



A subsidiary of Pinnacle West Capital Corporation

Palo Verde Nuclear
Generating Station

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102-06267-JHH/DFS
October 20, 2010

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528, 50-529, and 50-530
Supplementary Information Concerning Request for Amendment to
Technical Specification 3.7.4, "Atmospheric Dump Valves (ADVs)"**

By letter dated August 25, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102450051), Arizona Public Service Company (APS) submitted a license amendment request (LAR) for Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3. The proposed amendment would revise Technical Specification (TS) 3.7.4, "Atmospheric Dump Valves (ADVs)," to require that two ADV lines per steam generator (SG) be operable in Modes 1, 2, and 3, and Mode 4 when the steam generator is relied upon for heat removal. The proposed amendment would also make corresponding revisions to the Conditions, Required Actions, and Completion Times associated with one or more inoperable ADV lines and maintains consistency between the TS and the PVNGS licensing and design bases.

By email dated September 27, 2010, APS was notified that the NRC staff had reviewed the LAR and concluded that additional information was needed to enable an independent assessment regarding the acceptability of the proposed amendment request. The information requested by the NRC was discussed with APS during a conference call on September 30, 2010, and it was agreed that APS would respond by October 20, 2010. By letter dated October 6, 2010 (ADAMS Accession No. ML102730762), the NRC docketed the request for supplemental information and provided clarification based upon the September 30, 2010, conference call.

No commitments are being made to the NRC by this letter and the information provided in this letter does not modify the conclusion that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c).

ADD
NRR

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Should you need further information regarding this amendment request, please contact
Russell A. Stroud, Licensing Section Leader, at (623) 393-5111.

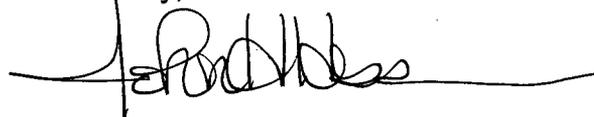
I declare under penalty of perjury that the foregoing is true and correct.

Executed on

(Date)

10-20-10

Sincerely,



JHH/RAS/DFS/gat

Enclosure: Supplementary Information concerning Request for Amendment to
Technical Specification 3.7.4, "Atmospheric Dump Valves (ADVs)"

cc:	E. E. Collins Jr.	NRC Region IV Regional Administrator
	J. R. Hall	NRC NRR Senior Project Manager
	L. K. Gibson	NRC NRR Project Manager
	J. H. Bashore	NRC Senior Resident Inspector for PVNGS
	A. V. Godwin	Arizona Radiation Regulatory Agency (ARRA)
	T. Morales	Arizona Radiation Regulatory Agency (ARRA)

Enclosure
Supplementary Information Concerning Request
for Amendment to Technical Specification 3.7.4,
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Enclosure
Supplementary Information concerning Request for Amendment to Technical Specification 3.7.4, "Atmospheric Dump Valves (ADVs)"

BACKGROUND

By letter dated August 25, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102450051), Arizona Public Service Company (APS) submitted a license amendment request (LAR) for Palo Verde Nuclear Generating Station (PVNGS), Units 1, 2, and 3. The proposed amendment would revise Technical Specification (TS) 3.7.4, "Atmospheric Dump Valves (ADVs)," to require that two ADV lines per steam generator (SG) be operable in Modes 1, 2, and 3, and Mode 4 when the steam generator is relied upon for heat removal. The proposed amendment would also make corresponding revisions to the Conditions, Required Actions, and Completion Times associated with one or more inoperable ADV lines and maintains consistency between the TS and the PVNGS licensing and design bases.

By email dated September 27, 2010, APS was notified that the NRC staff had reviewed the LAR and concluded that additional information was needed to enable an independent assessment regarding the acceptability of the proposed amendment request. The information requested by the NRC was discussed with APS during a conference call on September 30, 2010, and it was agreed that APS would respond by October 20, 2010. By letter dated October 6, 2010, (ADAMS Accession No. ML102730762), the NRC docketed the request for supplemental information and provided clarification based upon the September 30, 2010, conference call.

The purpose of this letter is to provide responses to the NRC's request for supplemental information. In preparing this response, APS found that a majority of CE Nuclear Steam Supply System (NSSS) plants do not have the design redundancy of two ADV's per SG similar to Palo Verde. Typically, these plants have only one ADV per SG. APS will work with the Technical Specification Task Force (TSTF) group and the NRC to submit changes to the Standard TS as determined appropriate based upon the NRC's review of the license amendment request.

The NRC questions are repeated below followed by the APS response to each question:

NRC Request 1:

The licensee is requesting "A separate condition entry for each SG" for Condition "A" for one ADV inoperable for a 7-day completion time. Standard Technical Specifications (STS) do not permit separate condition entry. Please justify why separate entry condition would be acceptable.

APS Response 1:

The use of a separate condition entry was requested by APS due to the design redundancy provided by having two ADVs on each SG.

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Each Palo Verde unit is designed with two SGs, with each SG having two main steam lines. Each main steam line has five Main Steam Safety Valves (MSSVs) with one ADV on each main steam line. Any one of the four ADV lines has the capacity to cool the reactor coolant system (RCS) to the shutdown cooling (SDC) system entry conditions.

Use of the "separate condition entry" for Condition "A" is justifiable because the most limiting plant configuration following postulated design basis events (DBEs) (i.e., leaving only one operable ADV on one SG) would remain the same whether one or both SGs were initially in Condition "A". In this configuration, if a main steam line break (MSLB) or feed water line break (FWLB) event were to cause a fault on one SG, then the post-accident heat removal design function would still be fulfilled by the one remaining operable ADV on the other SG. Thus the overall risk to public health and safety remains the same, and separate condition entry into Condition "A" is justifiable. The use of separate condition entry by having an explicit note also eliminates any potential misinterpretation of applicability for more than one SG.

NRC Request 2:

The licensee is requesting a 72-hour completion time for two ADVs inoperable on one SG for Condition "B." STS Condition "B" does not allow two inoperable ADVs on one SG for more than 24 hours. Please explain how a design-basis event could be mitigated if an accident on the SG with the operable ADV results in no ADVs available for accident mitigation.

APS Response 2:

The proposed Condition B represents a loss of ADV redundancy, but not a loss of design basis function because one ADV is still operable on one SG. Entering Condition B could result in one SG with no operable ADV lines and the second SG with just one operable ADV line for up to 72 hours which is consistent with the current Palo Verde licensing bases for the ADV TS. The justification for 72 hours is that there is a low probability of an event occurring during this short time period and there are alternate means available to release heat from the Steam Generator with no operable ADV's. Plants designed with only one ADV per SG, would be in a similar condition (one operable ADV for two SGs), when one ADV is inoperable.

NRC Request 3:

STS does not permit separate entry conditions on multiple SGs, and the limiting condition for operation is written to address only one SG at a time; therefore, only one SG is permitted to have two ADVs inoperable. In its LAR, the licensee assumes that STS Condition "B" allows two ADVs to be inoperable on two SGs for 24 hours, and uses this logic on page 9 of its LAR

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to help justify that the proposed 72-hour CT is more conservative than STS. Please justify the assumption and provide additional information to show that the design basis can be met.

APS Response 3:

The NRC question implies that since the wording of the limiting condition of operation (LCO) is written to address the number of ADVs on one SG, the conditions in TS 3.7.4 of the STS are limited to be applicable to inoperable ADVs on only one SG at a time but without the use of separate condition entry. APS agrees that the number of ADVs specified in brackets in the LCO should be either the total number of ADVs required to be operable on two SGs or the use of separate condition entry should be explicitly allowed as proposed by APS in the license amendment request.

APS does not agree with the NRC interpretation as stated in the question, since there would be no condition that would be applicable if two SG's each had one inoperable ADV. Condition B of TS 3.7.4 of the Standard TS is for "Two or more [required] ADV lines inoperable." The only way more than two ADV's can be inoperable is if more than one SG can be considered for this condition. If all four ADVs were inoperable, this condition would still be appropriate and this is consistent with the proposed Condition C of the license amendment request submitted by APS.

NRC Request 4:

The licensee proposes for Condition "C" the following words: "No OPERABLE ADV lines on either generator." The licensee uses the word "either" instead of the word "both," which can lead to possible misinterpretation. The word "either" is generally used as a substitute by the word "or." The meaning of the TS as worded can be inferred to mean no operable ADVs on SG "A" or no ADVs operable on SG "B." However, inferring from the licensee's description in the TS basis, the intent of this condition is detailing a situation where all four ADVs are inoperable, which describes a condition where there are no operable ADVs on SG "A" and no operable ADVs on SG "B." In addition, TS are typically stated to define inoperability; therefore, a typical condition would define what is inoperable (e.g., "two ADVs inoperable on each SG.") Without referring to the TS basis, the meaning of this condition is ambiguous. Please justify the word choice.

APS Response:

The NRC is correct in that the intention of Condition C is to address the situation when all 4 ADV's are inoperable. APS agrees to change the word "either" to the word "both" in Condition C to avoid any possible misinterpretation of this condition.