



GPU Nuclear, Inc.
U.S. Route #9 South
Post Office Box 388
Forked River, NJ 08731-0388
Tel 609-971-4000

October 16, 1998
1940-98-20590

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

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station (OCNGS)
Docket No. 50-219
Inservice Inspection (ISI) Program
Proposed Alternative for Evaluations of Flaws in Ferritic Piping

By letter dated April 16, 1992, GPU Nuclear submitted the Inservice Inspection Program for the Third Ten-Year Interval at the Oyster Creek Nuclear Generating Station. In accordance with 10 CFR 50.55a(b)(2) and 10 CFR 50.55a(g)(ii), this program was submitted to implement the requirements of ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, (the Code) 1986 Edition, with no Addenda.

This letter, pursuant to 10 CFR 50.55a(a)(3), is requesting an alternative for the evaluation of flaws in ferritic piping which will provide an acceptable level of quality and safety. Attachment 1 provides the details for this alternative.

As described in Attachment 1, GPU Nuclear has need to apply this alternative during the current 17R Outage. Accordingly, GPU Nuclear requests an expedited review of this alternative and recognizes the burden this short timeframe may place on the NRC Staff.

If you have any questions or comments on this matter, please contact Ron Zak, Corporate Regulatory Affairs at (973) 316-7035.

Sincerely,

Michael B. Roche

Michael B. Roche
Vice President and Director
Oyster Creek

c: Administrator, NRC Region 1
Senior Resident Inspector, Oyster Creek
Oyster Creek NRC Project Manager

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Attachment 1

Proposed Alternative:

Evaluation of Flaws in Ferritic Piping

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Evaluation Procedures and Acceptance Criteria for Flaws in Ferritic Piping

The following describes an alternative for evaluation procedures and acceptance criteria for flaws in ferritic piping not addressed in the ASME Boiler and Pressure Vessel Code, Section XI (the Code), 1986 Edition, with no Addenda.

Requirement:

The ASME Boiler and Pressure Vessel Code, Section XI, 1986 Edition, with no Addenda, has no analytical evaluation criteria for Category C-F-2 piping flaws. IWC 3610 Acceptance Criteria noted that standards were in preparation, and then referred to IWB 3610. IWB-3610 applies to ferritic steel components greater than 4 inches thick.

Indications which exceed the allowable flaw size of ASME B&PV Code, Section XI, IWC-3514 (which, in turn, refers one to IWB-3514 and Table IWB-3514-1 for Class 1 piping) would require repair or replacement of piping.

Basis:

Oyster Creek is currently committed to the 1986 Edition of the Code for ISI. As part of the NRC's approval of our 10-year plan, GPU Nuclear was requested to perform ISI on certain thin-walled carbon steel piping in Class 2 portions of relevant systems.

During the current 17R Outage inservice inspections, GPU Nuclear has detected an indication, which is probably porosity and/or slag, in one such weld in the Core Spray system test line (6-inch NPS, 0.29" wall thickness). This indication exceeds the allowable flaw size of ASME B&PV Code, Section XI, IWC-3514 (which, in turn, refers one to IWB-3514 and Table IWB-3514-1 for Class 1 piping). The 1986 Edition of the Code has no analytical evaluation criteria for Category C-F-2 piping flaws and refers to IWB-3610. However, IWB-3610 applies to ferritic steel components greater than 4 inches thick.

10 CFR 50.55a currently approves editions of the ASME B&PV Code, Section XI, through the 1989 Edition. This edition also does not include applicable evaluation criteria. The 1989 Addenda to the Code added Subsection IWB-3650, "Evaluation Procedures and Acceptance Criteria for Flaws in Ferritic Piping" and Appendix H, "Evaluation of Flaws in Ferritic Piping". GPU Nuclear proposes to use IWB-3650 and Appendix H of the 1995 Edition (no Addenda) of the Code as an alternative to the requirements of 10 CFR 50.55a.

The use of this alternative requirement (1995 Edition (no Addenda) of the Code, Subsection IWB-3650, "Evaluation Procedures and Acceptance Criteria for Flaws in Ferritic Piping" and Appendix H, "Evaluation of Flaws in Ferritic Piping") provides an acceptable level of quality and safety since the proposed alternative flaw evaluation and acceptance criteria ensures that the structural integrity of piping evaluated using this alternative is maintained. This criteria was prepared and reviewed by technical experts on the ASME Code committees prior to approval and incorporation into the Code. In addition, the NRC has issued a Notice of Public Rulemaking (NOPR) to incorporate later editions of the Code, including the 1995 Edition, and took no exceptions to these specific Code requirements.

Compliance by GPU Nuclear with the currently specified requirements of the 1986 Edition of the Code would be a hardship. Specifically, compliance would require repair or replacement of piping that would otherwise be found acceptable, by analysis, to later, NRC accepted, Code Editions. In addition, the piping in question is an open-ended pipe that goes to the torus. Performing a post-repair hydrostatic test would require blanking off the open end in order to pressurize to the required test pressure. This activity would result in increased radiological exposure to personnel that, again, would not be necessary with the application of the later edition of the Code.

Alternative:

GPU Nuclear proposes to use Subsection IWB-3650, "Evaluation Procedures and Acceptance Criteria for Flaws in Ferritic Piping" and Appendix H, "Evaluation of Flaws in Ferritic Piping" of the ASME Boiler and Pressure Vessel Code, Section XI, 1995 Edition (no Addenda), as an alternative for evaluation procedures and acceptance criteria for flaws in ferritic piping not addressed in the ASME Boiler and Pressure Vessel Code, Section XI, 1986 Edition, with no Addenda.