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December 2, 1999
NMP2L 1914

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: Nine Mile Point Unit 2
Docket No. 50-410
NPF-69

Subject: Core Shroud Reinspection Plan

Gentlemen:

By letter dated July 9, 1998, Niagara Mohawk Power Corporation (NMPC) submitted the results of ultrasonic (UT) examination of Nine Mile Point Unit 2 (NMP2) core shroud welds performed during refueling outage number 6 (RFO6). In its October 15, 1998 letter forwarding the safety evaluation, the NRC requested that NMPC submit its core shroud reinspection plan for refueling outage number 7 (RFO7) at least three months before performing the reinspection. The core shroud reinspection plan for RFO7 is presented below.

Horizontal Welds

Based on the plant specific analysis in General Electric's report GENE-B13-01920-63, Revision 2, reinspection of welds H4 and H5 is required during RFO7. These inspections will be performed using the GE OD Tracker on all accessible areas of the weld. The coverage estimates are greater than 50 percent, consistent with the inspection coverage achieved during RFO6. The additional inside diameter (ID) coverage of weld H5, obtained in RFO6 due to linear elastic fracture mechanics (LEFM) considerations, may not be necessary. This assessment is based on the preliminary results of a detailed fluence calculation indicating that the peak fluence of weld H5, when projected to the end of Cycle 8, will remain well below the threshold of 3×10^{20} neutrons/cm² such that a LEFM analysis will not be required.

Based on BWRVIP-07 guidelines, no reinspection of horizontal welds H1, H2, H3, H6, and H8 is required during RFO7 (cracking less than 10 percent of inspected length). The cracking of horizontal weld H7 exceeds 30 percent of inspected length, and, therefore per BWRVIP-07, a plant specific analysis is required. The plant specific analysis for weld H7 indicates that inspection during RFO7 is not required.

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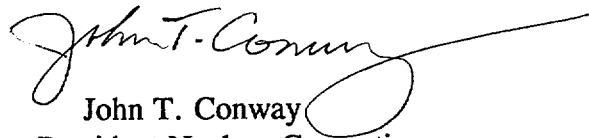
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Vertical Welds

No inspection of vertical welds is required during RFO7. This is based on the following:

- a. Vertical welds V4 and V5 satisfy criteria 3.1.1.a of BWRVIP-63 (intersecting horizontal welds are cracked less than 10 percent of inspected length). Therefore, no inspection of these welds is required during RFO7.
- b. All accessible areas of vertical welds intersecting the H4 and H5 welds (V12 through V17) were inspected during RFO6 with no indications found. Per BWRVIP-63, Sections 3.1.2 and 3.1.3, reinspection of these welds during RFO7 is not required.
- c. Vertical welds V24 and V25 intersect welds H7 and H8 below the core plate. The fluence for these welds, when projected to the end of cycle 8, will remain well below 3×10^{20} neutrons/cm². Per BWRVIP-63 guidance, vertical welds do not require inspection provided the intersecting horizontal welds satisfy either criterion 3.1.1.a or 3.1.1.b stated in the guidance. The intersecting horizontal weld H8 is cracked less than 10 percent and satisfies 3.1.1.a whereas H7 satisfies 3.1.1.b (assuming BWRVIP-14 crack growth rate of 2.2×10^{-5} inch/hour). Therefore, inspection of vertical welds V24 and V25 is not required during RFO7.
- d. Inspection of radial ring welds (V1-V3, V6-V11, V18-V23) is not required, since for unrepaired shrouds, radial ring welds are exempted from inspection per BWRVIP-63, Section 3.3.

Sincerely,



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JTC/IAA/jb

xc: Mr. H. J. Miller, NRC Regional Administrator, Region I
Mr. S. S. Bajwa, Section Chief PD-I, Section 1, NRR
Mr. G. K. Hunegs, NRC Senior Resident Inspector
Mr. D. S. Hood, Senior Project Manager, NRR
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