REQUEST FOR ADDITIONAL INFORMATION

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

ANP-10307P, REVISION 0

"AREVA MCPR [MINIMUM CRITICAL POWER RATIO] SAFETY LIMIT METHODOLOGY

FOR BOILING WATER REACTORS"

AREVA NP, INC.

PROJECT NO. 728

1. The second paragraph on Page 1-4 of topical report (TR) ANP-10307P, provides a snapshot of the current Safety Limit Minimum Critical Power Ratio (SLMCPR) methodology and the proposed MICROBURN-B2 methodology. The paragraph also, briefly, discusses the conservatism in both methods. It appears to the NRC staff that, from the contents of the last sentence of the same paragraph, that the current methodology is more conservative than the proposed methodology.

   a) Please provide a qualitative and a quantitative technical basis in support of the use of the proposed method, other than the fact that the proposed method utilizes state of the art computer codes and methods.

   b) Provide a flow chart representing the current SLMCPR methodology vs the proposed SLMCPR methodology.

2. The first paragraph on Page 2-4, alludes to applying the channel bow model in a conservative manner. It then, briefly discusses the meaning of “conservative manner.” However, it is not discussed as to how and when **[ ]** is determined and when/why one particular conservative manner is selected or the other. Please provide additional information regarding this process.

3. The third paragraph on Page 2-4, discusses addressing abnormal channel bow issues. Is this issue ongoing? Is the issue currently being addressed by the NRC staff?

4. On Page 2-5, Section 2.2.3.1, it is stated that **[ ]**. Please provide bases for selecting **[ ]**

5. It appears that the uncertainty associated with **[ ]** expressions presented on Page 2-7, were taken out of the MICROBURN-B2 methodology, and are thus approved formulation. Is that correct?

ENCLOSURE 2

6. On Page 2-9, second paragraph, an **[ ]** is briefly discussed. Is this an uncertainty in the **[ ]**? Please explain.

7. Is the **[ ]** discussed on Page 2-10, a new process?

8. On Page 2-13, it is stated that the updated methodology incorporates an uncertainty due to bow. Is this part of the MICRBURN-B2 approved methodology?

9. Figure 2-1, Page 2-15, depicts the major codes in the calculational process of the SAFLIM3D.

   a) Is **[ ]** an in-house interface code?

   b) In the same figure, the flow chart indicates that **[ ]** executes MICRBURN-B2 calculations using **[ ]** cases. What is the basis for the **[ ]** cases?

10. On Page 3-10, Figure 3-1, the flow chart indicates that a Safety Limit MCPR to be supported is selected. How is the initial MCPR limit selected? Is it based on core design?