Request for Additional Information No. 102 (1108), Revision 0

10/24/2008

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 16 - Technical Specifications
Application Section: 16.2

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)

16-125

The reactor core Safety Limits (SL) for the DNBR ratio are listed based upon use of either the ACH-2 or BWU-N correlations (1.246 and 1.21, respectively). In response to RAI 5 of the ACH-2 review (ANP-10269P-A), it was stated that the DNBR Technical Specification would be identified with a design limit of 1.30. Similarly, the DNBR limit when using the BWU-N correlation does not match the value provided in corresponding topical report (BAW-10199P-A).

Provide an explanation for these discrepancies.

16-126

Technical Specification Section 4.3.1.1 item (c) indicates a nominal pitch of 11.28 in. between the center of fuel assemblies placed in the spent fuel storage racks. The storage rack design as submitted in UN-TR-08-001P includes two different regions with different pitches (10.9 in. for Region 1 and 9.028 in. for Region 2). Provide clarification for the spent fuel storage rack pitch dimensions.

16-127

The peak fuel centerline temperature safety limit is listed as 4901°-F, decreasing by 14°-F per 10,000 MWD/MTU burnup. The supporting fuel mechanical design topical report (ANP-10285P) calculates the limit based on steady state peak linear heating rate. The reactor core technical specifications safety limits bases (second paragraph of the Background section) also specifies steady state peak linear heating rate instead of an absolute fuel temperature to preclude fuel centerline melting.

a) Justify the 4901°-F value and modify the wording of the bases to correspond to the absolute fuel temperature limit, instead of steady state peak linear heating rate.

b) Identify whether the 4901°-F value refers to UO2 or Gd rods (and provide the value for the other rods).

c) Provide the support for the 14°-F per 10,000 MWD/MTU burnup dependence.