



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 13, 1995

Mr. M. S. Tuckman  
Senior Vice President  
Nuclear Generation  
Duke Power Company  
P. O. Box 1006  
Charlotte, NC 28201

SUBJECT: REQUEST FOR APPROVAL OF SEISMIC ANALYSIS INDEPENDENT SUPPORT MOTION  
METHODOLOGY - McGUIRE NUCLEAR STATION, UNITS 1 AND 2; AND CATAWBA  
NUCLEAR STATION, UNITS 1 AND 2 (TAC NOS. M91833, M91834, M91832)

Dear Mr. Tuckman:

By letter dated March 16, 1995, Duke Power Company (DPC or the licensee) proposed three methodologies as alternatives to the seismic analysis methods described in the Catawba and McGuire Final Safety Analysis Reports. These methodologies consisted of (1) using the CREST computer program, (2) Independent Support Motion (ISM), and (3) coupled analysis of the reactor coolant loop (RCL) piping. DPC proposed these methodologies originally for the reanalysis of main steam lines in support of the steam generator (SG) replacement project at Catawba Unit 1 and McGuire Units 1 and 2. Since the new SGs weigh approximately 20% more than the original SGs at the operating condition and have a slightly higher center of gravity, it is necessary that the licensee perform a re-analysis of the main steam lines.

Since the March 16, 1995, submittal, DPC identified additional applications of the ISM and CREST methodologies. By letter dated June 30, 1995, the licensee requested that the ISM and CREST methodologies be reviewed and approved by the NRC for general piping application. By letter dated July 6, 1995, the staff requested additional information (RAI) needed to complete the review of the CREST program developed by North Carolina State University (NCSU).

By letter dated September 20, 1995, DPC requested the NRC's expedited approval for use of the ISM methodology in consideration of the incomplete status of the CREST review at this time and the necessity to complete the related SG replacement modification packages. This expedited use of ISM methodology is proposed for re-analysis of main steam line piping in support of the SG replacements.

The NRC staff has reviewed DPC's submittals for the portion regarding the ISM methodology. The staff concludes that the ISM methodology, as described in DPC's submittals, conforms to that described in NUREG-1061, Volume 4, Section 2.4.1. and is, therefore, acceptable for general piping applications, including the main steam lines, at Catawba Units 1 and 2, and McGuire Units 1

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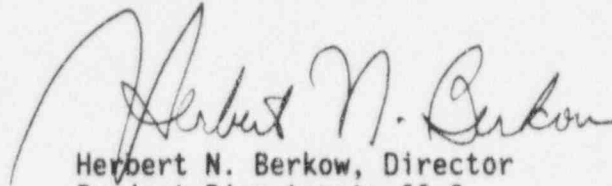
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Mr. M. S. Tuckman

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and 2. This completes the NRC staff's review of DPC's proposed use of the ISM methodology. As stated in its September 20, 1995, letter, DPC withdrew its request for further review of the third methodology, coupled analysis of RCL piping. The staff will continue its review of the CREST methodology pending DPC's responses to the staff's RAI of July 6, 1995.

Sincerely,



Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369, 50-370,  
50-413 and 50-414

cc: See next page

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Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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