



NUCLEAR ENERGY INSTITUTE

Alexander Marion
DIRECTOR
ENGINEERING DEPARTMENT
NUCLEAR GENERATION DIVISION

February 13, 2003

Mr. John Hannon
Chief, Plant Systems Branch
Office of Nuclear Reactor Regulation
Mail Stop O11-A11
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Hannon:

NEI appreciates the opportunity to work with NRR to improve the risk focus of fire protection regulations. The rulemaking currently underway permits licensees the option to adopt a risk-informed, performance-based fire protection licensing basis under the proposed 10 CFR 50.48(c). This letter provides our recommendations for enhancing the likelihood for licensee adoption of this rule.

NRC staff have made it clear during many meetings on this subject that this rulemaking has great potential for addressing a number of fire protection regulatory issues, and that many licensees should benefit from transitioning to this new licensing basis. We agree, but licensee decisions to make this transition will depend on the improved safety focus, cost of implementation, and a workable transition process being clearly visible. Industry and NRC can take steps to maximize the likelihood that licensees will choose to adopt the rule:

- Industry is developing the implementing guidance for the rule, and will (with staff agreement) provide guidance that optimizes the ease of transition
- NRC can provide regulatory incentives that make the transition easier and provide adequate assurance of the health and safety of the public.

This letter requests NRC consideration of possible pre-transition and post-transition incentives that will maintain or improve safety and reduce the burden of transition. Enclosure 1 provides the details and rationale for applying these incentives.

John Hannon
February 3, 2003
Page 2

While the focus of this letter is on incentives for the adoption of the new rule, similar considerations should apply for licensees who continue to comply with the existing regulations. As noted in Enclosure 1, reduced inspection frequency and enforcement discretion are appropriate for those licensees who have performed a detailed review of their current programs to support a transition to the new rule. Reduced inspection frequency and enforcement discretion should also be applied, within the context of the Reactor Oversight Program, to licensees who have performed comprehensive fire protection self-assessments and program upgrades under the current regulations. We will provide more specific recommendations in a subsequent letter.

We request your consideration of these incentives, and look forward to discussing them in more detail with you during our meeting on February 18, 2003.

If you have any questions please contact me at 202-739-8080 or Fred Emerson at 202-739-8086

Sincerely,

A handwritten signature in cursive script that reads "Alex Marion".

Alex Marion

c: Suzanne Black, NRC
Eric Weiss, NRC

**INDUSTRY-RECOMMENDED INCENTIVES FOR
LICENSEE ADOPTION OF THE PROPOSED
RISK-INFORMED, PERFORMANCE-BASED FIRE PROTECTION RULE**

Pre-Transition Incentives

NRC acceptance of the change to the rule language and several specific areas of the implementing guidance, described below, will provide incentives to encourage licensee adoption of an NFPA 805 licensing basis. The eventual acceptance of these provisions by NRC will help provide licensee confidence that the new rule is beneficial, can be reasonably implemented, is safety-focused, and will result in predictable resolution of emerging issues. We understand that acceptance will come only from discussion and negotiation of the specific industry proposals to assure that the health and safety of the public is protected.

- **Implementing guidance:** A straightforward process for approving the transition will be described in the implementing guidance document currently being developed.

Rationale: The implementing guidance will reflect an optimized approach for completing the transition. NRC acceptance of this approach will maintain the existing level of safety and minimize the burden associated with the transition process.

- **Proposed rule language:** The requirement for a license amendment to adopt alternative methods and analytical approaches is a barrier to licensee acceptance. We propose a less formal and less burdensome method for gaining prior NRC approval.

Rationale: NEI 96-07 Revision 1 *Guidelines for 10 CFR 50.59*

Implementation (accepted by NRC) notes that, “Licensees can make changes to elements of a methodology without first obtaining a license amendment if the results are essentially the same as, or more conservative than, previous results.” NRC will accept the objective performance criteria of Section 1 of NFPA 805 as part of their approval of NFPA 805 via this rulemaking.

Licensees will have to demonstrate through referencing approved methods (see below) that proposed alternative methods and analytical approaches meet these performance criteria. When they demonstrate this, the results (implementation) of these alternative methods under NFPA 805 are essentially the same as previous results (implementation) under the current regulations. Therefore a license amendment is not required to implement the alternative methods.

Industry and NRC should explore generic submittals and approvals that

individual licensees can reference as an approved method for the intended application. By referencing an approved method, there is no need for a license amendment. This provides for an appropriate degree of NRC oversight of the alternative methods licensees are implementing without the need for license amendments.

- **Implementing guidance:** An implementing guidance provision will define the scope of fundamental attributes, or elements (see NFPA 805 Section 3.1) broadly enough to encompass current fire protection programs. Fundamental attributes of current fire protection programs and designs within the scope of this definition should be considered to have been previously approved by the NRC.

Rationale: Current fire protection programs have been extensively reviewed by NRC, and the licensing bases and designs are well established. Allowing both licensing basis and design elements to be considered “previously approved” (as stated in NFPA 805, Section 3.1) will considerably simplify the transition process without in any way degrading current levels of safety. This is the principle of “safe today, safe tomorrow” as discussed in numerous meetings between industry and NRC staff. The industry guidance will reflect this principle, and will describe a straightforward process for bringing forward current design elements and programs into the new licensing basis.

- **Implementing guidance:** The implementing guidance will include a risk-informed analytical process for low power and shutdown operation.

Rationale: Consideration of low power operation and shutdown in fire protection programs is one of the key differences between the new licensing basis and the current regulatory basis. The implementing guidance will contain the current best recommended practice for implementing fire protection programs for low power and shutdown operation.

- **Implementing guidance:** The implementing guidance will include provisions for the use of fire modeling.

Rationale: The use of fire modeling will improve the cost effectiveness of fire protection programs under the revised rule by evaluating fire protection features to the hazards they are intended to address. Reasonable and clear guidance on the use of fire modeling will be provided in the implementing guidance, and this will maintain or enhance plant safety and the usefulness of this tool.

- **Inspection guidance:** The NRC should conform inspection guidance and the process for resolving non-compliances to the risk-informed, performance-based methodology in the new rule, and reflect the implementing guidance.

Rationale: Aligning inspection criteria to the new program basis minimizes the potential for differing expectations as to what constitutes compliance with the new licensing basis, and is therefore an essential step. It allows both NRC and the licensee to improve the safety focus over the deterministic conservatism of current inspection guidance.

Transition and Post-Transition Incentives

The transition and post-transition incentives listed below should be considered by NRC to credit the comprehensive reviews conducted by licensees during the transition process, and the monitoring programs established by the licensees after implementing the changes to the licensing bases. These incentives are intended to maintain or enhance safety levels during and after the transition process through an appropriate combination of licensee self-assessment and regulatory oversight.

- For each licensee that adopts NFPA 805 as an alternative licensing basis, NRC should defer regional Triennial Fire Inspections prior to and during the transition period. Instead, licensees should conduct an NRC-monitored self-assessment 1 year after the transition is complete, to give the licensee and NRC confidence that the licensee is in compliance with his post-transition licensing basis. Enforcement discretion should be applied to NRC oversight of the self-assessment results. This should be followed by an NRC inspection during the three years following the self-assessment. The triennial inspection cycle should continue if this initial post-transition inspection indicates significant compliance issues. If no significant issues are identified, the inspection cycle should be lengthened to six years, with the understanding that the licensee will conduct periodic self-assessments to monitor performance.

Rationale: Licensees will conduct extensive program reviews as part of the transition to the new licensing basis. Any issues identified during these reviews will be evaluated and addressed in the Corrective Action Program (CAP). Deferring regional triennial inspections during this transition period will permit the licensee to focus resources on completing the transition; the resident inspectors will be able to observe the transition reviews and CAP issue resolution. This will maintain an adequate level of safety during the transition process.

One year after the transition, issues should have been resolved and the licensee should be well-established in the new licensing basis. A comprehensive self-assessment at this time, with NRC oversight, will help assure that the licensee is in compliance with the new licensing basis. Placing any findings in the CAP with appropriate priority will adequately address any safety concerns. The application of enforcement discretion at this time will provide the licensee further incentive for conducting a comprehensive self-assessment and taking appropriate action via the CAP.

During the three years following the self-assessment, the normal NRC triennial fire protection inspections should resume in order to provide the NRC with appropriate oversight opportunities for the new licensing basis. If the licensee demonstrates adequate compliance during this inspection, a reduced inspection frequency of six years is appropriate to recognize licensee performance. The licensee should conduct periodic self-assessments during this period to assure continued compliance. This places the primary responsibility on the licensee to maintain compliance while providing the NRC an adequate opportunity to review performance. If performance deteriorates, an inspection frequency of three years should be reinstated.

- Risk insights should be used to establish compensatory measures for any non-compliances identified by the licensee during the transition.

Rationale: As noted with the previous incentive, licensees will conduct extensive reviews and address issues in the CAP. The application of risk insights to effect any necessary compensatory actions, in addition to addressing them in the CAP, will assure that any compensatory measures are appropriate to mitigate the hazard until a permanent change can be made. Resident inspector review will help maintain an appropriate level of NRC oversight.

- Establish a streamlined process for technical issue reviews that involve NRR and the regional NRC staff.

Rationale: During the initial transition process at each site, issues may be identified that call for timely resolution involving NRR as well as the regions. Rather than spend excessive time in formal letters and communications, the NRC should establish a site meeting with the NRR, region, and licensee personnel to address these transition issues. This will allow the NRC and licensees to address transition issues in a timely and public manner without unnecessary expenditures of resources.

- Establish an improved process for maintaining stability in the regulatory acceptance of key assumptions underlying the new licensing basis, such as fire models, PSA reviews, and other calculations. The process should allow for the application of new technical information, but reduce the likelihood of regulatory viewpoints changing as personnel change.

Rationale: Fire models and other aspects of NFPA 805 require input assumptions critical to the outcome of the analysis being performed, and to the establishment of the new licensing basis. As noted previously, generic submittals and approvals are desired wherever possible. A thorough regulatory review at the time these methods are initially submitted is necessary to minimize the likelihood of subsequent changes to NRC views.

This will improve the focus and minimize unnecessary expenditures of staff and industry resources in revisiting issues.

- Implement a regulatory process that ensures emerging issues concerning the new licensing basis will be resolved by applying the nuclear safety performance criteria embodied in NFPA 805, Chapter 1, Section 1.5.

Rationale: Since the new licensing basis will be developed after applying these performance criteria, any emerging issues should be addressed using the same criteria. This should maintain safety and reduce the resources required to monitor fire protection program changes as required by NFPA 805.