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AUTH. NAME

AUTHOR AFFILIATION

CONWAY, J.T. RECIP.NAME Niagara Mohawk Power Corp.

RECIPIENT AFFILIATION

Document Control Branch (Document Control Desk)

SUBJECT: Forwards results of evaluation which indicates that weld overlay repair of RWCU weld 33-FW-22 meets requirements of

ASME Code Case N-504, Sections (g)(2) & (g)(3).

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NINE MILE POINT NUCLEAR STATION/LAKE ROAD, P.O. BOX 63, LYCOMING, NEW YORK 13093/TELEPHONE (315) 349-2213 FAX (315) 349-2605

JOHN T. CONWAY Vice President Nuclear Engineering August 14, 1997 NMP1L 1243

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

RE:

Nine Mile Point Unit 1 Docket No. 50-220 DPR-63

Subject:

Generic Letter (GL) 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless

Steel Piping"

Gentlemen:

By letter dated May 15, 1997, Niagara Mohawk Power Corporation (NMPC) indicated that a through-wall pin hole leak at a bimetallic weld (33-FW-22) in the Nine Mile Point Unit 1 (NMP1) Reactor Water Cleanup System (RWCU) had been discovered. This leak resulted from a 7/16" axial crack that was classified as Intergranular Stress Corrosion Cracking (IGSCC). NMPC proposed to repair this weld by performing a weld overlay to restore the structural strength of the weldment and requested NRC approval of the weld overlay repair.

Based on information provided in our May 15, 1997 letter and by telephone conversation on May 16, 1997, the NRC approved restart of NMP1 following repair of the weld. Additionally, the NRC requested that additional information be provided via written communication. By letter dated May 19, 1997, NMPC provided the additional information. This included a commitment to perform an evaluation of flaw growth due to fatigue, as well as shrinkage effects on welds and components in the system affected by the weld reinforcement, and to submit the results to the NRC.

The enclosure to this letter provides the results of our evaluation. This evaluation indicates that the weld overlay repair of RWCU weld 33-FW-22 meets the requirements of ASME Code Case N-504 Sections (g)(2) and (g)(3) as follows:

• Section (g)(2) - Postulated Fatigue Flaw Evaluation A postulated initial flaw through the first weld pass of the overlay (360° around the overlay) is calculated to grow into the remaining weld overlay thickness less than the allowable depth specified by ASME Section XI, Table IWB-3641-5.

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• Section (g)(3) - Evaluation of Weld Overlay Shrinkage. The maximum stress in the RWCU system due to shrinkage at the weld overlay of 2162 psi is well within the ASME Section III allowable stress of 45,000 psi in SA106 Grade B piping due to a one-time anchor motion.

Sincerely,

John T. Comm

Vice President - Nuclear Engineering

JTC/JMT/cmk Enclosure

xc: Mr. H. J. Miller, NRC Regional Administrator

Mr. B. S. Norris, Senior Resident Inspector

Mr. A. W. Dromerick, Acting Director, Project Directorate I-1, NRR

Mr. D. S. Hood, Senior Project Manager, NRR

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