Duke Energy®

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February 4, 2009

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

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station, Unit 2
Docket Number 50-270
Inspection Results Required Per First Revised NRC Order (EA-03-009)

By letter dated February 20, 2004, the NRC issued the First Revised NRC Order (EA-03-009), "Establishing Interim Inspection Requirements for Reactor Vessel Heads at Pressurized Water Reactors." The Order imposed requirements for pressurized water reactor licensees to inspect reactor pressure vessel heads and related penetration nozzles and to submit a report detailing the inspection results within sixty days after returning the unit to operation.

Duke Energy Carolinas, LLC, performed the required inspections on Oconee Unit 2 during the End-of-Cycle 23 Refueling Outage. The attachment to this letter provides the required reactor pressure vessel head inspection results.

This letter and its attachment do not contain any NRC commitments.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 4, 2009.

Very truly yours,

Dave Baxter
Site Vice President
Oconee Nuclear Station

Attachment

A101
NRR

cc:

Luis Reyes, Regional Administrator, Region II
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Atlanta Federal Center
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Attachment

Oconee Nuclear Station, Unit 1 End-of-Cycle 24
Reactor Pressure Vessel Head (RPVH) Inspection Results Report

During the Oconee Unit 2 End-of-Cycle 23 Refueling Outage, Duke performed inspections of the Reactor Pressurized Vessel Head (RPVH) in accordance with the schedule required by the First Revised NRC Order EA-03-009, dated February 20, 2004.

The susceptibility of the RPVH to Primary Water Stress Corrosion Cracking (PWSCC) related degradation, as represented by a value of Effective Degradation Years (EDY), was calculated and compared to the criteria of the Order. The Oconee Unit 2 RPVH remains in the Replaced Category.

On 11/2/2008, as required by the Order, a bare metal visual examination of 100% of the RPVH outer surface, including 360° around each RPVH penetration nozzle, was performed. This examination found no indications of primary coolant system leakage or wastage of the RPVH or nozzle penetrations. Material suspected to be from the Component Cooling Water System could be seen on the head flange. The laboratory analysis of the samples detected no boron. The report states that the very low radiological activity associated with the material also implied that the deposit had not originated from the Reactor Coolant System. All deposits were removed subsequent to this examination. There was no degradation seen on any of the closure head components examined.

On 12-03-08, while venting Unit 2 Reactor Vessel Head CRDs, a section of stainless steel tubing broke resulting in spraying approximately 10 gallons of Reactor Coolant System water on the Reactor Vessel Head structure. The leak was stopped by closing the vent valve. After the leak, the surface of the Reactor Vessel Head was inspected visually through access ports. There were no indications of borated water leakage reaching any portion of the Reactor Vessel Head. All evidence of borated water leakage above the reactor vessel head insulation was thoroughly cleaned. Evidence of primary system leakage will be readily visible during future inspections.