



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 190 TO FACILITY OPERATING LICENSE NO. DPR-32
AND AMENDMENT NO. 190 TO FACILITY OPERATING LICENSE NO. DPR-37
VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-280 AND 50-281

1.0 INTRODUCTION

By letter dated December 10, 1993, Virginia Electric and Power Company (the licensee) proposed to change the surveillance frequency of the Auxiliary Feedwater (AFW) System pumps from monthly to quarterly in accordance with the guidance provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for testing During Power Operation." The proposed amendment would, in part, modify the Technical Specifications (TS) to incorporate a portion of the line-item TS improvements that were identified by the NRC staff as reported in NUREG-1366, "Improvements to Technical Specification Surveillance Requirements," dated December 1992. The TS improvements were based on an NRC study of surveillance requirements and included information provided by licensee personnel that plan, manage, and perform surveillances.

Changes are also proposed to the surveillance requirements of valves to establish a consistent approach for testing of the AFW System. Also proposed are a definition for "staggered test basis" and administrative changes.

2.0 PROPOSED TECHNICAL SPECIFICATION CHANGES AND EVALUATION

- 2.1 A definition of "staggered test basis" is proposed for Section 1.0, "Definitions." This definition did not exist in the current TS.

This definition is consistent with NUREG-0452, "Standard Technical Specifications for Westinghouse Pressurized water Reactors," Revision 4A. Although this is not the latest definition for STAGGERED TEST BASIS as defined in NUREG-1431, "Standard Technical Specifications - Westinghouse Plants," dated September 1992, the proper surveillance intervals are achieved and the change is, therefore, acceptable.

- 2.2 The test frequency noted in Technical Specification Table 4.1-2A, item 20, "Containment Hydrogen Analyzers," is changed from "staggered basis," to "STAGGERED TEST BASIS."

This change is acceptable since it is administrative and does not change the current TS requirements.

- 2.3 A new requirement is proposed to verify, at least once per 31 days, that manual, power-operated and automatic valves in each AFW flow path are in the correct position.

This change is consistent with Generic Letter 93-05, the Westinghouse Standard Technical Specifications, and is more restrictive than the existing TS requirements. This change is technically acceptable.

- 2.4 Deletion of the current TS requirement to exercise the AFW pump discharge valves monthly is proposed. A new requirement to verify that each motor-operated valve (MOV) in the AFW flow path performs satisfactorily per ASME Section XI is proposed.

The AFW pump discharge valves are normally open MOVs. These valves are required to be tested per the ASME Code and the licensee has chosen to include the requirement in Section 4.8 of the TS. Verification of proper operation of the MOVs per the ASME Code provides adequate level of assurance of proper operation, and is, therefore, acceptable.

- 2.5 Performance of AFW pump operability testing quarterly on a staggered test basis rather than monthly is proposed. Satisfactory performance of the pumps is proposed to be determined by reference to TS 4.0.5, which invokes ASME Section XI, rather than the current TS criteria to "flow test for 15 minutes to determine operability."

This changes the frequency of the surveillance on a particular AFW pump from monthly to quarterly. This change is consistent with Generic Letter 93-05, standard TS, and the ASME Code.

NUREG-1366 provided the following information on AFW pump and system testing. AFW pumps are the only Class 1, 2, or 3 centrifugal pumps tested more frequently than quarterly. A change of the test frequency of AFW pumps to quarterly on a staggered basis was recommended (test one pump monthly in this case). Analysis of AFW pump failures indicates that a monthly test interval for all AFW pumps may be contributing to pump unavailability through failures and equipment degradation. Conducting the tests on a staggered basis will permit system testing monthly, while reducing AFW pump testing to quarterly, thereby maintaining a consistent degree of reliability.

The staff finds that the Code quarterly-testing frequency is adequate to detect degradation and monitor pump performance. The NRC endorses the ASME Code, Section XI, and references this Code in 10 CFR 50.55a as the requirements of inservice testing (IST) for pumps.

For the reasons addressed above, this change is acceptable.

- 2.6 The following changes for AFW testing while shut down are proposed. The current TS allowed reducing testing requirements while shut down such that monthly testing of only one AFW pump and associated discharge valves was required. The changes require that the motor-driven AFW pumps and the MOVs in the cross-connected flow path for the opposite unit continue to be tested when the unit is shut down with the opposite unit's reactor coolant system temperature and pressure greater than 350° F and 450 psig, respectively.

These changes are proposed to be consistent with the proposed testing during plant operations. One of the opposite unit's AFW pumps is required to mitigate the consequences of a main steam line break or fire event in the Main Steam Valve House. Since the motor-operated pumps and valves will continue to be tested on a quarterly basis per the ASME Code, and Code quarterly-testing frequency is adequate to detect degradation and monitor pump and valve performance, this change is acceptable.

- 2.7 Also proposed are administrative changes such as: 1) grammar and punctuation; 2) correction of system or component names; and 3) capitalization of defined words.

These changes are acceptable since they are administrative and do not change the current TS requirements.

- 2.8 The staff concludes that the proposed TS changes do not adversely affect plant safety and will result in a net benefit to the safe operation of the facility, and, therefore, are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Virginia State official was notified of the proposed issuance of the amendments. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATIONS

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, and make administrative changes. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (59 FR 2873). Accordingly, these amendments meet 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 these amendments.

5.0 CONCLUSION

The NRC staff has concluded, on the basis of 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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