

Emergency Preparedness for Small Modular Reactors and Other New Technologies Rulemaking

Public Meeting
May 10, 2017

Introduction

- Provide an overview of the content of the draft regulatory basis,
- Inform the public and stakeholders of the current status, and
- Provide an opportunity to ask clarifying questions to help develop written comments.

Submitting Comments

- The NRC is inviting stakeholders to provide written comments on the draft regulatory basis document.
- Written comments may be submitted by any one of the methods identified in the *Federal Register* notice (82 FR 17768).
- Comment period ends on June 27, 2017.

Draft Regulatory Basis Document

- Available in Agencywide Documents Access and Management System (ADAMS) Accession Number ML16309A332
 - www.regulations.gov using:
 - Rulemaking Identification Number (RIN) 3150-AJ68, or
 - NRC Docket Identification Number: NRC-2015-0225
 - NRC Web page:
<https://www.nrc.gov/reactors/new-reactors/regs-guides-comm/ep-smr-other.html>
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https://www.regulations.gov

The screenshot shows the homepage of regulations.gov. At the top, there is a navigation bar with links for Home, Help, Resources, and Contact Us. Below this is a search bar with the text '3150-AJ68' and a 'Search' button. The main content area features a large banner with the text 'Make a difference. Submit your comments and let your voice be heard.' Below the banner is a search box with the text 'SEARCH for: Rules, Comments, Adjudications or Supporting Documents:' and a 'Search' button. To the left of the search box is a 'What's Trending' section with a bar chart icon. To the right is a 'Comments Due Soon' section with a list of comment counts for various time periods. Below that is a 'Newly Posted' section with a list of comment counts for various time periods. On the far right is a 'Browse by Category' section with links for 'FAA Section 333', 'APIs for Developers', and 'DOS Regulations Twitter Page'.

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What's Trending

Organic Research, Promotion, and Information Orders: Certified Products
Closing on Apr 19, 2017

Memo opening a comment period for this docket.
Closing on May 15, 2017

Federal Motor Vehicle Safety Standards: V2V Communications
Closed on Apr 12, 2017

Endangered and Threatened Species: Petition for Rulemaking To Establish a Whale Protection Zone for Southern Resident...
Closing on Apr 13, 2017

Tobacco Product Standard for N-Nitrosomonicotine Level in Finished Smokeless Tobacco Products; Extension of Comment...
Closing on Jul 10, 2017

Comments Due Soon

Today (55)
Next 3 Days (86)
Next 7 Days (180)
Next 15 Days (367)
Next 30 Days (704)
Next 90 Days (1,033)

Newly Posted

Today (74)
Last 3 Days (270)
Last 7 Days (488)
Last 15 Days (1,022)
Last 30 Days (1,998)
Last 90 Days (5,479)

FAA Section 333

APIs for Developers

See how developers are using Regulations.gov APIs!

Browse by Category

DOS Regulations Twitter Page

Introduction

- Scope and Contents of the draft regulatory basis:
 - Section 1 Background and Developments
 - Section 2 Existing Emergency Preparedness Framework
 - Section 3 Regulatory Issues
 - Section 4 Options for Rulemaking
 - Section 5 Regulatory Considerations
 - Section 6 Stakeholder Interactions
 - Section 7 Timeline and Milestones
 - Section 8 References

Edward Roach
Senior Emergency Preparedness Specialist

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DRAFT REGULATORY BASIS SECTIONS 1 THROUGH 4

Background

- In 2010, the Staff submitted SECY-10-0034, “Potential Policy, Licensing, and Key Technical Issues for Small Modular Nuclear Reactor Designs,” (ADAMS Accession No. ML093290268),
- SECY-11-0152, “Development of an Emergency Planning and Preparedness Framework for Small Modular Reactors,” (ADAMS Accession No. ML112570439), and
- SECY-14-0038, “Performance-Based Framework for Nuclear Power Plant Emergency Preparedness Oversight,” (ADAMS Accession No. ML14260A078).

Background

- In 2015, the staff sought Commission approval to initiate rulemaking to revise emergency preparedness regulations in SECY-15-0077, “Options for Emergency Preparedness for Small Modular Reactors and Other New Technologies,” (ADAMS Accession No. ML15037A176).
 - The Commission approved the staff’s request in the SRM-SECY-15-0077,

Existing Regulatory Framework

- Emergency Preparedness Regulations
 - Title 10 of the Code of Federal Regulations Part 50, section 47 (10 CFR 50.47), “Emergency Plans”
 - Appendix E to 10 CFR Part 50, Emergency Planning and Preparedness for Production and Utilization Facilities”
 - 10 CFR 50.54(q), Emergency Plans, (s), and (t)
 - Technical Content of applications in 10 CFR 50.34, which is also referenced from 10 CFR Part 52.

Emergency Planning Zone Basis

- NUREG-0396 Methodology
 - Distances for Emergency Planning Zones (EPZs)
 - Plume Exposure Pathway EPZ
 - Ingestion Exposure Pathway EPZ
 - Time Dependent Characteristics
 - Types of Radioactive Materials
- Key Component for the rule

Existing Emergency Planning Guidance

- Guidance (<http://www.nrc.gov/about-nrc/emerg-preparedness/regs-guidance-comm.html>)
 - Provides a full complement of guidance on
 - Licensing,
 - Inspections and oversight,
 - Evaluating,
 - Revising plans, and
 - Decommissioning.

Regulatory Issues

- Emergency Planning Zone Sizes
- Spectrum of Accidents and Environmental Consequences
- Operator Staffing and Emergency Response Teams
- Co-Location of Facilities
- Multiple-modular Facilities
- Performance-Based Approach

Regulatory Approaches

- Option 1 –Exemptions and Guidance
 - Maintains the current emergency preparedness regulations in effect.
 - Applicants would request specific exemptions from the existing guidance.
 - New guidance would be developed on how to the exemptions submission and review.

Regulatory Approaches

- Option 2 –Rulemaking
 - Address emergency planning zone boundary determinations
 - Plume Exposure Pathway EPZ
 - Ingestion Exposure Pathway EPZ
 - Technology-inclusive Approach
 - Small Modular Reactors
 - Other New Technologies
 - Non-light-water reactors
 - Medical Isotope Production and Utilization Facilities
 - Consequence-oriented

Staff Recommendation and Basis

- Conduct rulemaking to provide a clear set of rules and guidance on emergency preparedness for small modular reactors and other new technologies,
 - Reduce the need for emergency preparedness exemptions,
 - Provide regulatory stability and predictability,
 - Be effective and more efficient.

Andrew Carrera
Rulemaking Project Manager

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DRAFT REGULATORY BASIS SECTIONS 5 THROUGH 8

Backfitting

- Backfitting and Issue Finality regulations do not apply to this action
- Applies only to future SMRs and ONTs licensees

Cost/benefit Considerations

- **Costs**

- Cost to applicants to submit exemptions from current EP regulations
- Costs to applicants to submit emergency plan updates and indicators
- One time NRC costs for rulemaking

- **Benefits**

- Regulatory stability, predictability, and clarity in licensing
 - Incremental averted costs for applicants to adopt an appropriate sized EPZ and performance-based framework
-

Stakeholder Interactions

- Public Meetings
 - Conducted since 2010
 - Performance-based approach discussion in 2016
- Governmental and non-governmental organizations
- Nuclear Energy Institute's White Papers
 - Proposed Methodology and Criteria Establishing the Technical Basis for Small Modular Reactor Emergency Planning Zone, December 23, 2013, ML13364A345
 - Proposed Emergency Preparedness Regulations and Guidance for Small Modular Reactor Facilities, July 8, 2015, ML15194A275

Specifically Seeking Input

- Scope of the Draft Regulatory Basis
- Performance-Based Approach
- Regulatory Impacts
- Cumulative Effects of Regulation

Submitting Comments

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Opportunity to Ask Questions

- Clarifying questions

Contacts

- Arlon Costa, Arlon.Costa@nrc.gov
- Andrew Carrera, Andrew.Carrera@nrc.gov
- Ed Roach, Edward.Roach@nrc.gov
- Cindy Rosales-Cooper, Cindy.Rosales-Cooper@nrc.gov
- Kenneth Thomas, Kenneth.Thomas@nrc.gov