

April 29, 2015

MEMORANDUM TO: Brian E. Thomas, Director  
Division of Engineering  
Office of Nuclear Regulatory Research

FROM: Lawrence E. Kokajko, Director /RA/  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

SUBJECT: RESULTS OF PERIODIC REVIEW OF REGULATORY GUIDE 1.133 -  
REVISED

This memorandum supersedes the January 29, 2015, memorandum available in the Agencywide Documents Access and Management System at Accession No. ML15008A060, on the same subject and documents the updated U.S. Nuclear Regulatory Commission periodic review of Regulatory Guide (RG) 1.133, "Loose-Part Detection Program for Primary System of Light-Water-Cooled Reactors," published in May 1981. The RG provides guidance on loose-part detection program for the primary system of light-water cooled reactors. As discussed in Management Directive 6.6, "Regulatory Guides," the NRR staff reviews RGs approximately every five years to ensure that the RGs continue to provide useful guidance. The NRR staff revised the results of their review to address additional questions and comments from your staff. The documentation of the NRR staff review is enclosed.

Based on the results of the periodic review, the NRR staff concludes that no immediate changes to RG 1.133, Revision 1, are warranted at this time. However, the NRR staff plans to complete a detailed evaluation of regulatory issues and references to assess their impact on RG 1.133. The NRR staff will publish a report on this evaluation, including a determination of the future need to revise RG 1.133, in approximately one year.

Enclosure:  
Regulatory Guide Periodic Review

CONTACT: Leslie Perkins, NRR/DPR  
301-415-2375

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**NRR-106**

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## Regulatory Guide Periodic Review

Regulatory Guide Number: **1.133**

Title: **Loose-Part Detection Program For Primary System of Light-Water-Cooled Reactors**

Office/division/branch: **NRR/DE/EICB**  
Technical Lead: **Gursharan Singh**

Recommended Staff Action: **Reviewed with issues identified for future consideration**

**1. What are the known technical or regulatory issues with the current version of the Regulatory Guide (RG)?**

RG 1.133, Revision 1, "Loose-Part Detection Program for Primary System of Light-Water-Cooled Reactors," published in May 1981, establishes the U.S. Nuclear Regulatory Commission's (NRC) guidance on loose-part detection program for the primary system of light-water cooled reactors.

Section A of the RG references Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Part 36, and several paragraphs that are no longer applicable per the current Standard Technical Specifications. This part of the RG should be corrected in a future revision.

Section A of the RG also references Paragraph 20.1(c) of 10 CFR Part 20. The paragraph numbering system in 10 CFR Part 20 has been revised. Subpart part A, Paragraph 20.1003 now provides the definition of as low as reasonably achievable (ALARA). The occupational dose rates are now contained in Subpart C, Section 20.1201.

Section C.6 of the RG references Regulatory Guide 1.16 for notification requirements. However, this RG has been withdrawn and this reference needs to be deleted in a future revision.

The staff did not identify the need to revise the RG at this time. However, the NRC plans to complete a detailed evaluation of regulatory issues and references to assess their impact on RG 1.133. The NRC will publish a report on this evaluation, including a determination of the future need to revise RG 1.133, in approximately one year.

**2. What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of anticipated numbers of licensing and inspection activities over the next several years?**

The staff did not identify any technical issues in the review. However, there is a need to update the applicability of the RG and the references.

ENCLOSURE

- 3. What is an estimate of the level of effort needed to address identified issues in terms of full-time equivalent (FTE) and contractor resources**

Approximately 0.1 FTE.

- 4. Based on the answers to the questions above, what is the NRC staff action for this guide (reviewed with no issues identified, reviewed with issues identified for future consideration, revise, or withdraw)?**

Reviewed with issues identified for future consideration.

- 5. Provide a conceptual plan and timeframe to address the issues identified during the review.**

The NRC will publish a report on this evaluation, including a determination of the future need to revise RG 1.133, in approximately one year.

**NOTE: This review was conducted in February 2015 and reflects the NRC staff's plans as of that date. These plans are tentative and subject to change.**