

From: [Veil, Andrea](#)
To: [Sunseri, Matthew](#)
Cc: [Moore, Scott](#); [Burkhart, Larry](#); [Brown, Christopher](#); [RidsEdoMailCenter Resource](#); [RidsACRS MailCTR Resource](#); [Donoghue, Joseph](#); [Ross-Lee, M\]](#); [Clifford, Paul](#); [Lukes, Robert](#); [Sahd, Phillip](#)
Subject: REVIEW OF REGULATORY GUIDE (RG) 1.236, PRESSURIZED-WATER REACTOR CONTROL ROD EJECTION AND BOILING-WATER REACTOR CONTROL ROD DROP ACCIDENTS
Date: Monday, August 24, 2020 2:59:23 PM
Attachments: [image008.png](#)
[image009.png](#)

Dear Mr. Sunseri:

Thank you for your letter dated July 22, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20204A985), about the Advisory Committee on Reactor Safeguards (ACRS) review of Draft Regulatory Guide (RG) 1.236, "Pressurized-Water Reactor Control Rod Ejection and Boiling-Water Reactor Control Rod Drop Accidents." I appreciate the time and effort the ACRS devoted to this subject, as reflected in meetings held with the combined Metallurgy and Reactor Fuels and Accident Analysis - Thermal-Hydraulics Phenomena Subcommittees on May 5, 2020, and the ACRS Full Committee on June 3-5, 2020.

Your letter contained four conclusions and recommendations; the staff's responses are provided below:

Conclusion and Recommendation 1:

RG 1.236 provides thorough, comprehensive guidance for analyzing reactivity-insertion accidents, and it should be issued.

Staff Response: The staff agrees with this conclusion.

Conclusion and Recommendation 2:

Timely completion of RG 1.183 on source terms is a necessary complement to fully implement the guidance in RG 1.236.

Staff Response: The staff agrees with this recommendation and is working to timely complete a revision to RG 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors." In addition to capturing the transient fission gas release correlations needed to fully implement the guidance in RG 1.236, the staff is working to expand the applicability of RG 1.183 to a higher burnup limit.

Conclusion and Recommendation 3:

Significant effort was made by the staff in reviewing experimental data to define limits in RG 1.236. Key background materials, methods, and rationale used to develop this guide should be captured and published as part of the Commission's Knowledge Management Program.

Staff Response: The staff agrees with this recommendation and will develop and publish a NUREG/KM capturing the technical bases for the guidance defined in RG 1.236.

Conclusion and Recommendation 4:

It is anticipated that this guide will be applied on a case-by-case basis as evolutionary changes are made to light water reactor (LWR) fuels. These include changes to fuel pellet and cladding structure, higher enrichments, non-UO₂ fuel forms, and higher burnups. We look forward to reviewing staff actions related to these and similar submittals.

Staff Response: The staff agrees with this recommendation. However, the NRC staff does not intend to use the guidance in this regulatory guide to support NRC staff actions in a manner that would constitute either forward fitting or backfitting as defined and described in Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests."

The staff appreciates your review of draft RG 1.236 and looks forward to future interactions with the ACRS on nuclear fuel-related topics.

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