

Regulatory Guide Periodic Review

Regulatory Guide Number: 3.61

Title: **Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask**

Office/division/branch: **NMSS/SFST/CSDAB**
Technical Lead: **Michel Call**

Recommended Staff Action: **Revise**

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

Significant changes to staff guidance have been made since the publication of the current RG revision. Thus, the RG information is inconsistent with current staff expectations for applications for cask certificates of compliance (CoCs). Differences include the addition to the staff's review guidance of a materials chapter and information regarding storage of non-fuel hardware, the condition of the spent fuel contents, off-site dose evaluations for the radiation protection chapter, off-normal conditions and accident conditions evaluations in the thermal chapter, and off-normal conditions evaluations for the confinement chapter. This information is not reflected in the current RG revision.

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 anticipates one new application for a dry cask storage certificate of compliance and 6 amendments to existing certificates of compliance each year for the next few years.

The staff's review guidance in NUREG-1536, "Standard Review Plan for Dry Cask Storage Systems" is publicly available. This guidance explains how the staff is to review applications for cask CoCs. Applicants can infer from this staff guidance the kinds of information and analyses they need to include in their applications. CoC holders and applicants currently refer to the staff's review guidance for this information. However, a RG (which is supposed to explain the needed information for CoC applications to potential applicants) that is inconsistent with the related staff guidance can be a source of confusion and lead to incomplete or inadequate CoC applications. This in turn can mean lengthier reviews and increased resource expenditures for the staff and the applicant.

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 0.2 full-time equivalency (FTE) will be required to complete the review and update of the regulatory guide.

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

The staff plans to revise RG 3.61 to make the guide be consistent with current staff expectations for applications for cask certificates of compliance (CoCs).

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

NMSS/SFST/CSDAB proposes to provide draft RG to RES by the fall of 2014. The draft RG anticipated to be issued for public comment by mid-2015.

NOTE: This review was conducted in June, 2014 and reflects the staff's plans as of that date. These plans are tentative and subject to change.

Regulatory Guide Periodic Review

Regulatory Guide Number: 3.62

Title: **Standard Format and Content for the Safety Analysis Report for Onsite Storage of Spent Fuel Storage Casks**

Office/division/branch: **NMSS/DFSFT/LB**
Technical Lead: **Bernie White**

Recommended Staff Action: Revise

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

The 1989 version of the RG is out of date. The 1989 revision of the RG 3.62 does not sufficiently address the information needed to make a determination on whether to issue an independent spent fuel storage installation (ISFSI) license. For example, the RG does not include explicit requirements for the structural, confinement or criticality evaluations of the facility. In addition, since the RG was issued, authorization for a monitored retrievable storage (MRS) facility and storage of high-level waste were added to the regulations, but not to RG 3.62. As a result of the above, licensees use NUREG-1567, "Standard Review Plan for Spent Fuel Dry Storage Facilities" as an alternative.

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 anticipates one or two applications for a new license to store spent fuel in an ISFSI or MRS over the next 5 to 10 years and 10 amendments to existing licenses each year for the next few years. Applicants and the staff will be less efficient in their reviews because the guidance is not up to date and does not match the staff review guidance in NUREG-1567.

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?

0.1 FTE and no contract dollars from NMSS/SFST to revise the RG and address public comments.

4. Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?

The staff plans to revise RG 3.62

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

A draft guide will be transmitted to the Regulatory Guidance and Generic Issues branch in the Office of Nuclear Regulatory Research. The draft guide anticipated to be issued for public comments by mid-2015.

NOTE: This review was conducted in June, 2014 and reflects the staff's plans as of that date. These plans are tentative and subject to change.

Regulatory Guide Periodic Review

Regulatory Guide Number: 7.6

Title: Design Criteria for the Structural Analysis of Shipping Cask Containment Vessels

Office/division/branch: NMSS/DSFST/LB
Technical Lead: Gordon Bjorkman

Recommended Staff Action: Reviewed with issues identified

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

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code adopted strain based acceptance criteria in the 2013 edition of the ASME Code Section III, Division 3. The current RG does not contain staff guidance on acceptable methods to implement the new ASME strain based acceptance criteria.

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?

NRC expects to receive on average 1 to 2 new spent fuel package designs over the next 3 years. Applicants will likely continue to use stress based criteria. However, applicants propose strain based criteria the NRC staff will need to review such applications case-by-case, which is less efficient and effective for both applicants and NRC staff than using established NRC guidance.

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?

NMSS/DSFST/LB anticipates the effort to be 0.1 to 0.2 full-time equivalent (FTE) and the revision will be the work of NRC staff.

4. Based on the answers to the questions above, what is the staff action for this guide (Reviewed with no issues identified, Reviewed with issues identified for future consideration, Revise, or Withdraw)?

Revise with issues identified for future consideration.

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

The staff plans to assess the issue again as part of the next periodic review of the RG.

NOTE: This review was conducted in June, 2014 and reflects the staff's plans as of that date. These plans are tentative and subject to change.