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U.S. Nuclear Regulatory Commission  
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Joseph M. Farley Nuclear Plant  
Steam Generator Sleevings

Gentlemen:

By letter dated September 18, 1987, the Nuclear Regulatory Commission issued Amendment No. 72 to Facility Operating License No. NPF-2 and Amendment No. 63 to NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. These amendments authorized the use of a mechanical, hybrid expansion joint (HEJ) sleeve for the repair of steam generator tubes per WCAP-11178, Revision 1.

By letter dated October 22, 1990, the Nuclear Regulatory Commission issued Amendment No. 85 to Facility Operating License No. NPF-2 and Amendment No. 78 to Facility Operating License No. NPF-8 for the Joseph M. Farley Nuclear Plant, Units 1 and 2. These amendments authorized the use of a laser welded sleeve for the repair of steam generator tubes per WCAP-12672. WCAP-12672, "Steam Generator Sleevings Report, Laser Welded Sleeves," contains a specific statement concerning the location of the laser weld for the lower joint of a full length tubesheet laser welded sleeve. On page 3-4, the WCAP states, "A single pass weld is then made between the sleeve and tube approximately 1 inch above the tubesheet cladding." The ASME Code imposes temperature exposure limits on the carbon steel tubesheet material. While the calculated and measured temperatures on the steam generator tube outer diameter surface during welding will be below the tubesheet critical temperature, additional assurance that the tubesheet will not be exposed to unacceptable temperature excursions can be gained by placing the weld in the plane of the tubesheet cladding.

As a result, if a full length tubesheet sleeve is required in the Unit 2 Eighth Refueling Outage or subsequent outages, it is Southern Nuclear Operating Company's (Southern Nuclear's) intent to use a laser welded upper joint as described in WCAP-12672 and a mechanical, HEJ joint as the lower joint as described in WCAP-11178, Revision 1. Only sleeves made of thermally treated Inconel 690 will be used as described in WCAP-12672 and WCAP-11178, Revision 1. A laser seal weld may be installed below the lower HEJ joint.

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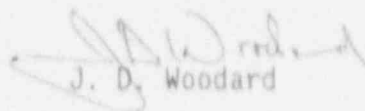
Westinghouse has evaluated the sleeve configuration as described above and determined the testing and design verification discussed in WCAPs 12672 and 11178, Revision 1, remain valid. The sleeve configuration has also been reviewed through the 10 CFR 50.59 process. It has been determined that the integrated sleeve configuration described is not a change in the Technical Specifications based on two factors. First, the upper and lower joint configurations have been approved by the NRC in WCAP-11178, Revision 1, "Steam Generator Sleeve Report (Mechanical Sleeves)," and WCAP-12672, "Steam Generator Sleeve Report, Laser Welded Sleeves," both of which are referenced in the Technical Specifications. Second, the integrated sleeve is a combination of approved joints. Additionally, Westinghouse has documented in WCAP-13115, "Steam Generator Sleeve Integration Report," that no effects impact the NRC approved joints as a result of combining the two joints in a single sleeve. The configuration is also not an unreviewed safety question.

Concerning the laser seal weld, by letter dated October 9, 1990, the NRC Staff approved ASME Code Case N-395 for the use of laser welding for installation of laser welded sleeves at Farley Nuclear Plant. The ASME Code Section XI, Article IWB-4110, indicates that the scope of repair procedures are "the rules and requirements for repair of the pressure retaining boundary for Class 1 components and their supports." The proposed seal weld is located outside the pressure retaining boundary since the HEJ joint provides the pressure retaining boundary. Furthermore, ASME Code Article NCA-9000, Glossary, defines repair as "[t]he process of physically restoring a nonconformance to a condition such that an item complies with Code requirements." As such, the seal weld is not a "repair," as that word is used in the Technical Specifications because it is not restoring a nonconformance. The seal weld is, therefore, simply complementing the proposed integrated sleeve in a manner which is acceptable to the governing Code.

This discussion is being provided for information regarding Southern Nuclear's interpretation of the steam generator Technical Specifications. If there are any questions, please advise.

Respectfully,

SOUTHERN NUCLEAR OPERATING COMPANY

  
J. D. Woodard

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