



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

1.0 INTRODUCTION

In a submittal dated March 21, 1986, the Washington Public Power Supply System requested a change to their Technical Specifications for the Washington Nuclear Project No. 2 (WNP-2) facility. The requested change would permit having only one of the two spray ponds which constitute the ultimate heat sink to be operable in Operational Condition \* (Refueling). After installation of a cross connection between the two redundant standby service water systems (SSWS), this change in the Technical Specifications would permit draining of one pond at a time in order to perform maintenance and repairs on the spray-tree networks and structures. One of the problems identified by the licensee is the need to maintain the protective coatings on the piping.

The amendment would allow maintenance to be done to the ultimate heat sink during refueling while fuel is being moved. Under the existing specification 3.7.1.3 performance of the needed maintenance to the spray ponds would require the licensee to declare the service water system inoperable. Specification 3.7.1.1 in turn would require the licensee to declare the associated diesel generator inoperable. Under specification 3.8.1.2 this would result in a requirement that the licensee suspend reactor core alterations, i.e., fuel movement in this instance. With the proposed amendment, the licensee would not be required to declare the service water system inoperable and thus could do the maintenance while refueling operations continue.

The spray ponds are seismic Category I and the SSWS is Class 1E powered. The spray ponds are not tornado missile protected. In the event of missile damage, a tornado missile protected river water make up system provides 100% makeup capability for once-through cooling of the plant. The licensee has performed an analysis of the SSWS piping with the cross connection installed and has determined that a safe shutdown earthquake (SSE) will not result in damage to the operable SSWS loop.

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The normal operating lineup for the SSWS is to withdraw water from one pond and to return the water to the other pond's spray network. With the licensee's request to have only one pond operable during refueling, a cross connection via a spool piece would be installed only during refueling conditions. The spool piece would permit one loop of the SSWS to withdraw water from one pond and to return it to the spray networks of the same pond. The licensee has determined that the minimum time from power operation which would be required to install the spool piece and a removable valve is six days. On the basis of the decay heat loads six days into the refueling, one spray pond has adequate capacity for 22 days of plant cooling, assuming a loss of off-site power.

## 2.0 EVALUATION

The installation of the blind flange connections for the cross connection does not affect our conclusions as stated in the staff's "Safety Evaluation Report Related to Operation of WPPSS Nuclear Project No. 2" (NUREG-0892) with respect to either the ultimate heat sink or the SSWS. During the time that the cross connection is in place and one pond is drained, approximately 16% of the year, the ultimate heat sink and the SSWS are more vulnerable to becoming inoperable due to natural phenomena because of the reduction in redundancies. For the case of a potential SSE, an additional supply of water could be made available within approximately three days by installing temporary piping from the river water makeup pump house to the operable spray pond for once through cooling. In the case of a potential tornado generated missile which could eliminate the spray networks, the existing systems for supplying water for once through cooling would be available, as discussed and approved in NUREG-0892. On the basis of the ability to provide additional makeup in a reasonable time, if necessary, we conclude that the installation of the cross connection does not adversely affect our previous conclusions concerning the requirements of General Design Criteria 2, 4, and 44. There are no shared facilities at WNP-2; thus, General Design Criterion 5 is not applicable. On the basis of the licensee's analysis, we conclude that the installation of the cross connection will not adversely affect the safety grade piping of the SSWS and, therefore, the guidelines of Regulatory Guide 1.29 are satisfied.

The guidelines of Regulatory Guide 1.27 identify the need to maintain a 30-day supply of cooling water in the ultimate heat sink. Based on the licensee's indication that the 22 days of plant cooling constitutes ample time to provide supplemental water to the operational spray pond, we conclude that the guidelines of Regulatory Guide 1.27, with respect to having a 30-day supply of water, are not significantly weakened for Operational Condition \*.

Under the current technical specification it would be necessary to declare the service water system inoperable to perform the needed maintenance to the ultimate heat sink. Under the proposed amendment the service water system would remain operable retaining this margin of safety through the duration of time required for the ultimate heat sink maintenance.

On the basis of the above evaluation, we find the proposed change acceptable.

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The licensee also requested that the definition of the ultimate heat sink, as succinctly expressed in the lead sentence of Technical Specification 3.7.1.3, be revised to be consistent with the wording in the WNP-2 Final Safety Analysis Report Section 9.2.5.2. This change in wording does not result from a design change nor does it authorize a design change. Furthermore, it does not alter the staff's understanding of the configuration of the ultimate heat sink. The staff finds the wording change proposed by the licensee acceptable.

In the supplemental letter of March 13, 1987, the licensee included a paragraph addressing the meaning of operability, asking that the paragraph be added to the basis section of the Technical Specifications. In accordance with Title 10 of the Code of Federal Regulations, Part 50.36(a), the bases are not considered part of the Technical Specifications, but include design and procedural details revisable in accordance with the controls set forth in Part 50.59.

The staff notes in this instance that the proposed paragraph is consistent with the information in paragraph 9.2.5.2 of the FSAR, and does not represent a change in design or operating procedures or a change in the staff's understanding of design or operation. The proposed paragraph, therefore, has been added to the basis in conjunction with this amendment.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation and use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupation radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

### 4.0 CONTACT WITH STATE OFFICIAL

The Commission made a proposed determination that the amendment involves no significant hazards consideration, which was published in the Federal Register on July 2, 1986 (51 FR 24266) and the staff has consulted with the State of Washington. No public comments were received, and by letter dated January 29, 1988 the State of Washington advised they have no comment.

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5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: April 4, 1988

