

**Response to**

**Request for Additional Information No. 64, Supplement 1**

**9/22/2008**

**U. S. EPR Standard Design Certification**

**AREVA NP Inc.**

**Docket No. 52-020**

**SRP Section: 05.03.01 - Reactor Vessel Materials**

**SRP Section: 05.03.02 - Pressure-Temperature Limits, Upper-Shelf Energy, and  
Pressurized Thermal Shock**

**SRP Section: 05.03.03 - Reactor Vessel Integrity**

**Application Section: FSAR Ch. 5**

**CIB1 Branch**

**Question 05.03.02-3:**

FSAR Section 5.3.2.3 discusses pressurized thermal shock (PTS) and provides the projected  $RT_{PTS}$  values for 60 EFPY. However, the FSAR does not provide the applicable projected fluence. Please provide in the FSAR the projected fluence used in the calculation of PTS and describe the methodology used.

**Response to Question 05.03.02-3:**

The methodology for calculating the fluence is noted in U.S. EPR FSAR, Tier 2, Section 5.3.1.6.1, which refers to the Fluence and Uncertainty Methodologies Topical Report, BAW-2241P-A.

U.S. EPR FSAR, Tier 2, Table 5.3-4 contains the fluence at the inner wetted surface of the cladding at 60 EFPY. These changes were described in the Response to Request for Additional Information No. 64, Question 05.03.02-2.

**FSAR Impact:**

The U.S. EPR FSAR will not be changed as a result of this question.

**Question 05.03.02-5:**

Section 5.3.2 of the FSAR states that the COL applicant will provide a plant-specific Pressure Temperature Limits Report (PTLR). To enhance the level of standardization in the certification information, it would appear appropriate to provide the PTLR at the design certification stage rather than in each COL application. Discuss your rationale for not including the PTLR in the FSAR. Also, discuss how the adequacy of Technical Specification requirements for pressure-temperature limits can be assured at the design certification stage if generic P-T limits or a PTLR is not provided at the design certification stage.

**Response to Question 05.03.02-5:**

As stated in U.S. EPR FSAR, Tier 2, Section 5.3.2.1, the U.S. EPR Pressure-Temperature (P-T) Limits Methodology for RCS Heatup and Cooldown Technical Report, ANP-10283P, contains the detailed methodology for developing the P-T limit curves. This technical report will be revised to include the complete methodology to support the PTLR in compliance with Generic Letter 96-03. The revised technical report will contain bounding P-T limit curves that are conservative based on relevant material properties in the design specifications, and will satisfy requirements for a PTLR in the Technical Specifications.

The revised technical report and corresponding FSAR changes will be submitted to the NRC by April 30, 2009.