



FRAMATOME ANP

An AREVA and Siemens company

FRAMATOME ANP, Inc.

December 20, 2002
NRC:02:063

Document Control Desk
ATTN: Chief, Planning, Program and Management Support Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Conditions for Safety Evaluation on EMF-2103(P), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors"

In drafting the safety evaluation for EMF-2103(P), the NRC developed a number of conditions on its acceptance of this methodology for application to licensed activities. Framatome ANP expressed its concerns about including some of these provisions in the SE, which led to a series of discussions with the NRC.

Framatome ANP has agreed to the conditions set forth in Attachment 1. We believe these limitations and requirements accurately reflect the understanding reached in our most recent technical discussions.

Very truly yours,

James F. Mallay, Director
Regulatory Affairs

Enclosure

cc: w/attachments
R. Caruso
D. G. Holland
R. Landry
J. S. Wermiel
Project 728

TOTO
Y601

Add: Drew
Holland

Attachment 1

Conditions on EMF-2103(P) Accepted by Framatome ANP

1. The model applies to 3 and 4 loop Westinghouse and CE designed NSSSs.
2. The model applies to bottom reflood plants only (cold side injection into the cold legs at the reactor coolant discharge piping).
3. The model is valid as long as blowdown quench does not occur. If blowdown quench occurs, additional justification for the blowdown heat transfer model and uncertainty are needed or the run corrected. A blowdown quench is characterized by a temperature reduction of the PCT node to saturation temperature during the blowdown period.
4. The reflood model applies to bottom up quench behavior. If a top-down quench occurs, the model will be justified or corrected to remove top quench. A topdown quench is characterized by the quench front moving from the top to the bottom of the hot assembly.
5. A counter-current flow limit violation warning will be added to alert the analyst to the occurrence of a CCFL violation in the downcomer.
6. Framatome ANP will not include the hot leg nozzle gaps.
7. If Framatome ANP applies the RLBLOCA methodology to plants using a higher Peak Linear Heat Generation Rate than used in the current analysis, or if the methodology is to be applied to an end-of-life analysis for which the pin pressure is significantly higher, then the need for a blowdown clad rupture model will be reevaluated. The evaluation may be based on relevant engineering experience and will be documented in either the RLBLOCA guideline or the plant specific calculation file.
8. Slot breaks on the top of the pipe have not been evaluated. If an analysis is performed for a plant with loop seals with bottom elevations that are below the top elevation of the core, Framatome ANP will evaluate the effect of the deep loop seal on the slot breaks. The evaluation may be based on relevant engineering experience and will be documented in either the RLBLOCA guideline or the plant specific calculation file.
9. The staff also notes that a generic topical report describing a code such as S-RELAP5 can not provide full justification for each specific individual plant application. When a license amendment is necessary in order to use this S-RELAP5 topical report, the individual applicant must provide justification for the specific application of the code. The justification is intended to ensure that the methodology has been applied to a specific plant within the conditions of this SE and within the stated limitations of the topical report. The justification may be in the form of a checklist that is provided to the NRC for information. The checklist should consist of the identification of an item with a statement by the licensee that the item has been (or will be) satisfied consistent with the topical report.