

BWR OWNERS' GROUP

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BWROG-01047
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**SUBJECT: BWROG COMMENTS ON DRAFT REGULATORY GUIDE 1110
(REGULATORY GUIDE 1.174, REVISION 1)**

This letter provides comments of the BWR Owners' Group (BWROG) on the Draft Regulatory Guide DG-1110 (Proposed Revision 1 to Regulatory Guide 1.174), hereafter referred to as Proposed Revision 1. These comments represent a consensus of the BWR community, having been approved by the Integrated Risk Informed Regulation Committee (IRIR) of the BWROG as well as by the BWROG Primary Representatives. Some more detailed comments are contained in the attachment to this letter.

1. It is important to note that a majority of the BWR utilities represented on the BWROG have utilized the current Regulatory Guide 1.174 in submitting risk informed change requests to the NRC. It is expected that many more submittals will be made using the current Regulatory Guide 1.174. Moreover, a consensus of the members held the Regulatory Guide coupled with the NRC Staff's interpretation of that guidance to be an effective means of achieving appropriate risk informed plant modifications. Thus, any revisions to the Regulatory Guide should carefully considered and only be driven by:
 - Significant new and relevant information,
 - Issuance of significant associated regulations or guidance, or
 - A specific need to expand the scope to additional applications not clearly covered in the current guide.

While there has been activity in each of these categories, it is not judged to be significant in terms of requiring a revision to the current Regulatory Guide 1.174.

2. Regulatory endorsement and application of the pending ASME PRA standard is judged to be of sufficient significance to warrant such a revision. At that time it would be deemed appropriate for Regulatory Guide 1.174 to reference the standard in matters of PRA quality and perhaps to offer some additional guidance. However, the Proposed Revision 1 assumes there will be no PRA standard at time of issuance, and instead has added a new Appendix A to deal with PRA quality. The PRA characteristics and attributes contained in Appendix A are not consistent with the graded approach of either the soon to be issued ASME PRA standard nor industry's NEI 00-02, thus introducing a third set of PRA quality requirements. This will create confusion among both applicants and regulators. Moreover, Appendix A itself is not clear on the intended regulatory status of the PRA characteristics and attributes contained therein. It describes them as "minimum

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technical elements needed to ensure a PRA acceptable to the staff", "PRA characteristics and attributes acceptable to the staff", and "Desired Characteristics and Attributes."

4. On page 7 Proposed Revision 1 states that licensees should do an independent peer review. On page 16 it states that a peer review is an acceptable approach. On page 16 it also says that an industry PRA certification program could also be used to help. It is then clearly stated that the NRC has not indorsed the NEI Peer Review Process. Yet in the footnote on page 16, it is stated that future revisions of this guide may endorse the certification process. These statements are not consistent.

Based on the comments above, the BWROG strongly suggested that the Proposed Revision 1 be deferred until the ASME PRA standard is firmly in place or the NRC has approved the NEI Peer Review.

5. In Section 2.2.3.1, Table 1, the new Table 1 adds the concept of "long-term containment integrity." Depending on how this term is defined and what is required to be demonstrated for a given risk informed application, this new scope item could significantly increase the complexity of the analysis by requiring Level 2 PRA quantifications with little perceived risk control benefit. For the small risk changes at issue it is difficult to see how long-term containment integrity would be significantly adversely affected if CDF and LERF are controlled through the existing guidance of Regulatory Guide 1.174. Moreover, there are no stated criteria for late release associated with long-term containment integrity.

The BWROG strongly suggests eliminating long term containment integrity in favor of the risk measure already established and addressed in the Commission Safety Goal policy.

If you have any questions regarding these comments, please contact Greg Krueger (Exelon Nuclear), BWROG Integrated Risk Informed Regulation Committee Chairman at (610) 640-6574 or Rick Hill (GE) Project Manager at (408) 925-5388.

Regards,

Original Signed By

J. M. Kenny
BWR Owners' Group Chairman

Attachment: BWROG Specific Comments

cc: J. A. Gray, Jr., BWROG Vice Chairman
BWROG Primary Representatives
BWROG IRIR Committee
B. Bradley, NEI
S. Floyd, NEI
T. G. Hurst, GE
R. A. Hill, GE
Robert Pulsifer, NRC

Attachment

BWROG Specific Comments

There are several additional specific comments on Proposed Revision 1. These are given below and are labeled by both section number and paragraph, Table, or Figure number in that section.

Section 1.1, paragraph 5:

- In general, there is much redundancy between Section 1.1 and Section 1.3. This redundancy should be eliminated.
- It would be helpful to provide some clarification of the term “unforeseen hazard.” Perhaps an example would suffice.

Section 2.2.3.1, paragraphs 2 and 3:

- The last sentence in both paragraphs taken in combination state “to gain the maximum benefit from a PRA, the model addresses all modes of operation and both internal and external events.” These statements should be tempered with a statement such as, “It is recognized that most utilities have not developed PRA models for all modes of operation and initiating events. It is expected that some plant modes and initiating event impacts will be addressed qualitatively when required.”

Section 2.2.4, Figures 3 and 4:

- The footnote in both tables discusses the fuzzy region boundaries and refers to the shading of the figures. However, in the Proposed Revision 1 there is no shading, and the boundaries appear to be quite discrete. The fuzzy boundaries should be maintained to allow an element of technical judgment.

Section 2.2.4, Figure 4:

- The end of the second bullet under “Region III” notations in the darkened part of the figure should read “Baseline LERF” rather than “Baseline CDF.” This is probably a typographical error.

Section 2.2.4, paragraph 6:

- The recognition of a risk informed component of power up-rate is appropriate, but the reason for the 3800Mwt limitation is not clear. The basis for that limitation should be explicitly and clearly stated as there are already plants that are licensed to core power levels greater than 3800 Mwt. Most of these have plans for extended power up-rates. It is not appropriate to issue a regulatory guide that includes new limitations or an increase in scope but that does not also provide guidance on how to address the limitation or increase in scope. There should also be a sound basis for any new limitation or increase in scope.
- A similar comment applies to the 40,000MWD/MT limit considering the current generation extended fuel and small batch-size/high burn-up cycles. In addition, the text should be revised so that is clear to whether 40,000 MWD/MT applies to core average, bundle average or peak rod exposure.

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Section 2.2.6, paragraph 11:

- Reference is made to a configuration risk management program (CRMP) for risk informed changes to Technical Specification allowed outage times. It is the BWROG's understanding that the CRMP is not a uniform permanent policy, and indeed should be replaced by the new Section (a)(4) of 10CFR50.65 (Maintenance Rule). Moreover, at least one plant with such a CRMP has had it transferred from the Technical Specifications to the owner controlled Technical Requirements Manual. The current status of CRMP needs to be assessed before entering it into a new regulatory guide revision.

Section 2.2.6, paragraph 12:

- For clarification, paragraph 11 that precedes the bullets should be reworded as follows: "In Section 2.2.4, it was indicated that the application would be given increased management attention when the calculated values of the changes in the risk metrics, and their baseline values when appropriate, approached the guideline limits. For such cases, the issues in the submittal that would be expected to be addressed would include:"

Section A.4, paragraphs 1 and 3:

- The introduction of discussion on use of an Integrated Decision Making Panel" (IDP) is noted; it contains information that may be of benefit to utilities involved in the risk informed regulation process. However, while its utilization appears optional by inference (paragraph 1), the very appearance in a regulatory guide opens the question of the NRC staff position on the use of an IDP in the context of activities covered by Regulatory Guide 1.174. That position of optional use should be more clearly stated in Section A.4. Also, the statement in paragraph 3 on IDP member training is not clear. Recognizing that IDP members are assumed to have the requisite technical background as stated elsewhere, the "activities" for which training is to be provided should be explained.