July 19, 2005

Mr. Henry B. Barron
Group Vice President and Chief Executive Officer
Duke Energy Corporation
526 South Church Street
P.O. Box 1006
Charlotte, NC 28201-1006

SUBJECT: CATAWBA NUCLEAR STATION, UNIT 2 - RESPONSE TO NUCLEAR REGULATORY COMMISSION BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY" (TAC NO. MC0529)

Dear Mr. Barron:

On August 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," to the industry. This bulletin informed addressees that current methods of inspecting the reactor pressure vessel (RPV) lower heads may need to be supplemented with bare-metal visual inspections in order to detect reactor coolant pressure boundary leakage. The bulletin also requested for these addressees to provide the NRC with information related to inspections that have been performed to verify the integrity of the RPV lower head penetrations.

The bulletin requested that addressees provide a description of the RPV lower head penetration inspection program that would be implemented at their respective plants during the next and subsequent refueling outages. This description was to include the extent of the inspection, the inspection methods to be used, the qualification standards for the inspection methods, the process used to resolve the source of findings of boric acid deposits or corrosion, the inspection documentation to be generated, and the basis for concluding that their plant satisfied applicable regulatory requirements related to the structural and leakage integrity of the RPV lower head penetrations.

By letter dated September 18, 2003, Duke Energy Corporation (Duke) provided its response to this request for the fall 2004 refueling outage at Catawba Nuclear Station (Catawba), Unit 2. In its response, Duke committed to performing a bare-metal visual inspection of the RPV lower head, including 360-degrees around 100 percent of the RPV lower head penetrations. Duke stated that the information obtained from the inspection findings at Catawba, Units 1 and 2 and industry developments on the RPV lower head penetrations will be used to determine the type of examinations that will be performed during future refueling outages, beyond the fall 2004 refueling outage. The NRC staff notes that there are a number of ongoing industry and NRC staff activities related to developing criteria for RPV lower head penetration inspections. The NRC staff expects that the criteria for these inspections will involve periodic bare-metal visual examinations or their equivalent.

The bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

By letter dated December 16, 2004, Duke provided a summary of its inspection results at Catawba, Unit 2. Duke reported it had performed a bare-metal visual inspection of the RPV lower head, including 360-degrees around 100 percent of the RPV lower head penetrations. Duke did not observe any evidence of RPV lower head penetration leakage or RPV lower head wastage. In addition, Duke performed ultrasonic examinations of all 58 RPV lower head penetrations and eddy current examinations on 56 of the 58 penetrations. Equipment problems prevented inspection of the remaining two nozzles. These examinations did not identify any indications.

Based on its review of Duke's responses to NRC Bulletin 2003-02, the NRC staff finds that Duke has met the reporting requirements of the bulletin for Catawba, Unit 2. Accordingly, TAC No. MC0529 is closed for Catawba, Unit 2.

Sincerely,

/RA/

Sean Peters, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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The bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

By letter dated December 16, 2004, Duke provided a summary of its inspection results at Catawba, Unit 2. Duke reported it had performed a bare-metal visual inspection of the RPV lower head, including 360-degrees around 100 percent of the RPV lower head penetrations. Duke did not observe any evidence of RPV lower head penetration leakage or RPV lower head wastage. In addition, Duke performed ultrasonic examinations of all 58 RPV lower head penetrations and eddy current examinations on 56 of the 58 penetrations. Equipment problems prevented inspection of the remaining two nozzles. These examinations did not identify any indications.

Based on its review of Duke's responses to NRC Bulletin 2003-02, the NRC staff finds that Duke has met the reporting requirements of the bulletin for Catawba, Unit 2. Accordingly, TAC No. MC0529 is closed for Catawba, Unit 2.

Sincerely,

/RA/
Sean Peters, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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