ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9003210063 DOC.DATE: 90/03/02 NOTARIZED: YES DOCKET #
FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
SORENSEN,G.C. Washington Public Power Supply System
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to License NPF-21,revising TS 3.4.2 & Tables 3.3.7.5-1 & 4.3.7.5-1..

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 6 ENCL 1 SIZE: 6+3
TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD5 LA	1	1	PD5 PD	1	1
	SAMWORTH,R	5	5			
INTERNAL:	ACRS	6	6	NRR/DET/ECMB 9H	1	1
	NRR/DOEA/OTSB11	1	1	NRR/DST 8E2	1	1
	NRR/DST/SELB 8D	1	1	NRR/DST/SICB 7E	1	1
	NRR/DST/SRXB 8E	1	1	NUDOCS-ABSTRACT	1	1
	OGC/LFMB	1	0	OGC/HDS2	1	0
	REG FILE 01	1	1	RES/DSIR/EIB	1	1
EXTERNAL:	LPDR	1	1	NRC PDR	1	1
	NSIC	1	1			

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 27 ENCL 25

RIDS/ADDS

RIDS/ADDS

NDAA-2

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

March 2, 1990
G02-90-038

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 AND 4.3.7.5-1 (ACCIDENT MONITORING INSTRUMENTATION) UNDER EMERGENCY CIRCUMSTANCES**

Reference: 1) Letter, G02-89-221, GC Sorensen (SS) to NRC, "Request For Amendment To Technical Specification 3.3.7.5 for Safety Relief Valve Position Indication", dated 12/4/89

2) Letter, G02-90-025, GC Sorensen (SS) to NRC, same subject, dated 2/14/90

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 added to Specification 3.4.2, Safety Relief Valves and to Tables 3.3.7.5-1, Accident Monitoring Instrumentation, and 4.3.7.5-1, Accident Monitoring Instrumentation Surveillance Requirements be revised to allow the acoustic monitor on each SRV to be inoperable until the plant shuts down for its next scheduled refueling outage (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 a recent test failure the environmental qualification bases of the coaxial cables for the acoustic monitors has been invalidated. Accordingly, the Supply System entered the seven day LCO at 1700 hours on February 28, 1990. It has been determined that the plant will be required to be shutdown and cooled down in order to replace these cables, unless an amendment is granted to allow the Supply System to continue to operate until the next scheduled outage (R-5, no later than May 15, 1990).

A001
1/1

The cable environmental qualification test failure was recognized during qualification testing of a replacement connector/cable assembly. The original connector had been discontinued. A replacement connector/cable assembly (using the same cable) was being qualified. During the long term qualification test, failure indications were observed. On February 27, 1990 a preliminary failure report was provided identifying the cable as having a failure potential when subjected to a LOCA following radiological and thermal aging. The report was reviewed and, it was determined that the acoustic monitors may not provide reliable indication of steam flow under post LOCA conditions. Under normal operating and shutdown conditions, the cable qualification is acceptable. However, due to the potential failure under the severe post LOCA conditions, in accordance with the subject Technical Specifications, the LCO was entered on February 28, 1990.

As discussed in the references, the Supply System has made modifications to the acoustic monitors and changed procedures to increase the reliability of the monitors. This effort is ongoing. A design change, under consideration, would allow accessibility, without plant shutdown, of the system charge amplifier components pending successful environmental qualification of triaxial cable. Further a Vendor representative site visit has been requested to assist in identifying additional enhancements to system reliability. 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 or both channels 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 15.2.4), 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 mitigating actions are to attempt to close the open SRV and establish 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 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 following mitigating and compensatory factors provide assurance that the valve position can be adequately monitored post LOCA:

1) Tail pipe temperature indication is monitored and recorded. While thermocouples are not safety related devices, an increase in temperature would indicate that the valve is open and steam is entering the suppression pool via the tail pipe. Channel checks of the temperature recorder are required to be performed monthly per LCO 3/4.3.7.5. Until the acoustic monitors are declared operable, the tail pipe temperature surveillance will be performed daily instead of monthly (see proposed change to Table 4.3.7.5-1 attached.) A control room annunciator is available that alarms on high tail pipe temperature (greater than 250°F). During our most recent down power for final reset of control rods prior to coastdown, the response of each tailpipe thermocouple was observed by the Technical Staff Engineers and Operations. The sensitivity and response to power change indicates adequate ability to sense relief valve steam flow during plant operation. An annunciator response procedure addressing the tail pipe temperature alarm will be revised to uniquely identify appropriate actions for alarms from the tail pipe temperature monitors.

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) 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.

As the cable failure for these acoustic monitors 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, 1990). Absent this amendment, the Supply System will be required to unnecessarily shutdown by March 7, 1990.

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 change affects only the operability of the SRV position indication, and does not affect automatic or manual actuation of the SRV. 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.

The cables will be replaced at the next outage (R-5).

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

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. 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
RB Samworth - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Req. for Amend to TS 3.4.2 & Tables 3.3.7.5-1 & 4.3.7.5-1 under emergency circumstances

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 5 MARCH, 1990

G. C. Sorensen

G. C. SORENSEN, Manager
Regulatory Programs

On this day 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 5th day of March, 1990.

Bernice Kasko

Notary Public in and for the
State of Washington

Residing at Kennewick, Wa