

NSIR

**Staff response to NEI's December 8, 2006, Letter on Severe Accident (beyond design-bases security events)**

NEI's letter proposes that Part 52 be revised to include additional provisions that an application include a description and evaluation of the design features or strategies for the prevention and mitigation of beyond design bases events that result from large fires and explosions that challenge core cooling, containment or spent fuel pool integrity.

The letter further proposes that the section 73.62 rule be terminated, and that the physical security proposed rule (section 73.55 et al.) be modified to exclude new reactors from these scenarios (presumably by revising the requirements on contingency response plans in Appendix C of part 73).

The staff notes that the proposed section 73.62 would call for a security assessment of the design both with respect to its capability in response to the design basis threat, as well as for mitigation of the effect of loss of large areas due to fires or explosions.

The staff offers the following comments for Commission consideration.

Inclusion in final part 52 now

The NEI proposal would be a substantive change, not just a format or procedural change, from what was proposed in the March 2006 proposed Part 52 rule. (It is also a change from the industry position in their comment on the March 2006 proposed Part 52 rule). The major change is that the industry would explicitly call out in the regulation that design features or strategies must be included in the application for "prevention of beyond design basis events resulting from large fires and explosions..."

The March 2006 proposed rule simply said that the application must contain: "A description of the design features that will provide physical protection of the standard plant design in accordance with the requirements of 10 CFR part 73." The final rule removed this provision, with the understanding that a subsequent rule would provide more specific information about the requirement. It would be difficult to argue that the NEI proposal, if incorporated into the final part 52, represents a "logical outgrowth" of the proposed rule since it focuses on certain beyond-DBT scenarios and is not tied to part 73.

Further, the NEI letter would have to be publicly available so that the Commission could represent the reasons for its revised approach. (Further, as a consequence, the final rule package should also be modified to reflect consideration of all other late comments, including the December 11, 2006, letter from Harmon, Curran, Spielberg and Eisenberg).

The staff would also suggest that including the suggested language in the same application paragraph as for those severe accidents resulting from other causes may be confusing, and would recommend that a separate paragraph be employed.

This proposal would leave open the question of how any applications that may be submitted under Part 50 would be handled.

Inclusion in the proposed section 73.62 rule

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As indicated above, the staff's proposed 73.62 rule encompassed both design basis threats and other scenarios. If the Commission desired to adopt the NEI concept for the threats beyond design basis threat, the Commission could direct the staff to revise the section 73.62 rule such that the assessment would focus only on design capability to withstand the design basis threat, and the mitigation of loss of large areas would be covered by this new part 52 provision. This modified proposed rule could then be published for public comment, with potentially a shortened public comment period. **However, the staff believes that the NRC would achieve better clarity and understanding by licensees and potential applicants by maintaining all security requirements Part 73. Also to revise Parts 52 and 73.55 would further delay the rulemaking process already underway for both Parts. The adequacy of the draft proposed "beyond DBT" language provided by NEI would have to be evaluated, adding to the delay. Contrary to NEI assertions, the current final Part 52.47 language removed the consideration of beyond DBT events with the understanding that a subsequent rule would provide more specific information.**

If the section 73.62 rule is terminated completely, [... NSIR to provide]

**The termination of the 73.62 rulemaking and incorporation of only beyond DBT characteristics (large area fires and explosions) in Part 52 would result in a more fragmented evaluation of security. The NEI proposal would not require the evaluation of threats within the scope of the DBT. The draft rule provides a continuity from design certification forward, allowing latter applicants to build upon and address security features and programs. Without the consistent approach provided by the draft rule and the inclusion of DBT and beyond DBT characteristics, more licensing conditions and additional licensee costs may be required in order to achieve a comprehensive evaluation of security by the different applicant stages (design certification, combined license etc.)**

**The draft 73.62 rule has additional assurances of the incorporation of security into the design and maintenance of those features. Currently the draft section (f) would require an incorporation of identified security features into the design and section (g) would require the inclusion of security design features into security plans. The incorporation of security design features into security plans is important because the maintenance of these features can be verified during future inspection efforts. Also incorporation of security design features into security plans would assure that future design, site, and/or security program changes did not diminish the protections initially identified through the assessment process. Neither of these assurances are present in the NEI proposal.**

**The NEI proposal mentions a four part plan (security enhancement review, security safeguards review, evaluation of beyond DBT, security plan) for performing evaluations related to the requirements of Part 73.55. This process has been mentioned previously by NEI as a voluntary effort they are developing. To date none of these products have been submitted to the NRC for consideration. Other voluntary efforts by industry, such as an evaluation of the security features for the AP1000 design, were not comprehensive and did not include the complete basis for some of the conclusions they reached. Keeping the draft requirement presents the opportunity for an applicant, in a structured, detailed, documented manner, to address the DBT and mitigative measures beyond DBT. Also, a requirement would result in a more efficient and predictable licensing process since applicant submittals would be structured in a consistent similarly detailed manner.**

Additionally it is not apparent that voluntary evaluations based on the proposed 73.55 requirements would meet the Commission intent stated in SRM-05-0120 to consider security at the earliest possible stage, resulting in a robust and effective security posture with less reliance on operational security programs.

Also the draft 73.62 is a "forward looking rule" and would apply to entities not yet considered by the NEI proposal. The guidance under development is being written to accommodate such things as GEN IV and pebble bed as well as the near term reactor applicants.

Additionally the NEI proposal would only serve to delay the promulgation of the regulatory framework that needs to be in place (and was directed by the Commission in SRM-05-0120) before the first COL applications are submitted to the NRC late in 2007. Such a delay would increase the possibility that several applicants would not have to perform any sort of security assessment.

Finally, security assessments, as required by the draft rule would provide: (1) a performance based assurance of availability and performance of security design features; and (2) a comprehensive consideration of site features and security operational programs before force-on force testing. A security assessment process, based on the comprehensive guidance being developed, likely would inform the force-on force process by formalizing and documenting target set development. The NEI proposal would not provide the same assurances since it would call for the voluntary application of industry developed guidance.