

**NRC Working Group 1**  
**PRA Technical Adequacy and Potential Enhancements to RG 1.200 and Supporting Documents**

**Problem Statement**

The NRC's regulatory position on PRA technical adequacy for licensing applications is documented in Regulatory Guide (RG) 1.200. However, the NRC and industry have expressed concerns regarding the sufficiency of the process for new methods, while the industry has encountered frustration when attempting to pursue innovative approaches. Therefore, a process for the use of new methods in risk-informed regulatory applications needs to be developed. In addition, there have been disagreements, in some cases, regarding the appropriate level of staff review of the PRA supporting the licensing applications. The peer review process currently laid out in RG 1.200 and supporting NRC and industry documents may need clarification and/or enhancement to realize the full value of the PRA standards and peer reviews, and to reduce unnecessary burden to licensees and the NRC.

**Major Objectives**

1. *Develop a process suitable for NRC endorsement for use of new methods in risk-informed regulatory applications*

There is a need to have an agreed on process that ensures that the methods used have received an appropriate level of technical scrutiny by experts before being used and that the peer review teams have the appropriate expertise to review the application of these methods. An important aspect of ensuring an appropriate level of technical scrutiny is the process by which new methods are accepted for use. Some examples of current approaches for gaining review and acceptance of new methods include Topical Reports, the Frequently Asked Question (FAQ) process, and License Amendment Requests (LARs). However, at present there is not a clear understanding of what constitutes a "consensus method" and so all "new methods" are subjected to a detailed review by the NRC when used in licensing applications.

Additionally, there is a current lack of assurance that the peer review team members are appropriate for the review. To assure adequate peer review of the PRA, a documented set of criteria must be available to assure that the review team has the necessary expertise and guidance to perform the peer review (i.e., the reviewers would be qualified to perform the analytical tasks that they are reviewing).

2. *Improve process for documentation and closure of Peer Review Facts and Observations (F&Os)*

The requirement to retain and report all past Peer Review F&Os until re-evaluated by another Peer Review is an administrative burden that provides minimal benefit to the licensee. The current process results in additional burden to the licensee due to the effort required for the preparation of the discussion of PRA technical adequacy section in an LAR which is followed by the documentation of the NRC's review of the F&O resolution. The NRC review frequently generates subsequent NRC Requests for Additional Information (RAIs) which increases the effort of the licensee in preparing RAI responses. The only currently accepted F&O closure path is the use of the Peer Review process, which is an additional cost and strain on limited PRA resources. In order to reduce this burden on the licensees to retain, report, and review the previously resolved F&Os, there is a need to provide an additional cost effective, robust process to allow licensees to close F&Os and obviate the need for an in-depth NRC review of the base PRA.

This new process needs to be developed to allow closure of peer review findings that address both the technical expertise required to close a finding as well as the documentation required to support peer review finding closure. In addition, once a finding has been considered appropriately closed, no further licensee or NRC review of the finding should be required to support a risk-informed regulatory application.

### *3. Evaluate any additional gaps in current peer review process*

To ensure that all open issues are addressed, the working group will conduct a thorough evaluation of the difficulties that the NRC and industry have encountered with the peer review process. This will involve a benchmark of current practices against documented, NRC-endorsed Nuclear Energy Institute (NEI) peer review guidance.

### **Work Product**

The industry and NRC working groups will collaborate throughout this initiative, while reporting to their associated Risk-Informed Steering Committee. The initial work product will be a scoping document/white paper with proposed solutions to the major issues identified by the working groups. Following an agreement on the options for addressing the issues identified herein, the working groups will then present these options to the industry and NRC steering committees. As directed by the steering committees, the working groups will clarify and/or develop enhancements to the existing guidance. For example, the industry may enhance or develop new NEI peer review guidance to be reviewed and endorsed by the NRC, and the NRC staff may develop interim staff guidance for the implementation of RG 1.200.