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SUBJECT: Forwards proposed FSAR changes re installation of fire doors. Deviation of doors installed at plant limited to door to frame gaps, door to floor gaps &/or latchset throws. Tests indicate that sub j doors perform satisfactorily.

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

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Docket Nos. STN 50-528 (License NPF-41)
STN 50-529 (License NPF-51)
STN 50-530 (License NPF-65)
Fire Door Installation
File: 87-A-005-419.05; 87-A-056-026

Dear Sir:

Attached, please find proposed FSAR changes concerning the installation of fire doors.

ANPP has determined that some fire doors had not been installed in strict compliance with the Underwriters Laboratories (U.L.) or Factory Mutual (F.M.) Tested Configurations. The deviations are limited to door to frame gaps, door to floor gaps, and/or latchset throws. The fire doors were purchased as U.L. or F.M. labeled doors and were installed with the deviations as mentioned above.

Two fire tests were performed at Warnock Hersey Laboratory for ANPP on two representative fire doors. The doors were tested in accordance with U.L. fire door testing procedure with the exception of the installation configuration. These tests determined that a typical ANPP fire door installation, with the above deviations, performs satisfactorily as a three hour rated fire door.

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

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/JKR/1s

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OTHER AUXILIARY SYSTEMS

penetrated wall ratings are provided. All cable tray, conduit, HVAC duct, and piping penetrations through fire barriers are sealed using seal designs of equal or greater rating than the rating of the penetrated barriers. Penetration seals meet the acceptance criteria of ASTM E-119 and have been approved by ANI.

Where door openings penetrate rated barriers, the openings are protected by ~~Underwriters Laboratories (UL) or Factory Mutual (FM)~~ rated door assemblies providing fire protection equal to or greater than the rating of the penetrated barrier, except as noted in the Appendix 9A response to Question 9A.106.

ALL FIRE
DOORS SHALL
BE PURCHASED
AS UNDERWRITERS
(UL) OR FACTORY
MUTUAL (FM)
LABELED DOORS

N. Fire and Smoke Monitoring, Detection, and Alarm System

Fire and smoke monitoring, detection, and alarm is accomplished by ionization (I) and ultraviolet (UV) detectors, and by heat responsive or heat actuated devices (HAD) in areas in which the potential of fire exists. These devices are installed in specific areas so indicated in table 9.5-1.

Selection, placement, and spacing of fire monitoring, detection, and alarm devices are based on consideration of design, configuration, and employment of the area together with draft conditions due to natural or mechanical ventilation.

The fire and smoke monitoring, detection, and alarm system includes a supervisory circuit which indicates the failure of individual circuits and detectors. Both monitoring and supervisory alarm signals register locally and in the control room. In the control room, incoming FPS alarms activate audible and visual annunciators individually or in groups.

APPENDIX 9A

(formerly Zone 86) from the Auxiliary Building (column line A-10) and the Control Building (column line J1). All trays within Zones 86A and 86B are horizontal trays passing from the Auxiliary Building to the Control Building. A three-hour vertical wall separates Train A cables from Train B cables. It is not necessary to provide 3-hour ratings at each floor elevation in the zones, because each zone is one train related only. Automatic water suppression for all trays within Zones 86A and 86B is described in section 9B.2.

QUESTION 9A.106 (FPER Audit Open Item No. 1)

(9B.2)

Verify that doors in fire rated walls and partitions are listed for use in that type of wall or partition.

RESPONSE: All fire doors are, or will be, labeled fire doors of the fire rating required for the wall rating, (i.e., 3 hour wall: A label, 3-hour door; 2-hour wall: B label, 1-1/2 hour door; 1-hour wall: C label, 3/4 hour door) with the exception of doors that have removable transoms and/or have both louver and glass view plates. The exceptions have been certified by the manufacturer^(a) to be of UL or FM construction (but without label) offering the corresponding fire rating protection. These doors are listed in the accompanying table:

| FIRE ZONE | DOOR # | WALL RATING | DOOR RATING | REMARKS |
|-----------|--------|-------------|-------------|---------|
| 28 | F105 | 2 HR | B | WG&L |
| 29 | F201 | 2 HR | B | WG&L |
| 42A | A102 | 2 HR | B | RT |
| 42D | A104 | 2 HR | B | RT/WG&L |
| 42A/42D | A110 | 2 HR | B | RT |
| 42B/42C | A118 | 2 HR | B | RT |
| 52A/47A | A201 | 2 HR | B | RT |

9B.2 FIRE HAZARDS ANALYSIS

This section presents the results of the PVNGS fire hazards analysis performed for each of the fire areas (figures 9B-1 through 9B-7) and fire zones (figures 9B-8 through 9B-38). With each fire area description, a detailed itemization of fire area specific deviations from the separation requirements of Section III.G is also presented. In addition, several generic deviations with relevance to many of the fire areas are:

- A. In general, exterior walls, basemats and roofs are not rated when:
 - 1. They are not required to separate a safe shut-down related train inside the fire area from a significant fire hazard (e.g., oil filled transformers) outside the fire area, and
 - 2. They do not separate safety related areas from non-safety related areas that present a significant fire threat to the safety related areas.

The existing design which includes non-rated exterior walls, basemats and roofs is an acceptable alternative to the separation requirements of Section III.G.2 of Appendix R.

- B. Some fire doors have been modified to include security system hardware. In general, the modifications have a minimal impact on the door fire resistance as the modification affects a limited area of one side of the door. Further, these modifications are necessary to provide adequate station security. The modifications are in accordance with industry practice and are considered acceptable in that without modification the doors would cause a condition detrimental to overall facility safety.

C.

ADD
(INSERT A)

(INSERT A)

- C. Some fire doors have not been installed in strict compliance with the Underwriters Laboratories (U.L.) tested configurations. The deviations are limited to door to frame gaps, door to floor gaps, and latchset throws. All fire doors, however, are or will be purchased as labeled fire doors except as noted in question 9.A.106. The fire door installation deviation from the U.L. Tested Configuration has been found acceptable based on additional fire tests performed at Warnock Hersey Laboratory. The special Test Configurations were chosen to conservatively represent the configurations as installed in the field. Since the field installation of the fire doors is not in strict compliance with the U.L. Tested Configuration, the requirements to maintain a U.L. or Factory Mutual (F.M.) label on each fire door will no longer be applicable.

Maintenance of all fire doors, with respect to door to frame gaps, door to floor gaps and latch throws, shall conform to the special test configurations as tested at Warnock Hersey Laboratory. All other aspects of fire doors, other than gaps and latch throws, will be maintained in accordance with U.L. or F.M. criteria.

