

NEI 05-04/07-12/12-06 Appendix X: Close Out of Facts and Observations (F&Os)

After the host utility has resolved the Facts and Observations (F&Os) from a peer review, they may undertake a review process to confirm close out of those F&Os. This appendix describes the close out confirmation process and associated configuration management.

X.1. Close Out of F&Os Process

The host utility has several options to achieve permanent close out of their F&Os. Options include Peer Review, NRC close out, and Independent Assessment.

X.1.1. Close Out F&Os in a Peer Review

In this option, the host utility commissions another full or a focused-scope peer review, to be conducted in accordance with the peer review guidance in the main body of this document [e.g. NEI 05-04] and in accordance with the peer review requirements in the ASME/ANS PRA Standard. The new peer review, whether a full or focused-scope, should include all the parts of the PRA related to the F&Os being closed. The previous F&Os should be reviewed by the new peer review team for information, but do not need to be specifically reviewed for closure as the new peer review scope is assessing the current model against all elements of the applicable hazard parts of the ASME/ANS PRA Standard. As part of the new peer review scope, any new F&Os are provided to the host utility. These new F&Os are considered open.

To close out previous F&Os through a peer review, the host utility should:

- Describe the resolution of the F&Os from previous in-scope peer reviews prior to the on-site review.
- Document resolution of the F&Os to the peer review team prior to the on-site review.
- Ensure that the scope of the review (e.g. High Level Requirements (HLRs), Supporting Requirements (SRs), hazard group) covers the portion of the Probabilistic Risk Assessment (PRA) affected by the existing F&Os, as appropriate.
- If a previous peer review was not completed under the current regulatory guidance, complete a gap assessment.

Following conduct of the new peer review, the previous F&Os within the scope of the peer review are considered closed, since the new peer review has evaluated the PRA model as being acceptable to Capability Category (CC) II. These closed F&Os are no longer relevant and need not be addressed in risk-informed applications of the PRA.

X.1.2. Close Out F&Os by NRC Review

A utility may choose to pursue NRC review to close out F&Os against their base model. The process for achieving closure via this process is discussed with the NRC by the licensee seeking the closure.

X.1.3. Close Out F&Os by Independent Assessment

A utility may choose to close out F&Os by independent assessment. An independent assessment is conducted in a manner similar to a peer review as outlined in the body of this guidance document, but with a scope limited to evaluating the closure of F&Os identified by the host utility, and without intention of issuance of new F&Os.

In selection of member(s) for the independent assessment team, the following apply:

- Every member of the independent assessment team should be independent of the PRA associated with the F&Os being reviewed, per the criteria of “independent” in the ASME/ANS PRA Standard. These members may be contractors, utility personnel, or employees of other utilities, and may include members of peer review teams that previously reviewed the models being assessed.
- Every member of the independent assessment group should meet the relevant peer reviewer qualifications as stated in the ASME/ANS PRA Standard for the technical elements associated with the F&Os being reviewed.
- The overall review team experience includes two qualified reviewers for each F&O. An exception to this is allowed for the closure of an F&O related to a single SR, in which case, a single independent reviewer is acceptable, in alignment with the peer review guidance in the main body of this document and in accordance with the ASME/ANS PRA Standard.
- Each member of the independent assessment team should be knowledgeable about the F&O independent assessment process used to assess the adequacy of the F&O resolution.
- The total number of reviewers is a function of the scope and number of finding F&Os to be reviewed for closure.

The scope of the independent assessment team review is limited to the F&Os and associated SRs requested for close out by the host utility. It is not the purpose of the independent assessment team to provide new F&Os, but some F&Os may remain open if the closure is deemed to not be complete. The review team should share any new issues identified during the course of their review, but such items would not be considered new findings. The host utility should generate actions for follow-up investigation of such new issues, in accordance with their PRA Maintenance and Upgrade process.

Pre-Review Activities

Host Utility Preparation

The host utility should provide the complete and relevant review materials to the independent assessment team at least two weeks prior to the on-site review. This should include:

- The exact wording of the findings from the PRA Peer Review,
- Identification of the SRs impacted for which the F&O was written against.
 - Including SRs that reference another SR (e.g., for an F&O written against a fire SR that referred back to an internal events SR, the fire SR would be the primary SR but the internal events SR should also be identified).
- Description of why the SR was not MET as indicated in the peer review report, the closure basis information from the host utility self-assessment, and any additional information required for the independent assessment team.
- A written assessment and justification of whether each finding constitutes a PRA upgrade, maintenance update, or other, as defined in the ASME/ANS PRA Standard.

Identification of Concurrent Focused-Scope Peer Reviews

The scope of this Technical Review may be expanded to include a concurrent focused-scope peer review to address changes to the PRA model that represent an upgrade per the definition of upgrade in the ASME/ANS PRA Standard. The process for the focused-scope peer review will follow the applicable guidance in the main body of this document (and the requirements for a peer review in the ASME/ANS PRA Standard), and new findings may be developed as part of this focused-scope peer review. The independent assessment team will also review the upgrade assessment conducted as part of the host utility's self-assessment, and will recommend any additional concurrent focused-scope peer reviews if warranted by this review.

On-site review

Conduct of reviews

The independent assessment team will review the documented finding closure basis as prepared by the host utility. The team should be given access to the PRA model, the host utility PRA team for interactive questions and answers during the review, and be given access to the plant for an on-site visit if deemed necessary to confirm adequate closure of the finding. A lead reviewer and supporting reviewer from the independent assessment team will be assigned for each finding, and will make the initial determination regarding adequacy of resolution of each finding within their review scope.

The independent assessment team should review the peer review report and the associated SR(s) from the ASME/ANS standard to ensure a good understanding of the peer review finding.

The independent assessment team will decide if the finding in question has been adequately addressed with appropriate and acceptable assumptions, and will also evaluate if the relevant changes have been incorporated into the PRA and appropriate plant configuration programs to ensure that the model represents the as-built, as-operated plant. Based on these assessments, the team will determine if the finding can be closed-out via consensus, referencing the appropriate SRs of the ASME/ANS PRA Standard for the review criteria.

The relevant PRA documentation should be complete and have been incorporated into

the PRA model and supporting documentation prior to closing the finding.; If the original finding identified error(s), the team should verify via sampling review that identified errors, including those specifically described in the original peer review, are fixed throughout the model. Additionally, the team will review the SR to ensure that the aspects of the underlying SR that were previously not met, or met at CCI, are now met, or met at CCII.

A consensus process, as described in the body of this document, should be followed during which the full team present on the day of the associated consensus session considers and reaches consensus on adequacy of closure of each finding.

If the independent assessment team determines, during the course of the on-site review, that other PRA changes constitute an upgrade, they may decide to conduct the focused-scope review if time and expertise permit. If this is not possible, the team will indicate the associated findings as “Not Reviewed” with recommendation for a subsequent focused-scope review.

Treatment of “New Methods”

Should an independent assessment team note the incorporation of a “new method” into a licensee’s PRA, they will not review the new method itself, and will not close relevant findings associated with the “new method.” In this context, a “new method” represents a fundamentally new approach in addressing a technical aspect of PRA. A “new method” is sufficiently different from methods currently in use throughout the U.S. nuclear industry, or sufficiently different in application of an existing approach, such that it would be considered an upgrade in accordance with the definition of upgrade in the ASME/ANS PRA Standard.¹

Use of Remote Reviewers

In some cases, the independent assessment team may be assembled such that some reviewers are only needed for a limited number of finding reviews, and it may be possible to have these reviewers participate remotely. This remote participation should be supported with web and teleconference connection to the on-site review team, and the remote reviewers should participate in relevant consensus sessions. A specific review schedule and times for interaction with the PRA host utility should be scheduled to ensure an efficient review.

Post-review activities

Closure After the On-site Review

In some cases the host utility's resolution of the finding may be delayed based on questions from the independent assessment team, or other action being taken by the host utility in response to the team’s questions. In particular, the independent assessment team may indicate that a finding is “partially closed” with only documentation issues remaining. The host utility may, in the time between the on-site review and the finalization of the independent assessment team report, demonstrate

¹ The final definition of “new method” is being developed as part of a separate effort related to methods review. Once this activity is complete, the final definition will be included in this appendix when integrated into NEI 05-04, NEI 07-12, and NEI 12-13 for endorsement in the next revision of RG 1.200.

that the issue has been addressed, that a closed finding has been achieved, and that the documentation has been formally incorporated in the PRA Model of Record. The independent assessment team will then re-review the host utility's resolution and associated documentation and a separate consensus session will be conducted as described earlier in this procedure.

Final Report

At the end of the review, the independent assessment team will provide a final report. The final report will include:

- Descriptions of the F&O independent assessment process.
- Description of the scope of the independent assessment (i.e., identification and description of the findings being reviewed for closure).
- Identification of the SRs which the findings were written against, including SRs that reference another SR. Include the basis for the SR assessment from the peer review of record.
- A summary of the review team's decisions for each finding within the scope of the review, along with the rationale for determination of adequacy or inadequacy for closure of each finding in relation to the affected portions of the associated SR. If multiple SRs are referenced by a single finding, the affected portions of all associated SRs should be addressed.
- For each F&O, assessment of whether the resolution was determined to be a PRA upgrade, maintenance update, or other, and the basis for that determination.
- Any new significant issues identified by the team that are not directly related to the findings being closed should be included in the report.
- If remote reviewers were used, describe their participation (e.g., identify which F&Os they reviewed).

The report will categorize each in-scope finding as "closed," "open," or "partially closed." "Partially closed" findings are still included in relevant licensing applications as "open."

For each finding, the basis for the decision on closure is documented, and the independent assessment team may also provide recommendations for achieving closure of findings that are not closed in this process. Differences or dissenting view among reviewers should be documented in the final report.

The final report should also include each of the independent assessment members' resumes and summary of their experience as it applies to qualification guidelines of NEI guidance documents and the ASME/ANS PRA Standard.

This report should be retained by the host utility in accordance with maintenance of their peer review and PRA recordkeeping practices, and is available for review and audit.

X.2. Closed-Out F&O

Once an F&O is closed out, the utility is not required to present and explain them in peer

reviews, NRC submittals or other requests excluding NRC audits. Additionally, closed-out F&Os are considered irrelevant to the current PRA model. The host utility should keep the documentation and close-out process for each F&O on file. Findings should not be considered formally closed for the purposes of submittal of a risk-informed application to the NRC until the final independent assessment team report has been issued.