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 AUTH. NAME AUTHOR AFFILIATION
 VAN BRUNT, E. E. 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-51, permitting one-time
 only exception to Surveillance Requirements 4.4.10 to allow
 RCS vent valve RCB-HV-105 to be tested during Mode 3
 operations instead of current Mode 5 or 6. Fee paid.

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Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

161-00743-EEVB/BJA
January 14, 1988

Docket No. STN 50-529

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 2
Proposed Technical Specification Change -
One Time Exception to Surveillance Requirement
for Valve RCB-HV-105
File: 88-F-056-026; 88-F-005-419.05

The purpose of this letter is to request a change to the PVNGS Unit 2 Technical Specifications. Specifically, the proposed change provides for a one-time only exception to the surveillance requirements for Reactor Coolant System (RCS) vent valve RCB-HV-105. Technical Specification Surveillance Requirement 4.4.10 currently requires the RCS vent valves to be tested at least once every 18 months when in Modes 5 or 6. Valve RCB-HV-105 was last tested in November, 1987 during an unplanned reactor shutdown. The surveillance test of the valve was acceptable and did not result in any adverse impact on plant safety. However, Unit 2 was in Mode 3 during the performance of this test. The proposed change will allow ANPP to credit this surveillance test for satisfying Surveillance Requirement 4.4.10. From previous conversations with the NRC staff, it is our understanding that this change request does not need prior approval to allow for continued operation of PVNGS Unit 2 until the first refueling outage. The justification for this proposed change is provided in the attachment to this letter along with the following information:

- 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 Determination.
- E. Safety Evaluation for the Proposed Change.
- F. Environmental Impact Consideration Determination.
- G. Marked-up Technical Specification Change Page.

Applicant.....
Check No. <u>805835</u>
Amount <u>\$156</u>
Date of Check <u>1/18/88</u>
Date Check Rec'd <u>1/26/88</u>
Received By <u>[Signature]</u>

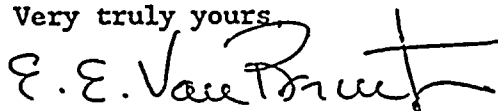
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161-00743-EEVB/BJA
January 14, 1988

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 10CFR170.12(c), the license amendment application fee of \$150.00 has been forwarded to the Facilities Program Coordinator of LFMB.

Very truly yours,



E. E. Van Brunt, Jr.
Executive Vice President
Project Director

EEVB/BJA/l
Attachment

cc: O. M. De Michele (all w/a)
G. W. Knighton
E. A. Licitra
J. R. Ball
J. B. Martin
Director, ARRA
A. C. Gehr
R. M. Diggs (w/WFD \$150)

January 26, 1988

NOTE FOR: Jim McKnight
Document Control Desk (016)

FROM: Jane Parks
License Fee Management Branch, ARM/DAF

SUBJECT: PROCESSING LETTERS WITH CHECKS RECEIVED DIRECTLY BY THE
LICENSE FEE MANAGEMENT BRANCH


Please process the enclosed letter under the applicable docket and give the following distribution under code M008:

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Action cy w/check to C. J. Holloway, LFMB (AR-2015)
3 cys to applicable branch of DL
1 cy to LPDR
1 cy to PDR

I am retaining the check, and the following information is for your records:

Check No.:	<u>005835</u>
Amount:	<u>\$150</u>
Date:	<u>1/18/88</u>
Ltr Date:	<u>1/14/88</u>
Applicant:	<u>Arizona Public Service Co.</u>
Docket No.:	<u>50-529</u>
Plant:	<u>Palo Verde 2</u>

Thank you for your cooperation.


Jane Parks
License Fee Management Branch
Division of Accounting and Finance
Office of Administration
and Resources Management

Enclosure:
Ltr. dtd 1/14/88

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DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7+1
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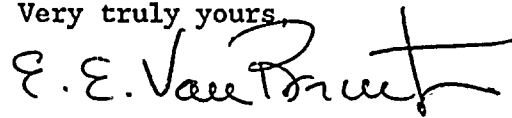
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161-00743-EEVB/BJA
January 14, 1988

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G. W. Knighton
E. A. Licitra
J. R. Ball
J. B. Martin
Director, ARRA
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ATTACHMENT

A. DESCRIPTION OF THE PROPOSED CHANGE

This proposed Technical Specification change allows for a one-time only exception to Surveillance Requirement 4.4.10 to allow RCS vent valve RCB-HV-105 to be tested during Mode 3 operations instead of the currently required Modes 5 or 6.

Technical Specification Limiting Condition for Operation (LCO) 3.4.10 requires the RCS vent paths to be operable during Modes 1 through 4. The associated Surveillance Requirement 4.4.10 specifies that each RCS vent path shall be demonstrated operable at least once every 18 months when in Modes 5 or 6 by cycling each vent valve from the control room and by verifying flow through each RCS vent path.

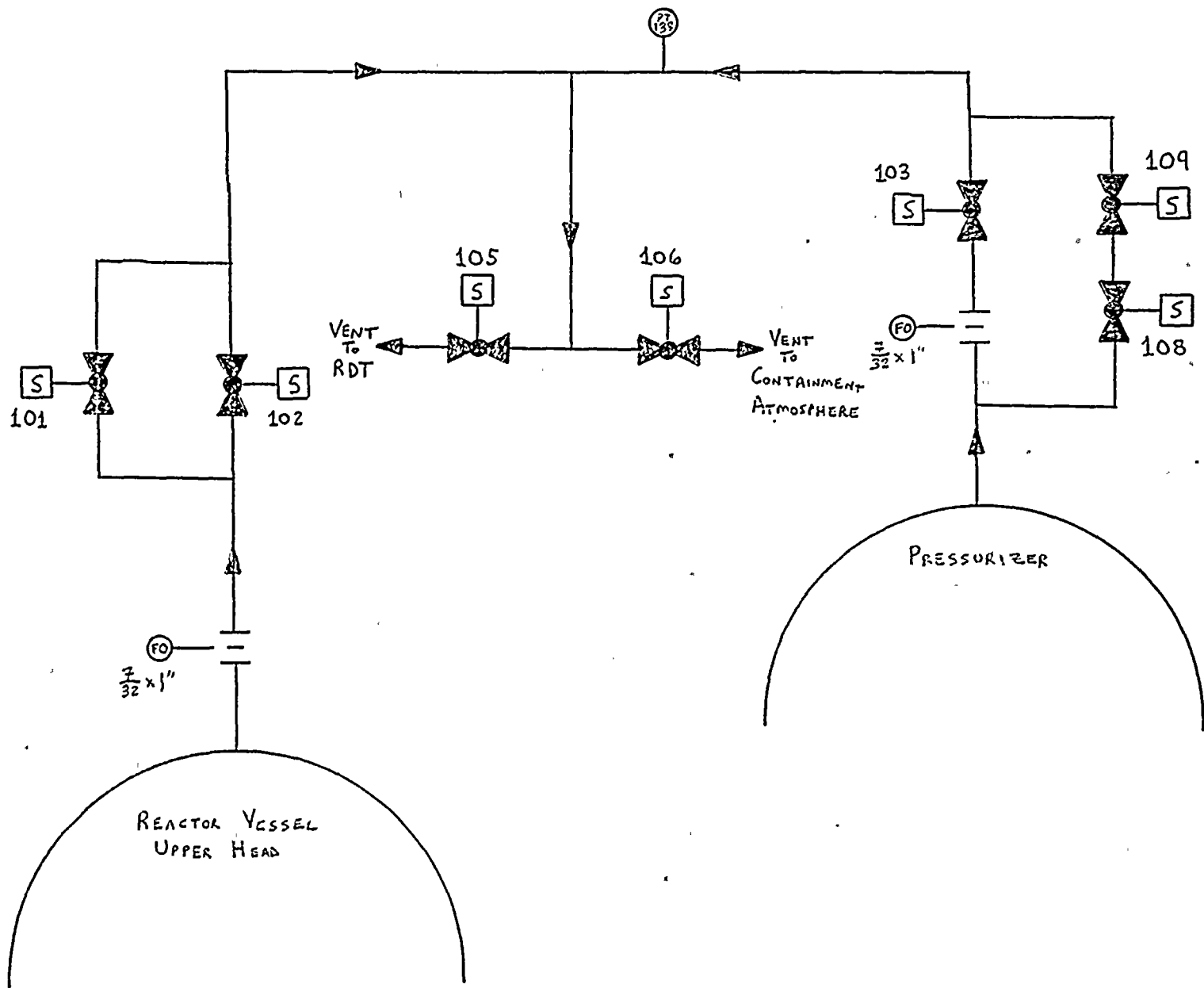
Valve RCB-HV-105 was last tested in November, 1987 during an unplanned reactor shutdown. However, Unit 2 was in Mode 3 during the performance of this test. The test was conducted in a manner such that the safety of the plant would not be compromised during the testing. The test method took advantage of the fact that the line upstream of valve RCB-HV-105 had been partially pressurized due to a slight leak from one of the upstream valves. Valve RCB-HV-105 was then cycled from the control room while verifying that the upstream pressure decreased as the upstream line was vented to the Reactor Drain Tank (RDT). This test method allowed for testing valve RCB-HV-105 without jeopardizing the integrity of the RCS since the upstream valves remained closed during the testing. The proposed change will allow ANPP to credit this previously conducted test on the valve to satisfy Surveillance Requirement 4.4.10.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

Technical Specification LCO 3.4.10 and related Surveillance Requirement 4.4.10 ensure that the RCS vent system is available to perform its required function. As stated in Technical Specification bases section 3/4.4.10, the RCS vents are provided to exhaust non-condensable gases and/or steam from the RCS that could inhibit natural circulation core cooling. Some additional functions of the system that are not specifically discussed in the Technical Specification bases are to: 1) provide a means of collapsing a steam void in the reactor vessel upper head region during a natural circulation cooldown, and 2) provide a means of raising pressurizer level during a Steam Generator Tube Rupture (SGTR) accident so that the safety injection throttling criteria can be met.

The RCS vent system is shown in Figure 1. The system provides redundant vent paths from the pressurizer steam space and from the reactor vessel upper head. The vented gases and/or steam can then be directed to either the RDT or the containment atmosphere. The system is composed of seven solenoid operated valves that can be operated remotely from the main control room. The system was installed in the PVNGS units in response to TMI item II.B.1. For further discussion of the system design refer to section 18.II.B.1 of the PVNGS FSAR.

FIGURE 1 : RCS VENTS SCHEMATIC



C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

The surveillance test for valve RCB-HV-105 has already been conducted. The test was successfully conducted in November, 1987 while Unit 2 was in an unplanned reactor shutdown. Surveillance Requirement 4.4.10 specifies that the unit must be in Modes 5 or 6 during the performance of the vent valve testing. This proposed change will allow ANPP to credit this Mode 3 surveillance test for satisfying Surveillance Requirement 4.4.10.

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 a 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 change does not involve a significant increase in the probability or consequences of an accident previously evaluated. For this proposed change, the main accident of concern is a Loss of Coolant Accident (LOCA) as a result of two stuck open vent valves during the testing. As described in FSAR section 18.II.B.1, the RCS vent system is designed in accordance with 10CFR50.46 in that the RCS vent paths are provided with 7/32" orifices to limit the flow from an unisolable leak. CESSAR section 9.3.4.1.2 states that a single charging pump has a capacity sufficient to replace the flow lost due to leaks in small RCS lines (i.e., lines with 7/32" by 1" long flow restricting devices). Therefore, a LOCA event will not result from the testing and the probability of having a LOCA event remains unchanged. The consequences of a vent valve failure also remain unchanged. In the unlikely event that two vent valves in series fail to open, a single charging pump has sufficient capacity to replace the coolant lost through the unisolable vent path. The likelihood of an unisolable vent path during this test of vent valve RCB-HV-105 is further reduced by only cycling this valve during the testing. This maintains the upstream vent valves closed to prevent an unisolable vent path.

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

Basis-- The proposed change allows for testing valve RCB-HV-105 during Mode 3 operations instead of the Technical Specification required Modes 5 or 6. The possible malfunctioning/accident that could result from this test is the failure of valve RCB-HV-105 to close. This could lead to an unisolable RCS vent path if one of the upstream valves was opened during the test and it also failed to close. This type of malfunction has been

evaluated in the FSAR. The malfunction will not lead to a LOCA since the anticipated coolant loss will be within the makeup capacity of a single charging pump. Therefore, this Technical Specification 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-- Technical Specification bases section 3/4.4.10 discusses the RCS vents. This bases section states, "The valve redundancy of the Reactor Coolant System vent paths serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of a vent valve, power supply, or control system does not prevent isolation of the vent path." If a vent path were established in Mode 3 by opening two vent valves in series, a single failure of one of the valves to close would not result in an unisolable vent path. Therefore, this proposed change will not result in a reduction in a margin of safety.

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. This proposed amendment does not match any of the examples provided by the Commission. However, this change can be described as a change to a Surveillance Requirement where the results of the change are clearly within all acceptable criteria for the system. The RCS vent system was designed to be operated over a wide variety of RCS pressure and temperature conditions including Mode 3 conditions. Therefore, operation of a vent valve for testing while in Mode 3 is in accordance with the system design.

E. SAFETY EVALUATION FOR THE PROPOSED CHANGE

This proposed Technical Specification change will not increase the probability or consequences of any accident previously evaluated. The primary accident of concern for this proposed Technical Specification change is a LOCA due to stuck open vent valves during the surveillance test. Note that you would need at least two vent valves in series stuck open to result in an unisolable vent path. As discussed in FSAR section 18.II.B.1, the RCS vent system is designed in accordance with 10CFR50.46. Paragraph (c) of 10CFR50.46 defines a LOCA as a hypothetical accident that would result from a loss of reactor coolant at a rate in excess of the capability of the reactor coolant makeup system. Each reactor coolant system vent (except for the 1" vent line with double instead of single valves) is provided with a 7/32" orifice to limit the flow from an unisolable leak. As stated in CESSAR section 9.3.4.1.2, one charging pump has a capacity sufficient to replace the coolant lost due to leaks in small RCS lines (lines with 7/32" x 1" long flow restricting devices.) Therefore, even if a RCS vent path was unisolable during performance of this surveillance test, it would not result in a loss of reactor coolant in excess of the makeup capacity of a single charging pump and would not result in a LOCA. Likewise, the consequences of an unisolable vent path would not be a serious detriment to plant safety since the lost coolant can easily be replaced by the charging system.

The proposed Technical Specification change will not create the possibility of an accident or a malfunctioning of a different type than any evaluated previously in the FSAR. This change involves a one-time only exception to Surveillance Requirement 4.4.10 which will allow for testing valve RCB-HV-105 during Mode 3 operations instead of the currently required Modes 5 or 6. The potential malfunctioning/accident that could result from this test is the failure of valve RCB-HV-105 to close. The test method used for this Mode 3 test ensures that the failure of valve RCB-HV-105 to close will not result in an unisolable vent path. This is because the upstream vent valves remained closed during the test. Therefore, no new accident scenarios are created by this test. This proposed change will not result in a reduction in a margin of safety as defined in the basis for any Technical Specification. Bases section 3/4.4.10 discusses the RCS vents. The bases section states that, "The valve redundancy of the Reactor Coolant System vent paths serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of a vent valve, power supply, or control system does not prevent isolation of the vent path." Therefore, if a vent path were established in Mode 3 by opening two vent valves in series, a single failure of one of the valves to close would not result in an unisolable vent path.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed Technical Specification change request does not involve an unreviewed environmental question because operation of PVNGS Unit 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 (ASLB), Supplements to the FES, Environmental Impact Appraisal, or in any decisions of the ASLB; 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

Enclosed is revised page 3/4 4-35 of the PVNGS Unit 2 Technical Specifications.

