



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 45 TO FACILITY OPERATING LICENSE NPF-52
DUKE POWER COMPANY, ET AL.
CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated December 15, 1987, as supplemented April 15, 1988, the licensee requested five changes to Technical Specification (TS) 3/4.7.8 "Snubbers" for Catawba Nuclear Station, Units 1 and 2. Change 1 would delete an optional sampling plan for snubber inspection (Surveillance Requirement 4.7.8e.3)--the "55" snubber plan) which has never been used at Catawba; Change 2 would allow deletion of the "reject" line from Figure 4.7-1 and in the "37" functional test plan (Surveillance Requirement 4.7.8e.2)); Change 3 proposes an alternate sampling plan, not yet approved by the American Society of Mechanical Engineers (ASME), involving grouping of snubber failure modes; Change 4 would allow deletion of the phrase "of a type" from Surveillance Requirement 4.7.8e; and Change 5 would delete the requirement to inspect snubber attachment hardware (Surveillance Requirement 4.7.8c. "Visual Inspection Acceptance Criteria") because this inspection is already under the requirements of ASME Code, Section XI.

Only Changes 2 and 5 are evaluated in the following. The issues in Changes 1, 3 and 4 remain under staff review and consideration but are not included in this evaluation.

2.0 EVALUATION

Change 2 would revise the acceptability criteria for snubber testing by the "37" functional test plan in Surveillance Requirement 4.7.8e.2) by deleting the "reject" line from Figure 4.7-1, which could unnecessarily require the functional testing of all 1600 snubbers. The change would also delete references to the "reject" region in the text of T.S. 4.7.8.e.2). A similar revision was approved in TS amendments 46 and 27, issued September 30, 1985, for McGuire Nuclear Station, Units 1 and 2, respectively.

In the "37" functional test plan, the number of test failures (C) is plotted in Figure 4.7-1 against the number of snubbers tested (N). The "accept" line in Figure 4.7-1 represents the equation $C = 0.055N - 2.007$ and is the criterion for ensuring, at the 95% confidence level, that a "bad" population of snubbers (defined as more than 10% failing the inspection test) would not be accepted. If any snubber(s) in the first sample of 37 snubbers failed inspection, sampling and testing would continue until the number of failures plotted against the number tested fell below the "accept" line.

The "reject" line in Figure 4.7-1 represents the equation $C = 0.055N + 2.007$ and is the criterion for ensuring, at the 95% confidence level, that a "good" population of snubbers (defined as less than 2.5% failing the inspection test) would not be rejected. By this criterion, for example, if more than 4 of the first 37 snubbers tested failed the test, then the total snubber population would be rejected and all 1600 snubbers would have to be inspected. Although the probability for failing the "reject" line criterion is very small for a population meeting the "accept" line criterion, the cost of failure would be high economically and may possibly result in occupational radiation exposure.

The staff has reviewed the effect of deleting the "reject" line from Figure 4.7-1 and determined that the deletion would have only minimal safety implications. The confidence level that a "bad" snubber population will not be accepted only changes from 95% to 94.74%. The proposed deletion is therefore acceptable.

Change 5 would revise Surveillance Requirement 4.7.8c. to delete the portion related to the inspection of the hardware by which a snubber is attached to its supporting structure. This hardware would instead be inspected in accordance with the less stringent requirements of ASME Code, Section XI.

For approximately 1000 snubbers, Surveillance Requirement 4.7.8c. requires the removal and replacement of mirror insulation in order to perform the inspection. Because of the potential for the creation of airborne radioactivity as a result of removing the insulation, respirator protection is required for any jobs being performed in this area. The inspection of other piping supports such as pipe hangers is performed under the requirements of the ASME Code, Section XI. On the basis of these considerations the staff finds that the proposed amendment requiring inspection of snubber attachment hardware in accordance with the ASME Code, Section XI requirements is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendments involve 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 exposure. The NRC staff has made a determination that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the 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.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (53 FR 28285) on July 27, 1988. The Commission consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: September 26, 1988