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 AUTH.NAME AUTHUR AFFILIATION  
 VAN BRUNT,E.E. Arizona Public Service Co.  
 RECIP.NAME RECIPIENT AFFILIATION  
 KNIGHTON,G. Licensing Branch 3

SUBJECT: Forwards proposed compensatory measures to be taken until completion of fire protection mods,per 10CFR50 App R.

DISTRIBUTION CODE: B002D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 7  
 TITLE: Licensing Submittal: Fire Protection

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THE  
FEDERAL  
BUREAU OF  
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OF THE  
DEPARTMENT OF JUSTICE  
WASHINGTON, D. C.  
20535

MEMORANDUM FOR THE DIRECTOR

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Arizona Public Service Company

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 Modifications and Compensatory Measures  
Docket Nos.: STN-50-528/529/530  
File: 84-056-026; G.1.01.10

Dear Mr. Knighton:

In order to provide equivalent protection prior to implementation of specific design changes identified in the 10CFR50 Appendix R, Fire Safety Evaluation including control room fire spurious actuation and associated circuit analyses, we propose that the enclosed compensatory measures be taken until the changes are completed.

We are proceeding to implement this proposal. Please advise us promptly if you have any comments on this information.

Very truly yours,



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

EEVBJr/TFQ/DKN

Enclosure

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

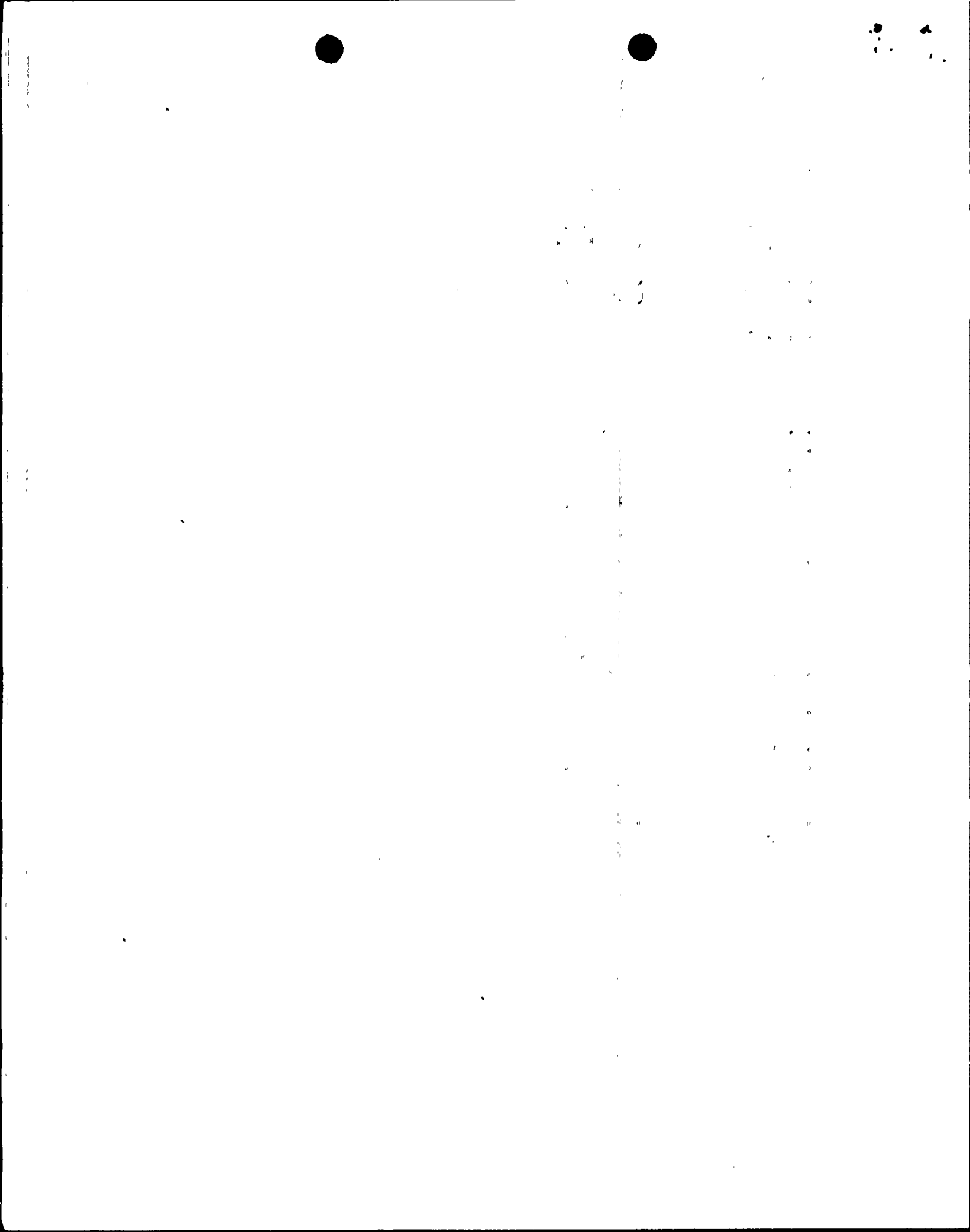
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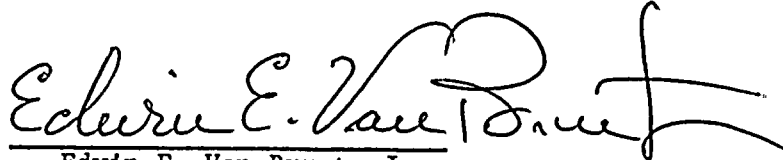
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K. McCandless	(4080)(w/a)
LCTS Coordinator	(4080)(w/a)
T.G. Woods	(1910)(w/a)
L. Graber (LIS)	(w/a)
L.W. Gross	(6075)(w/a)
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O.J. Zeringue*	(6130)(w/a)
J.D. Houchen*	(6130)(w/a)
W.F. Fernow*	(6130)(w/a)
R. Ferguson	(6225)(w/a)
L.G. Papworth	(6095)(w/a)
L. Harris	(6073)(w/a)
R.W. Meyer	(6170)(w/a)
J.B. Martin	(w/a)
R. Zimmerman	(w/a)
G. Fiorelli	(w/a)
W.H. Wilson	(Bldg. 3F6)(w/a)
W.G. Bingham	(Bldg. 3F6)(w/a)
S. Shepherd	(Bldg. 3F6)(w/a)
N. Baldasari	(Bldg. 3F6)(w/a)
M. Barnoski*	(w/a)


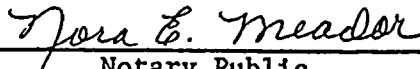


STATE OF ARIZONA     )  
                              ) ss.  
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Vice President, Nuclear Production of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.

  
Edwin E. Van Brunt, Jr.

Sworn to before me this 2nd day of October, 1984.

  
  
Notary Public

My Commission Expires:

My Commission Expires April 6, 1987





FIRE PROTECTION MODIFICATIONS AND COMPENSATORY MEASURES

I. SPURIOUS ACTUATION AND BREAKER COORDINATION

The following design changes are needed to counteract the effects of a control room fire requiring evacuation and shutdown outside the control room with loss of offsite power. These changes were identified during the recently completed 10CFR50 Appendix R Control Room Fire spurious actuation, associated circuits and breaker coordination analyses. Due to the engineering, construction, testing and documentation time needed, these changes are expected to be completed by April 1, 1985, before 5% power is exceeded.

In the interim, the smoke detection system for the control floor is operational and the control room is occupied at all times. Portable fire extinguishers and a manual hose station are provided. As an additional compensatory measure, an hourly fire watch will be established for the entire control floor area, 140' 0" elevation. With the above compensatory measures, these design changes can be completed by the above date with no adverse effect on plant safety.

° DCP 1SJ-EC-037

In the event of a control room fire, inoperability of the essential chilled water system may occur due to a spurious EC flow interlock signal. This change will relocate the analog instrument nest for the EC/EW flow chiller interlock (J-ECB-FSL-534) to the Train B remote shutdown panel room.

° DCP 1SJ-EW-025

In the event of a control room fire, inoperability of the essential cooling water system may occur due to a spurious EW flow interlock signal. This change will relocate the analog instrument nest for the EC/EW flow chiller interlock (J-EWB-FSL-152) to the Train B remote shutdown panel room.

° DCP 1SJ-RC-135

In the event of a control room fire, a spurious pressurizer low level signal may occur thereby disabling the pressurizer heaters. This design change will modify the existing pressurizer disconnect switch to include the low level interlock circuitry.



- ° DCP 1SJ-SI-144

In the event of a control room fire, the hi/low pressure interface may be disturbed due to the closing of various shutdown cooling isolation valves. This change will provide breaker and valve status for the shutdown cooling isolation valves, thereby supplying the plant operators with a means to verify the correct valve positions.

- ° DCP 1SJ-HA-037

In the event of a control room fire, the Train B electrical penetration room cooling unit may not function, thereby adversely affecting the proper performance of the equipment within the room. This change will provide a disconnect switch and separately fused control circuit for the Train B electrical penetration room air cooling unit, M-HAB-Z06.

- ° DCP 1SJ-HJ-040

In the event of a control room fire, smoke from the fire may flow into the ESF switchgear rooms (RSP area), thereby resulting in the potential loss of habitability either due to the smoke itself or the smoke detection system activation of the area's CO<sub>2</sub> flooding system. This change will provide disconnect switches and local (RSP area) handswitches for Train B dampers M-HJB-M55, M01, M02, and M03, thereby allowing the isolation of the control room and minimizing smoke propagation.

- ° DCP 1SN-SS-024

In the event of a control room fire, with a loss of offsite power, it may not be possible to properly align the valves necessary to obtain an RCS sample within 2 hours. This change will rewire the valves of interest, such that either a reliable power source to operate the valves is available or the valves will fail in the proper position.

- ° DCP 1SM-FP-123

In the event of a control room fire, it may be possible for smoke to activate the ESF switchgear rooms' CO<sub>2</sub> flooding systems, thereby resulting in the loss of habitability. This change will modify the CO<sub>2</sub> flooding system actuation to heat detectors with smoke detectors giving alarm only. This will minimize the chance of inadvertent actuation.



- ° DCP 1SE-QD-009

In the event of a control room fire, with a loss of offsite power, additional emergency lighting fixtures are being installed for safe shutdown from outside the control room.

- ° DCP 1SE-PK-033 (Associated Circuits)

This change will provide individual fuses for the auxiliary relay cabinets safe shutdown loads and separate common fused breakers for non-safe shutdown loads.

## II. FIRE BARRIERS AND COMPONENT SEPARATION

As a result of the reanalysis for 10CFR50 Appendix R which was included in FSAR Amendment 13, some additional walls and floors are being upgraded, reclassified and/or penetration seals added. In one instance a component is being relocated and in another, provision for manual action is being added.

As a compensatory measure, an hourly fire watch will be established in all safety related fire areas affected by the changes in accordance with Technical Specification 3/4.7.12 until the changes are implemented.

These changes are expected to be completed by April 1, 1985, before exceeding 5% power and, with the technical specification compensatory measures which will be taken, plant safety will not be adversely affected.

- ° DCP 1SA-FP-104

This design change will add additional rated fire seals to fire barriers in the Auxiliary, Diesel Generator and Control Buildings.

- ° DCP 1SA-FP-109

This design change will add additional rated fire seals to fire barriers in the Auxiliary Building.

- ° DCP 1SM-FP-124

It has been found through internal review that the fire door frame in the metal lath and plaster fire barrier wall between the Train A and B remote shutdown panel rooms at the 100' 0" elevation of the Control Building is rated for 1-1/2 hours. Therefore, the 3-hour fire rating currently assigned to the wall is being reduced to a 2-hour fire rating. To compensate for the necessary rating change, automatic Halon fire suppression systems are being added to each of the remote shutdown panel rooms.



° DCP 1SM-FP-117

The structural steel beams and columns in fire zones 37C and 37D supporting the floor of Fire Areas XVI and XVII established in FSAR Amendment 13, are currently not protected. Zones 37C and 37D consist of piping, valves and a few cables. The equivalent fire severity is less than 20 minutes. The redundant fire areas are separated horizontally by approximately 40 feet without intervening combustibles. Smoke detection is currently provided for early warning. In order to assure integrity of the floor assembly, one hour fire proofing is being added to the steel beams and columns.

° DCP 1SM-FP-096

In the event of a fire, cable tray collapse could cause the failure of a penetration seal. This change will add fire retardant material to the first cable tray support nearest the fire wall, whenever the support is in excess of 24 inches from the face of the fire wall.

° DCP 1SJ-CH-190

Both train-related charging pump low pressure switches are located in the corridors outside the charging pump rooms. A distance of approximately 25 feet, with intervening combustibles protected by cable tray water suppression systems, separate the two switches. This change will relocate the Train A switch (J-CHA-PSL-216) from the corridor to within the Train A charging pump room to completely separate it from the Train B switch.

° DCP 1SM-FP-127

In the event of a fire involving the condensate transfer pump circuitry, the makeup flow to the Train A and B ECW surge tanks may be impaired. This design change will add permanent adaptors to the ECW surge tanks, thereby allowing for the use of water from nearby fire hoses as an alternate makeup source. This action will be incorporated into the operational procedures.

° DCP 1SE-ZA-122

Wrap additional Auxiliary Feedwater System conduits in the Auxiliary Building elevation 70'0" and 88'0" with thermo-lag for train separation.

