

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2017-0091]**

**Regulatory Analysis Guidelines**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** NUREG appendices; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing four appendices to NUREG/BR-0058, Revision 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission." The guidance provided in the appendices refines the information the staff uses when performing a cost-benefit analysis and incorporates guidance enhancements. The appendices also incorporate pertinent information from NUREG/BR-0184, "Regulatory Analysis Technical Handbook." A description of each draft appendix is provided in the Discussion section of this document.

**DATES:** The NUREG appendices are available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** Please refer to Docket ID NRC-2017-0091 when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID NRC-2017-0091. Address questions about the NRC dockets to Dawn Forder; telephone: 301-415-3407; email: [Dawn.Forder@nrc.gov](mailto:Dawn.Forder@nrc.gov). For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that a document is referenced. For the convenience of the reader, the ADAMS accession numbers are also provided in a table in Section IV, "Availability of Documents," of this document.

- **Attention:** The [PDR](#), where you may examine, and order copies of public documents is currently closed. You may submit your request to the PDR via email at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov) or call 1-800-397-4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Pamela Noto, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-6795; email: [Pamela.Noto@nrc.gov](mailto:Pamela.Noto@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

## I. Discussion

The appendices to NUREG/BR-0058, Revision 5, address guidance enhancements that were identified in SECY-14-0143, “Regulatory Gap Analysis of the Nuclear Regulatory Commission’s Cost-Benefit Regulations, Guidance, and Practices,” and incorporates pertinent information from NUREG/BR-0184.

Appendix F, “Data Sources,” provides guidance on the processes needed to collect and analyze data, as well as data types, sources, and adjustment techniques. It also (1) identifies sources of information that can be collected to support data analysis activities, (2) describes various methods of adjusting raw data to establish a common basis, and (3) discusses the importance of collecting historical cost and non-cost data to support parametric estimating techniques.

Appendix G, “Regulatory Analysis Methods and Data for Nuclear Facilities Other Than Power Reactors,” documents established approaches and data considerations for use in performing non-power reactor regulatory analyses. This appendix provides supplemental information for performing a regulatory analysis for non-power reactor facilities and activities, including fuel fabrication facilities, independent spent fuel storage installations, irradiators, high-level waste repositories, and uses of byproduct material.

Appendix H, “Severe Accident Risk Analysis,” provides guidance and best practices recommended for use in performing probabilistic risk assessments and consequence analyses as part of regulatory and backfit analyses for nuclear power reactors. This appendix expands upon guidance regarding the safety goal evaluation and valuation of public health (accident) and economic consequences (offsite property) attributes. It provides references on sources of information and an overview of the tools and methods used to estimate changes in core damage frequency, large early release frequency, public health risk, and offsite economic consequences risk.

Appendix I, “NEPA Cost-Benefit Analysis Guidance,” describes the methods to be used in preparing cost-benefit analyses and in performing environmental justice reviews in support of the NRC’s regulatory and licensing actions conducted under the National Environmental Policy Act (NEPA) of 1969. This appendix describes the process for conducting cost-benefit analyses for the NRC NEPA reviews and the methods used for conducting cost-benefit analyses in evaluations of Severe Accident Mitigation Alternatives and Severe Accident Mitigation Design Alternatives and for complying with the 2004 Commission’s Policy Statement on “The Treatment of Environmental Justice Matters in the NRC Regulatory and Licensing Actions,” (69 FR 52040; August 24, 2004).

## **II. Public Outreach**

Following development of the appendices, the NRC posted the draft appendices to the Federal Rulemaking website at <https://www.regulations.gov> for a 60-day public comment period (86 FR 20208; April 16, 2021). The comment period closed on June 15, 2021. The NRC received two comment submissions with a total of 20 individual comments from industry. The NRC considered this public input when developing the final appendices provided for Commission approval. Responses to the public comments are provided in the NRC Response to Public Comments document.

The NRC staff held an Information Meeting with a Question and Answer Session on May 19, 2021 to provide an overview of the four draft appendices and discussed how they are related to the NRC’s cost-benefit guidance update. The NRC presentation can be found in ADAMS under Accession No. ML21137A007, and the meeting summary can be found in ADAMS under Accession No. ML21146A085.

## **III. Backfitting, Forward Fitting, and Issue Finality**

The NRC's issuance and use of the appendices do not constitute backfitting as that term is defined in Section 50.109 of title 10 *Code of Federal Regulations* (10 CFR) "Backfitting," and as described in the NRC Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests"; do not affect the issue finality of an approval under 10 CFR part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants"; and do not constitute forward fitting as that term is defined and described in MD 8.4.

#### **IV. Availability of Documents**

The documents identified in the following table are available to interested persons as indicated.

<b>DOCUMENT</b>	<b>ADAMS ACCESSION NO.</b>
NUREG/BR-0058, Revision 5, Appendix F, "Data Sources"	ML21228A244
NUREG/BR-0058, Revision 5, Appendix G, "Regulatory Analysis Methods and Data for Nuclear Facilities Other Than Power Reactors"	ML21228A245
NUREG/BR-0058, Revision 5, Appendix H, "Severe Accident Risk Analysis"	ML21228A246
NUREG/BR-0058, Revision 5, Appendix I, "National Environmental Policy Act Cost-Benefit Analysis"	ML21228A247
NUREG/BR-0058, Revision 5, "Regulatory Analysis Guidelines of the U.S. NRC"	ML19261A277 (Package)
NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook"	ML050190193
SECY-14-0143, "Regulatory Gap Analysis of the NRC's Cost-Benefit Guidance and Practices," December 16, 2014	ML14280A426 (Package)
NRC Response to Public Comments	ML21230A380

Dated: MONTH, DAY, 2021.

For the Nuclear Regulatory Commission.

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