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W. R. McCollum, Jr. Vice President



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May 27, 1998

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555

Subject: Oconee Nuclear Site Docket Nos. 50-269, -270, -287 Review of Preliminary Accident Sequence Precursor Analysis of Operational Event at Oconee Nuclear Station - LER No. 287/97-003

This letter is in response to the preliminary analysis of the event reported in LER No. 287/97-003, as described in a staff letter dated April 24, 1998. Duke Energy Corporation (Duke) understands the NRC's desire to make the Accident Sequence Precursor (ASP) analysis as realistic as possible and appreciates the opportunity to provide comments concerning the analysis of this event.

Duke has reviewed the preliminary analysis report and has the following observations:

- 1. The estimated conditional core damage probability calculated by the NRC for this event (3.3E-5) is lower than but in the same range as the value calculated by Duke using the current model of the Oconee PRA (8.8E-5). There are some differences in the way these values were calculated, as addressed below.
  - a) The fraction of time that was assumed for the HPI pumps to be vulnerable to failure as a result of low Let Down Storage Tank (LDST) level differs between the two analyses. The NRC assumed that 20% of the time between February 22 and May 3, the LDST level was low enough to cause failure of the HPI pumps had they been needed to This was determined from a simplified mitigate a LOCA. model of LDST level and pressure as a function of LDST reference leg level during BWST draw down. The Duke analysis simply assumed the HPI system to be vulnerable YOD1

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to failure for 50% of the time between February 22 and May 3.

- a) The NRC analysis assumes two separate independent recoveries for small LOCAs,
  - PCS-XHE\_XM\_CDOWN, which addresses the failure of the operators to depressurize the unit and initiate RHR prior to HPI failure,
  - PCS-XHE-XM-FDEPR, which addresses failure to depressurize to LPI pressure following loss of HPI.

Duke assumed only one potential recovery.

- b) Duke assumed that it would be possible to depressurize the primary system and initiate decay heat removal using the Low Pressure Injection system (LPI) for medium size LOCAs. This was applied as a "recovery" event for cutsets where both steam generator cooling and the LPI system were available. The NRC did not take credit for this potential recovery.
- 2. The sensitivity analysis which considers the combined effect of the Unit 3 LDST reference leg leak and the Unit 2 HPI injection nozzle weld leak ( LER No. 270/97-001) is not appropriate and adds no value to the analysis of the Unit 3 event. As discussed in the Duke letter of February 24, 1998 in response to the Preliminary Accident Sequence Analysis of LER 279/97-001, the precursor treatment of the Oconee 2 HPI injection nozzle leak event is inappropriate. Superimposing this event on another unit's condition introduces additional extrapolations, and produces questionable conclusions. Duke suggests that this sensitivity discussion be deleted.

In conclusion, the NRC's analysis of the Oconee event reported in LER No. 287/97-003 appears to have several differences from the Duke analysis of the same event. However, these are understandable differences in assumptions and neither analysis appears to be in error. Even with these differences, both the NRC and Duke analyses concluded that the conditional core damage probability was in the NRC Document Control Desk May 27, 1998 Page 3

range of 3E-5 to 8E-5 and that the conditional core damage probability of the event is above the precursor threshold.

Very Truly Yours,

W. R. McCollum // Site Vice President, Oconee Nuclear Site

cc: Mr. L. A. Reyes, Regional Administrator Region II

Mr. D. E. LaBarge, Project Manager ONRR

Mr. M. A. Scott Senior Resident Inspector Oconee Nuclear Site