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**PERFORMANCE
DEMONSTRATION
INITIATIVE**

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**DOCKETED
USNRC**

September 21, 2001 (3:08PM)

**OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF**

September 12, 2001

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Rulemaking and Adjudications Staff

Dear Sirs;

On Friday, August 3, 2001, in Vol. 66, No. 150, of the Federal Register, the U. S. Nuclear Regulatory Commission (NRC) proposed amendments to its regulations and invited comments. The following comments, referenced to paragraph numbers preceded by the 10CFR 50.55a nomenclature, are submitted by the Performance Demonstration Initiative (PDI) for your consideration. The U.S. nuclear utilities created the PDI to implement performance demonstration requirements contained in Appendix VIII of Section XI of the Code. PDI is an organization comprised of all U.S. nuclear utilities that was formed to provide an efficient, technically sound implementation of the performance demonstration requirements contained in Appendix VIII to Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code.

(b)(2)(xv)(A)(1) and (A)(2) – The PDI has no issue with the reasoning behind the proposed examination coverage change but there was confusion over the wording used and the changes identified below are intended as a clarification.

The PDI does take exception to the limitation imposed by the requirement that dissimilar metal welds must be examined from the side that is of the same base metal material as that from which qualification was demonstrated. The most representative application and the one PDI intends to qualify, is single-sided with access limited to the safe end side of the weld. However, when a meaningful examination can be conducted from the opposite (e.g., nozzle) side we intend to do so, and take coverage credit if needed, using the examination techniques qualified from the safe end side. The reasoning for this approach is two fold. First, the composition of the base material is of minor consequence when compared to the effects of the austenitic weld material. Second, the qualification is being conducted from the side of the weld that is most often accessible in the plant.

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(1) When implementing Supplement 2 and Supplement 10, examinations must be conducted in two axial and two circumferential directions. Where examination from both sides of the weld is not possible, full coverage credit from a single side may be claimed only after completing a successful single-sided Appendix VIII demonstration using flaws on the opposite side of the weld.

(2) When implementing Supplement 3, examinations must be conducted in two axial directions. When examination in the circumferential direction is required, the circumferential examination must be conducted in two directions, provided access is available. Where examination from both sides is not possible, full coverage credit may be claimed from a single side.

(b)(2)(xv)(C)(1) – PDI proposes eliminating the use of Supplement 4, Subparagraph 3.2(c), which imposes three statistical parameters for depth sizing. The first parameter, 3.2(c)(1), pertains to the slope of a linear regression line. The linear regression line is the difference between measured versus true value plotted along a through-wall thickness. For Supplement 4 performance demonstrations, a linear regression line of the data is not applicable because the performance demonstrations are performed on test specimens with flaws located in the inner 15 percent through-wall. The differences between measured versus true value produce a tight grouping of results which resemble a shotgun pattern. The slope of a regression line from such data is extremely sensitive to small variations, thus making the parameter of Subparagraph 3.2(c)(1) a poor and inappropriate acceptance criterion. The second parameter, 3.2(c)(2), pertains to the mean deviation of flaw depth. The value used in the Code is too lax with respect to evaluating flaw depths within the inner 15 percent of wall thickness. Therefore, PDI proposes to use the more appropriate criterion of 0.15 inch RMS of 10 CFR 50.55a(b)(2)(xv)(C)(1), which modifies Subparagraph 3.2(a), as the acceptance criterion. The third parameter, 3.2(c)(3), pertains to a correlation coefficient. The value of the correlation coefficient in Subparagraph 3.2(c)(3) is inappropriate for this application since it is based on the linear regression from Subparagraph 3.2(c)(1).

The PDI does not use paragraph 3.2(c) for sizing qualification, requiring utilities to submit for relief. Eliminating this requirement would aid both the utilities and the regulators from having to either submit, review, or process large numbers of basically generic requests for relief.

(b)(2)(xix) - The PDI has no issue with the reasoning behind the proposed change to IWA-2240, but there was much confusion over interpretation of the resultant wording and even the potential usefulness of the resultant requirements. The following clarifications are only intended to impact IWA-2240. Evaluation of the proposed change to IWA-4520 is beyond our scope

(xix) – Substitution of alternative methods. The provisions of IWA-2240 of the 1997 Addenda must be applied when using the 1998 Addenda through the latest editions and addenda incorporated by reference in paragraph (b)(2) of this section. The provision in IWA-4520(c), 1997 Addenda through the latest editions and addenda incorporated by reference in paragraph (b)(2) of this section, that allows the substitution of alternative examination methods, a combination of methods, or newly developed techniques for the methods specified in the Construction Code may not be applied.

(b)(2)(xxii) – The following change is proposed to the annual training requirements for ultrasonic examiners. Changing the Appendix VII-4240 reference from 1999 and 2000 Addenda to the 1998 Edition would change the current 8 hours of annual practice (detecting, sizing and interpreting UT data) back to 10 hours of annual (classroom) training and would render VII-4240 requirements ineffective. The Code was changed to improve the effectiveness of VII-4240 by changing it to require practicing the skill of ultrasonic detecting, sizing and interpreting data 8 hours annually. The Code was revised to allow manual or automated system personnel to practice data analysis using welds and components containing flaws. Computer based training systems have been developed that use pre-recorded flaw data to train manual UT examiners. In a virtual environment manual inspection personnel can practice scanning and analyzing UT data. The Code revision was specifically written to include manual scanning, automated systems, and computer based systems for manual or automated scanning when the UT signals are obtained from flaws of interest. It is believed that this is more beneficial than classroom training that would not maintain the data analysis skills of UT personnel.

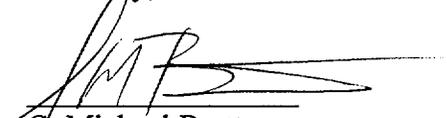
The redundant requirements can be consolidated by substituting the 8 hours of annual training in accordance with 10 CFR 50.55a(b)(2)(xiv) for the 10 hours of annual training in accordance with Section XI, but a request for relief is required. Eliminating this requirement would aid both the utilities and the regulators from having to either submit, review, or process large numbers of basically generic requests for relief.

(xxii) Annual Training Requirements for Ultrasonic Examiners. Supplemental annual training for ultrasonic examiner qualification must be in accordance with VII-4240, 1999 Addenda. Personnel shall practice ultrasonic techniques by examining welds containing cracks or analyzing prerecorded data of examinations performed on material containing cracks. Computer based training systems that use pre-recorded data may be used by personnel training for manual or automatic examinations. The cracks must be similar to those that may be encountered during inservice examinations. Personnel meeting the annual practice requirements of VII-4240 may apply those 8 hours to the 8 hours required within 6 months of a refueling outage as contained in 10CFR50.55a(b)(2)(xiv).

(g)(6)(ii)(c)(1) – The PDI has no issue with the proposed schedule and is fully committed to meeting the required implementation dates. However, a clarification that the implementation date is November 22, 2002, for Supplement 2 and 3 for examinations conducted from the inside surface (primarily pressurized water reactor vessel nozzle-to-safe end and safe end-to-pipe welds) would aid both the utilities and the regulators from having to either submit, review, or process large numbers of basically generic requests for relief.

Since these examinations are normally performed using the RPV examination device, it was the intention of PDI to complete the piping qualifications that are performed from the inside surface, in conjunction with the nozzle to shell and dissimilar metal welds. We are currently working with ASME Section XI to resolve other implementation issues such as the requirement that the specimen inside surface be concealed from the candidate (i.e., Appendix VIII, Supplement 2, paragraph 2.0) and the types of limiting conditions.

Sincerely;



G. Michael Bratton
Committee Chairman