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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

1.0 INTRODUCTION

By letters dated November 18, 1986 and January 7, February 25, and April 15, 1987, the Washington Public Power Supply System proposed certain changes to Section 3.6.3.1 of the Technical Specifications for WNP-2. The request deals with a configuration change to the Traversing Incore Probe (TIP) system nitrogen purge line. The proposed change adds an automatic solenoid isolation valve (TIP-V-6) to the line outside containment so as to provide the system with a reliable containment isolation capability in case of an accident. The existing check valve (TIP-V-6) will be moved inside containment.

2.0 EVALUATION

The TIP purge system supplies nitrogen to the TIP index mechanisms to minimize corrosion. There are a total of five index mechanisms serving approximately 40 LPRMs. Operation of the drive mechanism causes the fission chamber to be inserted or retracted from the reactor core within individual TIP guide tubes. Each TIP unit uses an indexing device to route the TIP detector to the desired LPRM assembly. Each of the LPRM assemblies in turn houses a TIP guide tube. The output signal from a TIP channel may be used to plot an axial flux profile. The purge line serves all five indexing devices.

In accordance with the regulations, specifically GDC 54 and 56 of Appendix A to 10 CFR Part 50, a piping system penetrating a primary reactor containment is required to be provided with containment isolation capabilities having redundancy, reliability, and performance capabilities. Also, the system should be able to be leak tested. The licensee misclassified the TIP nitrogen purge line as an instrument line, not subject to the cited criteria. Only one check valve was provided, on the line outside of containment.

As an interim measure the licensee is relying on an alternate arrangement for index mechanism nitrogen purging (Licensee Event Report Number 85-42, July 11, 1985) from a nitrogen supply within the drywell. Containment isolation is provided by use of a blank flange on the penetrating line. This would satisfy GDC 56.

The licensee has proposed permanently correcting the deficiency by providing two valves on the nitrogen purge line. The proposed amendment adds the new valve to the list of primary containment valves in Table 3.6.3-1 of the Technical Specifications.

The original check valve, identified as TIP-V-6, originally located outside of containment, is to be moved inside. In its place outside containment a one-inch solenoid automatic globe valve, identified as TIP-V-15, is to be installed, thus providing the required isolation redundancy. The trip for TIP-V-15 responds to high drywell pressure or reactor vessel low-low water level signal as reflected in Table 6.2-16 of the FSAR. It fails in the closed position and will close automatically upon loss of power. The system is also provided with a test connection.

The licensee's February 25, 1987 letter stated that, in accordance with Appendix J, the two valves will be Type-C-tested with air, and penetration 27F will be Type-B tested. The staff, therefore, concludes that the proposed changes to the TIP system nitrogen purge line as described above conforms with GDC 54 and 56, and the system will perform its containment isolation function satisfactorily in case of an accident.

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 occupational 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 (52 FR 7702) on March 12, 1987, and consulted with the state of Washington. No public comments were received, and the state of Washington did not have any comments.

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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