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STARS 13009

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August 30, 2013

NRC-2012-0173

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Mr. David L. Skeen
Director, Japan Lessons Learned Project Directorate
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: STARS Alliance LLC Comments on NRC Staff Working Group Evaluation of Alternatives for the Disposition of Recommendation 1 of the Fukushima Near-Term Task Force Report, Draft Working Group Document dated May 14, 2013

References:

1. NRC Staff Working Group Evaluation of Alternatives for the Disposition of Recommendation 1 of the Fukushima Near-Term Task Force Report, Draft Working Group Document, dated May 14, 2013, ML13135A125
2. NRC Staff Presentation at June 5, 2013 Public Meeting on NTTF Recommendation 1, Docket ID: NRC 2012-0173-0018; ML13156A370
3. Letter from J. E. Pollock, Nuclear Energy Institute (NEI) to D. L. Skeen, USNRC, "Industry Comments on NRC Staff Working Group Evaluation of Alternatives for the Disposition of Recommendation 1 of the Fukushima Near-Term Task Force Report," Draft Working Group Document, dated August 15, 2013

Dear Sir,

STARS Alliance LLC (STARS) submits the following comments in response to the NRC Staff Working Group Evaluation of Alternatives for the Disposition of Recommendation 1 of the Fukushima Near-Term Task Force Report, Draft Working Group Document, dated May 14, 2013 (Reference 1) and the NRC Staff Presentation at the June 5, 2013 Public Meeting on NTTF Recommendation 1 (Reference 2).

STARS endorses the comments and industry paper on principles of beyond design basis (DBD) regulation submitted by the Nuclear Energy Institute (Reference 3). In addition, STARS would like to emphasize the following points discussed below.

Improvement Activity 1 – STARS agrees with the NRC Staff Working Group (WG) that a generic approach

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without plant specific probabilistic risk assessments (PRA) would be the most appropriate course of action if the Staff proceeds with implementing changes to the NRC policies and processes related to NTTF Recommendation 1. However, STARS believes that the current regulatory framework maintains nuclear safety and use of this existing process provides an acceptable approach to regulation while precluding an increase in costs associated with new regulations.

The scope of the proposed new term, "design basis extension," is, "those conditions (including hazards and events) posing a significant safety concern at nuclear power plants for which accident prevention and/or mitigation capability must be provided, but are neither postulated accidents (anticipated operational occurrences or design basis accidents) evaluated in a nuclear power plant's final safety analysis report, or the external hazards for which a nuclear power plant was designed and licensed."

STARS recommends that the Staff re-evaluate NRC adoption of a new term for design basis extension to include the "High-Level Guiding Principles" provided by NEI in Reference 3. The NEI principles discuss strategies that are flexible operational capabilities for mitigation of potential beyond design basis conditions. NEI principles also include the philosophy that regulatory treatment of beyond design basis design or operations should be commensurate with the importance to safety and aligned with a common philosophy on beyond design basis capabilities. Reference 3 goes on to propose that the approach for beyond design basis requirements is, "Provide reasonable confidence in flexible operational capability for responding to a by definition unbounded class of event conditions." STARS recommends that the NRC incorporate this approach into the Staff proposed new term for design basis extension and incorporate this philosophy into any new regulatory framework.

STARS agrees with the Staff's conclusion, "that a regulatory requirement for a site-specific PRA for currently operating reactors, for the sole purpose of searching for as yet unrealized cost-beneficial risk-reduction activities, would not provide benefits commensurate with the substantial cost of develop such regulatory compliant models." STARS further believes that any additional burden placed on limited PRA resources would detract from activities important to safety already being supported by limited resources.

STARS does not agree with the Staff's estimate that there will be no additional costs to the industry for the approach described above. While the new regulatory framework may address the so-called "patchwork" approach of regulations, there would likely be significant licensing changes, FSAR updates, program additions and changes, procedures, equipment requirements, change processes (beyond 50.59), training, etc. that would be associated with a new regulation.

Improvement Activity 2 - STARS is concerned that the proposed scope to establish Commission expectations for defense-in-depth appear to overlap, and possibly, supersede existing regulations and General Design Criteria. STARS believes defense-in-depth should continue to be a philosophy, applied where possible in conjunction with risk-informed considerations, and continue to be used as a subjective approach in cases where PRAs do not exist. STARS is supporting NEI's proposed approach to provide to the NRC an industry view of appropriate considerations for a structured, risk-informed approach to defense-in-depth at a later date.

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Chapter 2 (and Appendix C) of NUREG-2150 refers to defense-in-depth as, "Defense-in-depth is an element of the NRC's safety philosophy that employs successive measures to prevent accidents or mitigate damage if a malfunction, accident, or naturally caused event occurs at a nuclear facility. Defense-in-depth is a philosophy used by the NRC to provide redundancy as well as the philosophy of a multiple-barrier approach against fission product releases. The defense-in-depth philosophy ensures that safety will not be wholly dependent on any single element of the design, construction, maintenance, or operation of a nuclear facility. The net effect of incorporating defense-in-depth into design, construction, maintenance, and operation is that the facility tends to be more tolerant of failures and external challenges."

Finding 2.1 from NUREG-2150 states, "Whether used explicitly, as for power reactors, or implicitly, as for materials programs, the concept of defense-in-depth has served the NRC and the regulated industries well and continues to be valuable today. However, it is not used consistently, and there is no guidance on how much defense-in-depth is sufficient."

STARS recommends the NRC revise its discussion under Improvement Activity 2 in Reference 1 to refer to defense-in-depth as a philosophy rather than a strategy. STARS agrees that the term defense-in-depth should be used consistently. However, STARS believes that defining defense-in-depth as something other than a philosophy causes confusion because defense-in-depth has historically been based on a number of approaches including General Design Criteria, instead of a single strategy. STARS also notes that the proposed six major parts to the Commission Policy Statement on Defense-in-Depth for Nuclear Power Reactor Safety do not adequately address that this philosophy should be commensurate with the importance to safety, except as noted in the Example Decision Criteria for Comparison to Quantitative Acceptance Guidelines.

STARS agrees that this Improvement Activity should be implemented on a forward-fit approach. The lack of PRA for certain scenarios including external hazards for many existing licensees will prevent implementation on a retrospective basis. Likewise, STARS agrees with the Staff that, "a site specific PRA for currently operating reactors, for the sole purpose of informing the defense-in-depth policy, would not provide benefits commensurate with the cost of developing such PRA models."

Improvement Activity 3 - STARS agrees with comments provided by NEI in Reference 3 on this activity.

If you have any question on these comments, please contact me at 623-239-4359, or Steve Meyer at 314-225-1483, or steve.meyer@starsalliance.com.

Sincerely,



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