is currently scheduled for June 29, 1992. With installation of the fully qualified valve stem position indicator, lack of approval past this date would subject WNP-2 to an unnecessary forced shutdown or relief request should an acoustic monitor fail.

Sincerely,



G. C. Sorensen, Manager  
Regulatory Programs (Mail Drop 280)

PLP/bk  
Attachments

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

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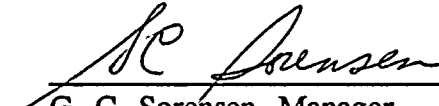
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3/4.3.7.5

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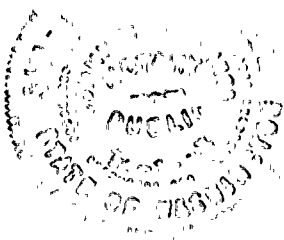
I, G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information,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

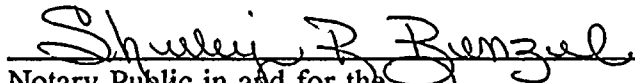
DATE: 20 FEBRUARY, 1992

  
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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 20 day of February 1992.



  
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Notary Public in and for the  
STATE OF WASHINGTON

My Commission Expires Dec 93

