

ENCLOSURE

**PROPOSED AMENDMENT TO TECHNICAL SPECIFICATION 3/4.7.6
AND BASES 3/4.7.6**

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A. DESCRIPTION OF THE PROPOSED TECHNICAL SPECIFICATION AMENDMENT

Technical Specification 3/4.7.6 ACTION a. is amended to change the time to restore an inoperable Essential Chilled Water (ECW) loop from 7 days to 72 hours. With only one ECW loop OPERABLE, two loops must be restored to OPERABLE status within 72 hours.

Technical Specification Bases 3/4.7.6 is also changed by deleting the following:

The normal HVAC [Heating, Ventilation, and Air Conditioning] system is redundant to the emergency HVAC system in maintaining the space design conditions of required safety systems during normal operating conditions and Design Basis Accident Conditions not involving seismic events or loss of offsite power. A seven (7) day Action requirement is for a single ECWS out-of-service, based on the high reliability of offsite power and availability of the normal HVAC system. The normal HVAC system contains two 100% redundant chillers.

The following statement is added to Technical Specification Bases 3/4.7.6:

The 72-hour ACTION requirement for a single ECW loop out-of-service is consistent with the operability requirements of the Emergency Core Cooling System, Auxiliary Feedwater, Essential Cooling Water, and Containment Spray Limiting Conditions for Operation. The normal HVAC system is used in maintaining the space design conditions of required safety systems and the vital power distribution rooms during normal operating conditions.

B. PURPOSE OF THE TECHNICAL SPECIFICATION

Technical Specification 3/4.7.6 ensures there is sufficient cooling capacity, provided by the ECW System, to support operation of essential ventilation air handling units in selected areas and for control room habitability during accident conditions. The ECW system does not operate during normal plant operations.

C. NEED FOR THE TECHNICAL SPECIFICATION AMENDMENT

Technical Specification 3/4.7.6 ACTION a. requires that with only one ECW loop OPERABLE, the inoperable loop must be restored within 7 days or the plant must be placed in HOT STANDBY within the next 6 hours, then in COLD SHUTDOWN within the following 30 hours. Technical Specification Bases 3/4.7.6 states that the 7-day ACTION requirement is based on the availability of the normal HVAC system as a redundant backup to the emergency HVAC system. Arizona Public Service Company

(APS) has determined that the Bases are incorrect, and therefore, the ACTION requirement is incorrect. The normal HVAC system is not fully redundant to the emergency HVAC system and the 7-day ACTION requirement should be changed to 72 hours. The NRC was notified of this condition via Licensee Event Report No. 528/91-007-01. This Technical Specification Amendment corrects the errors by providing a 72-hour ACTION requirement and the proper Bases for the 72-hour requirement.

D. SAFETY ANALYSIS OF THE PROPOSED TECHNICAL SPECIFICATION AMENDMENT

The ECW system consists of two 100% redundant independent trains, each train supplying chilled water to nine air handling units. The air handling units in turn are part of the essential HVAC system. The essential HVAC system services the control room, the Emergency Safety Features (ESF) switchgear rooms, DC equipment rooms, and battery rooms in the control building. The essential HVAC also serves the ESF pump rooms and electrical penetration rooms in the auxiliary building and the Auxiliary Feedwater pump rooms in the Main Steam Support Structure. The normal HVAC supplies these areas during normal plant operation.

Both trains of the ECW system are automatically started by a Safety Injection Actuation Signal, a Control Room Essential Filtration Actuation Signal, a Control Room Ventilation Isolation Actuation Signal, an Auxiliary Feedwater Actuation Signal, or a Loss of Power signal.

The ECW allowable out-of-service time is reduced from 7 days to 72 hours. The change to the 72 hours corresponds to the ACTION requirements for the ESF pumps.

Technical Specification 3/4.5.2 Limiting Condition of Operation (LCO) requires that two Emergency Core Cooling System (ECCS) subsystems be OPERABLE in Modes 1, 2, and 3. An ECCS subsystem consists of a High Pressure Safety Injection pump, a Low Pressure Safety Injection pump, and an OPERABLE flowpath. The ACTION statement requires that an inoperable subsystem be restored to OPERABLE status within 72 hours or the Unit must commence shutdown within 6 hours.

Technical Specification 3/4.7.3 LCO requires that two independent essential cooling water loops be OPERABLE in Modes 1, 2, 3, and 4. The ACTION statement requires that an inoperable loop be restored to OPERABLE status within 72 hours or the Unit must commence shutdown within 6 hours.

Technical Specification 3/4.7.1.2 LCO requires three independent steam generator auxiliary feedwater pumps and flow paths OPERABLE in Modes 1,

2, 3, and 4. The ACTION statement requires that an inoperable pump be restored to OPERABLE status within 72 hours or the Unit must commence shutdown within 6 hours.

Technical Specification 3/4.6.2 LCO requires two independent containment spray systems OPERABLE in Modes 1, 2, 3, and 4. The ACTION statement requires that an inoperable system be restored to OPERABLE status within 72 hours or the Unit must commence shutdown within 6 hours.

The CE Standard Technical Specifications (NUREG-0212, Revision 2, 1980) do not contain a section covering essential chilled water, but do contain sections for Service Water (3/4.7.4) and Component Cooling Water (3/4.7.3). These specifications are analogous to the ECW system, and specify an out-of-service time of 72 hours to restore an inoperable loop to OPERABLE status.

Therefore, changing the ACTION requirement to 72 hours makes the Technical Specification consistent with the out-of-service time for the limiting areas served, the ESF pump rooms.

E. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has provided standards for determining whether a no significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves a no significant hazards consideration if operation of the facility in accordance with a proposed amendment would not: (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) Involve a significant reduction in a margin of safety.

A discussion of these standards as they relate to the proposed amendment follows:

Standard 1 -- Involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment does not affect the probability or consequences of an accident previously evaluated because no change is made in the operation of the ECW system. The reduction in the allowable out-of-service time for an ECW loop increases the availability of the ECW system. The 72-hour out-of-service time is consistent with the allowable out-of-service time for the limiting areas served, the ESF pump rooms.

Standard 2 -- Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated because neither the design nor the operation of the ECW system is changed. The proposed amendment makes the Technical Specification consistent with the allowable out-of-service time for the limiting areas served, the ESF pump rooms.

Standard 3 -- Involve a significant reduction in a margin of safety.

The proposed Technical Specification change does not reduce the margin of safety. The assumptions used in the safety analyses are not changed because the ECW system design and operations are not changed.

F. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed amendment changes the ACTION and Bases requirements for the Essential Chilled Water System.

APS has determined that the proposed amendment involves no change in the amount or type of any effluent that may be released offsite, and that there is no increase in individual or cumulative occupational radiation exposure. As such, operation of Palo Verde Nuclear Generating Station Units 1, 2, and 3, in accordance with the proposed amendment, does not involve an environmental impact.

G. MARKED-UP TECHNICAL SPECIFICATION CHANGE PAGES

PVNGS Unit 1

3/4 7-15
B3/4 7-4

PVNGS Unit 2

3/4 7-15
B3/4 7-4

PVNGS Unit 3

3/4 7-15
B3/4 7-4

PLANT SYSTEMS

3/4.7.6 ESSENTIAL CHILLED WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 At least two independent essential chilled water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With only one essential chilled water loop OPERABLE, restore at least two loops to OPERABLE status within ^{72 hours} 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With only one essential chilled water system OPERABLE:
 1. Within 1 hour verify that the normal HVAC system is providing space cooling to the vital power distribution rooms that depend on the inoperable essential chilled water system for space cooling, and
 2. Within 8 hours establish OPERABILITY of the safe shutdown systems which do not depend on the inoperable essential chilled water system (one train each of boration, pressurizer heaters and auxiliary feedwater), and
 3. Within 24 hours establish OPERABILITY of all required systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE essential chilled water system for space cooling.

If these conditions are not satisfied within the specified time, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.6.1 At least two essential chilled water loops shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.

4.7.6.2 Once per 18 months during shutdown, verify that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is locked, sealed, or otherwise secured in position, is in its correct position.

PLANT SYSTEMS

BASES

3/4.7.4 ESSENTIAL SPRAY POND SYSTEM

The OPERABILITY of the essential spray pond system ensures that sufficient cooling capacity is available for continued operation of equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.7.5 ULTIMATE HEAT SINK

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either (1) provide normal cooldown of the facility, or (2) to mitigate the effects of accident conditions within acceptable limits.

The limitations on minimum water level and maximum temperature are based on providing a 27-day cooling water supply to safety-related equipment without exceeding their design basis temperature and is consistent with the intent of the recommendations of Regulatory Guide 1.27, "Ultimate Heat Sink for Nuclear Plants," March 1974.

3/4.7.6 ESSENTIAL CHILLED WATER SYSTEM

The OPERABILITY of the essential chilled water system ensures that sufficient cooling capacity is available for continued operation of equipment and control room habitability during accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

The Essential Chilled Water System (ECWS), in conjunction with respective emergency HVAC units, is required in accordance with Specification Definition 1:18 to provide heat removal in maintaining the various Engineered Safety Features (ESFs) room space design temperatures below the associated equipment qualification limits for the range of Design-Basis Accident conditions. ~~The normal HVAC system is redundant to the emergency HVAC system in maintaining the space design conditions of required safety systems during normal operating conditions and Design Basis Accident Conditions not involving seismic events or loss of offsite power. A seven (7) day Action requirement is for a single ECWS out of service, based on the high reliability of offsite power and availability of the normal HVAC system. The normal HVAC system contains two 100% redundant chillers.~~ Action requirements are provided to ensure operability of the vital bus inverters and emergency battery chargers, by verifying within one hour that the normal HVAC system is providing space cooling to the vital power distribution rooms. The Action requirement is provided to establish within 8 hours operability of the safe shutdown systems which do not depend on the inoperable ECWS. The 8 hour period provides a reasonable time in which to establish operability of this complement of key safety systems. This requirement ensures that a functional train of safe shutdown equipment is available to put the plant in a safe, stable condition for the most probable abnormal operational occurrences. An Action requirement of 24 hours is provided to establish operability of the remaining required safety systems which do not depend on the inoperable ECWS.

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The 72 hour ACTION requirement for a single ECWS train out-of-service is consistent with the operability requirements of the Emergency Core Cooling System, Essential Cooling Water System, Auxiliary Feedwater System, and Containment Spray System Limiting Conditions for Operation. The normal HVAC system is used in maintaining the space design conditions of required safety systems during normal operating conditions. The normal HVAC system is also used in maintaining the space design conditions in the vital power distribution rooms during normal operating conditions.

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PLANT SYSTEMS

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ACTION:

- 72 HOURS
- a. With only one essential chilled water loop OPERABLE, restore at least two loops to OPERABLE status within ~~7 days~~ or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
 - b. With only one essential chilled water system OPERABLE:
 1. Within 1 hour verify that the normal HVAC system is providing space cooling to the vital power distribution rooms that depend on the inoperable essential chilled water system for space cooling, and
 2. Within 8 hours establish OPERABILITY of the safe shutdown systems which do not depend on the inoperable essential chilled water system (one train each of boration, pressurizer heaters and auxiliary feedwater), and
 3. Within 24 hours establish OPERABILITY of all required systems, subsystems, trains, components, and devices that depend on the remaining OPERABLE essential chilled water system for space cooling.

If these conditions are not satisfied within the specified time, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.5.1 At least two essential chilled water loops shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.

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PLANT SYSTEMS

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