



DUKE POWER

June 30, 1997

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

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Closure of Oconee Unit 1 High Pressure
Injection (HPI) System JCO

Oconee Unit 2 was shut down on April 22, 1997 due to a leak in the Reactor Coolant System (RCS). The leak was caused by a crack in the pipe to safe-end weld connection at the RCS nozzle for the HPI System A1 injection line. By letter dated April 28, 1997, Duke Energy Corporation (Duke) submitted a Justification for Continued Operation (JCO) of Oconee Units 1 and 3 based on the Oconee Unit 2 HPI line leak. Further information was supplied by Duke letters dated May 2, 3, 7, 8, 9, 12, 13, 16, 19, 20, and 22, 1997. Following the shutdown of Oconee Unit 3 on May 3, 1997, the JCO-related information became applicable to Oconee Unit 1 only. In addition, submittals subsequent to the May 3, 1997, Unit 3 shutdown included commitments resulting from the Letdown Storage Tank (LDST) level control problem on Unit 3.

Region II issued a Confirmation of Action Letter (CAL) for Units 1, 2, and 3 on May 5, 1997. At a public meeting at Oconee on May 16, 1997, Duke presented the actions that were being implemented to support restart of Oconee Units 2 and 3 and the continued safe operation of Oconee Unit 1. In a letter dated May 20, 1997, Duke confirmed that the actions requested in the May 5, 1997 CAL had been completed. By letter dated May 22, 1997, the Region II Administrator

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updated the CAL by indicating concurrence for restart of Oconee Units 2 and 3, and the compensatory actions for operation of Oconee Unit 1. In a letter dated May 29, 1997, the staff stated that it judged Duke's commitment to shut down Oconee Unit 1 no later than June 14, 1997 to conduct radiographic and ultrasonic examinations of the HPI System injection lines and to perform compensatory actions associated with the LDST level monitoring system to be prudent.

The commitments associated with the Unit 1 JCO have been completed. Unit 1 was shut down on June 13, 1997 to inspect the HPI System injection lines and implement LDST modifications. During this outage, radiographic tests of the Unit 1 thermal sleeves verified that the sleeves were in position and that there has been no change in the thermal sleeve to safe-end gaps since 1983. Radiographic tests of the nozzle to safe-end welds, safe-end to pipe welds and pipe to valve welds were performed. Ultrasonic tests of the above welds, intermediate piping and nozzle inner radius were performed. Penetrant tests of the above welds, safe-end, and intermediate piping, as well as the warming line attachment welds on the A1 and A2 injection lines, were completed. All inspection results were acceptable.

These inspections exceed Generic Letter 85-20 requirements and the augmented inspection program recommendations of a B&W Owner's Group task force that were provided to the staff in a Duke letter dated February 15, 1983. Based on these comprehensive inspections, Duke concludes that there has been no degradation in the thermal sleeves, nozzles, or adjacent piping associated with the HPI System injection lines on Unit 1.

A modification has been implemented on Oconee Unit 1 to add separate reference legs for the LDST level transmitters and add a redundant LDST pressure transmitter. Prior to the Unit 1 shutdown, Operations had implemented administrative controls to minimize thermal cycles on the HPI nozzles, enhance reactor coolant leakage detection measures, and periodically monitor the LDST level reference legs. Based on the corrective actions implemented during the outage, these interim administrative controls are no longer considered as commitments. However, as described in previous correspondence to the staff, Duke has now implemented a temperature monitoring program for the HPI nozzles on all three units. Data collected from this program will be used to establish a periodic inspection program for the HPI nozzles and adjacent piping and to evaluate changes in operating practices to assure that thermal cycling on these injection lines is appropriately managed. Duke has also inspected all of the Unit 1 HPI System minimum flow orifices and replaced the orifices for the 1A and 1B HPI pumps.

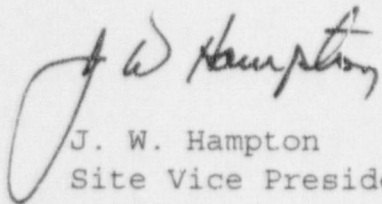
In addition to closing the JCO, Duke would like to provide an update on the status of another commitment associated with the subject HPI System events. In a letter dated May 7, 1997, Duke stated that, depending on the complexity of the computational fluid dynamics (CFD) analyses, our expectation was that these analyses would be completed by the end of June, 1997. The purpose of these analyses was to assist in the assessment of the time to initiate and propagate a flaw through the piping of HPI nozzle components. Based on a discussion with the vendor which is performing these analyses, the work will not be completed by the end of June, 1997. Duke expects the CFD analyses to be completed by December 15, 1997.

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In summary, Duke has completed the actions necessary to close the JCO for Oconee Unit 1. Duke will continue to keep the staff apprised of the status of longer-term commitments associated with the HPI System events of April 22, 1997, and May 3, 1997.

Please address any questions to J. E. Burchfield, Jr. at (864) 885-3292.

Very Truly Yours,

A handwritten signature in dark ink, appearing to read "J. W. Hampton". The signature is fluid and cursive, with a large loop at the beginning and a trailing flourish at the end.

J. W. Hampton
Site Vice President

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