



Action Plan Progress

PRA Technical Adequacy Working Group Public Meeting

September 3, 2014

Objective 1: Process for Availability of New Methods

- June white paper proposed options for making methods available
- To be updated following NRC feedback from this meeting
- Suggest walking through several examples to illustrate concept

Objective 1: Process for Availability of New Methods – Process Options

Group	Source	Pedigree	Maturity	Potential Process Options
A	NRC or NRC-collaboration	n/a	n/a	1, 2, 3
B	International organization (e.g., IAEA, NGO, regulator.)	International application on NPP. Accepted by regulator (either formally or implicitly)	Post-pilot usage	4, 5, 6
C	International organization (e.g., IAEA, NGO, regulator.)	Result of research. Peer reviewed and published or accepted by other government (non-US) nuclear oversight agencies.	No post-pilot usage.	4, 5, 6
D	University research, State Government research, developed for nuclear	Results peer reviewed, or used outside of NRC or accepted by other US Government or standards committees (IEEE)	Used over few to multiple years	4, 5, 6

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D	University research, State Government research, developed for nuclear	Results peer reviewed, or used outside of NRC or accepted by other US Government or standards committees (IEEE)	Used over few to multiple years	4, 5, 6
E	U.S. or State Government or NGO (e.g., University research) - developed for non-nuclear	Generally accepted for use within a non-nuclear industry (e.g., department of defense, aerospace, telecomm, petrochem, etc).	Commonly used over some years.	4, 5, 6
F	Utility research in collaboration with university or EPRI or other NGO (e.g., Underwriters Lab)	Peer Reviewed by independent party or vendor.	New	6, 7
G	Internal utility research (alone or with contractor)	None	New	7

Objective 1: Process for Availability of New Methods – Process Options

1. Usage acceptable immediately upon issuance of draft method.
2. Usage acceptable immediately upon conclusion of comment period on draft method.
3. Usage acceptable immediately upon resolution of industry/NRC comments.
4. Usage acceptable immediately following OG gap assessment against requirements of RG 1.200.
5. Usage acceptable immediately following OG peer review of method
6. Usage acceptable immediately following EPRI/NRC review of NPP applicability.
7. Full review by NRC/EPRI review panel

Objective 1: Process for Availability of New Methods - Examples

- State agency methods on flood frequency and height
- NARA – HRA approach approved by British regulator
- EPRI flooding guideline
- EPRI seismic PRA guideline
- LBB approach accepted by CNSC
- TORMIS
- DOE Standard on Aircraft Impact PRA
- NEI method for modeling digital I&C in PRA
- OECD/NEA methods for modeling of reliability of digital I&C (hardware and software)

Objective 2: More Efficient Approach to Closure of F&Os

- Definition of “Closure of an F&O”
 - This is the review and concurrence of work performed by a Licensee that addresses issues identified by an F&O associated with applicable PRA Supporting Requirement(s) such that at least technical Capability Category II or “Met” are fulfilled per RG 1.200 and ANS/ASME PRA standard as appropriate.
- With the “Closure of an F&O” with at CCII, the F&O will not be discussed in licensing applications.

Objective 2: More Efficient Approach to Closure of F&Os

- Current process: Full or focused scope peer review, and addressing all F&Os in every licensing application until the next peer review.
 - Pros
 - Easy to define
 - Cons
 - Inefficient use of NRC and licensee resources for F&Os that have been addressed
 - Substantial administrative burden and bookkeeping exercise

Objective 2: More Efficient Approach to Closure of F&Os

- Potential improvements
 - Options for other means of closure
 - Focused peer review - possibly SR by SR
 - Independent internal or external resource review
 - Qualified to perform peer review
 - Did not perform original work)
 - Possible groupings of F&Os
 - Documentation vs. technical
 - SR met vs. SR not met

Objective 2: More Efficient Approach to Closure of F&Os

- Adequate documentation for closure – possible criteria
 - Describe what was done to close F&O
 - Compare to standard
 - Reference new work (calculation, document by page, etc)
 - Include review process, reviewers used and their qualifications and independence
 - Reviewer qualifications
 - Same as peer reviewer qualifications for the given SR(s) being reviewed
 - Define appropriate regulatory footprint
 - Once closure of an F&O is accepted by NRC in one licensing application, it need not be addressed in future licensing applications
- Process to be documented in NEI peer review guidance documents, to be endorsed in RG 1.200

Objective 3: Other Open Peer Review Issues

- Discussed with Industry PRA Peer Review Task Force
- Candidate topic: Peer reviewer qualification process