August 1, 2002

Mr. M. S. Tuckman
Executive Vice President
Nuclear Generation
Duke Energy Corporation
526 South Church St
Charlottte, NC 28202

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 AND MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 RE: REQUEST FOR ADDITIONAL INFORMATION - REVIEW OF DUKE TOPICAL REPORT DPC-NE-2005P (TAC NOS. MB3105, MB3106, MB3173 AND MB3175)

Dear Mr. Tuckman:

The Nuclear Regulatory Commission is reviewing your application dated September 13, 2001, entitled "Appendix E to Topical Report DPC-NE-2005P, Duke Power Thermal-Hydraulic Statistical Core Design Methodology (Proprietary)" and has identified a need for additional information as identified in the Enclosure. These issues were discussed with your staff on July 24, 2002. Please provide a response to this request within thirty (30) days of receipt of this letter so that we may complete our review.

Sincerely,

/RA/

Robert E. Martin, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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

Enclosure: Request for Additional Information

cc w/encl: See next page

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DATE	7/24/02	7/25/02	7/24/02	7/25/02

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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST APPLICABLE TO

REVISIONS TO TOPICAL REPORT DPC-NE-2005-P,

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

MCGUIRE NUCLEAR STATION, UNITS 1 and 2

DUKE ENERGY CORPORATION

The staff has reviewed Duke Power's submittal dated September 13, 2001, "Appendix E to DPC-NE-2005P, Duke Power Thermal-Hydraulic Statistical Core Design (SCD) Methodology (Proprietary)" and has identified a need for the following additional information.

1. The submittal states that Appendix E contains the plant specific data and statistical departure from nucleate boiling (DNB) limits for the McGuire and Catawba Nuclear Stations with the Advanced Mark-BW fuel design using the BWU-Z critical heat flux (CHF) correlation and provides the fuel assembly structural and thermal-hydraulic features unique to the Advanced Mark-BW fuel design. However, the submittal also states that its SCD analysis is applicable to and bounds both the Advanced Mark-BW and the Mark-BW/MOX1 fuel designs. It appears that the data provided in the submittal are only applicable to the Advanced Mark-BW fuel design. Please clarify whether the methodology described in Appendix E to DPC-NE-2005P will be applied to both the Advanced Mark-BW and the Mark-BW/MOX1 fuel designs. If it is applicable to both designs, then additional data sets for the Mark-BW/MOX1 should be provided. Also, please identify those differences between the Advanced Mark-BW and Mark-BW17 fuel design.

2. Provide the Advanced Mark-BW fuel database used in Table E-2 of the September 13, 2001, submittal and describe the process used to obtain the 148 new data points in the two tests. Also, please demonstrate that the new data are duplicate and close to the old data used in the topical report, BAW-10199P, Addendum 2, "Application of the BWU-Z CHF Correlation to the Mark-BW17 Fuel Design with Mid-Span Mixing Grids", and justify that the data base is sufficient for this application.

3. Provide details of the calculation procedure used to evaluate the effect of crossflow between the different fuel types as well as the form loss coefficients used as inputs for the mixed core analysis. Also, describe the real test data available for this application to McGuire and Catawba and justify that the DNB statistical design limit of 1.36 is sufficient for McGuire and Catawba using the BWU-Z CHF correlation for Advanced Mark-BW fuel mixed with Westinghouse robust fuel assembly fuel.

McGuire Nuclear Station
Catawba Nuclear Station

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