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RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Application for amends to Licenses NPF-41 & NPF-51, revising Tech Spec 3.7.1.3 to change required storage tank level from existing 23 ft to indicated level of 25 ft. Fee paid.

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June 24, 1987
161-00307-JGH/BJA

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

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1 and 2
Docket Nos. STN 50-528 (License No. NPF-41)
STN 50-529 (License No. NPF-51)
Proposed Technical Specification Change - Condensate Storage Tank Level
File: 87-E-056-026; 87-F-056-026; 87-F-005-419.05

Dear Sirs:

The purpose of this letter is to request a change to the PVNGS Units 1 and 2 Technical Specifications. The proposed change revises Technical Specification 3.7.1.3 concerning the Condensate Storage Tank (CST). The revised Technical Specification will change the required CST level from the existing 23 feet to an indicated level of 25 feet. A recent engineering calculation has shown that the 25 foot level is the correct level to ensure that 300,000 gallons of usable water is available in the CST.

Enclosed within this change request package are the following:

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

A001
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Pursuant to the requirements of 10CFR50.91(b)(1), and by copy of this letter, we have notified the Arizona Radiation Regulatory Agency of this request for a Technical Specification change. In accordance with the requirements of 10CFR 170.12(c), the license amendment application fee of $150.00 is also enclosed.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/BJA/ls
Attachment

cc: O. M. De Michele (all w/a)
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Attachment to
161-00307

A. DESCRIPTION OF THE PROPOSED CHANGE

This proposed Technical Specification change revises Limiting Condition for Operation (LCO) 3.7.1.3 to change the required minimum level in the Condensate Storage Tank (CST) from 23 feet to an indicated level of 25 feet.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

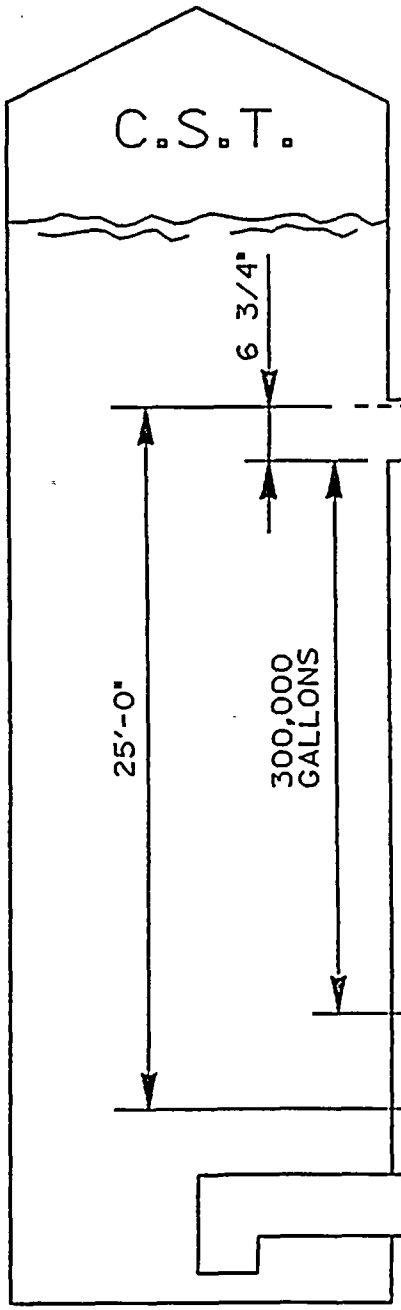
The CST is a Seismic Category I water storage tank that provides the primary source of demineralized water for the auxiliary feedwater system. The auxiliary feedwater system is used to remove decay heat and to cooldown the Reactor Coolant System (RCS) to a point where the shutdown cooling system can be used for decay heat removal. The most limiting event in terms of CST inventory is the Branch Technical Position (BTP) RSB 5-1 scenario (natural circulation cooldown) which requires that the CST have sufficient inventory to maintain the RCS at hot standby conditions for 4 hours followed by a natural circulation cooldown to shutdown cooling entry conditions. Thus, the purpose of Technical Specification 3.7.1.3 is to ensure that the CST contains a sufficient water volume to satisfy the Branch Technical Position RSB 5-1 requirements. Previous analysis (reference ANPP-40069 dated February 9, 1987) has shown that a minimum CST inventory of 300,000 gallons is sufficient to satisfy these requirements. As an additional note, the CESSAR FSAR imposes an interface requirement on the BOP design. The interface requirement is documented in FSAR section 5.1.4.G.9 and requires that 300,000 gallons of secondary quality makeup water be available to the auxiliary feedwater system. Futher discussion of the PVNGS condensate storage tank design can be found in FSAR section 9.2.6.

C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

This proposed Technical Specification change to revise LCO 3.7.1.3 by changing the minimum required CST level from 23 feet to an indicated level of 25 feet is requested in order to ensure that the safety analysis assumption of 300,000 gallons is satisfied. An engineering calculation has shown that the existing Technical Specification level requirement of 23 feet only ensures that 280,540 gallons of feedwater is available to the auxiliary feedwater pumps. The engineering calculation also showed that a minimum CST level of 25 feet (as indicated on the control room level indicator) will provide the required 300,000 gallons of usable feedwater. A review was performed to determine the impact of this change on past plant operations. The review indicated that there were four instances where the actual CST level in Unit 1 was below 25 feet. In these cases, the requirements of the action statements were met by either restoring the CST level to above 25 feet within the required time or by aligning the auxiliary feedwater pump suction to the reactor makeup water tank.

Figure 1 shows the relevant elevations of the condensate storage tank to explain this proposed Technical Specification change. As shown in Figure 1, the reserved 300,000 gallons is measured from plant elevation 104' - 3 3/4" to the bottom of the lowest non-safety grade penetration into the CST at plant

FIGURE 1: CONDENSATE STORAGE TANK LEVELS



PLANT ELEVATION	INDICATED LEVEL (LT-35A & 36B)	DESCRIPTION
135'-7 1/4"	32'-1 1/4"	NORMAL OPERATING MINIMUM CST LEVEL
128'-6"	25'-0"	THIS LEVEL ACCOUNTS FOR INSTRUMENT ERROR OF 6 INCHES AND ROUNDS UP TO THE NEXT FOOT LEVEL INDICATION
127'-11 1/4"	24'-5 1/4"	BOTTOM OF THE LOWEST NON-SAFETY GRADE PENETRATION INTO CST (LINE N-005-HCDA-6")
104'-3 3/4"	0'-9 3/4"	BOTTOM OF RESERVED 300,000 GALLONS
103'-6"	0'-0"	CONTROL ROOM LEVEL INSTRUMENTS INDICATE 0 FEET
101'-3"	—	CENTERLINE OF SAFETY GRADE AUX. FEEDWATER PUMP SUCTION LINE
100'-3 1/2"	—	BOTTOM OF CST

elevation 127' - 11 1/4". These plant elevations correspond to control room indicated levels of 9 3/4" and 24' - 5 1/4", respectively. When instrument error is accounted for, the required indicated level is 25 feet. It should be noted that the instrument error is applied in the conservative direction (i.e., requires a higher CST level) such that the required 300,000 gallon volume is assured as long as the indicated CST level is 25 feet.

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 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 the consequences of an accident previously evaluated.

Basis = The proposed Technical Specification change will not increase the probability of occurrence or the consequences of an accident previously evaluated. The proposed change will revise LCO 3.7.1.3 to ensure that the proper CST inventory of 300,000 gallons is available. The 300,000 gallon inventory is required by the safety analysis for the BTP RSB 5-1 event which requires that enough water be available to maintain hot standby conditions for 4 hours followed by a natural circulation cooldown to shutdown cooling initiation conditions. The events that initiate a BTP RSB 5-1 scenario (i.e., extended loss of offsite power) are independent of the level maintained in the CST. Therefore, this proposed Technical Specification change will not increase the probability of occurrence of any previously evaluated accidents. Additionally, this proposed change to increase the required CST level from 23 feet to an indicated level of 25 feet will ensure that the safety analysis required 300,000 gallons is available for use by the auxiliary feedwater pumps. Therefore, this proposed change ensures that the consequences of accidents are as previously evaluated in the FSAR.

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

Basis = This proposed Technical Specification change will not create the possibility of a new or different kind of accident from any accident previously analyzed. The increase in the required CST level from 23 feet to 25 feet does not change the operation of any plant equipment. Additionally, the change ensures that the required 300,000 gallons is available for use by the safety grade auxiliary feedwater pumps. This ensures that the pumps will operate as previously assumed in the safety analysis. Therefore, since the operation of plant equipment is not effected by this proposed change, the change will not create the possibility of a new or different kind of accident from any accident previously analyzed.

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

Basis = The proposed Technical Specification change will not reduce the margin of safety as defined in the basis for any Technical Specification. Bases section 3/4.7.1.3 concerns the CST. This proposed change ensures that this bases section is satisfied by specifying the appropriate water level that corresponds to a usable volume of 300,000 gallons.

2. The commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (51 FR 7751) of amendments that are considered least likely to involve a significant hazards consideration. This proposed amendment matches example (i) in that it is an administrative change to the Technical Specifications to correct an error in the existing Technical Specifications. The correct level for LCO 3.7.1.3 is the CST level that corresponds to a usable water volume of 300,000 gallons. An engineering calculation has shown that an indicated level of 25 feet corresponds to 300,000 gallons of usable water for the safety grade auxiliary feedwater pumps.

E. SAFETY EVALUATION FOR THE PROPOSED CHANGE

This proposed Technical Specification change will not increase the probability of occurrence or the consequences of an accident previously evaluated. The proposed change will revise LCO 3.7.1.3 to ensure that the proper CST inventory of 300,000 gallons is available. The 300,000 gallon inventory is required by the safety analysis for the BTP RSB 5-1 event which requires that enough water be available to maintain hot standby conditions for 4 hours followed by a natural circulation cooldown to shutdown cooling initiation conditions. The assumptions that define the BTP RSB 5-1 scenario are that offsite power has been lost, only safety grade components can be used, and the most limiting single failure must be assumed. These assumptions constrain the CST volume by not allowing for makeup to the CST during the event and by limiting the CST volume that is credited in the analysis to that which is contained in the Seismic Category I portion of the tank. The consequences of the previous

analysis are unchanged as long as at least 300,000 gallons of feedwater is provided by the CST in accordance with the BTP RSB 5-1 assumptions. A minimum CST level of 25 feet is sufficient to meet these requirements. Therefore, this proposed change does not increase the consequences of an accident previously evaluated. Additionally, this proposed change does not increase the probability of occurrence of any previously evaluated accidents since the events that initiate a BTP RSB 5-1 scenario (i.e., extended loss of offsite power) are independent of the level maintained in the CST.

This proposed Technical Specification change will not create the possibility of a new or different kind of accident from any accident previously evaluated. The increase in the required CST level from 23 feet to an indicated level of 25 feet does not change the operation of any plant equipment. Additionally, the change ensures that the required 300,000 gallons is available for use by the safety grade auxiliary feedwater pumps. This ensures that the pumps will operate as previously assumed in the safety analyses. Therefore, since the operation of plant equipment is not effected by this proposed change, the change will not create the possibility of a new or different kind of accident from any accident previously analyzed.

The proposed Technical Specification change will not reduce the margin of safety as defined in the basis for any Technical Specification. Bases section 3/4.7.1.3 concerns the CST and requires that 300,000 gallons be available in the CST. This proposed change ensures that this bases section is satisfied by specifying the appropriate water level that corresponds to a usable water volume of 300,000 gallons. An level of 25 feet as indicated on the control room level indicators is sufficient to provide the required 300,000 gallons.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed change request does not involve an unreviewed environmental question because operation of PVNGS Units 1 and 2 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, Supplements to the FES, Environmental Impact Appraisals, or in any decisions of the Atomic Safety and Licensing Board; or

2. 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

(See attached page 3/4 7-6 of the PVNGS Units 1 and 2 Technical Specifications).