ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8901310220 DOC.DATE: 89/01/12 NOTARIZED: NO DOCKET #
FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
AUTH.NAME AUTHOR AFFILIATION
KARNER,D.B. Arizona Nuclear Power Project (formerly Arizona Public Serv
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to License NPF-41,amending Tech Specs to support Cycle 3 operation of facility.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 8+30
TITLE: OR Submittal: General Distribution

NOTES:Standardized plant. 05000528

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD5 LA	1	0	PD5 PD	2	2
	CHAN,T	1	1	DAVIS,M	1	1
INTERNAL:	ACRS	6	6	ARM/DAF/LFMB	1	0
	NRR/DEST/ADS 7E	1	1	NRR/DEST/CEB 8H	1	1
	NRR/DEST/ESB 8D	1	1	NRR/DEST/MTB 9H	1	1
	NRR/DEST/RSB 8E	1	1	NRR/DEST/SICB	1	1
	NRR/DOEA/TSB 11	1	1	NUDOCS-ABSTRACT	1	1
	OGC/HDS1	1	0	REG FILE 01	1	1
	RES/DSIR/EIB	1	1			
EXTERNAL:	LPDR	1	1	NRC PDR	1	1
	NSIC	1	1			
NOTES:		1	1			

w/check $150
#008008

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 24

RIDS/ADDS

RIDS/ADDS

Arizona Nuclear Power Project
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

161-01614-DBK/BJA
January 12, 1989

Docket No. STN 50-528

Document Control Desk
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Proposed Reload Technical Specification Changes
File: 89-E-056-026; 89-F-005.419.05

Attached please find proposed changes to the PVNGS Unit 1 Technical Specifications. The proposed changes are required to support Cycle 3 operation of PVNGS Unit 1. Attachment 1 provides a short description of each of the proposed Technical Specification changes and the schedule for when each change is needed to support the Cycle 3 startup schedule. We request that the proposed changes be provided a sufficient time prior to the scheduled milestone so that the affected procedures can be revised prior to reaching the milestone. Additionally, please note that the Reload Analysis Report for Unit 1, Cycle 3 is being provided under a separate cover letter.

For each proposed Technical Specification change, the following information has been included within this amendment request:

A. Description of the Technical Specification Amendment Request.
B. Purpose of the Technical Specification.
C. Need for the Technical Specification Amendment.
D. Basis for Proposed No Significant Hazards Consideration Determination.
E. Safety Analysis for the Amendment Request.
F. Environmental Impact Consideration Determination.
G. Marked-up Technical Specification Change Pages.

In accordance with the requirements of 10CFR170.12(c), the license amendment application fee of $150.00 is being submitted with this request. Additionally, by copy of this letter, we are also forwarding the proposed changes to the appropriate state agency.

A001
1/1
w/check #150
#008008

If you have any questions on this matter, please contact Mr. A. C. Rogers at (602) 371-4041.

Very truly yours,

D. B. Karner
Executive Vice President

DBK/BJA/pvk
Attachments

cc: G. W. Knighton (all w/a)
T. L. Chan
J. B. Martin
T. J. Polich
A. C. Gehr
Director - ARRA

ATTACHMENT 1 - DESCRIPTION OF CHANGES

The following proposed Technical Specification changes are necessary to support Cycle 3 operation of Unit 1. Note that each of the changes listed below is provided in a separate attachment of this letter.

1) Shutdown Margin. This proposed change involves the revision of Figure 3.1-1A and Tables 3.1-2, 3.1-3 and 3.1-5. The changes are required to reflect cycle specific shutdown margin requirements and backup boron concentration monitoring frequencies. The revisions result in more restrictive operating limits for Cycle 3. These changes are needed prior to Mode 5 re-entry following the refueling activities. This milestone is currently projected to occur on May 1, 1989.

2) CEA Insertion Limits. This proposed change revises Technical Specification Figures 3.1-3 (COLSS in Service) and 3.1-4 (COLSS out of Service). These two figures provide regulating group CEA insertion limits versus core thermal power. The revised figures will result in more restrictive transient insertion limits. The more restrictive limits are required by the Cycle 3 safety analysis. This change is needed prior to criticality (Mode 2 entry) following the refueling activities. This milestone is currently projected to occur on May 31, 1989.

3) Azimuthal Power Tilt Allowance. Figure 3.2-1A will be revised to allow for a higher azimuthal power tilt during low power (less than 40% of rated thermal power) operation. This change is identical to a change already approved for PVNGS Unit 2 (refer to Amendment 25 of the Unit 2 Operating License). This proposed change is needed prior to reaching the 20% power plateau following the refueling activities. This milestone is currently projected to occur on June 5, 1989.

4) DNBR Margin. This proposed change will revise Figures 3.2-2 and 3.2-2A. These figures provide DNBR margin limits for various configurations of COLSS and CEACs inoperable. The changes are required by the Cycle 3 safety analysis. This proposed change is needed prior to reaching the 20% power plateau following the refueling activities. This milestone is currently projected to occur on June 5, 1989.

SHUTDOWN MARGIN

A. DESCRIPTION OF THE PROPOSED CHANGE

This proposed change involves the revision of Figure 3.1-1A and Tables 3.1-2, 3.1-3 and 3.1-5. Figure 3.1-1A provides shutdown margin requirements versus RCS cold leg temperature for the case where any full-length CEA is withdrawn. Tables 3.1-2, 3.1-3 and 3.1-5 provide required boron monitoring frequencies in the event that one or both startup channel high neutron flux alarms are inoperable. The proposed revisions are required to reflect cycle specific requirements. The revisions result in more restrictive operating limits.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

The shutdown margin requirements of Figure 3.1-1A ensure that the reactor remains subcritical following a design basis accident or anticipated operational occurrence. Tables 3.1-2, 3.1-3 and 3.1-5 provide frequencies for monitoring RCS boron concentration in the event that one or both startup channel high neutron flux alarms are inoperable. The monitoring frequencies ensure that an inadvertent boron dilution event will be observed and that the operator will be provided with sufficient time to terminate the event before complete loss of reactor shutdown margin.

C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

The proposed changes to the shutdown margin and boron monitoring frequency requirements are necessary to ensure that the Technical Specifications are consistent with the safety analyses performed for the Cycle 3 core design. More restrictive operating limits are necessary to ensure acceptable analysis results.

D. BASIS FOR NO SIGNIFICANT HAZARDS CONSIDERATION

1. The Commission has provided standards for determining whether a significant hazards consideration exists as stated in 10CFR50.92. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with a proposed amendment would not: (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Involve a significant reduction in a margin of safety. A discussion of these standards as they relate to the amendment request follows:

   Standard 1 -- Involve a significant increase in the probability or consequences of an accident previously evaluated.

Basis -- The proposed Technical Specification changes are required to make the Technical Specifications consistent with the Cycle 3 safety analyses. Figure 3.1-1A provides shutdown margin requirements versus RCS cold leg temperatures when any full-length CEA is withdrawn. For operation below a RCS cold leg temperature of 350 F, the shutdown margin must be increased from 3.5 to 4.0 % delta K/K. This ensures that the consequences of DBEs and AOOs remain bounded by the reference cycle analysis results. Tables 3.1-2, 3.1-3 and 3.1-5 provide boron monitoring frequencies when one or both startup channel high neutron flux alarms are inoperable. In some cases, the required monitoring frequencies must be reduced. This ensures that the time criteria for detection and correction of a boron dilution event remain the same as the reference cycle. In conclusion, the proposed changes do not affect the probability of occurrence of any previously analyzed events. Additionally, the proposed changes ensure that the consequences of previously analyzed events will be no greater than the reference cycle.

Standard 2 -- Create the possibility of a new or different kind of accident from any accident previously evaluated.

Basis -- The proposed changes to Figure 3.1-1A and Tables 3.1-2, 3.1-3 and 3.1-5 are required to make the Technical Specifications consistent with the Cycle 3 safety analyses. The changes will not create the possibility of a new or different kind of accident from any accident previously analyzed. The changes ensure that the results of DBEs and AOOs are bounded by the reference cycle analyses.

Standard 3 -- Involve a significant reduction in a margin of safety.

Basis -- The bases section for Limiting Condition for Operation (LCO) 3.1.1.2 states that the shutdown margin limits of Figure 3.1-1A are necessary to ensure that the reactor remains subcritical following a DBE or AOO. With the proposed change to Figure 3.1-1A, the Cycle 3 safety analyses ensure that the results of DBEs and AOOs are bounded by the reference cycle analyses. The bases section for LCO 3.1.2.7 states that the boron monitoring frequencies ensure that boron dilution events will be detected with sufficient time for the operator to terminate the event before complete loss of shutdown margin. The revised monitoring frequencies of Tables 3.1-2, 3.1-3 and 3.1-5 ensure that the time criteria for these actions will be consistent with the reference cycle. Therefore, the margin of safety, as defined in the bases sections of the Technical Specifications, will be maintained.

2. The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (51FR7751) of amendments that are considered least likely to involve a significant hazards consideration. The proposed change matches the following example:

(iii) For a nuclear power reactor, a change resulting from a nuclear reactor core reloading, if no fuel assemblies significantly different from those found previously acceptable to the NRC for a previous core at the facility in question are involved. This assumes that no significant changes are made to the acceptable criteria for the technical specifications, the analytical methods used to demonstrate conformance with the technical specifications and regulations are not significantly changed, and that the NRC has previously found such methods acceptable.

E. SAFETY EVALUATION FOR THE PROPOSED CHANGE

The proposed Technical Specification changes are required to make the Technical Specifications consistent with the Cycle 3 safety analyses. Figure 3.1-1A provides shutdown margin requirements versus RCS cold leg temperatures when any full-length CEA is withdrawn. For operation below a RCS cold leg temperature of 350 F, the shutdown margin must be increased from 3.5 to 4.0 % delta K/K. This ensures that the consequences of DBEs and AOOs remain bounded by the reference cycle analysis results. Tables 3.1-2, 3.1-3 and 3.1-5 provide boron monitoring frequencies when one or both startup channel high neutron flux alarms are inoperable. In some cases, the required monitoring frequencies must be reduced. This ensures that the time criteria for detection and correction of a boron dilution event remain the same as the reference cycle. In conclusion, the proposed changes do not affect the probability of occurrence of any previously analyzed events. Additionally, the proposed changes ensure that the consequences of previously analyzed events will be no greater than the reference cycle.

The proposed changes to Figure 3.1-1A and Tables 3.1-2, 3.1-3 and 3.1-5 are required to make the Technical Specifications consistent with the Cycle 3 safety analyses. The changes will not create the possibility of a new or different kind of accident from any accident previously analyzed. The changes ensure that the results of DBEs and AOOs are bounded by the reference cycle analyses.

The bases section for Limiting Condition for Operation (LCO) 3.1.1.2 states that the shutdown margin limits of Figure 3.1-1A are necessary to ensure that the reactor remains subcritical following a DBE or AOO. With the proposed change to Figure 3.1-1A, the Cycle 3 safety analyses ensure that the results of DBEs and AOOs are bounded by the reference cycle analyses. The bases section for LCO 3.1.2.7 states that the boron monitoring frequencies ensure that boron dilution events will be detected with sufficient time for the operator to terminate the event before complete loss of shutdown margin. The revised monitoring frequencies of Tables 3.1-2, 3.1-3 and 3.1-5 ensure that the time criteria for these actions will be consistent with the reference cycle. Therefore, the margin of safety, as defined in

the bases sections of the Technical Specifications, will be maintained.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed Technical Specification change request does not involve an unreviewed environmental question because operation of PVNGS Unit 1 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the staff's testimony to the Atomic Safety and Licensing Board (ASLB), Supplements to the FES, Environmental Impact appraisals, or in any decisions of the ASLB; or

2. Result is a significant change in effluents or power levels; or

3. Result in matters not previously reviewed in the licensing basis for PVNGS which may have a significant environmental impact.

G. MARKED-UP TECHNICAL SPECIFICATION CHANGE PAGES

Enclosed are revised Figure 3.1-1A and Tables 3.1-2, 3.1-3 and 3.1-5 of the PVNGS Unit 1 Technical Specifications.