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SUBJECT: Application for amend to License NPF-21, changing TS 3.4.2  
 re safety relief valves & Table 3.3.7.5-1 re accident  
 monitoring instrumentation to permit acoustic monitor to be  
 inoperable until plant shuts down for next outage.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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November 25, 1991  
G02-91-215

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 AMENDMENT TO TECHNICAL SPECIFICATION 3.4.2 (SAFETY  
RELIEF VALVES) AND TABLE 3.3.7.5-1 (ACCIDENT MONITORING  
INSTRUMENTATION) UNDER EMERGENCY CIRCUMSTANCES

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90, 2.101, and 50.91(a)(5), the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications on an emergency basis as provided for in the regulations. Specifically, the Supply System is requesting that notes be added to Specification 3.4.2, Safety Relief Valves and to Table 3.3.7.5-1, Accident Monitoring Instrumentation to allow the acoustic monitor for MS-SRV-4D to be inoperable until the plant shuts down for its next scheduled refueling outage or until the first forced outage of sufficient duration to effect repair, whichever occurs first (see attached).

Action C for Specification 3.4.2, Safety Relief Valve and action 80.a for Technical Specification Table 3.3.7.5-1, Accident Monitoring Instrumentation, require that the plant be shutdown if an inoperable indicator channel is not restored to operable status within seven (7) days. Due to apparent failure of the Acoustic Monitor for MS-SRV-4D, the Supply System entered the seven day LCO at 1953 hours on November 24, 1991. It has been determined that the plant will be required to be shutdown and cooled down in order to repair/replace this acoustic monitor, unless an amendment is granted to allow the Supply System to continue to operate until either the next forced outage or the next scheduled outage (R-7).

The Supply System has made modifications to the acoustic monitors and changed procedures to increase the reliability of the monitors. This effort is ongoing. In addition a design change to install a direct reading SRV setpoint tester has been approved with implementation being evaluated for either the next, or following, refueling outage. This modification would replace or supplement the acoustic monitors.

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REQUEST FOR AMEND. TO TS 3.4.2, SAFETY RELIEF VALVES AND  
TABLE 3.3.7.5-1 ACCIDENT MONITORING INSTRUMENTATION UNDER  
EMERGENCY CONDITIONS

The tailpipe temperature monitoring system has been enhanced by recorder replacement such that all SRV tailpipe temperatures are monitored over a two second period with an immediate alarm capability for any high temperature. The Supply System has been and is continuously working to improve this system.

The operability of the accident 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." The technical specifications for WNP-2 require two instrumentation channels for providing this information on valve position. One channel utilizes an acoustic monitor. The second channel utilizes thermocouples to detect a temperature increase indicative of flow past the valve. The loss of either channel on one or more SRVs does not prevent accurate determination of the position of the associated SRV(s). Further, should an SRV open and remain stuck open, the resulting transient does not represent the same magnitude of challenge to a BWR (such as WNP-2) as does a stuck open pressurizer relief or safety valve on a PWR. As discussed in the safety analysis of this event (WNP-2 FSAR 15.1.4), the operator response to this event is based on a suppression pool temperature alarm not an open alarm from the SRV position indication instruments. The safety analysis assumes closure of the open SRV and establishment of suppression pool cooling within 20 minutes. As discussed in this analysis, even if the valve fails to close (worst case) the consequences of the event are mild. Hence the failure of an acoustic monitor causing an operator to review other instrumentation (as listed below) to determine which valve is open does not increase the severity of the transient. The valve can remain open. The loss of position indication for one or more of the eighteen (18) Safety/Relief Valves does not reduce the capability of the SRV to perform its intended function, nor does it prevent accurate determination of the position of the associated SRV. The instrumentation discussed below provides the necessary attendant instrumentation to assure operability of MS-SRV-4D.

The following mitigating and compensatory factors provide assurance that the valve position is adequately monitored:

- 1) Tail pipe temperature indication is monitored and recorded. An increase in temperature would indicate that the valve is open, and steam was entering the suppression pool via the tail pipe. This indication has remained capable of indicating valve actuation since the failed monitor was identified. A recent design enhancement allows monitoring of all channels over a two second period with an immediate alarm for any channel(s) indicating a high temperature. This would immediately alert the operator to a potentially open SRV. The control room annunciator alarms on high tail pipe temperature (greater than 250°F). An annunciator response procedure addressing the tail pipe temperature alarm will be revised to uniquely identify appropriate actions for MS-SRV-4D.

REQUEST FOR AMEND. TO TS 3.4.2, SAFETY RELIEF VALVES AND  
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- 2) Suppression Pool temperature indication is available, and is set to alarm at 85°F. An increase in suppression pool temperature would indicate an open SRV. This parameter will be monitored on a daily basis.
- 3) Suppression Pool level indication is available, and is set to alarm at +0.5"/-1" of Normal Level (466'3"). An increase in suppression pool level would indicate an open SRV. This parameter will be monitored on a daily basis.
- 4) Cross talk due to noise pickup from acoustic monitors on adjacent SRVs will indicate flow through the SRV with the failed monitor but will not alarm. This capability has been demonstrated to be a reliable diagnostic tool on several occasions in the past.
- 5) Other plant parameters are affected by an SRV actuation and are available as confirmation. Examples are main turbine governor valve position indication change, generator output change, main turbine steam flow change, steam/feedwater flow mismatch and the resultant reactor pressure perturbation.

Other indicators provide adequate feedback for ADS (reactor pressure) and SRV operation, and Alternate Shutdown Cooling operation (reactor pressure/temperature) if they are required. Additionally, MS-SRV-4D is not controlled on either of the remote shutdown panels.

As the failure of this acoustic monitor has only recently been identified, it was not possible for the Supply System to anticipate this event and submit this request in a more timely manner. Based on the above and the following, no significant hazards consideration, the Supply System requests that the amendment as attached be granted until the next scheduled outage (no later than May 15, 1992), or the next forced outage of sufficient duration to effect the necessary repairs. Absent this amendment, the Supply System will be required to unnecessarily shutdown by December 1, 1991.

The Supply System has evaluated this amendment 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 the SRV position indication channels are not assumed to function in the initiation of an analyzed accident. The inoperability of these indication channels does not affect ADS operation of the SRVs. The analysis for an inadvertent opening of an SRV (FSAR Section 15.1.4) assumes the function of these alarm-only instrument channels for the purpose of having the operator assess the need for commencing suppression pool cooling with RHR. As discussed above, the operator has many diverse indications available to indicate the need for commencing suppression pool cooling as a result of an open SRV and the SRV position indication is not the primary indication. Loss of an SRV position indication channel will not adversely affect the operator's ability to respond to this event as assumed in the analysis. The proposed

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REQUEST FOR AMEND TO TS 3.4.2, SAFETY RELIEF VALVES AND  
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change affects only the operability of the SRV position indication and does not affect automatic or manual actuation of the SRV. MS-SRV-4D is not controlled from either of the remote shutdown panels (Appendix R). Therefore, this change will 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. Sufficient diverse indication remains available to adequately determine whether an SRV is inadvertently open, therefore this change will not result in a failure to assess the need for suppression pool cooling. This change will 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 operator has many diverse indications available to indicate the need for commencing suppression pool cooling. Loss of an SRV position indication channel will not adversely affect the operator's ability to respond to this event as assumed in the analysis. The additional surveillances to monitor the suppression pool temperature while operation continues with an inoperable channel will compensate for the loss of position indication channel. Therefore, this change will not involve a significant reduction in the margin of safety.

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 cumulative 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 amendment request has been reviewed and approved by the WNP-2 Plant Operations Committee (POC) and the Supply System Corporate Nuclear Safety Review Board (CNSRB).

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are given in full. The list is as follows:

Name	Address
Mr. A. B. C.	123 Main Street, New York, N. Y.
Mr. D. E. F.	456 Broadway, New York, N. Y.
Mr. G. H. I.	789 Fifth Avenue, New York, N. Y.
Mr. J. K. L.	1010 Third Avenue, New York, N. Y.
Mr. M. N. O.	1111 Second Avenue, New York, N. Y.
Mr. P. Q. R.	1212 First Avenue, New York, N. Y.
Mr. S. T. U.	1313 West 125th Street, New York, N. Y.
Mr. V. W. X.	1414 East 125th Street, New York, N. Y.
Mr. Y. Z. A.	1515 West 125th Street, New York, N. Y.
Mr. B. C. D.	1616 East 125th Street, New York, N. Y.
Mr. E. F. G.	1717 West 125th Street, New York, N. Y.
Mr. H. I. J.	1818 East 125th Street, New York, N. Y.
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Mr. W. X. Y.	2323 West 125th Street, New York, N. Y.
Mr. Z. A. B.	2424 East 125th Street, New York, N. Y.
Mr. C. D. E.	2525 West 125th Street, New York, N. Y.
Mr. F. G. H.	2626 East 125th Street, New York, N. Y.
Mr. I. J. K.	2727 West 125th Street, New York, N. Y.
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Mr. B. C. D.	4242 East 125th Street, New York, N. Y.
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• REQUEST FOR AMEND TO TS 3.4.2, SAFETY RELIEF VALVES AND  
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EMERGENCY CONDITIONS

In summary, based on the assertion that no significant hazard is created by the subject relief and that remaining methods are available to satisfy the function of determining valve position, present operation does not represent an undue risk to the health and safety of the public. Additionally absent this amendment, the WNP-2 plant will be required to shutdown.

Very truly yours,



G. C. Sorensen, Manager  
Regulatory Programs

PLP/bk  
Attachments

cc: JB Martin - NRC RV  
NS Reynolds - BCP&R  
PL Eng - NRC  
DL Williams - BPA/399  
NRC Site Inspector - 901A



STATE OF WASHINGTON )  
COUNTY OF BENTON )

Subject: Request for Amend to TS 3.4.2  
SRV & Table 3.3.7.5-1 Accident  
Monitoring Instrumentation

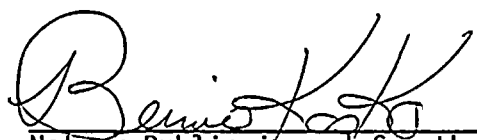
I. G. C. SORENSEN, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have the full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information,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

DATE 25 NOVEMBER, 1991

  
\_\_\_\_\_  
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 25th day of November 1991.

  
\_\_\_\_\_  
Notary Public in and for the  
STATE OF WASHINGTON

Residing at Kennewick, Washington

My Commission Expires April 28, 1994



