

ArevaEPRDCPEm Resource

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ArevaEPRDCPEm Resource
Subject: Draft - U.S. EPR Design Certification Application RAI No. 311 (3839, 3846), FSAR Ch. 16
Attachments: Draft RAI_311_CTSB_3839_3846.doc

Attached please find draft RAI No. 311 regarding your application for standard design certification of the U.S. EPR. If you have any question or need clarifications regarding this RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the RAI to ensure that we have not inadvertently included proprietary information. If there are any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the draft RAI publicly available.

Thanks,
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10/9/2009

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

QUESTIONS for Technical Specification Branch (CTSB)

16-316

An RAI was written to address the fact that Table 3.3.1-2 of the GTS identifies setpoint values as Limiting Trip Setpoints (LTSPs), while the FSAR, Chapter 15, Table 15.0-7 (Reactor Trip Functions) and Table 15.0-8 (ESF Actuation Functions), appear to identify the same values as Nominal Trip Setpoints (NTSPs). A detailed review of the RAIs issued and the responses received indicates that the referenced RAI was never actually submitted. The staff submits the following RAI Question to resolve the setpoint discrepancies.

Provide the additional information and any changes necessary to resolve the conflicts between setpoint values presented in the proposed technical specifications and the values presented in the FSAR 15 accident analysis.

There are discrepancies between Table 3.3.1-2, "Acquisition and Processing Unit Requirements Referenced from Table 3.3.1-1," and Chapter 15 Tables 15.0-7, "Reactor Trip Setpoints and Delays Used in the Accident Analysis," and 15.0-8, "Engineered Safety Features Actuation System (ESFAS) Functions Used in the Accident Analysis," with respect to the setpoint values as presented. The following are examples.

1. For reactor trip functions, Table 3.3.1-2 shows the setpoint values as Limiting Trip Setpoints (LTSPs), while FSAR Table 15.0-7 shows the same values as Nominal Trip Setpoints (NTSPs) for functions 3 through 18. Table 15.0-7 distinctly identifies Normal and Degraded uncertainties for each signal.
2. Similarly, for ESF actuation functions, Table 3.3.1-2 shows the setpoint values as Limiting Trip Setpoints, while FSAR Table 15.0-8 appears to show Nominal Trip Setpoint values and Normal and Degraded uncertainties for each signal. The setpoint values shown are the same in both tables for several functions (for example, functions 2.c, 2.d, 3, and 4).

LTSPs were defined in Bases B 3.3.1 and in Reference 1 of B 3.3.1, as equivalent to a Limiting Safety System Setting (LSSS). The NTSP was defined in Reference 1 as the actual setting value for the trip function, which accounts for various instrumentation loop uncertainties including margin for conservatism to ensure the analytical limit is not exceeded. The LTSP and NTSP values cannot be the same, as presented in the various FSAR Tables cited above, because there would be no margin between them.

The additional information is needed to resolve setpoint discrepancies between the EPR GTS, Table 3.3.1-2, and Chapter 15 Tables 15.0-7 and 15.0-8.

16-317

Follow-up to RAI Question No. 16-293

In RAI 16-293, the applicant was asked to provide an assessment to confirm that all the LCO values in the proposed TS are consistent with the initial conditions assumed in the safety analyses. The staff, in particular, cited the proposed pressurizer minimum water level of 75% specified in LCO 3.4.9.a as an example where a TS requirement is not consistent with the initial condition assumed in the safety analyses (e.g., a pressurizer water level of 59% is assumed in heat-up transients in FSAR Section 15.2). In its response letter dated September 30, 2009, the applicant proposed to revise LCO 3.4.9.a and the associated discussion in the TS Bases B 3.4.9 to reflect the assumed value of 59% in a feedwater line break event which is identified as the limiting event for pressurizer water level concerns. The staff finds the revised LCO 3.4.9.a and its associated TS Bases B 3.4.9 acceptable, however, the requested assessment of all the LCO values proposed in the EPR GTS is not provided. The applicant is requested to provide an overall assessment as stated in the original RAI 16-293. This is identified as an open item in the SER w/OI for Chapter 16 of the EPR FSAR.