

From: [Miller, Ed](#)
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Subject: Revised Appendix B from public meeting
Date: Thursday, November 01, 2012 9:25:30 AM
Attachments: [Appendix B 2012 10 25 ForUseAtMeeting.docx](#)

Attached is the marked up Appendix B (from the Integrated Assessment ISG) that was used for discussion at the October 24/25 public meeting.

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Preliminary changes proposed to Appendix B
Draft for use at public meeting October 25, 2012

APPENDIX B: Peer Review

A ~~participatory~~ peer review is an important element of the Integrated Assessment. The peer review increases confidence in the results of the Integrated Assessment and provides assurance that they form a sound basis for regulatory decisions. Where feasible, the peer review can incorporate established review licensee licensee review procedures if compatible with the site-specific conditions and non-routine nature of the Integrated Assessment. Expertise needed on the peer review team Peer reviewer attributes, attributes of an acceptable peer review, ~~process considerations~~, and required documentation of the peer review are described below.

B.1 Peer review team Peer reviewer attributes

The ~~peer review team should be assembled~~ reviewers based on the following considerations ~~should have the following attributes~~:

- Peer reviewers should be independent of those who are performing the Integrated Assessment. ~~#[Make this clear that the person performing the peer review did not perform or direct the activity being reviewed]~~ The independence of any reviewer chosen from the licensee's organization should be justified. At least one reviewer should be from an organization external to the licensee's, unless justification is provided to demonstrate the independence of reviewers assembled from inside the licensee's organization.
- ~~The peer review team~~ The number of peer reviewers is dictated by the scope of the Integrated Assessment and should include as many people as necessary for review by individuals with appropriate expertise. Collectively, peer reviewers should have expertise in all areas of importance to the Integrated Assessment. ~~The peer review team members should~~ For example, reviewers should have combined experience in the following areas (as applicable): systems engineering, flood hazard assessment, flood protection engineering (e.g., structural and geotechnical engineering), human reliability analysis and evaluation of manual actions, and application of PRA methodologies.
 - Reviewers focusing on the evaluation of flood protection features should have demonstrated experience consistent with the types of flood protection utilized at the site.
 - Individuals with experience assessing operator manual actions (e.g., for fire) should be included in the peer review team at sites relying on operator manual actions to protect against or mitigate a flood event.
- ~~One of the peer reviewers should be designated as the peer review team leader. The team leader is responsible for the entire peer review process, including completion of the final peer review documentation. The team leader is expected to provide oversight related to both the process, scope, and technical aspects of the peer review. The team leader should coordinate activities that require interface with plant personnel or the Integrated Assessment Team. The team leader will establish the initial scope of the peer review and assemble an appropriate review team. The team leader should have sufficient knowledge and experience to determine the scope of the review based on the above considerations. #Throughout the Integrated Assessment, the peer review team leader should expand the scope of the review and add members to the team if necessary to ensure all areas of review are appropriately covered.~~

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- ~~If the Integrated Assessment only involves the evaluation of permanent flood protection features using conventional engineering methods with no reliance on operator manual actions, the peer review team may consist of a single reviewer (the peer review team leader).~~
- ~~A larger peer review team with broader expertise is required if flood protection involves temporary protective measures, active components, or operator manual actions. The same is true if the Integrated Assessment includes evaluation of mitigation strategies. In these cases, the peer review team should consist of a minimum of two people, but should include as many people as necessary for review of all important aspects of the Integrated Assessment by people with appropriate expertise.~~
- Peer reviewers may be selected from within the licensee's organization using their normal peer review processes if the attributes described above are met. If reviewers with the above attributes cannot be assembled from within the licensee's organization (in whole or in part), it is necessary to assemble additional reviewers from outside the licensee's organization (i.e., external peer reviewers).

B.2 Peer review attributes

The peer review should have the following attributes:

- ~~To facilitate an efficient and informative review, the peer review should be an participatory in-process peer review is recommended, though a one-time peer review at the end of the Integrated Assessment is also acceptable. In other words, it should be recommended that the peer review be performed contemporaneous with the Integrated Assessment and observations made by the peer review team reviewers should be transmitted to the Integrated Assessment team as soon as possible.~~
- ~~The peer review should be conducted as an assembled team for #critical particularly for complex] items, including evaluation of the following (if credited): (1) #operator] manual actions, (2) temporary protective measures, and (3) non-safety-related equipment used for event mitigation. Reviewers should have the opportunity to interact with one another when performing the reviews, irrespective of the specific areas of review that represent the individuals' expertise.~~
- ~~The peer review reviewers should evaluate each of the following if they #are formed were] a part of the Integrated Assessment and assess the rationale if they #did are]~~
 - methodologies used to evaluate capabilities for flood protection and mitigation
 - assumptions made and methods used to formulate and validate themthe methodologies
 - performance criteria applied
 - evaluations of the reliability of flood protection features and systems for which generally accepted codes and standards are either unavailable or inapplicable
 - evaluations of the feasibility and reliability of non-routine or new operator-manual actions (i.e., actions that are not routinely performed or have not been previously evaluated under other processes)
 - judgments made regarding the mitigation capability and reliability of credited systems (applies to both margins-type and full PRA methods)
 - judgments made that there is high confidence that key safety functions will be maintained, including logic models and timelines -(applies to scenario-based evaluation methods)
- ~~The peer review team~~Peer reviewers should pay particular attention to the following:

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- assumptions, particularly those that are not thoroughly developed and documented
 - justification for the use of novel models or methods, especially if those models or methods are inconsistent with current practicess
 - technical judgments, especially those that are not supported by technical analyses such as explicit calculation or appropriate data
 - judgments made regarding the reliability of protection or mitigation actions involving the use of equipment, personnel, or other resources in non-traditional ways
- The peer review teamPeer reviewers should evaluate the completeness, and accuracy, and technical bases of the final Integrated Assessment report

~~B.2 Peer review process~~

~~B.3 The peer review should begin with the designation of a peer review team leader, who will establish the initial scope of the peer review and assemble an appropriate peer review team. The peer review team leader should have sufficient knowledge and experience to determine what kind of peer review is necessary based on the above considerations. Throughout the Integrated Assessment, the peer review team leader should expand the scope of peer review and add members to the team if necessary to ensure all areas of review are appropriately covered.~~

~~B.4 Flood protection evaluations and design considerations based on generally recognized codes and standards need not be a focus of the peer review.~~

~~B.5 Peer reviewers should have the opportunity to interact with one another when performing the reviews, irrespective of the specific areas of review to which they were assigned.~~

~~B.6 The peer review should be conducted as an assembled team for critical items, including evaluation of the following (if credited): (1) operator manual actions, (2) temporary protective measures, and (3) non-safety-related equipment used for event mitigation.~~

~~B.7B.3 Peer review documentation~~

The peer review process should be clearly documented in the Integrated Assessment ~~report~~submittal. Documentation of the peer review should be contained in a separate ~~#~~report ~~appendix/enclosure/section~~] as part of the ~~in the~~ licensee's Integrated Assessment submittal and should include the following:

- a description of the peer review process
- the names and ~~#~~capabilities and backgrounds, qualifications] of the peer review team members and leader, as well as the areas on which each reviewer concentratedreviewed by each participant.
- a description of how reviewer attributes (Section B.1) are met by the assembled peer review team
- a discussion of the key findings and a discussion as to how the findings were addressed
- an assessment of the disposition of ~~#~~suggestion: the key findings, comments made by peer reviewers
- a review of the final Integrated Assessment report
- the conclusions of the peer review team as to the completeness, accuracy, and technical bases of the Integrated Assessment

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