

April 19, 2007

Ms. Andrea Sterdis, Manager
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SUBJECT: WESTINGHOUSE AP1000 COMBINED LICENSE (COL) PRE-APPLICATION
TECHNICAL REPORT 35 - REQUEST FOR ADDITIONAL INFORMATION
(TAC NO. MD3727)

Dear Ms. Sterdis:

By letter dated November 29, 2006 (DCP/NRC1803), you submitted AP1000 Technical Report 35, "AP1000 Steam Generator Description Changes," which provided information related to design changes for the AP1000 steam generators. The Nuclear Regulatory Commission staff has reviewed the report, and has determined that additional information is required. Our questions are provided in the Enclosure. We discussed these issues with your staff on March 23, 2007. Your staff indicated that you would attempt to provide your response within 30 days of the date of this letter.

Please contact me at (301) 415-1313, if you have any other questions on these issues.

Sincerely,

/RA/

Steven D. Bloom, Senior Project Manager
AP1000 Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

Project No.: 740

Enclosure:
Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

WESTINGHOUSE AP1000 DOCUMENT NO. APP-GW-GLN-010, Rev 0

TECHNICAL REPORT 35 - AP1000 STEAM GENERATOR DESCRIPTION CHANGES

PROJECT NUMBER 740

- TR35-1 On page 3 of your technical report, you stated that although you intend to achieve full depth expansion in the tubesheet, you plan to remove the requirement of achieving this by hydraulic expansion. Residual stresses resulting from the expansion method will affect the susceptibility of the tubes to develop degradation (e.g., stress corrosion cracking). As currently proposed, there is no mention of the expansion method to be employed nor the criteria to be used for selecting this method. Please discuss how the expansion method will be chosen and your plans to incorporate such information in the design control document (DCD).
- In addition, in Section 5.4.2.2 of Revision 15 of the mark-up, you stated: *“Residual stresses smaller than from other expansion methods result from this process...”* Since as currently proposed there is no expansion method specified, please discuss your plans to modify this sentence.
- TR35-2 On page 3 of your technical report, you stated that in order to accommodate the 20-inch separator arrangement, the wrapper and feedwater ring configurations also change and that the design change is shown in the revised Figure 5.4-2. Looking at the revised Figure 5.4-2, it is not clear what the changes were to the configuration of these components. Please discuss the configuration changes made to the wrapper and feedwater ring as a result of increasing the moisture separators from 7 to 20-inches. Discuss any technical considerations in making these changes.
- TR35-3 On page 3 of your technical report (Section 5.4.2.4.1), you stated that the phrase *“...and some primary separator parts”* will be removed from the list of items that will be fabricated from nickel-chromium-iron alloys. The staff notes that on page 9 of the report, the 2nd bullet implies that low alloy steel will be used and the chromium content will be selected so as to limit the likelihood/potential for erosion/corrosion. The staff also notes that there is operating experience in which erosion/corrosion has been observed in moisture separators of current operating plants. Please discuss your plans to incorporate (into the DCD) the materials to be used for the primary separator parts exposed to high velocities that could result in erosion/corrosion and any criteria to be used in selecting those materials.

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