

June 28, 2005

Mr. Michael G. Gaffney  
Site Vice President  
Kewaunee Nuclear Power Plant  
Nuclear Management Company, LLC  
N490 Highway 42  
Kewaunee, WI 54216-9511

SUBJECT: KEWAUNEE NUCLEAR POWER PLANT - RESPONSE TO NUCLEAR REGULATORY COMMISSION BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY" (TAC NO. MC0544)

Dear Mr. Gaffney:

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 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 November 10, 2003, Nuclear Management Company, LLC (NMC) provided its response to this request. NMC described its plans to perform a 100-percent bare-metal visual examination of the RPV lower head, including each penetration to RPV junction, during the fall 2004 refueling outage at Kewaunee Nuclear Power Plant. In its same response, NMC committed to performing a 100-percent bare-metal visual examination of the RPV lower head, including each penetration to RPV junction, during subsequent refueling outages, beyond the fall 2004 refueling outage. NMC indicated that this inspection schedule may be adjusted in the future should industry experience, changes to the American Society of Mechanical Engineers Code, or a change in regulatory requirements justify a change to the inspection frequency or method. As such, NMC is requested to notify the NRC staff in writing of any changes to this commitment prior to implementation.

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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 January 7, 2005, NMC provided a summary of its inspection results at Kewaunee. NMC reported it had performed a bare-metal visual examination of the 36 RPV lower head penetrations with no evidence of reactor coolant system pressure boundary leakage observed.

Based on our review of NMC's responses to NRC Bulletin 2003-02, the NRC staff finds that NMC has met the reporting requirements of the bulletin for Kewaunee. Accordingly, TAC No. MC0544 is closed for Kewaunee.

Sincerely,

**/RA/**

Carl F. Lyon, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-305

cc: see next page

M. Gaffney

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Sincerely,

**/RA/**

Carl F. Lyon, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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