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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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

October 4, 1990
G02-90-168

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 3.3.4
ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

Reference: Letter, G02-90-110, GC Sorensen (SS) to NRC, "Anticipated
Transients Without Scram Design Modifications", dated 6/22/90

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 the subject specification be revised as attached to accommodate new design features implemented during our spring 1990 refueling outage.

In recent discussions between Ms. P. Eng and Mr. H. Lee (NRR) and Messrs P. Powell and R. Green (SS) with regard to the design information provided by the referenced letter the subject Technical Specification was questioned. Specifically, the "minimum operable channels per trip system - 1" was identified as possibly allowing a channel, in the new design, to be inoperable indefinitely. As a result of these discussions the Technical Specification and the new design features were reevaluated resulting in the attached changes being identified.

The first change recognizes that, in the new design, channels can be placed in the trip condition without causing an ATWS Recirculation Pump Trip (ATWS-RPT) actuation. The old design did not have this feature. Previously a tripped channel caused an actuation. With the new design tripping a channel performs the intended safety function of the channel. Action paragraph b. is clarified to reflect this design feature by adding the phrase "per Trip Function" and deleting "for one trip function in one trip system". On Table 3.3.4.1-1 Trip Function is made plural to also reflect this design feature. Additionally, a note has been provided clarifying the intent of the required action of tripping the channel. The note indicates that tripping the channel is only applicable if placing the

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inoperable channel(s) in trip will not result in a recirculation pump trip. This change also permits operation to continue with the channel(s) in the tripped condition while channel operability is restored. In this condition, with the one-out-of-two-twice logic, half of the logic is satisfied and a valid signal on one of the other two channels will cause a recirculation pump trip. In this way placing an inoperable channel in the tripped condition will not inhibit an ATWS-RPT should an ATWS event occur. These changes achieve consistency with the BWR Standard Technical Specifications being implemented in the Improved Technical Specification Program.

The second change allows the Completion Time for placing inoperable channel(s) in trip to remain 14 days which is consistent with the currently allowed time a channel is allowed to be inoperable before taking further action. With the new logic further action consists of placing the channel in the tripped condition (unless an ATWS-RPT would occur). This change adds an additional required action to verify that one trip system is operable within 1 hour. This allows 1 hour to ensure the ATWS-RPT safety function for one pump remains viable. One hour is consistent with the Completion Time allowed by 3.0.3 prior to commencing any compensatory actions. The 14 days is acceptable because the second trip system is fully operable during this period. This is consistent with existing ECCS Technical Specification Completion Times established for conditions when one of several related trains is inoperable (HPCS, RCIC). These required actions assure that the potential for a single failure preventing a recirculation pump trip on a valid signal will be minimized. The changes achieve consistency with the BWR Standard Technical Specifications being implemented in the Improved Technical Specification Program.

The third change, reducing the Completion Time for reaching MODE 2 from 8 hours to 6 hours, achieves consistency with APPLICABILITY LCO 3.0.3. This change is consistent with the BWR Standard Technical Specifications being implemented in the Improved Technical Specification Program.

The third change, recommended in the above discussions, recognizes that the "minimum operable channels per trip system" should be changed from 1 to 2. With the new logic, one-out-of-two-twice, and the "MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM" being 1, a channel could conceivably be out of service in the one-out-of-two-twice-logic indefinitely without corrective or compensatory action being implemented. Operation of this system in this manner has never been the intent of the Supply System. To correct this oversight the attached change to Table 3.3.4.1-1 is submitted. This change combined with the revised requirements of LCO action statement 3.3.4.1 b will ensure that corrective or compensatory actions are implemented upon the discovery of an inoperable channel.

The Supply System has reviewed these changes per 10 CFR 50.92 and provides the following in support of a finding for no significant hazards consideration.

The first change, allowing an inoperable channel to be placed in the tripped condition does not represent a significant hazards consideration because it does not:

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- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because in the case of the first change the safety function of the channel is implemented by placing the channel in trip. This satisfies one half of the trip logic and ensures that a valid signal received on the other half of the logic will cause a recirculation pump trip. Further, this change does not result in any hardware or operating procedure changes. The ATWS-RPT instrumentation is not assumed in the initiation of any analyzed event. This instrumentation role is in mitigating and thereby limiting the consequences of an ATWS event. This instrumentation actuates to prevent reactor vessel overpressurization and fuel damage in the event of an ATWS. The proposed change to these actions will not allow continuous operation such that a single failure could prevent the instrumentation to actuate when required to mitigate the consequences of an ATWS event. Therefore, this proposed 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 the proposed change introduces no new mode of plant operation nor does it require physical modification to the plant.
- 3) Involve a significant reduction in a margin of safety. No significant reduction in a margin of safety is involved with this change since the required actions have been developed to assure the ATWS-RPT remains capable of mitigating the consequences of an ATWS event. This change also provides a benefit of avoiding an unnecessary plant transient when adequate compensatory measures are available to ensure the instrumentation's intended function will be satisfied.

Also the second change, allowing the 14 days Completion Time before placing inoperable channel(s) in the tripped condition and the 1 hour allowed to verify the operability of an ATWS-RPT trip system do not represent a significant hazards consideration because they do not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. This change does not result in any hardware or operating procedure changes. The ATWS-RPT instrumentation is not assumed in the initiation of any analyzed event. The instrumentation's role is in mitigating and thereby limiting the consequences of an ATWS event. This instrumentation actuates to aid in protecting the fuel cladding in the event of an ATWS transient. The proposed change to the actions will not allow continuous operation such that a single failure will preclude ATWS-RPT actuation in order to mitigate the consequences of the transient. Therefore, the proposed 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 the proposed change introduces no new mode of plant operation nor does it require physical modification to the plant.

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- 3) Involve a significant reduction in a margin of safety. No significant reduction in a margin of safety is involved with this change since the required actions have been developed to assure the ATWS-RPT remains capable of mitigating the consequences of the ATWS transient. This change also provides a benefit through the potential avoidance of an unnecessary plant transient by providing adequate time to take compensatory measures to ensure the instrumentation's intended function is satisfied.

The third change reducing the time allowed to reach startup from 8 to 6 hours, does not represent a significant hazards consideration because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The imposition of a more stringent requirement to this Technical Specification will not alter in any way a previously evaluated accident. Movement to startup within 6 hours is recognized by LCO 3.0.3 as an acceptable time duration.
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated. The imposition of a more stringent requirement will not result in a new or different kind of accident than those previously evaluated.
- 3) Involve a significant reduction in a margin of safety. the imposition of a more stringent time requirement increases the margin of plant safety by decreasing the amount of time allowed to remain in an action statement. The plant is returned quicker to a mode in which the action statement does not apply. Hence with a shorter duration the probability of an event occurring during the LCO interval is decreased and the margin of safety is enhanced.

The fourth change, increasing the "minimum operable channels per trip system" from one to two recognizes the new design and ensures that corrective or compensatory action will be commenced in a timely manner. This change does not represent a significant hazards consideration because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. This change imposes a more stringent requirement on the operation of WNP-2. It ensures action will be taken to restore the system to a safety condition (channel tripped or operable) in a timely manner. As discussed in the significant hazards discussion on the first change the ATWS-RPT instrumentation is not assumed in the initiation of any analyzed event. The instrumentation acts to mitigate and thereby limit the consequences of an ATWS event. This change will ensure the system will be able to respond to a valid trip signal on one channel when the other channel is inoperable. As such, this change enhances the system ability to respond and mitigate the consequences of an ATWS event. At the same time this change combined with the new design does not increase the vulnerability of the plant to a spurious signal actuation. The previous design actuated on a single signal thereby being

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vulnerable to a spurious actuation. In the new design with the inoperable channel in a tripped position the same vulnerability is present. However, this vulnerability only exists when the system is degraded. Hence the overall probability of a spurious actuation is reduced by the new design and the probability of a spurious signal actuation with channel(s) inoperable in accordance with the proposed action is the same as that that existed at all times with the old design. Therefore, the probability of a previously evaluated accident is not increased.

- 2) Create the possibility of a new or difference kind of accident from any previously evaluated because the proposed change introduces no new mode of plant operation nor does it require physical modifications to the plant.
- 3) Involve a significant reduction in a margin of safety because as discussed above the change ensures the system will be restored or put in a safe condition in a timely manner. As such, safe operation is assured and the margin of safety is not jeopardized.

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, these proposed changes meets 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 the change is not required.

This Technical Specification change 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.

Very truly yours,

Alan Sorensen

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
CR Wallis - EFSEC

STATE OF WASHINGTON)
COUNTY OF BENTON)

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I, A. G. Hosler, being duly sworn, subscribe to and say that I am the Manager, WNP-2 Licensing, 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.

This document contains Safeguards Information and must be protected in accordance with 10CFR 73.21.

DATE: 10/4, 1990

A. G. Hosler
A. G. Hosler, Manager
WNP-2 Licensing

On this day personally appeared before me A. G. Hosler, 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 4th day of October, 1990.

Bonnie Kasko
Notary Public in and for the
STATE OF WASHINGTON

Residing at Kennebec, Me
My commission expires 4/28/94

