



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20455-0001

Enclosure 1

August 11, 1995

Bruce J. Sheffel, Chairman, PDI
Detroit Edison Company
Fermi 2 Power Plant
6400 North Dixie Highway
Newport, Michigan 48166

SUBJECT: NRC ASSESSMENT OF THE PDI PROGRAM

Dear Mr. Sheffel:

The NRC performed an assessment of the nuclear industry's efforts in implementing the requirements of Appendix VIII, "Performance Demonstration for Ultrasonic Examination Systems," to Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (the Code). The nuclear industry created the Performance Demonstration Initiative (PDI) to manage demonstration requirements contained in Appendix VIII. PDI designated the Electric Power Research Institute (EPRI) Nondestructive Examination (NDE) Center to be the Performance Demonstration Administrator (PDA) to implement the PDI program. Subsequently, PDI was expanded to include demonstration of ultrasonic testing (UT) ability in the area of intergranular stress corrosion cracking (IGSCC) based on the "IGSCC Coordination Plan" agreement between NRC, EPRI, and the Boiling-Water Reactor Owners' Group. Individual utilities and vendors may satisfy Appendix VIII and the IGSCC Coordination Plan performance requirements by participating in the PDI program. Qualification procedures are either generic (available for broad application) or vendor- or utility-specific (established for unique application). The generic UT procedures PDI-UT1, PDI-UT2, and PDI-UT3 are a major improvement over the procedures currently used in the industry.

The assessment team reviewed PDI and PDA activities associated with the performance demonstrations of the UT procedures, equipment, and personnel used to detect and size flaws. The current PDI testing program includes austenitic stainless steel and ferritic steel pipe welds (Appendix VIII, Supplements 2, 3, and 12), intergranular stress corrosion cracking (IGSCC) for stainless steel piping, and automated UT of reactor pressure vessel welds (Supplements 4 and 6). PDI is also doing preparatory work for bolting (Supplement 8), and the manual UT of reactor pressure vessel welds (Supplement 4 and 6).

The team observed PDI meetings and had discussions with PDI and PDA staff at EPRI in September and December 1994. The onsite assessment was conducted between January 23 and February 3, 1995, with an exit meeting held at the EPRI NDE Center on February 3, 1995.

Overall, it was found that the PDA staff has established and is in the process of executing a well-planned and effective program to test UT technicians on selected portions of Appendix VIII. The team concluded that the PDI program effectively qualified NDE technicians in accordance with Appendix VIII with the exception of certain requirements that PDI found to be impractical. The specific requirements are the subject of ongoing evaluations by the

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appropriate ASME committees and may be the subject of code cases. It is important that these issues be resolved on a timely basis to allow practical implementation of Appendix VIII. Situations not specifically addressed by code are addressed by the PDI steering committee and subcommittee work.

Certain open items and areas where improvements could be made in the program are discussed in the assessment report. Please review the report and advise me within 30 days of any inaccuracies in the description of the PDI program or information that should be proprietary. Also, please advise me of any actions you plan to take relative to the open item identified in the report.

If you have any questions, please contact Edmund Sullivan at (301) 415-3266 or Donald Naujock at (301) 415-2767.

Sincerely,

ORIGINAL SIGNED BY:

Jack R. Strosnider, Chief
Materials and Chemical Engineering Branch
Division of Engineering
Office of Nuclear Reactor Regulation

Enclosure: As stated

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