

October 6, 2004

Mr. Karl W. Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 - RESPONSE TO NRC
BULLETIN 2003-02, "LEAKAGE FROM REACTOR PRESSURE VESSEL
LOWER HEAD PENETRATIONS AND REACTOR COOLANT PRESSURE
BOUNDARY INTEGRITY" (TAC NO. MC0576)

Dear Mr. Singer:

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 September 22, 2003, Tennessee Valley Authority (TVA) provided its response to this request. TVA indicated it planned to perform a VT-2 examination of the RPV lower head penetrations during the fall 2003 refueling outage at Watts Bar Nuclear Plant, Unit 1. In its same response, TVA committed to performing a 360-degree bare-metal visual examination of all 58 RPV lower head penetrations during each refueling outage at Watts Bar, Unit 1, until a change to the American Society of Mechanical Engineers Code or a regulatory action justifies a change in this frequency. As such, TVA 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 December 10, 2003, TVA provided a summary of its inspection results at Watts Bar, Unit 1. TVA reported it had performed a 360-degree bare-metal visual examination of the 58 RPV lower head penetrations with no evidence of penetration leakage observed.

The NRC staff has completed its review of TVA's responses to NRC Bulletin 2003-02. Accordingly, TAC No. MC0576 is closed for Watts Bar, Unit 1.

Sincerely,

/RA/

Robert J. Pascarelli, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-390

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Mr. Karl W. Singer
Tennessee Valley Authority

WATTS BAR NUCLEAR PLANT

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