



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555-0001**

April 18, 2017

The Honorable Kristine L. Svinicki  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: DRAFT NUREG/BR-0058, REVISION 5, "U.S. NUCLEAR REGULATORY COMMISSION GUIDANCE ON PERFORMING REGULATORY AND COST-BENEFIT ANALYSES"**

Dear Chairman:

During the 642<sup>nd</sup> meeting of the Advisory Committee on Reactor Safeguards, April 6-7, 2017, we reviewed SECY-17-0035, "Draft NUREG/BR-0058, Revision 5, 'U.S. Nuclear Regulatory Commission Guidance on Performing Regulatory and Cost-Benefit Analyses'." We also considered the draft revision during our 641<sup>st</sup> meeting, March 9-11, 2017; and our Regulatory Policies and Practices Subcommittee reviewed this matter on February 7, 2017. We had the benefit of discussions with representatives of the NRC staff. We also had the benefit of the referenced documents.

**RECOMMENDATION AND CONCLUSION**

1. The draft revision includes significant changes and important improvements to existing guidance, and its finalization will benefit from public comment at this time.
2. Substantial material that is important to use of the guidance has been identified, but has not yet been completed. This material should be included and a subsequent opportunity for comment provided, prior to finalization of this revision.

**BACKGROUND**

The current NUREG/BR-0058, Revision 4, was issued in September 2004. Draft Revision 5 has been developed in response to Staff Requirements Memorandum-SECY-12-0110, "Consideration of Economic Consequences Within the NRC's Regulatory Framework" and is in accordance with SECY-14-0002, "Plan for Updating NRC's Cost-Benefit Guidance." The plan provides for a two-phase approach, and draft Revision 5 is part of Phase 1. The draft is expected to be issued for public comment in April 2017. In accordance with our letter to the Executive Director for Operations on draft Revision 5, dated March 20, 2017, this letter is provided in parallel with the solicitation of public comments, and we requested an opportunity to again review Revision 5 following resolution of comments and prior to issuance.

At our 641<sup>st</sup> meeting, staff discussed both draft Revision 5 to NUREG/BR-0058 and the final version of NUREG-1530, Revision 1, "Reassessment of NRC's Dollar per Person-Ram Conversion Factor Policy." NUREG-1530 provides important input to the guidance in NUREG/BR-0058, and our letter on proposed revision 1, dated March 20, 2017, provides comments and recommends development of a further revision to characterize and quantify the uncertainty in the dollar per person-rem value.

## **DISCUSSION**

The two-phase approach for updating cost-benefit guidance described in SECY-14-0002 provided for Phase 1 to focus on structural and administrative issues and to include certain ongoing staff initiatives. Phase 2 was described as addressing potential policy issues, including any identified in a gap analysis to be performed in parallel with Phase 1. Subsequently, Phase 1 was expanded to include items identified in SECY-14-0143, "Regulatory Gap Analysis of NRC's Cost-Benefit Guidance and Practices," and in SECY-14-0087, "Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses." Also, items, including the use of uncertainty, were added to Phase 1 as a result of findings of Government Accountability Office and the NRC Office of Inspector General audit reports.

Although the content of draft Revision 5 to NUREG/BR-0058 has been expanded from the initial scope of Phase 1, it does not yet include specific items identified for inclusion. For example, of 12 specific appendices currently identified, only 5 are included with draft Revision 5 and will be available for public comment. In our March 20, 2017, letter to the Executive Director for Operations, we requested to have an opportunity to review the NUREG following resolution of comments and prior to issuance of Revision 5.

Staff stated that NUREG/BR-0058, and each of its appendices, will be able to be revised independently. The staff intends to issue Revision 5 of the NUREG, along with Revision 0 of the available appendices. Subsequently, they plan to issue or revise appendices independently from revision of the NUREG itself, except for its table of contents which would be changed each time to reflect the current status of the appendices. Although this revised document structure offers the potential advantage of enabling update to, or addition of, an appendix without revision of the NUREG, we have two concerns as follows:

1. In most cases, the addition of an appendix should include modification of the NUREG text, and hence require issuance of a new revision of the NUREG. Therefore, until the remaining appendices have been added, further revisions of the NUREG will be expected for most of the additions.
2. The NUREG should include a clear statement of the process to ensure that users can identify the current appendix revisions since appendix revisions could change with only an update to the NUREG table of contents and no change to the effective NUREG revision.

Our main concern applies to the technical content of the appendices and how they may affect each other and guidance in the main report. As an example, the staff informed us that Appendix H will contain expanded guidance on methods, models, and perhaps data that may be used to support the safety goal evaluations and estimates of offsite health consequences that are integral elements of the regulatory analysis process. That material is intended to replace outdated references and numerical estimates that are currently discussed extensively in Section 2.4 and Section 5.3 of the main report text. Draft outlines for Appendix F and Appendix G indicate that they will contain guidance on data sources, historical data, and methods for data normalization. Appendix C contains guidance on the treatment of uncertainty throughout the regulatory analysis process. The draft outline of Appendix H indicates that it will also include guidance for uncertainty and sensitivity analyses. Our March 20, 2017, letter concerning NUREG-1530, Revision 1, further addresses our concerns about the continuing mixed use of sensitivity and uncertainty in circumstances when consistent use of uncertainty is possible and in accordance with policy. It is not apparent how consistent guidance can be accomplished through incremental issuance of individual appendices without a comprehensive update of the integrated regulatory analysis guidance document.

During our meetings with staff, they acknowledged these concerns and we will discuss them further following incorporation of public comments on the material currently available in Revision 5.

Section 5.3.2.3 provides guidance for evaluating the effect on occupational health from accidents. It includes reference to NUREG-1530, Revision 1, for the monetary evaluation of health effects. For high dose rate, high exposure events, a higher dollar per person-rem value is to be used. This should be noted in NUREG/BR-0058, so it is not overlooked by an analyst following the guidance it provides.

The draft revision reflects significant effort by staff to restructure existing cost-benefit guidance, expand discussion of regulatory analyses across NRC business lines, improve methods for assessing factors that are difficult to quantify, include best practices, and introduce uncertainty analysis for use in cost-benefit analysis. These changes will benefit from public comment at this time.

Sincerely,

/RA/

Dennis C. Bley  
Chairman

## REFERENCES

1. U.S. Nuclear Regulatory Commission, SECY-17-0035, "Draft NUREG/BR-0058, Revision 5, 'U.S. Nuclear Regulatory Commission Guidance on Performing Cost-Benefit Analyses'," February 28, 2017 (ML16182A034).
2. Advisory Committee on Reactor Safeguards, "Proposed Revision to NUREG-1530, 'Reassessment of NRC's Dollar Per Person-Rem Conversion Factor Policy,'" March 20, 2017 (ML17075A230).
3. Advisory Committee on Reactor Safeguards, "Interim Comments on Draft NUREG/BR-0058, Revision 5, 'U.S. Nuclear Regulatory Commission Guidance on Performing Cost-Benefit Analyses,'" March 20, 2017 (ML17075A309).
4. U.S. Nuclear Regulatory Commission, NUREG/BR-0058, "U.S. Nuclear Regulatory Commission Guidance on Performing Cost-Benefit Analyses," Draft Revision 5, January 26, 2017 (ML17023A180)
5. U.S. Nuclear Regulatory Commission, SECY-17-0035, "Draft NUREG/BR-0058, Revision 5, 'U.S. Nuclear Regulatory Commission Guidance on Performing Cost-Benefit Analyses,'" January 26, 2017 (ML17023A304).
6. U.S. Nuclear Regulatory Commission, Staff Requirements Memorandum, SECY-12-0110, "Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission's Regulatory Framework," March 20, 2013 (ML13079A055).
7. U.S. Nuclear Regulatory Commission, SECY-14-0002, "Plan For Updating the U.S. Nuclear Regulatory Commission's Cost-Benefit Guidance," January 2, 2014 (ML13274A495).
8. U.S. Nuclear Regulatory Commission, SECY-14-0087, "Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses," August 14, 2014 (ML14127A451).
9. Advisory Committee on Reactor Safeguards, "SECY-14-0087, 'Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses,'" September 11, 2014 (ML14255A101).
10. U.S. Nuclear Regulatory Commission, Staff Requirements Memorandum, SECY-14-0087, "Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses," March 4, 2015 (ML15063A568).
11. U.S. Nuclear Regulatory Commission, SECY-14-0143, "Regulatory Gap Analysis of the NRC's Cost-Benefit Regulations, Guidance and Practices," December 16, 2014 (ML14280A426).

12. U.S. Nuclear Regulatory Commission, Office of the Inspector General, OIG-15A-15, "Audit of NRC's Regulatory Analysis Process," June 24, 2015 (ML15175A344).
13. U.S. General Accountability Office, GAO-15-98, "NRC Needs to Improve Its Cost Estimates by Incorporating More Best Practices," December 2014.

12. U.S. Nuclear Regulatory Commission, Office of the Inspector General, OIG-15A-15, "Audit of NRC's Regulatory Analysis Process," June 24, 2015 (ML15175A344).
14. U.S. General Accountability Office, GAO-15-98, "NRC Needs to Improve Its Cost Estimates by Incorporating More Best Practices," December 2014.

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