

January 5, 2007

Mr. G. R. Peterson  
Vice President  
McGuire Nuclear Station  
Duke Power Company LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNIT 1, THIRD 10-YEAR INSERVICE  
INSPECTION INTERVAL PRESSURIZER LOWER HEAD TO SHELL WELD  
FLAW EVALUATION (TAC NO. MD0245)

Dear Mr. Peterson:

By letter dated January 9, 2006, Duke Power Company LLC (the licensee), submitted an evaluation of five circumferential indications located on the pressurizer lower head to shell weld for the McGuire Nuclear Station (McGuire), Unit 1. The licensee discovered the indications by ultrasonic examination during the unit's 17th refueling outage. The licensee intended to demonstrate through a flaw evaluation using the methods described in the American Society of Mechanical Engineers, *Boiler and Pressure Vessel Code* (ASME Code), paragraph IWB-3600 that the unit can be operated safely without repair of the subject weld for an additional 10 years.

The Nuclear Regulatory Commission (NRC) staff has completed its review of the flaw evaluation and found that the flaw evaluation meets the rules in Section XI of the ASME Code. With a conservatively assumed flaw depth, the detected circumferential cracks in pressurizer lower head to shell weld will not reach the allowable flaw depth after 10 years of crack growth under the limiting loading condition (normal and upset). The NRC staff concludes that McGuire Unit 1 can be operated safely without repair of the subject weld for 10 years. As mentioned in the submittal, successive inspections at the flaw location will be conducted during the next inspection periods in accordance with IWB-2420, "Successive Inspections," in Section XI of the ASME Code.

Sincerely,

**/RA/**

Evangelos C. Marinos, Chief  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-369

cc: See next page

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McGuire Nuclear Station, Units 1 & 2

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