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RA-12-030

10 CFR 54

April 6, 2012

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

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Response to Request for Additional Information related to the response to License Renewal Commitment No. 10 regarding thermal aging irradiation embrittlement of cast austenitic stainless steel (TAC NO. ME7123)

Reference: Request for Additional Information – NRC letter to M. Pacilio from H. Jones dated February 21, 2012 (TAC No. ME7123)

This letter is submitted to provide a response to the question provided in the above referenced Request for Additional Information regarding a license renewal commitment response. The commitment concerns thermal aging and neutron irradiation embrittlement of reactor vessel internal components casted from austenitic stainless steel. Our response is contained in the attachment to this letter.

There are no regulatory commitments contained in this letter.

Should you have any questions concerning this letter, please contact Jeff Chrisley, Regulatory Assurance, at (609) 971-4469.

Respectfully,

Michael J. Massaro

Michael J. Massaro
Vice President
Oyster Creek Nuclear Generating Station

Attachment

cc: Regional Administrator - NRC Region I
NRC Senior Resident Inspector - Oyster Creek Station
NRC Senior Project Manager - Oyster Creek Nuclear Generating Station
NRC Project Manager – Program Operations Branch, Division of License Renewal

A114
NRR

Attachment
Response to Request for Additional Information

RAI-1
Regarding the fuel support piece, it was stated that, "[t]he loading on the fuel support piece is mostly in compression and as such any loss of fracture toughness is not expected to affect the structural integrity of the component." Please elaborate on the locations of the fuel support piece which are under tensile stresses, provide the maximum tensile stress value and confirm whether the highly stressed areas are accessible in the proposed supplemental inspections. If all accessible surfaces of the fuel support piece are under compressive stresses, what information do you expect to obtain from the proposed supplemental inspections? Further, discuss the inspection results documented to date.

Response

In BWRVIP-234, Thermal Aging and Neutron Embrittlement Evaluation of Cast Austenitic Stainless Steels for BWR Internals, Section 5.1 Orificed Fuel Support – Stress Evaluation – it is stated that there is no information on the actual tensile stress. Therefore, we cannot identify where the tensile stress areas are located on the fuel support piece and thus do not know if these areas are accessible for visual inspection.

However, the supplemental visual inspections are performed when the component is removed from the vessel and the compressive loads have been removed from the component. The inspection is performed on both the ID surface and the OD surface of the component. Therefore, it is reasonable to conclude that the extent of coverage achieved on both the ID and the OD surfaces covers some portions of the component that would be subject to tensile stresses.

The supplemental visual inspections could identify cracking or other degradation on the fuel support piece due to aging related to high temperature and neutron fluence or other mechanisms.

A visual inspection (VT-1) was completed during 1R23 (2010) on two fuel support pieces with 70% coverage achieved and no recordable indications were identified.