

## Clarifications for Discussion at November 12, 2002 Meeting

### Section 3.8

- 1) In AP1000 DCD Tier 2 Material, subsection 3.8.2.4.1.1, 3<sup>rd</sup> paragraph, "3.7.5.5" should be "3.7.3.5". Also, there appears to be a statement that applied to AP600 but not AP1000: "based on the envelope of the results for each soil case." Please correct the text.
- 2) In AP1000 DCD Tier 2 Material, subsection 3.8.2.4.2.6, 2<sup>nd</sup> paragraph, it appears that "SA537, Class 2" should be "SA738, Grade B". Otherwise, the information is irrelevant. Please correct the text.
- 3) In the AP1000 DCD, Tier 2 Material, Section 3.8.2 "Steel Containment," subsection 3.8.2.4.2.3, "Equipment Hatches" (Page 3.8-12), and subsection 3.8.2.4.2.8, "Summary of Containment Pressure Capacity" (Page 3.8-14), Westinghouse reports conflicting pressure capacities for the 16' diameter equipment hatches at 100°F (74 vs. 84, using NE 3222 Service Level C limits; 111 vs. 126, using Code Case N-284). Please correct the discrepancies in the reported pressure capacity for the 16' diameter equipment hatch.
- 4) AP1000 DCD, Tier 2 Material, Section 3.8.3.2, "Applicable Codes, Standards, and Specifications," references ACI 349-01 (and supplemental requirements in Section 3.8.4.5), but does not identify ACI 349-01 as Tier 2\* information. This reference to ACI 349-01 (and supplemental requirements in Section 3.8.4.5) needs to be identified as Tier 2\* information.
- 5) AP1000 DCD, Tier 2 Material, Section 3.8.3.2, "Applicable Codes, Standards, and Specifications," also references AISC N690-84 (and supplemental requirements in Section 3.8.4.5), but does not identify AISC N690-84 as Tier 2\* information. This reference to AISC N690-84 (and supplemental requirements in Section 3.8.4.5) needs to be identified as Tier 2\* information.
- 6) In AP1000 DCD, Tier 2 Material, Figure 3.8.3-8 (sheet 1 of 3) and Figure 3.8.3-15 (sheets 1 and 2), some of the information in both the hard-copy printed version and the CD version are illegible. Figure 3.8.3-8 also has unrecognizable symbols for the weld information. Legible copies of these figures need to be submitted to permit review of the technical information contained on these figures.
- 7) AP1000 DCD, Tier 2 Material, subsection 3.8.4.1.1, "Shield Building," indicates that "[t]he conical roof supports the passive containment cooling system tank as shown in Figure 3.8.4-2." This figure apparently replaces AP600 Figure 3.8.4-7, and has been revised to show the AP1000 roof and tank dimensions and elevations. However, AP600 Figure 3.8.4-7 was designated as Tier 2\*, while there is no such designation for AP1000 Figure 3.8.4-2. Westinghouse needs to identify this figure as Tier 2\*, or provide the justification for reclassifying this information.
- 8) AP1000 DCD, Tier 2 Material, subsection 3.8.4.4.1, "Seismic Category I Structures," discusses seismic design and analysis procedures. Figure 3.8.4-3 shows the GTSTRUDL model of the AP1000 shield building, with a refined discretization of the roof and the passive containment cooling water storage tank. This model appears to be a revision of the AP600 model shown in Figure 3.8.4-9 of the AP600 DCD. The staff notes that the AP1000 model appears to contain geometry errors in the vicinity of the openings, as evidenced by the

irregularities in the mesh. Please (1) provide a revised Figure 3.8.4-3, with the apparent errors corrected, or (2) explain why the model is correct as shown.

9) AP1000 DCD, Tier 2 Material, subsection 3.8.5.4.3, "Design Summary of Critical Sections," under "[b]asemat between column lines 1 and 2 and column lines K-2 and N," refers to "...analyses on uniform soil springs"\* described in subsection 3.8.5.4.1." Subsection 3.8.5.4.1 does not describe these analyses. If applicable, Please provide the description of the referenced uniform soil spring analyses, and explain how they are utilized in the development of the AP1000 basemat design. If referenced in error, please correct the text to reflect the actual analysis methodology.