



NUCLEAR ENERGY INSTITUTE

Adrian P. Heymer
EXECUTIVE DIRECTOR
STRATEGIC PROGRAMS
NUCLEAR GENERATION DIVISION

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

Subject: Industry Comments on the NRC Tier 1 Fukushima Response Draft Section 50.54(f) Letter and NRC Orders

Project Number: 689

Dear Mr. Skeen:

This letter provides NEI's comments on five of the six NRC Tier 1 Fukushima response recommendations that are the subject of requests for information (10CFR 50.54(f) letters) and NRC orders. The Boiling Water Reactor Owners' Group is providing comments on containment venting issues, NRC Near-Term Task Force Report recommendation 5.1.

The industry appreciates the actions taken by the NRC staff to fully engage the public in the development of regulatory orders and requests for information related to the lessons learned from the Fukushima accidents. These comments reflect the industry's statements provided in the numerous public interactions in recent months. Our comments are founded on the following principles:

- Ensure licensees remain focused on safe plant operations.
- Focus and priority should be on those activities that can provide tangible safety benefits in the shortest time and that are directly linked to the lessons learned from the Fukushima accidents.
- Where resource constraints exist, priority should be given to those activities that prevent fuel damage and maintain containment integrity.

The attachments provide detailed industry comments on the draft Section 50.54(f) letter and the material relating to NRC orders discussed in the public meetings the week of January 16, 2012.

General Comments

The industry supports the necessity of providing much of the information the NRC intends to request through 50.54(f) letters. To ensure that licensee responses to requests for information are timely and do not impose an unnecessary burden or distraction, the NRC should ensure that the information requested is properly scoped and justified by safety significance. Requests should also be staggered to facilitate adequate review by knowledgeable or experienced personnel and allow for a phased response based on plant safety significance.

Resource Limitations

The language in the draft Section 50.54(f) letter related to the reevaluation of external events should be revised to address the limited national technical resource expertise. Provisional industry resource assessments indicate limited national expert resources for responding to NRC Near-Term Task Force Report Recommendation 2.1, the re-evaluation of external events, especially for flooding and seismic. There are not sufficient national resources, in nuclear operating companies or national engineering firms, to perform and review the tasks for all applicable external events in the schedules defined in the proposed requests for information. This conclusion is supported by industry experience in developing early site permits and combined license applications. Provisional estimates indicate that between 15,000 and 30,000 man-hours could be expended for each seismic PRA, dependent on site-specific features and circumstances. This is only one part of a request for information for one external event: seismic. The same expertise will be needed to respond to other sections of the NRC request for information or NRC orders.

The process for performing external event re-evaluations should provide for a phased implementation, with the first group of plants being evaluated based on the susceptibility of the site with respect to the external event under consideration. The industry is willing to work with NRC staff to develop a prioritization scheme, a phased implementation schedule that would reflect priorities based on the relative external event susceptibility and work that has already been completed, such as that for new plant projects. It is possible that existing plants co-located on sites that have been the subject of new plant siting reviews and approvals may be able to complete specific external event re-evaluations sooner.

Guidance Development Schedules

Adequate time needs to be allowed and sufficient technical resources need to be applied to develop clear and concise guidance that is understandable by the industry, the NRC and the public. The resource limitations described in this letter, the uncertainty over implementing specific national standards, the public interactions, and regulatory reviews present a severe challenge to completing, understanding and approving evaluation guidance. Draft guidance outlines indicate that some

guidance documents could be over 200 pages, presenting a potential comprehension and review challenge for the industry and the NRC staff given the highly compressed schedules being proposed. In addition, the length and complexity of some of the tasks associated with responding to the letters and orders varies.

We believe that additional time beyond that outlined in recent public interactions is needed to develop, fully understand, and implement the guidance. It is critical that all parties have a common understanding of the guidance and implementation. This will provide for increased certainty in implementation and review, thereby minimizing the potential for rework and misinterpretation later.

Interim Milestones

The recommendation on prioritization of activities based on the susceptibility of the external event with respect to the site mandates the need for project milestones. Such markers will ensure that progress and accomplishments can be assessed and understood by all parties: the industry, the NRC, and the public.

Definition of Vulnerability

The term vulnerability has many facets, and because it is a central element for implementing NRC Near-Term Task Force Recommendation 2.3, and to a limited extent 2.1, it warrants further discussion and explanation in guidance. At this time, we do not believe we should finalize the definition in the Section 50.54(f) letters or in the Fukushima-related NRC orders. Should the NRC staff decide to move forward without further public interaction on this topic, the following alternative definition is proposed: *"Plant-specific vulnerabilities are those features that directly result in a failure of a key safety function that would preclude safe shutdown of a reactor."*

Scope of External Events

The industry recognizes the value of performing walkdowns and agrees with the NRC that the seismic and flooding walkdowns should be given priority when sequencing the efforts described in the 50.54(f) letter. In order to complete the walkdowns as soon as possible, the scope should be focused on the more safety-significant lessons learned from Fukushima. The Section 50.54(f) letter on flooding mixes low water level and drought conditions with flooding. Drought, high temperatures and low water levels are more appropriately addressed in the section dealing with other external events and not flooding, unless there is a specific site issue, such as tsunami draw down.

There are numerous external events listed in the regulatory guidance and national consensus standards. There would be efficiency and resource benefits to developing screening criteria to enable licensees to only focus on those external events that are applicable to their location.

Technical resources capable of performing these complex external event evaluations are limited and a screening process would ensure that these technical resources are focused on relevant matters that have safety significance.

The Section 50.54(f) letter requests licensees to perform walkdowns and provide certain information including information about maintenance, monitoring and testing. The reviews and assessments for external events should focus on those matters that are directly related to the insights from the Fukushima accidents. None of the numerous international and Japanese reports on the Fukushima accidents have identified the need to enhance maintenance, monitoring or testing procedures and activities. If there are significant concerns over maintenance, monitoring and testing, such issues should be addressed as a separate activity outside of Fukushima-related actions through normal NRC processes.

Performance of seismic evaluations of spent fuel pools should not be given the same priority as other seismic evaluations. There is no evidence that the beyond design basis external events at Fukushima challenged the spent fuel pool structures. Implementing the draft Section 50.54(f) letter may require a seismic PRA consistent with Regulatory Guide 1.200R endorsed standards depending on the comparison between the Ground Motion Response Spectra (GMRS) and the Safe Shutdown Earthquake criteria. There is no standard or guidance for defining acceptable methods for performing spent fuel pool seismic PRAs. This requirement should be deferred until on-going NRC and industry research on spent fuel pool PRA methods has been further progressed, the overall risks from spent fuel pools is better characterized, and appropriate methods have been documented and endorsed.

The Need to Pilot PRA Guidance

The regulatory application of other PRA approaches without adequate demonstration and pilot activities before widespread industry implementation has caused significant delays, rework and expenditure of NRC and industry resources. The industry believes it is critical to complete a pilot seismic PRA before a large number of licensees perform this work. The industry recognizes the schedule impact of such activities and believes an alternative approach to that proposed in the Section 50.54(f) letter should be developed.

An expedited deployment of flexible and diverse portable equipment along with verification and IPEEE enhancement should provide confidence that a plant has the capability to withstand a beyond design bases seismic event. The industry is willing to meet with the NRC staff to continue the discussions on how to most efficiently implement the seismic evaluation elements of the Section 50.54(f) letter that were started in December 2011. We believe that such steps will provide earlier enhancement of safety while allowing time to perform the needed seismic evaluations in the most expeditious and efficient manner.

Equipment Covered under 10 CFR 50.54(hh)

The focus of the industry's response in this area is on prevention of fuel damage, loss of containment, and loss of spent fuel pool cooling. The portable equipment located on site and in offsite facilities will be available to assist in mitigation of a core damage event. Under Recommendation 8, Severe Accident Management Guidelines will be enhanced to incorporate the additional portable equipment into plant-specific severe accident management strategies, as appropriate.

Emergency Preparedness

No technical basis is provided for the staff's proposed site access restriction assumption of 72 hours. Based on our review of a variety of natural phenomenon events, this time duration seems too long, particularly with respect to personnel access. This assumption should recognize that the means and degree of site access will vary over the 72-hour period—more restrictive at first and then improving over time (e.g., access phases such as no access, limited access, and unlimited access). In addition, a licensee should have the option to modify this assumption, if supported by a site-specific technical basis.

Section 50.54(f) Process Considerations

Much of the information that the NRC intends to request is material that is not readily available or "off the shelf." Many of these requests will require significant new analyses or studies that will require a substantial amount of time and resources to complete. Much of the information requested is not related to licensees' compliance with their current licensing basis. The NRC is required by 10 CFR 50.54(f) to assess the burdens of such information requests and ensure that those burdens are justified in view of the potential safety significance of the issue to be addressed. However, the draft information requests did not contain any analysis of these burdens. If these analyses are not documented, there is uncertainty on whether the scope of the requests can be justified per the rule.

The industry believes that the NRC should conduct an adequate analysis of the burden implications of the information requests consistent with 10 CFR 50.54(f) using the input provided by industry in this comment letter. Absent a meaningful analysis, licensees may have to devote significant time and resources collecting and analyzing information that, in the context of the Fukushima regulatory review, may have relatively low safety significance. An adequate justification, on the other hand, will result in a properly defined scope for the information to be requested, enabling priority to be given to those issues that have the greatest safety benefit and significance.

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Structuring the information requests on NRC licensees so that the burdens are properly justified by the safety significance of the information needed will allow the industry to be responsive to the NRC in aggressive and achievable timeframes.

The industry is ready to work with the NRC on developing implementing guidance for NRC Tier 1 recommendations to achieve the guidance approval schedules referenced in the draft Section 50.54(f) letters and NRC orders, as amended by the recommendations in this letter.

If you or your staff has questions on these comments please contact Vijay Nilekani (202-739-8022; vxn@nei.org).

Sincerely,



Adrian P. Heymer

Attachments

c: Mr. Martin J. Virgilio, EDO, NRC
Mr. James T. Wiggins, NSIR, NRC
Mr. Eric J. Leeds, NRR, NRC
Mr. Brian W. Sheron, RES, NRC
Mr. Michael R. Johnson, NRO, NRC
Ms. Catherine Haney, NMSS, NRC
Mr. Mark A. Satorius, FSME, NRC
Mr. Victor McCree, R-II, NRC
Mr. Elmo E. Collins, Jr., R-IV, NRC
Mr. Robert M. Taylor, NRR/JLD, NRC