



April 29, 2016  
NRC:16:009

The Honorable Stephen Burns, Chairman  
The Honorable Kristine L. Svinicki, Commissioner  
The Honorable William C. Ostendorff, Commissioner  
The Honorable Jeff Baran, Commissioner

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

Dear Chairman Burns:

AREVA Inc. (AREVA) has recently spoken with the Commissioners on the importance of improving safety margins and incorporating technical innovations at nuclear facilities through the use of topical reports. The current review process for topical reports, however, is inefficient and prolonged, resulting in delays or abandoned plans for adopting new technology, even for well-established safety enhancements.

In the past, metrics were identified in LIC-500, NRR Office Instruction entitled "Topical Report Process", for 80% of topical report reviews to be completed within two years and 100% of topical report reviews to be completed within three years. We are currently not meeting these targets and these metrics have been removed from the current version of LIC-500. Data shows that review times for AREVA topical reports are trending in a direction that is adverse for important safety improvements and timely technical innovations. For topical reports,

- Approved in 1998 to 2006: 14 month average review (37 topical reports completed)
- Approved in 2007 to 2011: 21 month average review (10 topical reports completed)
- Approved in 2011 to 2015: 37 month average review (10 topical reports completed)
- Submitted in 2009 to 2013, but not yet approved: 51 month average and increasing (5 topical reports still under review)
- Today, AREVA has submitted 15 topical reports that have not yet been approved. They range from an April 2016 submittal to 76 months since submittal.

AREVA acknowledges the challenges faced by the NRC due to the Fukushima event in regard to the above negative trend. However, now that much of that effort is behind us, there is a significant need to re-direct focus to the backlog of topical reports. The following ideas should be considered:

1. The first area to be addressed needs to be the internal NRC prioritization of topical reports. They fall into the lowest category of priority, which is not consistent with the current industry needs.

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## AREVA INC.

2. The second area that will have a significant impact is to dedicate resources and avoid redirection of the staff to other activities outside the existing licensing requirements of the operating plants.
3. Lastly, AREVA understands the resource constraints that the NRC has with staffing levels and the use of subcontractors to support the review process. However, a higher budget for FTE's in the technical branch of NRR, specifically dedicated to topical report review, until the backlog is cleared would be of immediate value.

Schedule improvements in the topical report review/approval process are needed to allow us to enhance safety, provide operational flexibility, and reduce conservatism from potential outdated methodologies, while providing more accurate assessments of events. Computing power has evolved significantly to the point where higher fidelity modeling and analysis can occur, but implementation is being delayed due to the significant backlog. With the potential of a shrinking industry, the time to bring these improvements to market is immediate. The industry, utilities and vendors, are also programmatically pursuing accident tolerant fuel types on an aggressive schedule. However, advanced fuel designs, and improved codes and methods already on the docket are needed today to allow pursuit of enhanced Accident Tolerant Fuels in the near future.

Both AREVA and the NRC have recognized that they can improve. Together, we have taken steps to increase communication with monthly status meetings, worked to prioritize reviews and established more accurate workload forecasts to allow better allocation of resources. AREVA is willing to work with the NRC to determine the root cause of the negative schedule trend and then develop actions to improve the process. In the interim, AREVA has identified several recommendations for consideration:

- Rigorously follow the LIC-500 process and reapply the previous schedule metrics for acceptance reviews and technical reviews. This will allow a reasonable degree of predictability to the utilities considering adopting products, materials, codes or methods to improve their operational flexibility.
- Vendors could initially submit the limits and precautions recommendations in the topical report to save time and effort during the review process.
- Audits during the acceptance review and technical review phases are positive steps toward a more efficient and effective process. NRC needs to provide a sufficient budget for reviewers to travel to vendor sites to conduct audits as the most cost-efficient method to conduct effective audits.
- Both vendors and NRC need to use improved project management techniques to drive the process and meet an acceptable schedule.
- Allow for more efficient re-use of safety reviews, including expedited generic approval of a topical report for methods that have been approved in a plant-specific application.
- Rigorously follow Regulatory Guides and NUREGs associated with topical report reviews and not allow reviewers to deviate from them.
- Include information about safety margin improvement with the topical report submittal to assist in establishing the priority and schedule for the review process.
- Establish a "Tiger" team of reviewers and vendor personnel that focus on only a few topical reports until completion. This approach is not advocated as the normal process, but rather for the highest priority items. Target the entire review and approval cycle to be completed in four months.
- Employ a more rigorous adherence to the reasonable assurance standard (100% proof is not always feasible, nor necessary).

- Allow agency precedent versus re-reviewing methodologies that have already been approved in other applications.
- Continue Change Management Process discussions with vendors. This will establish reasonable topical report change process standards to allow modest technology enhancements or adjustments without prior NRC staff review and approval.
- Allow vendors to support the administrative process so that the schedule is not delayed waiting for NRC administrative support.
- Improve the process for acquiring NRC contractors and aligning review expectations.
- Utilize the same reviewers or set of reviewers for similar subjects to provide continuity.
- Establish a close-out process where lessons learned are documented and all parties are given constructive feedback.

We look forward to working with NRR to identify the root cause of the schedule issues and implementing improvements to this important process. Please feel free to contact me at (434) 832-3945, or by e-mail at [Gary.Peters@areva.com](mailto:Gary.Peters@areva.com) to discuss this topic further.

Sincerely,



Gary Peters, Director  
Licensing & Regulatory Affairs  
AREVA Inc.

cc: Executive Director for Operations Victor McCree  
Director, Office of Nuclear Reactor Regulation William Dean