ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9312290087 DOC.DATE: 93/12/20 NOTARIZED: YES DOCKET #
FACIL:50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
AUTH.NAME AUTHOR AFFILIATION
PARRISH,J.V. 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 3/4.6.1.8, "Drywell & Suppression Chamber Purge Sys."

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 10+6
TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PDV LA	1	1	PDV PD	1	1
	CLIFFORD,J	2	2			
INTERNAL:	ACRS	6	6	NRR/DE/EELB	1	1
	NRR/DORS/OTSB	1	1	NRR/DRCH/HICB	1	1
	NRR/DRPW	1	1	NRR/DSSA/SPLB	1	1
	NRR/DSSA/SRXB	1	1	NUDOCS-ABSTRACT	1	1
	OC/LFDCB	1	0	OGC/HDS1	1	0
	REG FILE 01	1	1			
EXTERNAL:	NRC PDR	1	1	NSIC	1	1

R I D S / A D D S

R I D S / A D D S

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 22 ENCL 20

AA2

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352-0968 • (509) 372-5000

December 20, 1993
G02-93-296

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21**
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION 3/4.6.1.8, DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

Reference: Letter, dated April 29, 1987, DM Crutchfield (NRR) to GC Sorensen (SS), "Issuance of Exemption to a Provision of Appendix J and Amendment No. 41 to Facility Operating License No. NPF-21 WPPSS Nuclear Project No. 2"

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 Drywell and Suppression Chamber Purge System Technical Specification be changed, as attached, to:

1. remove phrases in the Limiting Condition for Operation (LCO) and Action Statement 3.6.1.8.a that are redundant to plant design requirements (reference to a permanently installed block, limiting valve travel to 70°),

2. eliminate Surveillance 4.6.1.8.1 that confirms, during each valve operation, that the valves are limited to 70° open (delete Surveillance 4.6.1.8.1 and renumber the following surveillances),

3. change Surveillance 4.6.1.8.2 (renumbered to 4.6.1.8.1) to allow the frequency for leak rate surveillance testing to be either once per six months, for elastomer seal valves as presently required, or for metal to metal seal valves as required by Surveillance 4.6.1.2.d for "Type C" valves. This places the metal to metal valves in the Type C test program authorized by the reference,

A001
1/1

4. delete the note on page 3/4 6-12 and references to the note as it was only applicable through April 10, 1988, and

5. relocate "actions" in the renumbered Surveillance 4.6.1.8.1 (previously 4.6.1.8.2) to Action Statement 3.6.1.8.b. This is requested to make the required actions more visible to the operator. Presently, with the actions inside the surveillance a potential for overlooking the actions exists. This is an administrative change in that the requirements of the specification are not changed but only given greater visibility.

Current plans for the Spring 1994 Refueling Outage include replacement of two out of four purge and two out of four vent valves (CSP V-3, 4 and CEP V-1A, 2A) with valves qualified to close from a full open position (90°) within 5 seconds against a Design Basis Accident (DBA) Loss of Coolant Accident (LOCA). It is anticipated that purge and vent valves CSP V-1, 2 and CEP V-3A, 4A will be replaced at a later date. The replacement valves, two in series on the suppression chamber purge supply and two in series on the drywell exhaust, will have metal to metal seals instead of resilient type seals. As such, they meet the definition of valves to which Type C testing is applicable (Appendix J paragraph II.H.1). Appendix J, paragraph III.D.3 specifies Type C Testing "during each reactor shutdown for refueling but in no case at intervals greater than 2 years." Presently, because the installed valves have resilient seals they are tested in accordance with the schedule in 4.6.1.8.2; once per six months. Moving the replacement valves into the Type C testing program, Surveillance 4.6.1.2.d, allows testing to be done every two years and changes the leak rate criteria to that established by the reference. Under the program, approved by the reference, the permissible leakage rates are established by ASME Code, Section XI, Article 3426. As approved by the reference, the permissible leakage rate for these valves is significantly below the 0.05 L_a specified by Surveillance 4.6.1.8.1. The new permissible rates will be approximately .020 to .025 L_a for the 24" and 30" replacement valves respectively.

A safety review has been completed for the change out of these valves. The review concluded that this change does not represent an unreviewed safety question. Accordingly, this request deals with the Technical Specification changes needed to address both types of valves in Specification 3/4.6.1.8.

Because the presently installed block that limits opening of the valves to 70° is a mechanical stop on the pneumatic operator that is fixed, cannot be affected by the operator, and has not been observed to degrade, the incremental safety benefit gained by Surveillance 4.6.1.8.1 is not of significance to operation of the plant. Surveillance 4.6.1.8.1 requires that:

> "When being opened, the drywell and suppression chamber purge supply and exhaust butterfly isolation valves shall be verified to be blocked so as to open to less than or equal to 70° open, unless so verified within the previous 31 days".

For the reasons stated above, repeating the 70° block requirement in the LCO serves no significant purpose with regard to plant safety. The blocked position of the valve cannot be changed. With installation of the new valves compliance to this surveillance requirement and satisfaction of the LCO will not be possible. The new valves are qualified to close from a fully open position of 90° in 5 seconds against a DBA LOCA and will not be required to have a block and therefore cannot satisfy the surveillance, LCO, or Action Statement that refers to a block. With the LCO not satisfied the Action Statements would require plant shutdown. Compliance will not be possible.

Again, for those valves not scheduled to be replaced in the Spring 1994 outage, the block has been verified as being in place and effective since plant startup. No degradation of the blocking mechanism has been observed. Because the block is effective, has not degraded over the intervening years since startup, cannot be changed by the operator and the LCO and surveillance imposing verification of the block will become confusing with installation of the new valves, deletion of Surveillance 4.6.1.8.1 and removal of reference to the block in the LCO is appropriate. Elimination of Surveillance 4.6.1.8.1 and removal of the reference to the block in the LCO will not decrease the ability to safely operate the Plant with respect to the Drywell and Suppression Chamber Purge Supply System. In this manner compliance to the Specification can be maintained. Also, this submittal proposes a Bases change that incorporates the 70° block. As such, additional assurance is provided that the block will remain a controlled design feature of the plant governed by the 10 CFR 50.59 process for those valves not being replaced in the forthcoming outage.

The present containment purge and vent valves have resilient material seals and are periodically opened during Operational Conditions 1, 2, or 3. As a result, wear of the resilient seal material can occur causing primary containment leak rates to exceed acceptable levels. Therefore, at time of initial licensing, additional leak rate testing beyond the testing requirements of 10 CFR 50, Appendix J was required to ensure operability. Industry operating experience had demonstrated that a resilient material seal had the potential to degrade in a shorter period than other types such as metal to metal. The present six month schedule was established as a result of an NRC initiative contained in Generic Issue (GI B-20), Containment Leakage Due to Seal Deterioration, and implemented at WNP-2 upon issuance of the WNP-2 Operating License.

The 70° block permanent design feature was implemented in response to a concern that the valve, if fully open, would not be able to close fast enough during a DBA LOCA to prevent damage to the Standby Gas Treatment (SGT) System through which the system would be exhausting. As a result, the SGT would not be capable of mitigating the consequences of the DBA LOCA. The block at 70° was calculated as an appropriate amount of valve opening from which the valve could be assured of closing in time to preserve the operability of the SGT System. The block was then installed to ensure that the valve would not be opened beyond 70°.

The block is a fixed design feature and not affected by any controls available to the operator. It is a fixed condition that can only be changed by plant modification requiring evaluation against the requirements of 10 CFR 50.59 which governs plant modifications. The block is a welded extension to the stop tube inside the actuator that cannot be adjusted in any manner. Disassembly is required to access the stop assembly at which point maintenance work practices would assure correct reassembly. Replacement of the actuator would require a procurement specification to be generated which in turn, through the procurement work process, would assure that modifications would be required of any procured actuator such that it could not be installed without the necessary modifications. In this way adequate practices are in place to assure that the 70° stop tube block will not inadvertently be eliminated through replacement or maintenance. The block cannot be altered by the operator, as such, attention to the block in Technical Specifications is an unnecessary distraction for the operator to consider when evaluating the operability of the Purge System. Because this is a design feature that is fixed and not capable of being altered by the operator the benefit gained in repeating the requirement in the LCO or in verifying that the block is in place during each operation of the valve is marginal. Verifying this design feature does not significantly enhance safety and to some degree the verification distracts from other plant activities and over emphasizes the importance of the mechanical block design feature over that of other permanently installed safety related design features. Because the surveillance provides marginal benefit for those valves that are not being replaced in the Spring 1994 outage and because the new valves will not require blocking at 70°, the block reference in the LCO and Surveillance 4.6.1.8.1 are not necessary. Compliance, after valve replacement with one set of valves having a block and another set not having a block, will not be possible. Therefore, the surveillance and reference to the block in the LCO can be deleted without impacting safe operation of the plant or abilities to comply with the Technical Specifications.

The Supply System has evaluated the proposed change to remove reference to the block from the LCO and Action Statement and delete Surveillance 4.6.1.8.1 and determined that it 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 LCO and Action Statement requires and the surveillance verifies that the permanently installed 70° block is in place and effective. Because the block design feature of the valves not being replaced is fixed and not capable of being altered to allow a larger valve opening there is no condition under which the valve could be opened to a larger position if the surveillance was not done. As a result, deletion of the surveillance and removal of reference to the block from the LCO and Action Statement will have no effect. Because these valves will continue to be limited to the 70° position by a designed mechanical block and the new valves are qualified to close from their maximum open (90°) position within 5 seconds against a DBA LOCA the assumptions

of previously evaluated accidents involving the Drywell and Suppression Chamber Purge System will remain valid. Hence, the probability of previously evaluated accidents involving the system will not change with deletion of the surveillance and removal of reference to the block from the LCO and Action Statement. Because the limit on the valve opening will be in effect for those valves not being replaced and the replacement valves are qualified to close against a DBA LOCA the mitigative function of the valves to close under DBA LOCA conditions is not affected and both the Purge and SGT Systems will remain operable and capable of performing their design accident mitigating functions. Therefore, the consequences of previously evaluated accidents involving these systems will not be impacted by deletion of the surveillance and removal of reference to the block from the LCO and Action Statement.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because the change does not introduce any new modes of plant operation nor does it require physical modification of the plant. No aspect of the design or plant operation is affected by deletion of the surveillance or removal of the reference to the block from the LCO and Action Statement. Those valves not being replaced will continue to be limited from opening greater than 70° by the permanently installed and non-adjustable blocking feature and the capability of these valves to meet accident analysis design requirements will remain unchanged. Because the block design is fixed, elimination of the surveillance and removal of reference to the block from the LCO and Action Statement does not represent a potential that the valves could be changed in any manner. The replacement valves will be qualified for operation from a full, 90°, open position to be capable of closing under DBA LOCA conditions within 5 seconds. The maximum full open position of the replacement valves is 90°. Therefore, because removal of the surveillance and block reference in the LCO and Action Statement does not create any unanalyzed valve or operating conditions, the change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

3) Involve a significant reduction in a margin of safety. Because the block is fixed, non-adjustable and cannot be changed except by plant modification it will remain effective. No degradation of the mechanism has been observed over the intervening years of plant operation since 1983. As a result, the margin of safety created by the block is not reduced by elimination of the surveillance. At the maximum open position the valves will continue to be restricted to 70° of opening. Because the surveillance does not have significant safety benefit (the design is fixed, it has not been observed as degraded or ineffective) the margin of safety associated with the surveillance is marginal and may be a detraction from overall plant operation. The verification process and any efforts spent with regard to the verification (however small) dilute attention given to other more dynamic plant activities. Additionally, the surveillance of a fixed plant design places

undue emphasis on the design feature being verified over other safety significant fixed plant designs and from this standpoint detracts from the overall margin of safety in the fixed plant design by emphasis on the block mechanism. Hence, because the margin of safety created by the surveillance is not significant in itself and the surveillance could be detrimental to overall plant operation, elimination of the surveillance and removal of reference to the block in the LCO and Action Statement does not involve a significant reduction in the margin of safety.

The Supply System has evaluated the proposed change to allow the new valves with metal to metal seals to be tested as Type C valves while leaving the testing schedule for the elastomer, resilient seal material valves on the present six month schedule and determined that it 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 metal to metal seat valves meet the Appendix J criteria necessary to be tested as Type C valves. Testing on a less frequent schedule implies that degradation of a valve would go undetected for a greater length of time. However, because the seals are metal to metal the capability of the valves to remain effective and meet the design requirements for leakage over an extended period has been designed into the valves. Further, extended performance has been proven by industry experience with these types of metal to metal seat valves. Therefore there is no significant possibility that the new valves could degrade excessively over the extended period and as a result not be capable of limiting leakage to within design bases assumptions. Because the new valves will maintain leakage within accepted limits over the extended period, testing of the new valves on a Type C schedule does not represent a significant increase in the probability or consequences of a previously evaluated accident.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because the change in surveillance frequency for the replacement valves does not introduce any new mode of plant operation nor does it require modification of the plant. The valves will limit leakage to acceptable values over the extended period. Hence, there is no decrease in confidence that the valves will perform the same as the elastomer sealed valves tested on a six month schedule. Therefore, there is no change in operating conditions or impact to design bases accident assumptions. The performance of the replacement valves on a Type C test schedule will be the same or better than the elastomer seated valves on a six month schedule. The replacement valves will be required to meet even tighter permissible leakage limits. Hence, the possibility of a new or different kind of accident than those previously evaluated is not created by this change.

3) Involve a significant reduction in a margin of safety. The margin of safety created by the testing schedule is that degradation of the valve will be discovered prior to exceeding design bases accident assumptions for leakage. In this manner, the safe operation of the plant is assured. The new valves, because of a metal to metal seal design, are proven to be more resistant to degradation and will maintain acceptable leakage rates over the extended period. Accordingly, because of a better design the test schedule can be extended without impacting the margin of safety (assured by testing before a valve can reach a significantly degraded condition) and jeopardizing design bases accident assumptions. The Type C testing schedule will assure that any degradation of the replacement valves will be identified before leakage rates reach an unacceptable level. For this reason, the change in test frequency for the replacement valves does not represent a significant decrease in the present margin of safety created by the resilient seal valve testing schedule.

The deletion of the note on page 3/4 6-12 is an editorial change. The note is no longer applicable and can be deleted without consequence. The Supply System has evaluated deletion of the note and determined that it 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 is an administrative change that has no impact on the operation of the plant and cannot have a credible impact on the possibility or consequences of a previously evaluated accident. The change does not result in any hardware or operating procedure changes or in any manner contribute to the probability or consequences of a previously evaluated accident. Hence, it cannot increase the probability or consequences of a previously evaluated accident.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because the change does not introduce any new modes of plant operation nor does it require physical modification of the plant. It simply removes an outdated purge time allowance that is no longer applicable. Hence, the possibility of a new or different kind of accident than those previously evaluated is not created by this change.

3) Involve a significant reduction in a margin of safety. An administrative change that has no impact on the operation of the plant cannot significantly impact the margin of safety created by the affected specification. This change removes an outdated purge time allowance that is not applicable and does not contribute to any margin of safety. Because deletion of the outdated allowance does not have a technical or operational impact the margin of safety created by the specification is not affected by the change.

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION 3/4.6.1.8, DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

The relocation of the "actions" in Surveillance 4.6.1.8.1 to Action Statement 3.6.1.8.b is an administrative change in that the requirements are not changed. They remain effective and are relocated to provide better visibility. The accepted practice is that the surveillance proves operability and if the surveillance is not satisfied the Action Statement is entered to place the system or plant in a more conservative condition. The present surveillance allows action to be taken within the surveillance. This is not consistent with the Technical Specifications and has a potential for being inconsistently followed. The proposed relocation returns this specification to the accepted format. The Supply System has evaluated the relocation of the "actions" and determined that it 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 is an administrative change that has no impact on the operation of the plant and cannot have a credible impact on the possibility or consequences of a previously evaluated accident. The probability of previously evaluated accidents remain the same with or without this change. Because no presently required actions are being deleted or have greater potential for being missed the consequences of previously evaluated accidents are not increased as a result of this change. For these reasons this change will not increase the probability or consequences of previously evaluated accidents.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because the change does not introduce any new modes of plant operation nor does it require physical modification of the plant. It provides greater visibility to actions necessary to conservatively operate the plant. Hence, the possibility of a new or different kind of accident than those previously evaluated is not created by this change.

3) Involve a significant reduction in a margin of safety. An administrative change that has no technical or operational impact on the plant cannot significantly impact the margin of safety created by the affected specification. This change relocates a requirement for action from the surveillance to the Action Statement, without changing what the operator is expected to do. It provides better visibility for the action thereby decreasing the potential that the action could be overlooked. Therefore, the margin of safety created by the specification is not affected by this change.

In preparing this request the Bases were also reviewed for impact. It is evident that the Bases were written to preclude use of the butterfly valves in Operational Conditions 1, 2 or 3 and were not revised at the time of licensing to recognize the 70° block and the limited operational time allowed thereby. Accordingly, a revision to the Bases is also included to reflect the intended use of the system and the Type C testing schedule for metal to metal seated valves.

REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION 3/4.6.1.8, DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

As discussed above, the Supply System concludes that these changes do not involve a significant hazards consideration, nor is there a potential for a significant change in the types or significant increase in the amount of any effluents that may be released offsite, nor does the change 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 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 and the Supply System Corporate Nuclear Safety Review Board. In accordance with 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

The new valves will be installed during the 1994 Spring Refueling Outage. Therefore, to support resumption of power operation after the outage, Staff approval of this Technical Specification change is requested by June 1, 1994.

Sincerely,

J. V. Parrish (Mail Drop 1023)
Assistant Managing Director, Operations

PLP/bk
Attachments

cc: BH Faulkenberry - NRC RV
NS Reynolds - Winston & Strawn
JW Clifford - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A
W Bishop - EFSEC

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Request for Amend to TS 3/4.6.1.8
Drywell & Suppression Chamber
Purge System

I. J. V. PARRISH, being duly sworn, subscribe to and say that I am the Assistant Managing Director, Operations 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 12/16, 1993

J. V. Parrish, Assistant Managing Director
Operations

On this date personally appeared before me J. V. PARRISH, 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 16th day of December 1993.

Traci M. Hardy
Notary Public in and for the
STATE OF WASHINGTON

Residing at Kennewick, WA

My Commission Expires Aug. 9, 1995