

From: Wiebe, Joel
Sent: Monday, May 10, 2010 4:03 PM
To: 'Gordon Arent'; 'Tony Langley'; 'Bill Crouch'
Subject: Preliminary RAIs for Watts Bar Unit 2 FSAR Section 6.2.5

1. Provide a description of how each of the criteria 1 through 8 of Regulatory Guide (RG) 1.7 Revision 3, Section C.2.1 for commercial grade hydrogen analyzer are met.
2. Describe the approach for demonstrating equipment survivability in the beyond design basis accident environment conditions inside the containment. RG 1.7 Revision 3, Section C.2.1, item (1) "Equipment Survivability identifies that the acceptable approaches for demonstrating equipment survivability are described in Chapter 19 of references 9 and 11 given in the RG.
3. RG 1.7, Section C.3 states that all containment types should have an analysis of the effectiveness of the method used for providing a mixed atmosphere. This analysis should demonstrate that combustible gases will not accumulate within a compartment or cubicle to form a combustible or detonable mixture that could cause loss of containment integrity. In addition, the footnote 2 in the RG states "The NRC staff believes that current lumped parameter analytical codes may overestimate mixing processes (in particular, natural convection). Applicants should substantiate the applicability of these codes to their analyses through sensitivity studies, validation with data, or other means."

Describe the analysis performed and the results obtained which demonstrates the effectiveness of the proposed method for providing a mixed atmosphere during a beyond design basis accident. In addition, describe the approach taken to demonstrate that mixing is not overestimated by the code used for the analysis.
4. Refer to the first paragraph of Section 6.2.5.2.b. Describe the "Phase B isolation signal" referred to in this section.
5. RG 1.7 Revision 3, Section C.1 provides guidance for survivability of systems, structures and components (SSCs) installed to mitigate the hazards from the generation of combustible gas during a beyond-design-basis accident environment. FSAR Section 6.2.5.2, third paragraph states "Ductwork not protected by embedment is designed to withstand the LOCA environment" – i.e., does not state beyond-design-basis environment. Verify that the SSCs installed for the mitigation of the hazards of combustible gas are designed to operate in the beyond-designed basis environment or provide justification for not meeting the guidance.

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