

# CATEGORY 1

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 AUTH. NAME AUTHOR AFFILIATION  
 IDE, W.E. Arizona Public Service Co. (formerly Arizona Nuclear Power  
 RECIP. NAME RECIPIENT AFFILIATION  
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SUBJECT: Requests NRC approval of proposed alternative IAW provisions of 10CFR50.55a(a)(3)(i) to 10CFR50.55a(g) & requirements of ASME Boiler & Pressure Vessel Code Section XI for repairs & installation. Description of proposed alternative, encl.

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10 CFR 50.55a(a)(3)

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102-04299-WEI/SAB/RKB  
June 26, 1999

U.S. Nuclear Regulatory Commission  
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Dear Sirs:

Reference: APS Letter No. 105-04095-WEI/AKK/MLG, dated March 17, 1998,  
from W. E. Ide, APS, to NRC, "Inservice Inspection Programs for  
Second 10-year Interval."

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, and 3  
Docket Nos. STN 50-528/529/530  
Request for Proposed Alternative to ASME Section XI  
Requirements for Repairs and Installation (Code Case N-567).

Arizona Public Service Company (APS) hereby requests NRC Staff approval of a proposed alternative, in accordance with the provisions of 10 CFR 50.55a (a)(3)(i), to 10 CFR 50.55a(g) and the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI for repairs and installation.

Section 50.55a, "Codes and Standards," of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires, in part, that each operating license for a boiling or pressurized water-cooled nuclear power facility and each construction permit for a utilization facility be subject to the conditions in paragraph (g), "Inservice Inspection [ISI] Requirements," of 10 CFR 50.55a. Paragraph (g) requires, in part, that Classes 1, 2, and 3 components and their supports meet the requirements of ASME Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." Paragraph 50.55a(b), in part, references the latest editions and addenda in effect of Section XI of the Code and any supplementary requirements to that section of the Code. Footnote 6 to Section 50.55a states that the use of specific code cases may be authorized by the Commission upon request pursuant to paragraph 50.55a(a)(3), which requires that proposed alternatives to the described requirements or portions thereof provide an acceptable level of quality and safety.

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Section IWA-7210 (b) of ASME Section XI, 1989 Edition, requires repairs and installation of items to be performed in accordance with the owner's design specifications and the original edition of the construction code. Additionally, IWA-7210 (b) states that later editions and addenda of the construction code or ASME Section III may be used. However, no provisions currently exist in ASME Section XI for the use of earlier editions of ASME Section III for repair and replacement activities. ASME has written and approved Code Case N-567, "Alternative Requirements for Class 1, 2, and 3 Replacement Components, Section XI, Division 1." This code case establishes acceptable methods for the use of replacement components constructed to earlier editions of the construction code or ASME Section III. APS believes the provisions established in Code Case N-567 provide an acceptable level of quality and safety because, the code case requires reconciliation of (i) the ASME code requirements including the administrative requirements, and (ii) owner's requirements including quality assurance requirements (10CFR50 Appendix B and 10CFR Part 21).

In the above referenced letter, APS submitted for NRC Staff review, the Units 1, 2 and 3 ISI Programs for the second 10-year interval. Relief Request No. 1 of that submittal requested use of the 1992 Edition, 1992 Addenda of the ASME Code, Section XI, with noted exceptions. IWA-4170 of ASME Section XI, 1992 Edition, 1992 Addenda, specifies the same requirements as IWA-7210 in the 1989 Edition. In addition, NRC Staff review and approval is not yet complete on the APS ISI Second 10-year Interval program. Therefore, should approval of Code Case N-567 precede approval of the second interval ISI program, APS requests approval of the proposed alternative of Code Case N-567 for both the 1989 Edition and the 1992 Edition, 1992 Addenda of ASME Section XI.

A detailed description and justification for the proposed alternative is provided in enclosure 1. Enclosure 2 is a copy of ASME Code Case N-567. APS requests the Staff's review and response by February 1, 2000.

Please contact Mr. Scott Bauer at (623) 393-5978 if you have any questions. This letter does not make any commitments to the NRC.

Sincerely,



Enclosure

WEI/SAB/RKB/rh

cc: E. W. Merschoff  
M. B. Fields  
J. H. Moorman



**ENCLOSURE 1**

**Proposed Code Alternative**

THE UNITED STATES OF AMERICA  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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**Alternative Request**  
**Use of Earlier Editions and Addenda  
of ASME Section III for Repair and Replacement**

<b>Code Class</b>	1,2 and 3
<b>Code Reference</b>	IWA-7210, 1989 Edition IWA-4170, 1992 Edition/1992 Addenda
<b>Examination Category</b>	ALL
<b>Item Numbers</b>	ALL
<b>PVNGS Units</b>	ALL
<b>Requirement</b>	IWA-7210 (b) [IWA-4170(b), 1992 Ed./1992 Ad.] requires repair and installation of replacement items to be performed in accordance with the Owner's Design Specification and the original Construction Code. Additionally, it states "Later Editions and Addenda of the Construction Code or of Section III, either in their entirety or portions thereof, and Code Cases may be used".
<b>Alternate Requirement</b>	Code Case N-567 "Alternative Requirements for Class 1, 2, and 3 Replacement Components, Section XI, Division 1", permits the use of a replacement component constructed to an earlier Construction Code or Addenda provided that 1) any deviations from the Owner's Requirements or the Original Construction Code of the component being replaced shall be reconciled, 2) a report of reconciliation shall be prepared and made part of the record in accordance with IWA-6340 and 3) use of this Case shall be shown on the NIS-2 Form documenting installation of the component.
<b>Basis For Relief</b>	<p>The code case requires reconciliation of (i) the ASME code requirements including the administrative requirements, and (ii) owner's requirements including quality assurance requirements (10CFR50 Appendix B and 10CFR Part 21). Thus the reconciliation requirements of the code case ensures that the replacement component provides an acceptable level of quality and safety.</p> <p>One situation where APS will apply this code case involves Pressurizer Safety Valves (PSVs) that APS purchased from Washington Public Power Supply System (WPPSS). The original construction code for APS' valves is the 1974 Edition, Winter 1975 Addenda of ASME Section III. However, the WPPSS valves were constructed and certified to an earlier</p>



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Edition and Addenda (i.e. Class 1, 1971 Edition, Winter 1972 Addenda).

During refueling outages, all four (4) PSVs are removed from the Unit and sent to a testing facility to be recalibrated. The valves are then returned and reinstalled into the system. By having a total of four spare PSVs, there is no need for another containment entry for the reinstallation of the valves. Since PVNGS only had two (2) spare PSVs, two (2) additional spare valves were needed. The use of the valves purchased from WPPSS would streamline maintenance activities associated with the PSVs during outages, reduce personnel radiation exposure and result in substantial cost savings.

APS has evaluated the WPPSS PSVs against the original owner's design specifications and applicable ASME Section III requirements, and all deviations have been identified and are being reconciled to support the use of these valves in upcoming refueling outages. A report of reconciliation will be made part of the record in accordance with IWA-6340, and upon installation, the use of Code Case N-567 will be documented on the NIS-2 Form, consistent with the provisions of Code Case N-567.

Approval

50.55a(a)(3) of Title 10 of the Code of Federal Regulations states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if "(i) The proposed alternatives would provide an acceptable level of quality and safety, or (ii) Compliance with the specified requirements of this section would result in hardship or unusual difficulty without compensating increase in the level of quality and safety."

APS requests approval based on the use of ASME Code Case N-567 providing an acceptable level of quality and safety.

References

1. ASME Section XI, Rules for Inspection and Testing of Components of Light Water Cooled Plants 1992 Edition and 1992 Addenda, Section IWA-4170
2. ASME Section XI, Rules for Inspection and Testing of Components of Light Water Cooled Plants 1989 Edition, Section IWA-7210
3. Code Case N-567, Alternative Requirements for Class 1, 2, and 3 Replacement Components, Section XI, Division 1, Approval Date August 14, 1997



**ENCLOSURE 2**

**ASME Code Case N-567**



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CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: August 14, 1997

See Numeric Index for expiration  
and any reaffirmation dates.

Case N-567  
Alternative Requirements for Class 1, 2, and 3  
Replacement Components  
Section XI, Division 1

*Inquiry:* What alternative to the requirements of IWA-7210 (IWA-4170 in the 1991 Addenda through the 1995 Edition or IWA-4220 in the 1995 Addenda and later Editions and Addenda) may be used to accept a replacement component constructed to an earlier Edition or Addenda than that of the component being replaced?

*Reply:* It is the opinion of the Committee that, as an alternative to the requirements of IWA-7210 (IWA-4170 in the 1991 Addenda through the 1995 Edition or IWA-4220 in the 1995 Addenda and later

Editions and Addenda), a component used for replacement may be constructed to an earlier Edition or Addenda of the original Construction Code of the component being replaced, provided the following requirements are met:

(a) Any deviations from the Owner's Requirements<sup>1</sup> or the original Construction Code<sup>1</sup> of the component being replaced shall be reconciled;

(b) A report of the reconciliation shall be prepared and made part of the record in accordance with IWA-6340 (IWA-4910 in the 1991 Addenda through the 1995 Edition or IWA-4180 in the 1995 Addenda and later Editions and Addenda);

(c) Use of this Case shall be shown on the NIS-2 Form documenting installation of the component;

<sup>1</sup> See the 1995 Edition or later IWA-9000 Glossary for definitions of Owner's Requirements and Construction Code.

