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RECIP. NAME RECIPIENT AFFILIATION
KNIGHTON, G. W. PWR Project Directorate 7

SUBJECT: Application for amend to License NPF-41, revising Tech Spec Section 3/4.6.1, "Primary Containment," & bases. Revised containment analyses demonstrate acceptability of containment spray pump flow rate change. Fee paid.

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

October 2, 1986
ANPP-38537-JGH/JRP/98.05

Director of Nuclear Reactor Regulation
Attention: Mr. George W. Knighton, Project Director
PWR Project Directorate #7
Division of Pressurized Water Reactor Licensing - B
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528 (License NPF-41)
Technical Specification Change-Revised Containment Analyses
File: 86-005.419.05; 86-056-026

Dear Mr. Knighton:

This letter is provided to request a change to the PVNGS Unit 1 Technical Specifications Section 3/4.6.1, Primary Containment and its associated Bases. The revised containment analyses demonstrate the acceptability of the containment spray pump flowrate change as well as the integrity of the containment following an accident. These changes will not significantly reduce the margin of safety as defined in the Bases for any of the PVNGS Unit 1 Technical Specifications. The revised containment peak accident pressure of 49.5 psig assures that the containment design pressure of 60 psig is not exceeded and that containment integrity will be maintained following the most limiting LOCA.

The changes presented herewith were previously discussed with and agreed to by your staff during the PVNGS Unit 2 Technical Specification review process and have been incorporated into the PVNGS Unit 2 license.

Enclosed within this change request are the following:

A. Description of the Proposed Change Request.

B. Summary of Safety Evaluation.

C. Basis for No Significant Hazards Consideration.

D. Environmental Impact Consideration Determination.

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E. Marked-up Technical Specification Change Pages

Pursuant to 10CFR50.91(b)(1), and by copy of this letter and attachments, we have notified the Arizona Radiation Regulatory Agency of this request for a Technical Specification change. In accordance with 10CFR170.12(c), the license amendment application fee of $150 is also enclosed.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

Attachment

JGH/JRP/dlm

cc: O. M. DeMichele
E. E. Van Brunt, Jr.
Director Region V USNRC
NRC Project Manager-E. A. Licitra
NRC Resident Manager-R. P. Zimmerman
Director ARRA-C. F. Tedford
A. C. Gehr

A. Description of Amendment Request:

The existing containment spray system performance is based on a single train flow rate of 3,740 gpm. As part of the effort to increase the containment spray pump performance margin for Technical Specification Surveillance Testing, an evaluation of peak containment pressures and temperatures was performed assuming a reduced containment spray pump flowrate of 3,525 gpm. The results of the peak containment pressure analyses demonstrate acceptable results at the reduced containment spray pump flows (refer to PVNGS FSAR Section 6.2.1, Amendment 15). The containment peak accident pressure is increased from 49.2 to 49.5 psig which is still well within the containment design pressure of 60.0 psig. The Technical Specification changes requested in this package consists of the following:

1) Limiting Conditions for Operation 3.6.1.2.a, 3.6.1.3.b and Surveillance Requirements 4.6.1.1.c, 4.6.1.2.a, 4.6.1.2.d, 4.6.1.3.b and associated Bases sections: change the containment peak accident pressure (Pa) from 49.2 psig to 49.5 psig based upon the results of the revised containment analyses.

2) Action Statement a.1 of Limiting Condition for Operation 3.6.1.3: add a clarification note to the action statement to allow for the opening of the outer containment air lock door to facilitate the repair of an inoperable inner air lock door. The added clarification also limits the allowable time spent with the outer air lock door open to one hour per year.

3) Surveillance Requirement 4.6.2.1.b: change the containment spray pump differential pressure requirement from 273 psid to 257 psid. This change is in accordance with the assumptions used in the revised containment analyses where the containment spray pump flowrate was reduced in order to increase operating margins. This change is justified based upon the satisfactory results of the revised containment analyses.

It should be noted that these changes have been previously reviewed and approved by the NRC and incorporated into the PVNGS Unit 2 Technical Specifications.

The purpose of this technical specification is that of primary containment integrity. This ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10CFR100 during accident conditions. The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure. The limitations on containment internal pressure ensure that (1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the outside atmosphere of 4 psig and (2) the containment peak pressure does not exceed the design pressure of 60 psig during LOCA conditions.

B. Summary of Safety Evaluation:

These Technical Specification changes will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR. The containment analyses were revised to evaluate a decrease in the containment spray pump flowrate. The revised analyses are presented in Section 6.2.1 of the PVNGS FSAR and they demonstrate the acceptability of this flowrate change. The revised analysis for the most limiting containment pressurization transient give acceptable results as the containment peak accident pressure of 49.5 psig is still well within the design pressure for the containment building of 60.0 psig. Thus, the integrity of the containment is assured and the offsite dose consequences of containment pressurization accidents will not be increased by these changes. It should be noted that the revised containment analyses have also been submitted to the NRC by letter dated September 30, 1985 (ANPP-33610).

In Technical Specification 3.6.1.3, by allowing the outer door to be opened for a small fraction of the time during the year will allow maintenance on the inner door of the airlock. Restricting the amount of time the outer door is open, ensures that the probability of risk to the health and safety of the public remains low. This change was submitted in the letter from ANPP to the NRC dated November 1, 1985 (ANPP-33898).

These Technical Specification changes will not significantly create the possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR. The revised containment analyses demonstrate the acceptability of the containment spray pump flowrate change as well as the integrity of the containment following an accident.

These Technical Specification changes will not reduce the margin of safety as defined in the Bases for any of the PVNGS Unit 1 Technical Specifications. The revised containment peak accident pressure of 49.5 psig assures that the containment design pressure of 60 psig is not exceeded and that containment integrity will be maintained following the most limiting LOCA.

C. Basis for No Significant Hazards Consideration:

(A) The proposed change does not involve a significant hazards consideration because operation of Palo Verde Nuclear Generating Station Unit 1 in accordance with this change would not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated:

Basis: The containment analyses were revised to evaluate the effects of a reduction in the containment spray pump flowrate. The revised analyses for the most limiting containment pressurization transient give acceptable results as the containment peak accident pressure of 49.5 psig is still well within the design pressure for the containment

building of 60.0 psig. Therefore, the integrity of the containment is assured and the offsite dose consequences of accidents which may result in the pressurization of the containment will not be increased by this change.

2) Create the possibility of a new or different kind of accident from any accident previously analyzed.

Basis: The proposed revision reduces the required containment spray pump differential pressure at minimum flow conditions from 273 psid to 257 psid. This allows for a greater operating margin between the actual containment spray pump performance and the Technical Specification requirement as explained in the letter from ANPP to the NRC dated April 15, 1985 (ANPP-32401). The acceptability of this change has been demonstrated by revised containment analyses. The revised analyses result in a slight increase in containment peak accident pressure (from 49.2 psig to 49.5 psig) but the peak pressure still remains well within the containment design pressure of 60.0 psig. Thus, the analyses show that there is not the possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR.

3) Involve a significant reduction in a margin of safety.

Basis: Technical Specification Bases 3/4.6.1.4 and 3/4.6.1.6 will be revised to state that 49.5 psig is the containment peak accident pressure following a LOCA. This pressure is less than the containment design pressure at 60.0 psig and is consistent with the safety analyses. Therefore, this change does not result in a significant reduction in a margin of safety.

(B) The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48FR14870) of amendments that are considered least likely to involve significant hazards considerations.

The proposed changes in A(1), (2) and (3); to change the containment peak accident pressure; to add clarification to limit the allowable time spent with the outer air lock door open; and to change the containment spray pump differential pressure requirement, is similar to Example (vi) in that the requirement may be deemed to be relaxed; however, where the results of the change clearly satisfies the safety analysis. The proposed change amending the associated Bases is similar to Example (i) in that it is an administrative change to make the Bases consistent with the proposed change.

D. Environmental Impact Consideration Determination

The proposed 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 staffs testimony to the Atomic Safety and Licensing Board, Supplements to the FES, Environmental Impact Appraisals, or in any decisions of the Atomic Safety and Licensing Board; or

2) Result in 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.

E. Marked-Up Technical Specification Change Pages

(See Attached Pages 3/4 6-1, 3/4 6-2, 3/4 6-3, 3/4 6-4, 3/4 6-5, 3/4 6-15, B3/4 6-2).