



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 5, 1996

Mr. J. P. O'Hanlon  
Senior Vice President - Nuclear  
Virginia Electric and Power Company  
5000 Dominion Blvd.  
Glen Allen, Virginia 23060

SUBJECT: NORTH ANNA UNIT 1 - USE OF AN ALTERNATIVE REPAIR TECHNIQUE FOR  
REACTOR VESSEL HEAD PENETRATIONS (SERIAL NO. 95-605) (TAC NO.  
M94138)

Dear Mr. O'Hanlon:

Your letters of November 22, 1995, and January 26, 1996 informed us that you planned to inspect at least 20 reactor vessel head penetrations in rings 13, 12 and 11 during the refueling outage for North Anna Unit 1 scheduled to begin February 10, 1996. You also advised us that if a flaw is identified that exceeds the acceptance criteria (described in your submittal) in the first group of vessel head penetrations, an additional ring (ring 10) of vessel head penetrations will be examined. If an unacceptable flaw is found in ring 10, the penetrations in ring 9 will be examined. Your inspection plan and expansion plan are acceptable.

As you stated in your letter, there are no requirements in the American Society of Mechanical Engineers (ASME) Section XI, 1993 Edition, Summer 1983 Addenda (which is the Code of Record for North Anna Unit 1) to examine the vessel head penetrations. Subparagraph IWA-3100(b) states that if acceptance standards for a particular component are not specified in Section XI, then flaws that exceed the original construction specifications given in Section III can be used to determine disposition, subject to review by the enforcement authority having jurisdiction at the plant site. The proposed acceptance criteria contained in Westinghouse WCAP 14024, "Inspection Plan Guidelines for Industry/Plant Inspection of Reactor Vessel Closure Head Penetration Tubes" have been reviewed and accepted with comments in a letter of November 19, 1993, from W. T. Russell to W. Raisin (NUMARC). The NRC comments were incorporated in WCAP 14024, Rev. 1. The acceptance criteria are appropriate for the North Anna Power Station.

In the event flaws are found in the North Anna Unit 1 vessel head penetrations that exceed the acceptance criteria and need repair, you requested approval to use the alternative weld repair method described in Westinghouse Topical Report, WCAP-14519, "RV Closure Head Penetration Tube ID Weld Overlay Repair." As discussed in the enclosed Safety Evaluation, the NRC staff concludes that the use of the embedded flaw repair method is an acceptable alternative to the

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ASME Code requirements in that it will provide an acceptable level of quality and safety. The proposed alternative is authorized as requested pursuant to 10 CFR 50.55(a)(3)(i) for the repair of flaws exceeding the acceptance criteria for North Anna Unit 1 reactor vessel head penetrations.

If you have any comments or questions, please call me (301 415-1490) or Leon Engle (301 415-1480).

Sincerely,

(Original Signed By B. Mozafari For)

David B. Matthews, Director  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-338

Enclosures:

1. Safety Evaluation on Alternative Repair Technique
2. Safety Evaluation on WCAP-13998, Rev. 1

cc w/enclosures:

See next page

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