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 RECIP. NAME: RECIPIENT AFFILIATION  
 KNIGHTON, G. Licensing Branch 3

SUBJECT: Confirms info discussed at 840911 meeting w/Licitra & Kubicki in Bethesda, MD re revised fire protection evaluation rept included in Amend 13 to FSAR. FSAR will be amended to address issue re fire dampers.

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1. The purpose of this study is to determine the effect of the treatment on the response of the subjects. The subjects were divided into two groups, one receiving the treatment and the other receiving a placebo. The results of the study are as follows:

2. The treatment group showed a significant increase in response compared to the placebo group. This increase was observed in all subjects who received the treatment.

3. The placebo group showed no significant change in response. This suggests that the treatment is effective in increasing response.

4. The results of this study suggest that the treatment is effective in increasing response. This finding is consistent with previous studies which have shown that the treatment is effective in increasing response.

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Subject	Response	Treatment	Response	Subject	Response	Treatment	Response
1	10	Yes	15	1	10	Yes	15
2	12	Yes	18	2	12	Yes	18
3	14	Yes	20	3	14	Yes	20
4	16	Yes	22	4	16	Yes	22
5	18	Yes	24	5	18	Yes	24
6	20	Yes	26	6	20	Yes	26
7	22	Yes	28	7	22	Yes	28
8	24	Yes	30	8	24	Yes	30
9	26	Yes	32	9	26	Yes	32
10	28	Yes	34	10	28	Yes	34

Arizona Public Service Company

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ANPP-30680-EEVBJr/TFQ/DKN  
September 27, 1984

Director of Nuclear Reactor Regulation  
Attention: Mr. George Knighton, Chief  
Licensing Branch No. 3  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2 and 3  
Fire Protection Evaluation  
Docket Nos. STN-50-528/529/530  
File: 84-056-026; G.1.01.10

Dear Mr. Knighton:

This will confirm information discussed with Messrs. Licitra and Kubicki at a meeting held in Bethesda, MD, on September 11, 1984 on an item in the revised Fire Protection Evaluation Report included in FSAR Amendment 13.

FSAR Question 9A.68, item b, and this letter pertain to Fire Dampers. Our response to FSAR Question 9A.68 indicates that, where the damper is mounted on the surface of the wall, the structural steel attaching the damper to the wall and the first duct support will be coated with fire retardant material of a rating equal to that of the wall.

Upon further investigation, it has been found that this specific type of installation occurs only in a few areas with little or no combustible loading, such as HVAC shafts, essential chiller room, corridors or in rooms where automatic fire suppression systems are installed to limit fire severity.

Following is a fire protection evaluation of the areas where surface mounted dampers are installed:

1. Control Building

- a. Dampers installed on the interior wall of the HVAC shafts (2 hr shaft w/1-1/2 hr dampers) are exposed to no combustible load.

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- b. Dampers installed on the exterior wall of the HVAC shafts are in fire zones with detection and automatic suppression systems (CO<sub>2</sub> or water). This would mitigate the effects of fire and limit the heat exposure. The duct supports are seismically designed and therefore are of substantial steel construction. They would withstand a design basis fire with automatic suppression.
- c. There is one surface mounted damper at the 74' level (essential chiller room) of the Control Building in the 3 hr rated central wall. The equivalent fire severity in this fire zone (No. 1) is less than 15 minutes consisting primarily of charcoal filters located about 40 feet away. Smoke detection is installed in the room for early warning. This installation provides reasonable assurance that a fire will not propagate through the wall. On the other side of the damper is a two hour rated concrete soffit containing no combustibles. There is no direct communication with the adjacent fire area.

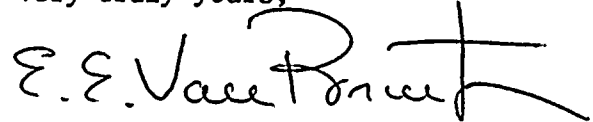
## 2. Auxiliary Building

- a. Zone 37A corridor, 70 foot level. There is one surface mounted damper in a one hour rated portion of a concrete wall. The fire loading is less than 20 minutes and there is smoke detection installed in the zone for early warning. Spatial separation on either side of the wall between redundant safe shutdown equipment is approximately 60 feet total, with no intervening combustibles. This installation provides adequate separation and protection of safe shutdown equipment.
- b. Zone 52A corridor, 120 foot level. There is one surface mounted damper in a one hour rated portion of a concrete wall. The combustible loading consists of cable trays (69 minutes) but is protected by an automatic detection and water suppression system. Redundant safe shutdown equipment is also separated by approximately 80 feet to that located in zone 52B. This installation provides adequate separation and protection of safe shutdown equipment.



Based upon the above analysis of fire hazards, equipment separation and fire suppression systems available, the surface mounted dampers in these areas will provide adequate protection without additional fire proofing. The FSAR will be revised in a future amendment.

Very truly yours,

A handwritten signature in dark ink, appearing to read "E. E. Van Brunt, Jr.", with a stylized flourish at the end.

E. E. Van Brunt, Jr.  
APS Vice President  
Nuclear Production  
ANPP Project Director

EEVBJr/TFQ/DKN/dh

cc: E. A. Licitra  
D. J. Kubicki  
A. C. Gehr





bcc's:

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