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**Cc:** [Diaz-Sanabria, Yoira](#); [Sheng, Simon](#); [Gonzalez, Hipolito](#); [Lamb, John](#)  
**Subject:** Oyster Creek Nuclear Generating Station - Request for Additional Information - License Renewal Commitment regarding thermal aging and neutron irradiation embrittlement of CASS materials  
**Date:** Monday, January 23, 2012 1:36:00 PM

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By letter dated April 9, 2008, AmerGen Energy Company, the licensee, submitted for staff review and approval a response to Commitment No. 10 stated in NUREG-1875, Volume 2, "Safety Evaluation Report Related to the License Renewal of Oyster Creek Generating Station [(OCNGS)]." This commitment concerns thermal aging and neutron irradiation embrittlement of OCNGS reactor vessel internals components made of cast austenitic stainless steel materials. The Vessels and Internals Integrity Branch has reviewed the information provided by the licensee to support the submittal and needs additional information to complete its review. The request for additional information was discussed with John Hufnagel. If you have any questions or would like to arrange a teleconference to discuss the following information, please contact Heather Jones at (301) 415-4054 or e-mail [Heather.Jones@nrc.gov](mailto:Heather.Jones@nrc.gov).

### **REQUEST FOR ADDITIONAL INFORMATION (RAI)**

#### **RAI-1**

The licensee attempted but could not obtain information regarding the type and composition of cast austenitic stainless steel (CASS) reactor vessel internal (RVI) components within the scope of license renewal. Alternatively, the licensee proposed additional supplemental inspections for three CASS RVI components: fuel support piece, core spray line spray nozzle elbows, and control rod guide tube (CRGT) base. Please confirm that these three components are the only RVI components that were made of CASS materials and may be susceptible to thermal aging and neutron irradiation embrittlement. Discuss whether there could be other CASS RVI components that have not been identified yet.

#### **RAI-2**

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.

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