

**From:** N. Kaly Kalyanam  
**To:** Linda Conklin  
**Date:** 04/20/2007 2:38:45 PM  
**Subject:** Fwd: Acceptability of CEAs and guide tube (GT) inserts, Erbium rods credited in the criticality analysis

Linda,

I am forwarding some follow-up questions from Summer Sun.

Thanks

Kaly

>>> Summer Sun 04/20/2007 1:01 PM >>>

Kaly, In a phone call held yesterday, the licensee of SONGS indicated that the use of CEAs, GT inserts for reactivity control in the criticality analysis was previously approved by the NRC for CE plants. The licensee provided to us the ADAMS nos. of the SEs, ML042670562 for the use of CEAs in St Lucie-1, ML012850287 for the use of rodlets (similar to GT inserts) in Millstone 2.

I have following three issues related to the use of CEAs, GT-inserts, and Erbium rods for the licensee to address. These issues are considered as a followup to RAI 6. The licensee may add its response to the draft RAI 6 response.

(1) Use of CEAs

In accordance with the SE for St Lucie-1 (ML042670562), the bases for the NRC to accept the use of CEAs are:

(a) the licensee demonstrated that it had appropriate controls, procedures, and analyses to both understand and preclude the phenomena including 1) cladding wear, 2) unrecoverable cladding strain, 3) irradiation assisted stress corrosion cracking, and absorber depletion, from affecting the spent fuel pool criticality analyses, and

(b) the licensee demonstrated that design and use of the removable CEAs proposed in St Lucie 1 satisfied the guidance in Section 5.1 (a and c only) of RG 1.13, "Spent Fuel Storage Facility Design Basis."

The licensee is requested to provide information to demonstrate that it satisfies the SE conditions (a) and (b) listed above for St Lucie -1, and justify for any deviations.

(2) use of GT-Inserts

In accordance with the SE for Millstone 2 (ML012850287), the bases for the NRC to accept the use of rodlets are:

(a) the rodlets were made from borated stainless steel, Type 304 B7, grade A with 2 w/o of boron, manufactured in accordance with the requirements of standard ASTM A 887-89 and ASTM A 484-91; and

(b) the licensee committed to implement a surveillance program where, at 5 year intervals, 1% of the rodlets will be visually inspected for any material degradation to assure that at all times there is enough poison material for reactivity control.

The licensee is requested to describe the material used in the GT-inserts, and surveillance programs, and demonstrate that it satisfies the SE conditions (a) and (b) listed above for

Millstone-2. Justification should be provided if the material of GT inserts and surveillance programs used at SONGS are different.

(3) Use of Erbium Rods

Provide the ADAMS No. for the SE approving the use of Erbium rods for PWR licensing applications, and address how the applicable range and conditions specified in the SE are met for the application of Erbium rods in SONGS.

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