

August 1, 2005

Mr. David A. Christian  
Sr. Vice President and Chief Nuclear Officer  
Virginia Electric and Power Company  
Innsbrook Technical Center  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060-6711

SUBJECT: SURREY POWER STATION, UNIT 1 - RESPONSE TO NUCLEAR  
REGULATORY COMMISSION BULLETIN 2003-02, "LEAKAGE FROM  
REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS AND  
REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY"  
(TAC NO. MC0569)

Dear Mr. Christian:

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 22, 2003, Virginia Electric and Power Company (VEPCO) provided its response to this request. VEPCO committed to perform a bare-metal visual examination of all 50 RPV lower head penetrations during the fall 2004 refueling outage at Surry Power Station, Unit 1. In its same response, VEPCO also committed to perform a bare-metal visual examination of these 50 RPV lower head penetrations during subsequent refueling outages at Surry, Unit 1, although VEPCO indicated that this inspection schedule may be revised in the future. As such, VEPCO is requested to notify the NRC staff in writing of any changes to this commitment prior to implementation.

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 18, 2005, VEPCO provided a summary of its inspection results at Surry, Unit 1. VEPCO reported it had performed a 360-degree bare-metal visual examination of the 50 RPV lower head penetrations with no evidence of penetration leakage observed. In addition, VEPCO performed ultrasonic (UT) examinations on 39 RPV lower head penetrations, and performed eddy current (EC) examinations on 48 RPV lower head penetrations. Equipment problems and access restrictions limited the number of penetrations that could be examined. The results of the UT examinations for the 39 penetrations did not identify any indications. Likewise, the results of the EC examinations for the 48 penetrations did not identify any flaw-like responses. One EC indication was recorded in Penetration 49 that was representative of a shallow surface depression. However, a follow-up UT examination of Penetration 49 confirmed this indication as a surface condition with no crack-like characteristics.

Based on its review of VEPCO's responses to NRC Bulletin 2003-02, the NRC staff finds that VEPCO has met the reporting requirements of the bulletin for Surry, Unit 1. Accordingly, TAC No. MC0569 is closed for Surry, Unit 1.

Sincerely,

*/RA/*

Stephen Monarque, Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-280

cc: See next page

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Based on its review of VEPCO's responses to NRC Bulletin 2003-02, the NRC staff finds that VEPCO has met the reporting requirements of the bulletin for Surry, Unit 1. Accordingly, TAC No. MC0569 is closed for Surry, Unit 1.

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Stephen Monarque, Project Manager, Section 1  
 Project Directorate II  
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