

November 18, 1999

LICENSEE: Duke Energy Corporation (Duke)
FACILITY: Oconee Nuclear Station, Units 1, 2, and 3
SUBJECT: SUMMARY OF SEPTEMBER 14, PHONE CALL BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) STAFF AND DUKE REPRESENTATIVES TO DISCUSS THE OCONEE LICENSE RENEWAL APPLICATION

On September 14, 1999, representatives of Duke had a phone call with the NRC staff in Rockville, Maryland, to discuss the Oconee license renewal application. The purpose of the phone call was to discuss questions the staff had regarding fatigue calculations. Enclosure 1 contains the staff's questions. The Duke participants for the phone call were Greg Robison, Robert Gill, Mike Davis, Mark Rinckel (Framatome, consultant to Duke), and Ashok Nana (Framatome). The staff participants were Allen Hiser and Joe Sebrosky.

The questions were related to a meeting on fatigue that was held on August 25, 1999, with Duke in Rockville, Maryland. At that meeting the staff stated that it would review some of the fatigue calculations that were reanalyzed to support license renewal. The meeting summary dated September 9, 1999, discusses the calculations.

During the phone call Duke provided verbal answers to the Enclosure 1 questions that the staff asked regarding the fatigue calculations. A summary of the answers can be found in Enclosure 1. A draft of this meeting summary was provided to Duke to allow them the opportunity to comment on the summary prior to issuance.

Original Signed By

Joseph M. Sebrosky, Project Manager
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Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosure: As stated

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Fatigue Calculation Questions
Phone call of 9/14/99

Staff question 1

It is not apparent to the staff how the fracture toughness values (K_{Ia} and K_{Ic}) were derived for some of the calculations. What values of RT_{NDT} and temperature were used to obtain the fracture toughness values?

Discussion regarding question 1

The value that Duke used for RT_{NDT} for the A508 material was +10 °F. The temperature value that Duke used to obtain the fracture toughness value was 190 °F. The staff asked the basis for the RT_{NDT} value during the phone call. Duke stated that the value was consistent with the value found in BAW-10046, "Methods of Compliance with Fracture Toughness & Operational Requirements of 10 CFR 50, Appendix G." Subsequent to the phone call the staff reviewed topical report BAW-10046 and had more discussions with Duke regarding this issue. Through these discussions it was clarified that the appropriate RT_{NDT} for A508 material is +60 °F, and for A516 material the appropriate value is +10 °F. The staff reviewed the calculations based on this information and believes that the values used for RT_{NDT} in the calculations are appropriate. Therefore, the staff considers this question resolved.

Staff question 2

IWB-3612 of Section XI of the ASME Code specifies that flaw acceptance is based on consideration of both normal conditions (including upset and test), and emergency and faulted conditions. Calculation no. OSC-4547 explicitly states that stress calculations are not available for the upset or faulted conditions of the pressurizer. How are the Code requirements addressed in this case, and are there other calculations that are similarly disposed?

Discussion regarding question 2

Duke agreed that it would review the flaw evaluation calculations to determine if the emergency and faulted conditions are bounded by normal conditions (including upset and test) that are analyzed in calculation OSC-4547. If Duke determines that the emergency and faulted conditions are not bounded it will amend the response to safety evaluation report (SER) open item 4.2.3-1 to reflect that they found a problem with the calculations. If a problem is discovered the SER open item response would also reflect that the problem will be entered into Duke's corrective action program for resolution and to determine if there are any other fatigue calculations that are affected. Subsequent to the phone call Duke determined that the emergency and faulted conditions for all but one calculation are bounded therefore no revision to Duke's response to SER open item 4.2.3-1 was required. Duke is still reviewing the one calculation that was not bounded. The review of this calculation has been entered into the Oconee tracking process. Any follow up to this question will be performed under Duke's current licensing basis. Therefore, the staff considers this question resolved for license renewal.