

# Public Workshop (2 of 3)\*

Update to RG 1.183, Revision 1 – Alternative Radiological Source Terms  
for Evaluating Design Basis Accidents at Nuclear Power Reactors

February 13, 2024

ADAMS Accession No. ML24040A168

\* Workshop 1 info - <https://www.nrc.gov/pmns/mtg?do=details&Code=20231392>

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# Introductions

Please ensure to identify yourself before speaking throughout the meeting.

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# NRC Opening Remarks

Michael Franovich, Director

Division of Risk Assessment  
Office of Nuclear Reactor Regulation



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# Workshop Agenda

- Workshop Format
- Project Schedule
- Non-LOCA Release Fraction Calculations
- External Presentations (as applicable)
- Break
- Discussion



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## 86 FR 14964 – NRC Policy on Enhancing Participation in NRC Public Meetings

Comment-Gathering Meeting – Purpose is for the **NRC to obtain feedback** on regulatory issues and NRC actions – in this case for an update to RG 1.183

Focused on allowing participants **opportunity** to provide opinions, perspectives and feedback

**NRC staff will take notes** during meeting and use these notes to inform decision-making

**Meeting summaries** will include high-level summaries of notes NRC staff has taken

# Workshop Format

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# RG 1.183 Update Stakeholder Involvement

- Public Workshops and Information Meetings
  - 3 Workshops (1<sup>st</sup> held on 1/9/24)
  - 2 Information Meetings
- Contact Project Lead
- Meeting Feedback
- ACRS Meeting – approximately November 2024
- Draft Guide Comment Period – approximately June 2025
  - Relationship with Proposed Increased Enrichment Rulemaking
    - Docket ID NRC-2020-0034, [www.regulations.gov](http://www.regulations.gov)
    - Comment period on Proposed Increased Enrichment Rulemaking Regulatory Basis ended on January 22, 2024

# Project Schedule

Milestone	Tentative Completion
Public Workshops* and Information Meetings**	January 2024 – April 2024
DG Internal Review begins	June 2024
DG Internal Review completed	October 2024
Pre-Decisional DG Publicly Available to Support ACRS Briefings	November 2024
ACRS Briefings (Staff to respond as needed)	November 2024
Increased Enrichment Proposed Rule package to Commission (will include DG referenced in SECY paper)	December 2024
DG Available for Public Comment via Proposed IAW Increased Enrichment Rulemaking SECY	June 2025 (Estimated)

\* The term “Workshop” means a Comment-Gathering Meeting as described in the NRC’s policy statement on public meetings (see 86 FR 14964)

\*\* The term “Information Meeting” means NRC will inform attendees and allow questions (see 86 FR 14964)

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# Non-LOCA Release Fractions Calculations

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Joseph Messina, Nuclear Methods and Fuel Analysis Engineer  
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Division of Safety Systems  
Office of Nuclear Reactor Regulation

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# Overview - Non-LOCA Release Fractions

NRC Staff are currently performing calculations with FAST\*, version 1.2 to revise Tables 3 and 4 of RG 1.183 Rev. 1

- Calculations will consider release fraction examples for:
  - 10x10 BWR assembly
  - 14x14 PWR assembly
  - 17x17 PWR assembly
- Preliminary results to be presented during the March workshop

\* FAST (Fuel Analysis under Steady-State and Transients) is an analytical tool that calculates the thermal-mechanical behavior of nuclear fuel when given power and boundary conditions.

<https://fast.labworks.org/file-download/download/public/636>

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# Assumptions - Non-LOCA Release Fractions

The revised Tables 3 and 4 of RG 1.183, Revision 1 will be determined using the following assumptions:

- 75 GWd/MTU burnup
- 6% enrichment
- Revised power history to cover new burnup range and similar integrated power
- Uses ANS 5.4 Standard and procedure from Appendix I of RG 1.183, Revision 1

The NRC Staff welcomes opinions, perspectives and feedback regarding the approach or assumptions being used to revise Tables 3 and 4 of RG 1.183, Revision 1

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# External Presentations



Break



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# RG 1.183 Update Stakeholder Involvement

## - Reminder -

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# Contacts

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Technical Contact

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## How did we do?

### Public Meeting Schedule: Meeting Details

[ [New Search](#) ]

#### Meeting info

#### Purpose

The NRC is hosting 3 workshops in early 2024 to discuss a revision to RG 1.183, Revision 1 (<https://www.nrc.gov/docs/ML2308/ML23082A305.pdf>). These workshops will provide opportunities for NRC staff to discuss and extend the applicability of the guidance to higher burnup and increased enrichment fuel applications, in support of the NRC's Fuel Enrichment Rulemaking (<https://www.regulations.gov/document/NRC-2020-0034-0005>), and to consider other feedback that is relevant to the guidance. The workshops allow for the NRC's external stakeholders to participate in the regulatory process through a collaborative gathering format as described in the NRC's policy statement on public meetings at 86 FR 14964. The staff will collect comment and input through note-taking and will consider this information while drafting updates to guidance.

#### Meeting Feedback

#### Meeting Dates and Times

01/09/24  
1:00PM - 4:30PM ET

#### Meeting Location

Virtual and In-Person at NRC One White Flint North  
11555 Rockville Pike  
Rockville MD

#### Webinar

Webinar Link: <https://events.gcc.teams.microsoft.com/event/a7b85e10-06e8-42d9-b7dc-364a2a63c06c@e8d01475-c3b5-4365-def4c64f52e> [EXIT](#)  
Webinar Meeting Number: 233 658 082 952  
Webinar Password: JkRaDj

### Meeting Feedback

Meeting Feedback Form [EXIT](#)

<https://www.nrc.gov/pmns/mtg?do=details&Code=20231392>