

January 9, 2007

Ms. Andrea Sterdis, Manager
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SUBJECT: WESTINGHOUSE AP1000 COMBINED LICENSE (COL) PRE-APPLICATION
TECHNICAL REPORT 6 - REQUEST FOR ADDITIONAL INFORMATION
(TAC NO. MD2174)

Dear Ms. Sterdis:

By letter dated June 5, 2006 (DCP/NRC1746), you submitted AP1000 Technical Report 6, "AP1000 As-Built COL Information Items," which identified COL Information items that require as-built information or conditions to be completed. The NRC 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 December 21, 2006. Your staff indicated that you would attempt to provide your response by February 9, 2007.

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 1
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-GLR-021, Rev 0

TECHNICAL REPORT 6 - AP1000 AS-BUILT INFORMATION ITEMS

PROJECT NUMBER 740

TR6 - 4 COL Information Items 5.3-1 and 5.3-4

The staff is in the process of reviewing the information that was provided by Westinghouse Electric Company in report APP-GW-GLR-021 under Combined License (COL) Information Items 5.3-1 and 5.3-4. The staff has identified that additional information is needed to complete the evaluation. The staff's request for additional information (RAI) follows:

1. COL Information Item 5.3-1 (NRC FSER Combined License Action Item 5.2.2.2-1) states that the original AP1000 Design Control Document (DCD) includes generic pressure-temperature (P-T) limit curves based on the previously established design and limiting material requirements. Accordingly, the submittal proposes a markup to DCD Section 5.3.3 stating that the use of plant-specific P-T limit curves will be addressed by the COL holder during procurement and fabrication of the reactor vessel. The proposed DCD markup then further states that the development of plant-specific P-T limit curves and evaluation of LTOP setpoint pressure is required of the AP1000 COL holder prior to fuel load. The submittal proposes, in COL Information Item 5.3-4 (NRC FSER Combined License Action Item 5.3.4.3-1), that the COL holder will verify, prior to fuel load, that the actual plant-specific reactor vessel (RV) material properties for the Pressurized Thermal Shock (PTS) evaluation are consistent with what was established in the AP1000 DCD, based on the as-procured RV material data. The submittal also proposed mark-ups to DCD Section 5.3.4 that would implement this proposed COL holder action item.

The applicant submitted AP1000 Standard COL Technical Report Number 33 on September 29, 2006. This report proposed changes to the %Cu content limit for the RV materials, as well as the P-T limit curves that were established in the original DCD. However, report APP-GW-GLR-021, as written, still references the P-T limit curves and material properties (including %Cu content) from the original DCD.

- a) Please clarify whether the information in report APP-GW-GLR-021 should, in fact, reference the proposed P-T limit curves and new %Cu content limit from COL Technical Report Number 33.
- b) If the information in report APP-GW-GLR-021 should reference the proposed P-T limit curves and new %Cu content limit from COL Technical Report Number 33, please revise report APP-GW-GLR-021 to include the new P-T limit curves proposed in COL Technical Report Number 33.

Enclosure

- c) Please supplement report APP-GW-GLR-021 to include the following material properties and parameters used to calculate the P-T limit curves:
- %Cu content limit for RV forging and weld
 - %Ni content limit for RV forging and weld
 - minimum initial RTNDT values for the RV forging and weld
 - operating term in effective full power years (EFPY) of facility operation for which the P-T limit curves are valid
 - maximum projected peak forging and weld surface fluence for the above operating term
 - margin terms for the RTNDT calculations, as prescribed by Regulatory Guide (RG) 1.99, Revision (Rev.) 2
2. Please supplement report APP-GW-GLR-021 such that it addresses the following criteria pertaining to the implementation of the Technical Specification (TS) P-T limit curves by the COL holder:
- a) The final TS P-T limits and associated material properties will be verified by the NRC through an Inspection Test Analysis and Acceptance Criterion (ITAAC) prior to fuel load.
- b) If new P-T limit curves and/or associated TS criteria for the P-T limit curves (e.g, effective full power years for which P-T limit curves are valid, LTOP system setpoint criteria, etc.) are proposed for facility operation at any point subsequent to issuance of the COL, the revised P-T limit curves and/or associated TS criteria will need to be authorized by the NRC via the license amendment process, as required by 10 CFR 50.90.

TR6 - 5 COL Information Item 13.6-2

The staff requests that COL Information Item 13.6-2 be revised to state the following:

The Combined License holder will verify that the as-built location of vital equipment is inside vital areas identified in reference 6 after the installation of the vital equipment prior to fuel load for low-enriched uranium (LEU) fuel or prior to the receipt of fuel on site for mixed-oxide weapons-grade plutonium (MOX) fuel.

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