Supplemental RAI Request for Chapter 5
(GE Letters MFN 06-479, MFN 06-50, MFN 06-508, and MFN 06-502)

5.4-20 (A) In GE's response to RAI 5.4-20, it was indicated that the isolation condenser (IC) tubes will be solution annealed while straight and then bent by induction bending. Discuss how you confirmed that the material properties of the most limiting bent tube remained acceptable following induction bending. Include a discussion of the material properties tested (e.g., hardness), the results, and the acceptance criteria.

(B) In GE's response to RAI 5.4-20, it was indicated that the design of the support structures for the IC tubes on the poolside are not available. Given that material selection and specific design attributes, such as the presence of crevices, can contribute to degradation, provide a COL Action Item to submit this information.

(C) Given that crevices exist in both the passive containment cooling system (PCCS) heat exchanger and the IC, discuss the inspection requirements for these locations. If there are no inspection requirements, provide a technical justification for why no inspections are needed.

(D) Clarify the material of construction for the IC tubes. In several places the material of construction for the IC tubes was specified as SB-163 (e.g., refer to Table 6.1-1 in your August 17, 2006 letter (MFN 06-265); refer to your response to NRC RAI 5.4-48). However, in other documents, Code Case N-580-1 is referenced for the specification for the IC tubes (refer to response to NRC RAI 6.1-10). Code Case N-580-1 refers to SB-167 (for pipes).

5.4-53 In response to RAI 5.4-53, GE indicated that the alarm setpoint for the IC radiation monitor is selected close enough to background so that an early warning of a leak is detected, but with adequate margin to prevent spurious actuation. However, the response did not fully address several aspects of the staff's original question. For example, it did not address the operator actions to be taken in response to leakage and it did not address why the leak rate for a critical size flaw was not determined and used in determining when the isolation condenser should be isolated. Address these questions. If these are more appropriately treated as COL Actions Items, please discuss your plans to add this as a COL Action Item.

5.4-55 In GE's response to RAI 5.4-55, GE indicated that the Alloy 600 tubing (presumably SB-163 and not SB-167) was used as replacement tubing for several early BWR isolation condenser and that the material performed satisfactorily without incident *due to general corrosion* in this application. Discuss whether there were any other "incidents" associated with the use of these materials in these applications.

5.4-57 For the PCCS, provide the same information as requested in the enclosed supplemental questions for 5.4-53 and 5.4-58. In addition, discuss whether the cracking that occurred in the earlier ICs (refer to your response to RAI 5.4-54)

could occur in the PCCS heat exchanger. If so, discuss what inspections should be performed to ensure timely detection of the cracking?

5.4-58 Given the lack of operational data and the limitations of accelerated corrosion testing to fully simulate all of the combinations of water chemistry, material properties, and stresses that may exist in the field, provide your proposed inspection and acceptance requirements for these tubes and discuss where these regulatory requirements should be incorporated (e.g., technical specifications, tier 1, ASME Code). In addition, provide a response to NRC RAI 5.4-56.