



December 8, 2011
NRC:11:109

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Pressurized Water Reactor Safety Analysis Licensing Topical Reports

Ref. 1: Letter, Pedro Salas (AREVA NP Inc.) to Document Control Desk (NRC), "Pressurized Water Reactor Safety Analysis Licensing Topical Reports," NRC:11:063, June 24, 2011.

Ref. 2: Letter, Timothy J. McGinty (NRC), to Pedro Salas (AREVA NP Inc.), "AREVA Pressurized Water Reactor Safety Analysis Methods," September 14, 2011.

During recent licensing reviews, the NRC staff identified various issues with the safety analysis methods described in the following AREVA NP Inc. (AREVA) Licensing Topical Reports:

- EMF-2103(P)(A), Revision 0, "Realistic Large Break Loss of Coolant Accident (LOCA) Methodology for Pressurized Water Reactors [(PWRs)]," April 2003,
- EMF-2328(P)(A), Revision 0, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based," March 2001, and
- EMF-2310(P)(A), Revision 1, "SRP [Standard Review Plan] Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors," May 2004.

By letter dated June 24, 2011 (Reference 1), AREVA informed the NRC staff of our intention to develop a generic resolution to these issues. Reference 1 identified the problematic areas with each safety analysis method and provided additional detail regarding the proposed resolutions.

In Reference 2, the NRC concurred that the recovery plan in Reference 1 adequately addressed the recurring issues that had previously been resolved through plant-specific licensing reviews and requested that AREVA provide our assessment of the regulatory and safety significance of the recurring issues in accordance with 10 CFR 21. The results of the assessment are described in Attachment A. In summary, the assessment concluded that there are no substantial safety hazards in accordance with 10 CFR 21 and no significant hazards consideration in accordance with 10 CFR 50.92(c).

AREVA NP INC.

TOIO
NR

If you have any questions related to this letter, please contact me at 434-832-4937, or by e-mail at pedro.salas@areva.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Pedro Salas', is written over a large, stylized circular scribble.

Pedro Salas, Manager
Corporate Regulatory Affairs
AREVA NP Inc.

cc: H. D. Cruz
Project 728

Attachment A

10 CFR Part 21 Discussion

AREVA evaluates the safety significance of any issue that could potentially create a substantial safety concern in accordance with 10 CFR Part 21. All potential issues are documented in AREVA's corrective action program and screened to determine whether a particular issue could create a substantial safety hazard or a failure to comply associated with a substantial safety hazard.

The specific recurring issues related to the identified safety analysis methods have been entered into the corrective action program and their safety significance addressed.

This evaluation was performed in conjunction with the significant hazards consideration of 10 CFR 50.92(c). The issues were assessed against both 10 CFR 21 and 10 CFR 50.92(c) criteria because both of these standards are well recognized and acknowledged as the foremost thresholds for assessing safety significance.

No Significant Hazards Consideration

According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or,
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or,
3. Involve a significant reduction in a margin of safety.

Although AREVA does not possess a Part 50 license, the properties of 10 CFR 50.92(c) were used in support of this regulatory and safety assessment. In support of this determination, an evaluation of each of the three criteria set forth in 10 CFR 50.92 is provided below regarding the issues discussed in Reference 1.

1. Does the issue involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No. The issues discussed in Reference 1 will have no effect on any accident initiator or precursor previously evaluated and will not change the manner in which the methods are utilized. The issues were evaluated to determine if the results and conclusions determined using the methods continue to remain valid. This evaluation included the use of sensitivity studies using the base analyses and other NRC-approved methods to provide a comparison of the results and conclusions. Based on the sensitivity studies performed in plant specific License Amendment Request (LAR) applications, there has either been a validation of the base analyses assumptions or the effect of a change in the assumptions was shown to be insignificant. The evaluation concluded that the methods were implemented consistent with the NRC approval of the

methods and that the identified issues did not create a substantial safety hazard. Thus, the issues do not have any effect on the probability of an accident previously evaluated.

2. Does the issue create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No. The issues discussed in Reference 1 do not affect the performance of any structure, system, or component credited with mitigating any accident previously evaluated, nor do the issues introduce any new modes of system operation or failure mechanisms.

3. Does the issue involve a significant reduction in a margin of safety?

Response: No. The issues discussed in Reference 1 will not affect the ability to quantify unidentified RCS leakage, accurately model core behavior for the currently loaded fuel, and ensure compliance with NRC-approved LTRs. As such, the issues do not modify the safety limits or setpoints at which protective actions are initiated and do not change the requirements governing operation or availability of safety equipment assumed to operate to preserve the margin of safety. Therefore, the issues evaluated continue to provide an equivalent level of protection as is currently provided. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the responses above, AREVA has concluded that the issues discussed in Reference 1 present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

Conclusion

AREVA's regulatory and safety assessment performed in accordance with 10 CFR 21 and 10 CFR 50.92(c) concluded that there are no substantial safety hazards and no significant hazards consideration as a result of the issues identified in a letter to the NRC from Pedro Salas (AREVA) to Document Control Desk (NRC), "Pressurized Water Reactor Safety Analysis Licensing Topical Reports," NRC:11:063, dated June 24, 2011 (Reference 1).