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AUTH. NAME AUTHOR AFFILIATION
 BERNIER, R.A. Arizona Public Service Co. (formerly Arizona Nuclear Power
 RECIP. NAME RECIPIENT AFFILIATION
 MATHEWS, R.J. NRC - No Detailed Affiliation Given *Rev. 8/28/95*

SUBJECT: Forwards corrected pages to Rev 6 to "PVNGS Update FSAR,"
 incorrectly printed & required editorial correction.

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 TITLE: OR Submittal: Updated FSAR (50.71) and Amendments

NOTES: STANDARDIZED PLANT 05000528
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 Standardized plant. 05000530

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Arizona Public Service Company
Company Correspondence

ID #: 102-02973-RAB/GAM
Date: May 27, 1994

To: R. J. Mathews
Sta.#: 7718
Ext.#: 6809

From: R. A. Bernier *RAB*
Sta.#: 7636
Ext.#: 5882

File: 94-005-419.05
Subject: Updated Final Safety Analysis Report - Corrected Pages

We recently distributed Revision 6 to the Palo Verde Nuclear Generating Station (PVNGS) Updated Final Safety Analysis Report (UFSAR). It was subsequently discovered that two pages of the update were incorrectly printed and required editorial correction. The two pages have been corrected and are attached.

Please distribute the attached corrected UFSAR pages 9.2-9/9.2-10 and 9B.3-7/9B.3-8 to all UFSAR holders except the NRC. The corresponding superseded pages currently in the UFSAR should be discarded. The NRC is being provided the corrected pages by a separate letter.

Should you have any questions or require additional information, please contact Richard A. Bernier at (602) 393-5882.

RAB/GAM/dd

Attachment:
PVNGS UFSAR Corrected Pages

cc: A. K. Krainik

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9.2.1.5.5 Instrumentation and Controls

Refer to paragraph 7.4.1.1.4 for the ESPS pump control logic. (Refer to paragraph 9.2.1.9 for instrumentation and control applications to the ESPS.)

9.2.1.6 System Operation

During emergency operations, the ESPS provides cooling water directly to the cooling systems of the diesel generators and to the ECWS indirectly through the ECWS heat exchangers. Cooling water for the ESPS is supplied from the ultimate heat sink as described in subsection 9.2.5. Return flow from components serviced by the ESPS is returned to the ESPS spray cooling subsystem and to the ultimate heat sink for reuse.

The ESPS will operate for 27 days following a postulated LOCA without requiring any makeup water to the ultimate heat sink and without requiring any blowdown from the spray ponds for salinity control. Provisions for makeup water and spray pond blowdown for the time period following 27 days are discussed in subsection 9.2.5. The combined water inventory of both essential spray ponds is needed for a 27-day operation without makeup. | 6

The ESPS has two redundant and separate trains. Each train alone, in conjunction with the ultimate heat sink, has a full 100% heat dissipation capacity for a safe shutdown. Although an emergency reactor shutdown is accomplished by initial operation of both ESPS trains, shutdown and cooldown over an extended period of time is possible with the use of a single train. | 6

The ESPS operational logic and the associated initiation and actuation controls and instrumentation are summarized in the following paragraphs.

WATER SYSTEMS

operationally actuated by any single or any combination of the following signals or operations:

- Safety injection actuation signal (SIAS)
- Containment spray actuation signal (CSAS)
- Control room ventilation and isolation actuation signal (CRVIAS)
- Control room essential filtration actuation signal (CREFAS)
- Auxiliary feedwater actuation signal (AFAS-1 or AFAS-2)
- Diesel generator start signal (DGSS)
- Loss of offsite power signal (LOP)
- Manual start by control room operator

Manual start and stop actuation from the control room overrides the automatic mode. Manual start and stop controls are also provided for each of the two ESPS trains and two ECWS trains. This individual control feature permits the removal of a train from operation after the automatic operation actuation if it is not required.

The only components that are actuated in any of the trains, either automatically or by manual control room operator initiation in lieu of automatic actuation, are the ESPS pumps. Essential spray pond system and ECWS valves are manually and locally operated, except for spray header isolation valves SPA-HV49A and SPB-HV50A, and spray header bypass valves SPA-HV49B and SPB-HV50B, which are manually operated only from the control room. Valves in the supply lines from the pumps and in the return lines to the essential spray ponds or to the ECWS and diesel generator heat exchangers are locked open.

Table 9B.3-1

COMPARISON OF PALO VERDE NUCLEAR GENERATING STATION TO APPENDIX A OF
NRC BRANCH TECHNICAL POSITION APCS 9.5-1 (Sheet 7 of 68)

B. ADMINISTRATIVE PROCEDURES, CONTROLS, AND FIRE BRIGADE

APPLICATION DOCKETED BUT CONSTRUCTION PERMIT NOT RECEIVED AS OF 7/1/76	PLANTS UNDER CONSTRUCTION AND OPERATING PLANTS	PVNGS POSITION AND BASIS FOR NONCOMPLIANCE ITEMS
<p>8. <u>Multiple-Reactor Sites</u></p> <p>On multiple-reactor sites where there are operating reactors and construction of remaining units is being completed, the fire protection program should provide continuing evaluation and include additional fire barriers, fire protection capability, and administrative controls necessary to protect the operating units from construction fire hazards. The superintendent of the operating plant should have the lead responsibility for site fire protection.</p>	<p>8. <u>Multiple-Reactor Sites</u></p> <p>Same</p>	<p>8. <u>Multiple-Reactor Sites</u></p> <p>Construction of Units 1, 2, and 3 is complete.</p> <p>The PVNGS fire protection program provides continuing evaluation of the fire protection/prevention measures to protect the operating unit(s) from construction fire hazards.</p> <p>Fire barriers between operating plants are not deemed necessary. Each unit complex is separated from any other unit complex by a distance of approximately 500 feet.</p> <p>Responsibilities for the fire protection program are discussed in section A.1 of this table.</p>
<p>9. <u>Simultaneous Fires</u></p> <p>Simultaneous fires in more than one reactor need not be postulated, where separation requirements are met. A fire involving more than one reactor unit need not be postulated except for facilities shared between units.</p>	<p>9. <u>Simultaneous Fires</u></p> <p>Same</p>	<p>9. <u>Simultaneous Fires</u></p> <p>PVNGS does not postulate simultaneous fires in more than one reactor since no facilities, except for the fire water pumps, the water supply tanks, and the underground fire water main loop, are common. A separation distance of approximately 500 feet exists between units. The failure of the shared facilities will not affect the safe shutdown capability of the units.</p> <p>The two diesel-driven fire water pumps (50% capacity each) are protected by a wet pipe sprinkler system. (See section E.2.c of this table for more details).</p>

PVNGS UPDATED FSAR
COMPARISON OF PALO VERDE NUCLEAR
GENERATING STATION TO APPENDIX A OF
NRC BRANCH TECHNICAL POSITION APCS 9.5-1

March 1994

9B.3-7

Revision 6

COMPARISON OF PALO VERDE NUCLEAR GENERATING STATION TO APPENDIX A OF
NRC BRANCH TECHNICAL POSITION APCS 9.5-1 (Sheet 6 of 68)

A. OVERALL REQUIREMENTS OF NUCLEAR PLANT FIRE PROTECTION PROGRAM (CONTINUED)

APPLICATION DOCKETED BUT CONSTRUCTION PERMIT NOT RECEIVED AS OF 7/1/76	PLANTS UNDER CONSTRUCTION AND OPERATING PLANTS	PVNGS POSITION AND BASIS FOR NONCOMPLIANCE ITEMS
<p>1. Administrative procedures consistent with the need for maintaining the performance of the fire protection system and personnel in nuclear power plants should be provided.</p> <p>Guidance is contained in the following publications:</p> <p>NFPA 4 - Organization for Fire Services</p> <p>NFPA 4A - Organization for Fire Department</p> <p>NFPA 6 - Industrial Fire Loss Prevention</p> <p>NFPA 7 - Management of Fire Emergencies</p> <p>NFPA 8 - Management Responsibility for Effects of Fire on Operation</p> <p>NFPA 27 - Private Fire Brigades</p> <p>2. Effective administrative measures should be implemented to prohibit bulk storage of combustible materials inside or adjacent to safety-related buildings or systems during operation or maintenance periods. Regulatory Guide 1.39, Housekeeping Requirements for Water-Cooled Nuclear Power Plants, provides guidance on housekeeping, including the disposal of combustible materials.</p>	<p>1. Same</p> <p>2. Same</p>	<p>1. Administrative procedures consistent with the need for maintaining the performance of the fire protection system and personnel in nuclear power plants are provided.</p> <p>2. PVNGS complies by providing administrative "Control of Combustibles" procedure.</p>

COMPARISON OF PALO VERDE NUCLEAR
GENERATING STATION TO APPENDIX A OF
NRC BRANCH TECHNICAL POSITION APCS 9.5-1