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SUBJECT: Forwards 10CFR50, App R deviation evaluation re partial fire
 suppression in Fire Area II, Fire Zone 14, lower cable
 spreading room for review & approval. Existing design
 adequate, per 10CFR50, App R, Section III.G.2.c.

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WILLIAM F. CONWAY
EXECUTIVE VICE PRESIDENT
NUCLEAR

102-02194-WFC/JCO
June 29, 1992

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
10 CFR 50 Appendix R Deviation
File: 92-056-026

Arizona Public Service Company hereby submits for NRC review and approval a deviation from 10 CFR 50, Appendix R regarding partial fire suppression in Fire Area II, Fire Zone 14, lower cable spreading room. The fire suppression system in the fire zone is installed for the protection of the cable trays in the fire area but not at the ceiling level for full area protection.

As discussed in the enclosure, the existing design provides equivalent protection to that required by 10 CFR 50, Appendix R, Section III.G.2.c and provides an acceptable level of protection to assure that there will be no adverse impact on the ability to achieve and maintain safe shutdown.

If you have any questions, please contact Thomas R. Bradish of my staff at (602) 393-5421.

Sincerely,



WFC/JCO/jco

Enclosure

cc: J. B. Martin
D. H. Coe
A. C. Gehr
A. H. Gutterman

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ENCLOSURE

APPENDIX R DEVIATION EVALUATION

APPENDIX R DEVIATION EVALUATION

This evaluation is performed to assess the adequacy of preaction cable tray fire suppression versus general area fire suppression in Fire Area II, Fire Zone 14, lower cable spreading room.

DISCUSSION

Fire Area II, Fire Zone 14, lower cable spreading room contains Train B cables. This zone is bounded on all sides, including floors and ceilings by 2 and 3 hour rated continuous fire barriers.

There is a small (2' X 6') enclosed vertical raceway, along the north wall in Zone 14, at floor elevation 120', column JC-J1. The raceway contains Train A, IEEE 383 fire resistant cables. The raceway enclosure around the Train A cables is a 2-hour rated, 8-inch concrete masonry unit block construction from floor to ceiling (UL Design U904 and Uniform Building Code Table No. 43-B). There are two 4' X 4' access hatches with Class B labeled 1.5-hour rated hatch covers. The raceway is sealed with 3-hour fire seals at the floor and ceiling. The installed raceway enclosure exceeds the 1-hour fire barrier requirement of 10 CFR 50, Appendix R, Section III.G.2.C.

Fire detection in the fire zone consists of thermistor wire in each cable tray and smoke detection at the ceiling. Preaction water spray suppression systems are installed in each cable tray. Manual hose stations and portable fire extinguishers are provided. There are no ignition sources present, such as switchgear, nor other types of fixed combustibles which would present an exposure fire hazard. The cable spreading room is typically not subject to transient combustibles and does not contain equipment or components which require frequent maintenance, surveillance or testing activities. The room is a very low personnel activity room and the potential for fire involving transient combustibles is extremely low. The room is readily accessible for manual fire fighting.

The train separation and protection provided complies with Appendix R, Section III.G.2.c except that the suppression system installed is a preaction water spray system covering all the cable trays in lieu of ceiling level coverage for the entire area. The unsprinklered areas of the room are those without cable trays and are not in the immediate proximity of the Train A cable raceway. The enclosed cable raceway is not exposed to unprotected combustible loads. The raceway does not contain a sprinkler system nor combustibles other than the IEEE 383 fire resistant cables.

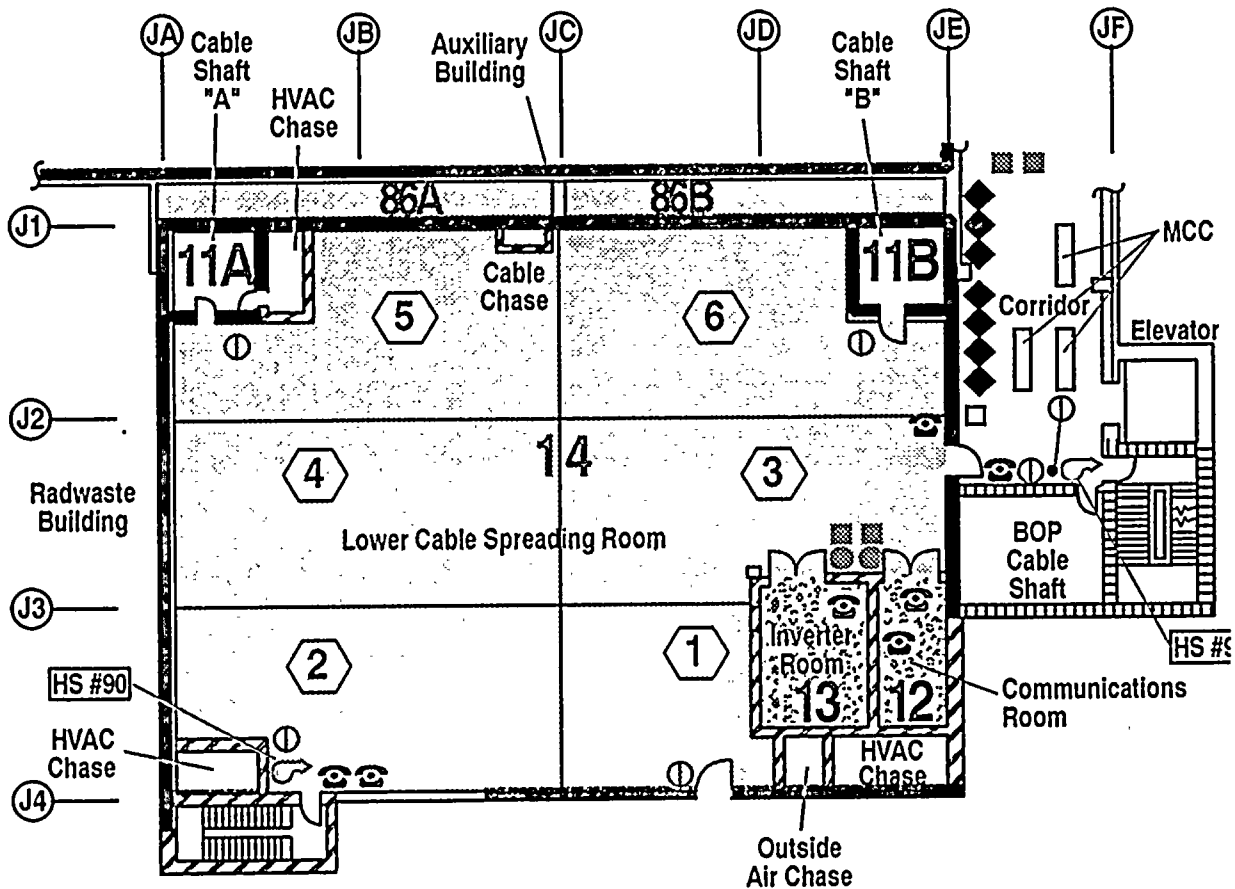
Cable tray only suppression for compliance with 10 CFR 50, Appendix R, Section III.G.2.c has been previously accepted by the NRC in lieu of general ceiling area sprinkler protection in another PVNGS fire zone as described in NUREG-0857, Supplement No. 6, Safety Evaluation Report related to the operation of PVNGS, Section 9.5.1.6, dated October 1984, page 9-10.

The existing design provides equivalent protection to that required by 10 CFR 50, Appendix R, Section III.G.2.c and provides an acceptable level of protection to assure that there will be no adverse impact on the ability to achieve and maintain safe shutdown.

PVNGS Pre-Fire Strategies Manual

Control Building

Elev. 120' - 0"



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|----------------------------------|--|--|
| ◆ = Sprinkler System Valve | ⊙ = Manual Pull (Suppression) | [Pattern] = Cable Tray Only Sprinklers |
| ▲ = CO ₂ System Valve | ■ = Suppression Panel | [Pattern] = Halon 1301 |
| 🔧 = Hose Station | ☎ = Dial Telephone | [Pattern] = CO ₂ Flood System |
| ① = Portable Fire Extng. | ☎ = Sound Power Telephone Jack | [Pattern] = One Hour Barrier |
| ⊕ = ABC Extng. (Wheeled) | □ = Emer. Shower & Eye Wash | [Pattern] = Two Hour Barrier |
| ⊕ = Foam Extng. (Wheeled) | [Pattern] = Preaction Sprinkler System | [Pattern] = Three Hour Barrier |
| ○ = Manual Pull (Alarm) | [Pattern] = H ₂ O Deluge System | |
| □ = Detection Alarm Panel | [Pattern] = Wet Pipe Sprinkler System | |

Rev. 5 November 1991



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