

January 14, 2005

Mr. Jeffrey S. Forbes  
Site Vice President  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S. R. 333  
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - RESPONSE TO NRC BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY" (TAC NO. MC0520)

Dear Mr. Forbes:

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 and requested these addressees 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 19, 2003, Entergy Operations, Inc. (Entergy) provided its response to this request. Entergy indicated it planned to perform a bare-metal visual examination of 100 percent of the circumference of all 52 RPV lower head penetrations as they enter the RPV lower head, during the spring 2004 refueling outage at Arkansas Nuclear One, Unit 1 (ANO-1). In its same response, Entergy stated that the scope for future examinations, beyond the spring 2004 refueling outage, will consider the lessons learned from the spring 2004 inspections and other RPV lower head penetration inspections conducted within the industry. 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 July 12, 2004, Entergy provided a summary of its inspection results from the spring 2004 refueling outage at ANO-1. Entergy reported it had performed a bare-metal visual examination of 100 percent of the circumference of the 52 RPV lower head penetrations as they enter the RPV lower head, with no evidence of penetration leakage observed.

Based on its review of Entergy's responses to NRC Bulletin 2003-02, the NRC staff finds that ANO-1 has met the reporting requirements of the bulletin. Accordingly, TAC NO. MC0520 is closed for ANO-1.

Sincerely,

*/RA/*

Thomas W. Alexion, Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-313

cc: See next page

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Based on its review of Entergy's responses to NRC Bulletin 2003-02, the NRC staff finds that ANO-1 has met the reporting requirements of the bulletin. Accordingly, TAC NO. MC0520 is closed for ANO-1.

Sincerely,

*/RA/*

Thomas W. Alexion, Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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July 2004