

January 9, 2004
5928-04-20015

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

Three Mile Island, Unit 1
Operating License No. DPR-50
NRC Docket No. 50-289

Subject: Additional Information Concerning a Proposed Alternative Associated with the Use of a Weld Overlay

- References:**
- 1) Letter from Michael P. Gallagher (AmerGen Energy Company, LLC), to U.S. Nuclear Regulatory Commission, dated November 3, 2003
 - 2) Letter from Michael P. Gallagher (AmerGen Energy Company, LLC), to U.S. Nuclear Regulatory Commission, dated November 7, 2003
 - 3) Letter from Michael P. Gallagher (AmerGen Energy Company, LLC), to U.S. Nuclear Regulatory Commission, dated November 18, 2003
 - 4) Letter from Michael P. Gallagher (AmerGen Energy Company, LLC), to U.S. Nuclear Regulatory Commission, dated November 20, 2003
 - 5) Letter from Michael P. Gallagher (AmerGen Energy Company, LLC), to U.S. Nuclear Regulatory Commission, dated November 25, 2003

In the Referenced letters, AmerGen Energy Company (AmerGen) requested a proposed alternative in accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(3)(i) and supplied additional information requested by the U. S. Nuclear Regulatory Commission. This proposed alternative would permit the use of a full structural weld overlay repair for an indication identified in the steam generator "A" hot leg surge line nozzle-to-safe end weld. This letter provides additional information as discussed in a conference call with the NRC staff on December 18, 2003.

As discussed in the conference call, a laminar indication was identified outside the original fabrication butt weld on the stainless steel safe end side. This indication is within the ISI inspection volume of the new weld overlay. The circumferential location of the laminar indication is approximately 180 degrees opposite the original weld axial indication.

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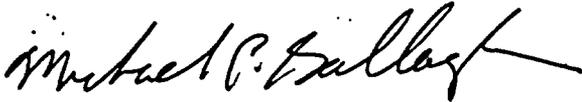
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The laminar indication, which is more than one indication separated by less than 1.0 inch, is calculated to be a total area of 1.19 square inches. By using a 45 and 60 degree RL wave, the dilution weld layer and the outer 25% of the original pipe wall below the laminar indication can be examined. The ability to examine the area under the laminar indication should permit the detection of a crack propagating from the original fabrication butt weld.

ASME Code Section XI, 1995 through the 1996 Addenda was used as the basis for acceptance of the indication. The ultrasonic examination method using the 0 degree L wave was used for detection of the laminar indication. The 45 degree RL wave confirmed the presence of the laminar indication. The original construction code USAS B31.7 Draft February 1968, Including June 1968 Errata, would also permit use of the ultrasonic examination method using a 0 degree L wave to detect the laminar indication, and a 45 degree and 60 degree RL wave to interrogate the volume underneath the laminar indication.

If you have any questions, please contact us.

Very truly yours,



Michael P. Gallagher
Director, Licensing and Regulatory Affairs
AmerGen Energy Company, LLC

Attachment

cc: H. J. Miller, Administrator, Region I, USNRC
D. M. Kern, USNRC Senior Resident Inspector, TMI
D. M. Skay, USNRC Senior Project Manager
File No. 01086