

January 15, 2002

Mr. Michael Bratton
PDI Chairman
Entergy Nuclear Southwest
(GSB-998)
17265 River Road
Killona, LA 70066

SUBJECT: WELD OVERLAY PERFORMANCE DEMONSTRATION ADMINISTERED BY
PDI AS AN ALTERNATIVE FOR GENERIC LETTER 88-01
RECOMMENDATIONS

Dear Mr. Bratton:

The purpose of this letter is to inform you of the NRC staff's determination that PDI's performance demonstration program for weld overlays is an acceptable alternative to the performance demonstration recommendations of GL-88-01, "NRC Position on IGSCC (intergranular stress corrosion cracking) in BWR (Boiling Water Reactor) Austenitic Stainless Steel Piping."

In a public meeting on January 31 through February 2, 2001, at the Electric Power Research Institute (EPRI) - Nondestructive Examination (NDE) Center, Charlotte, North Carolina, the staff agreed to review written correspondence between the staff and the EPRI Performance Demonstration Initiative (PDI) to ascertain the status of weld overlay performance demonstrations recommended in NRC Generic Letter (GL) 88-01. GL 88-01 was issued, in part, to alert licensees of the NRC staff's position for using weld overlay to mitigate IGSCC. GL 88-01 states that in addition to Section XI of the Code, detailed procedures, equipment and examination personnel shall be qualified by a formal program approved by the NRC such as the Tri-party Agreement¹. The program should use mock-ups with flaws similar to flaws found in operating facilities. The technical bases for the staff's position is contained in NUREG-0313, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," Revision 2, June 1986.

Currently, weld overlay performance demonstrations are administered by PDI, and are being performed at the EPRI NDE Center under the program established for the Tri-party Agreement. In a letter to the NRC dated June 26, 1998, PDI recommended that these demonstrations continue under the Tri-party program for up to two years after the publication of a rule change to 10 CFR 50.55a that implements Appendix VIII to Section XI. After that date, the requirements of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (Code), Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," Supplement 11, "Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds," would apply. The rule was published September 22, 1999, which established a November 22, 2001, implementation date for Supplement 11.

¹

The Tri-party Agreement is between NRC, EPRI, and the Boiling Water Reactor Owners Group (BWROG), "Coordination Plan for NRC/EPRI/BWROG Training and Qualification Activities of NDE Personnel," July 3, 1984.

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The nuclear power industry tasked PDI with the implementation of a Supplement 11 performance demonstration program. However, to expedite development and continuity with the existing weld overlay program, PDI decided to integrate the test specimens from the Tri-party program into the Supplement 11 program.

The staff assessed the PDI weld overlay program during a public meeting on June 12 through 14, 2001, at the EPRI NDE Center. Based on this assessment, the staff has determined that the PDI performance demonstration program for weld overlays does not fully comport with the existing requirements of Supplement 11, but nevertheless, does satisfy the recommendation in GL 88-01 for weld overlay performance demonstrations and qualifications of procedures and personnel. Therefore, the staff concludes that the PDI performance demonstration program for weld overlays, which meets the spirit of Appendix VIII, Supplement 11, is an acceptable alternative to the performance demonstration recommendations in GL-88-01. The staff will continue to follow PDI's program with respect to Supplement 11 as changes to the ASME code are implemented.

If you have any questions regarding this matter, please contact Terence L. Chan of my staff at (301) 415-2768.

Sincerely,

/ra/

William H. Bateman, Chief
Materials and Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

Mr. Michael Bratton

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Sincerely,

William H. Bateman, Chief
Materials and Chemical Engineering Branch
Division of Engineering
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