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SUBJECT: Forwards, for review, FSAR changes to Sections 1.9, 3.7 & 13.5
 & other ref sections. Changes involve amending FSAR to allow
 use of containment HVAC test to measure RCS heat loss in
 lieu of steam down method.

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February 9, 1987
ANPP-40056-JGH/JKR/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 3
Docket No. STN 530
Changes to the FSAR Concerning Various Changes
File: 87-D-005-419.05; 87-G-056-026

Dear Mr. Knighton:

Attached for your review on PVNGS Unit 3 are FSAR changes to Sections 1.9, 3.7, 13.5 and other referenced sections. These changes involve 1) amending the FSAR to allow the use of containment HVAC test to measure RCS heat loss in lieu of the steam-down method; 2) incorporating reference to ASME Code Case N-411; 3) listing the types of procedures to be maintained by ANPP.

These changes are justified because 1) containment HVAC test results provide the necessary data consistent with the test objective; 2) the Code Case has been approved for use in Regulatory Guide 1.84; 3) these procedures are required to maintain the fire protection program as stated in the CE Standard Technical Specifications.

For PVNGS Units 1 and 2, safety evaluations have been completed for implementation of these changes in accordance with the requirements of 10 CFR 50.59. The safety reviews and evaluations have determined that there are no unreviewed safety questions involved with the changes. These changes will be included in the next FSAR amendment.

If you have any questions, please contact Mr. W. F. Quinn of my staff.

Very truly yours

J. G. Haynes
Vice President
Nuclear Production

JGH/JKR/1s
Attachment

cc: O. M. De Michele
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SECTION TO BE ADDED TO PVNGS FSAR1.9.2.4.20 PRECORE REACTOR COOLANT SYSTEM HEAT LOSS

CESSAR Section 14.2.12.2.9 requires that a Precore Hot Functional Test be performed to measure RCS heat loss and pressurizer heat loss under hot, zero power conditions. The RCS heat loss is measured to determine a value for use in the RCS Thermal Performance Program COLSS, and pressurizer heat loss is measured to satisfy the requirements of Reg. Guide 1.68.

A more accurate determination of the RCS heat loss value for the COLSS program in Unit 3 is to be achieved utilizing test data obtained from the Unit 3 Containment HVAC Systems. The objective of CESSAR Section 14.2.12.2.9 is still met if the Containment HVAC test method replaces the steam-down test method that is specified within Section 14.2.12.2.9 to measure RCS heat loss.

CONFORMANCE TO NRC
REGULATORY GUIDES

REGULATORY GUIDE 1.83: Inservice Inspection of Pressurized
Water Reactor Steam Generator Tubes
(Revision 0, June 1974)

RESPONSE

14 | The position of Regulatory Guide 1.83 is accepted (refer to CESSAR
Section 1.8 and to section 5.2.4) except that for compliance with
Position C.3.a of the Regulatory Guide, the inspection shall be
performed prior to the field hydrostatic test.

REGULATORY GUIDE 1.84: Design and Fabrication Code Case
Acceptability ASME Section III
Division 1 (~~Revision 15, May 1979~~)

RESPONSE

11 | The position of Regulatory Guide 1.84 is accepted (refer to
table 5.2-2).

REGULATORY GUIDE 1.85: Materials Code Case Acceptability
ASME Section III Division 1

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RESPONSE

11 | The position of Regulatory Guide 1.85 is accepted (refer to
table 5.2-3).

REGULATORY GUIDE 1.86: Termination of Operating Licenses for
Nuclear Reactors (Revision 0, June 1974)

RESPONSE

The position of Regulatory Guide 1.86 is accepted.

REGULATORY GUIDE 1.87: Construction Criteria for Class 1
Components in Elevated Temperature
Reactors (Revision 0, June 1974)

3.7.1.3 Critical Damping Values

Refer to CESSAR Section 3.7.1.3 for NSSS seismic systems.

The damping values (percent of critical damping) used for seismic design of Category I structures are listed in table 3.7-1, and are the same as those specified in Regu-

latory Guide 1.61. Increased damping values may be used in determining the acceptability of unrestrained piping uplift at support locations using the methodology presented in the Interim Summary Report, dated December 1983, by the Pressure Vessel Research Committee (PVRC) task group on Damping

Values. Strain-corrected damping values for the foundation materials were developed using the computer program SHAKE ⁽¹⁾ and soil properties from field and laboratory test results. The average strain-dependent damping ratios for clay and sand are shown in figures 3.7-5 and 3.7-6, respectively.

Frequency-dependent soil damping values were obtained using the LUCON computer program ⁽²⁾ and the strain-dependent relationships for use in the time-history analysis of lumped-mass models of structure-foundation systems. For the design response spectrum method of analysis, soil damping values for the structure-foundation system were computed using the expressions given in Table 3-2 of BC-TOP-4-A.

INTEGRITY OF REACTOR
COOLANT PRESSURE BOUNDARY

Table 5.2-2
NRC REGULATORY GUIDE 1.84 CODE CASES USED ON PVNGS
(Sheet 5 of 7)

Case No.	Title	Notes
N-338(a)	Use of Mild Steel Washers for Section III, Division I, NF Construction	s
N-339(a)	Examination of Ends of Fillet Welds for Class 1, 2, and MC Construction	w
SEE INSERT to page 5.3-9		
a.	Code cases not currently incorporated in Regulatory Guide 1.84 but approved for use on PVNGS.	
b.	Additional contingencies in the use of this Code Case have been required by the NRC. They are documented in the Specification to which the Code Case is applicable.	
c.	C-E Scope. (Pressurizer Assembly 14273-PE-130)	
d.	Hydrogen Recombiners (12-NM-993)	
e.	Nuclear Service Butterfly Valves (13-JM-605).	
f.	C-E Scope. (Elastomeric Sealed Valves 14273-PE-709)	
g.	Piping for the following systems: Radioactive Waste Drains, CVCS, Safety Injection Shutdown, Essential Chilled Water, Essential Spray Pond, Essential Cooling Water, Reactor Coolant, Fuel Pool Cooling and Cleanup, Nuclear Cooling Water, Auxiliary Feedwater, Main Steam, Nuclear Sampling, Condensate Transfer and Storage, Diesel Fuel Oil and Transfer, Diesel Generator (13-PM-100 through -115) and Mechanical Penetration Assemblies (13-MM-500)	
h.	C-E Scope. (Shutdown Cooling Heat Exchangers 14273-PE-301) (Regenerative Heat Exchangers 14273-PE-302) (Letdown Heat Exchangers 14273-PE-303) (ASME Section III Code Tanks 14273-PE-605) (CE-Designated ASME Section III Code Tanks 14273-PE-603) (CE-Designed Ion Exchangers 14273-PE-651) (Filters Radioactive Service 14273-PE-201)	

Insert to page 3.7-3.

Alternative damping values, allowed by ASME Code Case N-411, may be used for reconciliation of As-Built design, for support optimization, and for design of plant systems, in accordance with conditions outlined in Regulatory Guide 1.84.

Insert to page 5.2-9.

N-411

Alternative Damping Values for Seismic Analysis of
Classes 1, 2, and 3 Piping Sections, Section III,
Division 1.



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H. Station Security Procedures

Station security procedures provide for the implementation of the Security Plan (refer to section 13.6).

I. Fire Protection Procedures

Fire protection procedures are provided to instruct applicable station personnel in methods of fire prevention, fire fighting, and maintenance of fire protection equipment. Procedures provide specific instructions to members of the fire team in fire fighting techniques.

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See insert to page 13.5-9.

Insert to page 13.5-9.

In addition to the above, limiting conditions for operation, action statements and surveillance requirements for the Fire Protection program will be established within PVNGS Station Manual. This will provide the same level of protection as described in the following sections of the C-E Standard Technical Specifications:

Section 3/4.3 - Instrumentation

Specification 3.3.3.7 - Fire Detection Instrumentation
(limiting conditions of operation, surveillance requirements)

Section 3/4.7 - Plant Systems

Specification 3.7.11.1 - Fire Suppression Water System
(limiting conditions of operation, surveillance requirements)

Specification 3.7.11.2 - Spray and/or Sprinkler System
(limiting conditions of operation, surveillance requirements)

Specification 3.7.11.3 - CO₂ Systems
(limiting conditions of operation, surveillance requirements)

Specification 3.7.11.4 - Fire Hose Station
(limiting conditions of operation, surveillance requirements)

Specification 3.7.11.5 - Yard Fire Hydrant and Hydrant Hose Houses
(limiting conditions of operation, surveillance requirements)

Specification 3.7.11.6 - Halon Systems
(limiting conditions of operation, surveillance requirements)

Specification 3.7.12 - Fire Rated Assemblies
(limiting conditions of operation, surveillance requirements)

An exception to this is the use of closed circuit TV in radiation areas that would pose an unnecessary risk to personnel in lieu of a fire watch.

