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August 10, 2000

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001
Attention: Document Control Desk

Subject: Duke Energy Corporation
McGuire Nuclear Station, Units 1 and 2
Docket Numbers 50-369 and 50-370
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414

License Amendment Request, Implementation of Best-Estimate Large Break Loss of Coolant Accident (BELBLOCA) Analysis Methodology

References: 1) Letter, M. S. Tuckman (DEC) to U. S. Nuclear Regulatory Commission, "Implementation of Best-Estimate Large Break LOCA Methodology", dated June 19, 2000.

2) Letter, F. Rinaldi (U. S. NRC) to Duke Energy Corporation, "Meeting Summary - Meeting of June 12, 2000, Regarding Westinghouse Best-Estimate Large Break LOCA Methodology", dated June 30, 2000.

3) Letter, M. S. Tuckman (DEC) to U. S. Nuclear Regulatory Commission, "License Amendment Request, Implementation of Best-Estimate Large Break Loss of Coolant Accident (LOCA) Analysis Methodology", dated June 29, 2000.

4) Letter, M. S. Tuckman (DEC) to U. S. Nuclear Regulatory Commission, "License Amendment Request, Implementation of Best-Estimate Large Break Loss of Coolant Accident (LOCA) Analysis Methodology", dated July 27, 2000.

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Reference 1 documented the approach Duke Energy Corporation and Westinghouse planned to follow to address changes to the composite plant model analysis applying the Westinghouse Best-Estimate (BELBLOCA) methodology to McGuire and Catawba Nuclear Stations. This approach was based on discussions with the NRC staff in a meeting in White Flint on June 12, 2000, as documented in Reference 2. The Technical Specifications changes required to implement the BELBLOCA methodology (Reference 3), along with a summary of the composite plant results (Reference 4), have been submitted to the NRC for review. During the course of the review, questions were raised by NRC officials with respect to the use of a composite plant model that were not specifically addressed in Reference 1. These questions were discussed in a phone call between Duke, Westinghouse and the NRC on August 3, 2000. The purpose of this letter is to revise the approach outlined in Reference 1 to provide more specific details related to the analysis approach based on a composite plant model. Of particular concern is the potential for a future plant change or issue to have a greater effect on one unit or plant than on the composite plant model. This letter describes the process that Duke and Westinghouse will use to address future changes/issues of this nature.

As future plant changes or issues emerge, or when issues related to the Westinghouse BELBLOCA methodology or application emerge, the application of the BELBLOCA methodology and the results must be evaluated for continued validity and any impact on plant operation within the licensing basis analyses. These evaluations are an ongoing process that Duke and Westinghouse have agreed to follow for the application of the BELBLOCA methodology to McGuire and Catawba. This ongoing process consists of two steps as described below.

The first step of the evaluation of the impact of any change or issue will be performed utilizing the composite plant model. This evaluation will include an assessment of the qualitative impact on the transient behavior, as well as a

quantitative effect on the licensing basis result. In the process of performing this evaluation, the impact on the limiting nominal case (the reference transient), the uncertainty analysis, and the overall licensing basis analysis for the composite model will be considered. For generic issues applicable to all units, it is expected that it will only be necessary to perform this first step of evaluation on the composite plant model.

The second step of the evaluation process will assess whether the change or issue will have a more significant impact on one unit or plant than on the composite plant model. This step will assess the impact on the individual units to determine if the composite plant model continues to provide bounding results for all of the individual units. As was discussed for the composite evaluation above, the individual plant evaluation will also determine whether the change or issue qualitatively affects the analysis results by examining the physics of the impact on the transient behavior, along with its quantitative effect. When separate individual plant impacts are assessed, the separate impacts will be maintained, even if the composite analysis continues to be bounding. This will be done in order to ensure that future evaluations will not overlook possible compounding effects of changes that have similar transient effects. Reports to the NRC (i.e. 10CFR50.46 reports) will provide separate values for each individual plant even if the composite results are determined to remain applicable.

The types of plant changes that are anticipated would be such situations as an increase in the steam generator tube plugging level, a change in the performance of an ECCS system, etc. Such situations are no different than the current requirement to review the licensing basis analyses to address emerging issues, with one exception. The exception is that a composite plant model is being used to bound all four McGuire and Catawba units for this application of the BELBLOCA methodology. For each instance of a plant change or issue to

be addressed, Duke and Westinghouse will follow the two step evaluation process to assess the impact of the change.

In performing the BELBLOCA analysis for McGuire and Catawba, a table of input parameters considered significant to the analysis was developed. This table lists those parameters which are either bounded or treated explicitly in the uncertainty analysis. In developing the bounding values and uncertainty ranges, the values were selected to bound the range of as operated plant values for the four McGuire and Catawba Units. This table of significant operating parameters will be maintained by Duke in the UFSAR for each individual unit.

This letter provides more specific details related to the BELBLOCA analysis approach based on a composite plant model. These additional details were added in response to questions raised by the NRC during its review of the BELBLOCA analysis for McGuire and Catawba, as discussed in the August 3, 2000 Duke/NRC telephone call.

Within this submittal document, Duke Energy Corporation makes the commitment to maintain the process for evaluating future plant changes and emergent issues related to the BELBLOCA methodology, its application, and results as described above.

Please address any additional questions to J. S. Warren at (704)382-4986.

Very truly yours,

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