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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST FOR SNUBBER INSERVICE INSPECTION PROGRAM

DUKE POWER COMPANY, ET AL.

CATAWBA NUCLEAR STATION, UNIT 1

DOCKET NO. 50-413

1.0 INTRODUCTION

By letter dated August 23, 1995, Duke Power Company (DPC), the licensee of Catawba Nuclear Station Unit 1 (Catawba 1), requested relief from the requirements of ASME Code, Section XI, 1989 Edition for its Inservice Inspection (ISI) Program for snubbers, and authorization of a proposed alternative.

Currently, the Catawba 1 ISI program is required to be performed, per the ASME Code, Section XI, Article IWF-5000, in accordance with the first addendum to ASME/ANSI OM-1987 Edition, Part 4, published in 1988 (OMa-1988, Part 4). The licensee stated that the alternative use of the visual examinations and functional testing programs on Code Class 1, 2, and 3 snubbers, in accordance with Catawba Technical Specifications (TS), would provide an acceptable level of quality and safety.

2.0 EVALUATION

According to Catawba TS, at least once per 18 months during shutdown, a representative sample of snubbers of each type shall be tested. One sample plan requires that at least 10% of all snubbers shall be functionally tested. For each snubber of a type that does not meet the functional test acceptance criteria of TS Section 4.7.8f, an additional 10% of all snubbers shall be functionally tested until no more failures are found or until all snubbers have been functionally tested. The other sample plan requires that an initial representative sample of 55 snubbers be functionally tested. For each snubber type which does not meet the functional test acceptance criteria, an additional sample of at least one-half the size of the initial sample shall be tested until the total number tested is equal to the initial sample size multiplied by the factor, 1 + C/2, where "C" is the number of snubbers found to have not met the functional test acceptance criteria.

As stated in the Catawba TS, the large-bore steam generator hydraulic snubbers will be treated as a separate type (population) for functional test purposes. The representative sample selected for the functional test sample plans shall be randomly selected from all snubbers and reviewed before commencement of the testing. The sample selection shall ensure, as far as practicable, that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers.

In addition to the regular sample, snubbers placed in the same location as snubbers that failed the previous functional test shall be retested at the time of the next functional test but shall not be included in the sample plan.

The staff finds that the TS requirements for snubber functional testing are as conservative or, in some cases, more conservative than the requirements of the OM Code. For example, the corrective action provision in the existing program is more conservative than the OM Code requirements. The TS requirements ensure that snubbers are visually examined and functionally tested in a manner that provides an acceptable level of quality and safety. Therefore, the proposed alternative is acceptable.

The licensee stated in its submittal that the current Catawba TS also specifies an adequate program for visual examination for all safety-related hydraulic and mechanical snubbers. Snubber examinations are currently performed under TS 3/4.7.8 as amended per NRC Generic Letter 90-09, "Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions." The alternate schedule was provided to alleviate the expenditure of unnecessary resources and prevent radiological exposure associated with the over restrictive examination schedule.

The licensee stated that the current inspection program as defined by the TS provides for a level of quality and safety equal to or greater than that of the OM code requirements. The OM Code provides the provision for failure mode grouping of snubbers, which fail visual examination, allowing only those snubbers identified as being in that group to require shortened intervals. Under the existing TS program all snubbers in the population would be placed in a shortened inspection interval.

3.0 CONCLUSION

Based on the information provided, the staff determined that the licensee has presented an adequate justification for its proposed alternative to the requirements of ASME Code, 1989 Edition, Section XI, Article IWF-5000 (which references OMa-1988, Part 4), with regard to visual examination and functional testing of Code Class 1, 2, and 3 snubbers. The staff determined that the proposed alternative use of the TS for the Code Class snubbers would provide an acceptable level of quality and safety and, therefore, is authorized pursuant to 10 CFR 50.55a(a)(3)(i).

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Date: January 11, 1996