OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS RESULTS OF PERIODIC REVIEW OF REGULATORY GUIDES

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

I. Division of Fuel Cycle Safety and Safeguards

A. **Regulatory Guide 3.15**, Standard Format and Content of License Applications for Storage Only of Unirradiated Power Reactor Fuel and Associated Radioactive Material

This Regulatory Guide (RG) is currently under revision (last revision dated 1983). The draft guide was provided to management on December 18, 2013, for review and comments. The final draft is expected to be transmitted to the Office of Nuclear Regulatory Research (RES), Division of Engineering, Regulatory Guidance and Generic Issues Branch by late March 2014. The final/revised RG is expected to be issued one year after that.

Recommended Staff Action: Revise.

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

This RG is being revised to update outdated or revised forms, RGs, and regulations that are referenced in the RG and to incorporate additional information important to the safe operation and subsequent decommissioning of an unirradiated power reactor fuel storage site. This proposed revision provides specific guidance on the format and content of the expected new applications for licenses to authorize the storage of unirradiated power reactor fuel.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

Not updating this RG would not address inefficiencies imposed on applicants and staff in preparing and reviewing applications.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

An estimate of the effort needed to revise this RG is between 0.10 FTE and 0.20 FTE.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

The staff has already recommended that this RG be revised (currently in process).

Enclosure

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

Publish draft by second quarter of 2014. Publish final RG one year after that.

B. **Regulatory Guide 3.16**, General Fire Protection Guide for Plutonium Processing and Fuel Fabrication Plants

The most recent revision of this RG was completed on April 17, 2009. (see <u>74 FR 17885</u>).

Recommended Staff Action: No change/Accept as is.

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

There are no technical or regulatory issues with the current version of the RG.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

There are no technical or regulatory issues with the current version of the RG.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

Since there are no technical or regulatory issues with the current version of the RG, the level of effort is 0 FTE and 0 contract dollars.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

The recommended staff action is to declare this RG as REVIEWED. There are no technical or regulatory issues with the current version of the RG. The RG is referenced by a licensee within licensing basis documentation to demonstrate compliance of their fire protection program. The RG is needed and is acceptable in its current version.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

N/A

C. **Regulatory Guide 3.52**, Standard Format and Content for the Health and Safety Sections of License Renewal Applications for Uranium Processing and Fuel Fabrication

The most recent revision of this RG was completed on June 3, 2009. (see <u>74 FR 26737</u>).

Recommended Staff Action: Administrative change.

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

Some of the references, for example NUREG-1520, have been updated since the RG was published. The revision numbers and dates in the "Reference" section need to be updated.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

The magnitude of the issue's impact on internal and external stakeholders is low to moderate. The number of Part 70 renewal applications over the next 3-5 years is less than 5.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

An estimate of the effort needed to correct the identified issues is less than 0.1 FTE.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

The proposed action is an administrative change to change the dates of the NUREGs in the Reference Section of this RG.

Basis: the references do not cite the latest version of the NUREGs. Changing the dates is an administrative and not a technical change.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

If a decision is made to make an administrative change to RG 3.52, the changes will include updating the revision number and dates for the NUREGs (e.g., NUREG-1520) referenced in the RG. The Regulatory Guide branch of RES will initiate this process with the Office of Nuclear Material Safety and Safeguards reviewer.

D. **Regulatory Guide 3.55**, Standard Format and Content for the Health and Safety Sections of License Renewal Applications for Uranium Hexafluoride Production

The draft final Part 40 rule was provided to the Commission as SECY-12-071 (dated May 7, 2012). The SRM on SECY-12-071 was issued May 3, 2013. In summary, the Commission voted down the draft final rule. The staff identified two options for a path forward: 1) revise the guidance based on current requirements; or 2) delay the updates until the Part 40 rulemaking is revised (estimated to take 4 years). The staff plans to move ahead with revising this RG instead of waiting for Part 40 to be revised.

Recommended Staff Action: Revise.

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

The technical or regulatory issues with the current version of RG 3.55 are unknown at this time. Based on the revised status of the Part 40 rulemaking, the RG will need to be reevaluated against the current regulatory requirements to determine which are these technical or regulatory issues.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

Impacts on internal and external stakeholders are still to be determined.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

FTE and contract dollars are still to be determined.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

Perform a review against the current requirements in Part 40.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

Conceptual plan and timeframes are to be determined.

II. Division of Spent Fuel Alternative Strategies

A. **Regulatory Guide 3.69**, *Topical Guidelines for the Licensing Support Network*

The most recent revision (Revision 1) to this RG was completed in June 2004 (the draft guide was issued as DG-3022).

Recommended Staff Action: No change/Accept as is.

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

The Licensing Support Network has been decommissioned and is no longer available.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

Regardless of whether or not the RG is updated for the known issues, the Licensing Support Network would remain unavailable.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

An estimate to address identified issues has not been developed.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

The staff recommends that RG 3.69 remain as is. Though the Licensing Support Network has been decommissioned and is no longer available, the related adjudicatory proceeding is still suspended.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

N/A

III. Division of Spent Fuel Storage and Transportation

A. **Regulatory Guide 3.48**, Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation or Monitored Retrievable Storage Installation (Dry Storage)

The most recent revision to this RG was completed in August 1989.

Recommended Staff Action: Withdraw (after publication in final of RG 3.62).

(1) What did the RG support?

Licensing of an independent spent fuel storage installation not co-located at a nuclear power plant.

(2) What was the purpose of the RG?

Standard format and content for a safety analysis report for a license application for an independent spent fuel storage installation or a monitored retrievable storage facility that is not located at a nuclear power plant.

(3) How was the RG used?

- Safety analysis report for the Foster Wheeler independent spent fuel storage installation (Docket No. 72-25) was written using the guidance in RG 3.48.
- Safety analysis report for Private Fuel Storage independent spent fuel storage installation (Docket No. 72-22) was written using the guidance in RG 3.48.

(4) Why the RG is no longer needed?

No longer needed because it will be combined with RG 3.62, which when revised will be an updated standard format and content guide for a safety analysis report for a license application for an independent spent fuel storage installation or a monitored retrievable storage facility, regardless of whether it will be co-located at a nuclear power plant or not.

(5) What guidance is available once the RG is removed?

Revised RG 3.62 will contain the same information as an updated RG 3.48.

(6) Is the RG referenced in other documents and what are the "ripple effects" on these documents?

• Referenced in RG 3.50, Revision 1. A draft of Revision 2 was published in the *Federal Register* in January 2014. The draft of the revised RG does not refer to RG 3.48.

• Referenced in RG 3.53, Rev. 0. The Division of Spent Fuel Storage and Transportation (SFST) is in the process of revising RG 3.53. The draft of the revised RG does not refer to RG 3.48.

(7) What is the basis for believing that no guidance similar to that in the RG will ever be needed?

The guidance this document provides would be duplicative with RG 3.62.

(8) Will generic guidance still be needed?

Yes, in the form of RG 3.62.

(9) What is the rationale for withdrawing this RG instead of revising it?

See 5 above.

(10) Do other agencies rely upon the RG, e.g., the Agreement States, National Aeronautical and Space Administration, Department of Energy?

No.

B. **Regulatory Guide 3.53**, Applicability of Existing Regulatory Guides to the Design and Operation of an Independent Spent Fuel Storage Installation

The most recent revision to this RG was completed in 1982.

Recommended Staff Action: Revise.

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

In RG 3.53, the issues deal with the applicability of existing RGs to the design and operation of an independent spent fuel storage installation (ISFSI). Within the revision that is currently in house, the goal is to add the applicability of existing RGs for the construction of an ISFSI as well.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

At this juncture, there wouldn't be an immediate impact on internal and external stakeholders.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

An estimate of the effort needed to correct the identified issues is between 0.10 FTE and 0.20 FTE.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

The staff recommends to revise this RG. This is important because this RG hasn't been updated in over 30 years and it is important to capture the essential information to make sure that our ISFSIs are being operated, designed, and constructed in a proper manner. Thus far, the team took time to review the original RG, provided updated RGs and Title 10 of the *Code of Federal Regulations* Part 72 locations to RG Project Manager. From there, the Project Manager placed those comments into the soon-to-be revised Revision 1.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

Upon concurrence from the Branch Chiefs and Division Management in SFST, the revised version will be submitted to RES and upon receiving feedback there, the Project Manager and the team will come together in order to address the feedback and complete the task of revising the RG. Timeframe: upon concurrence, it would be an additional 3-6 months to complete the task.

C. **Regulatory Guide 3.60**, *Design of an Independent Spent Fuel Storage Installation (Dry Storage)*

The most recent revision to this RG was completed in 1987.

Recommended Staff Action: Revise.

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

Regulatory Guide 3.60 takes exception to certain sections of the American National Standards Institute Standard 57.9 published in 1984. The RG will be revised to incorporate guidance for performing seismic analyses and long term settlement evaluations of ISFSI concrete pads.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

Stakeholders may be incorrectly performing seismic analyses and long term settlement evaluations in the design of ISFSI concrete pads. This could lead to license conditions to limit the number of casks that can be stored on the pad.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

0.1 to 0.2 SFST FTE. No contract dollars necessary.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

Revise based on response to item 2.

(5) If a RG should be revised, provide a conceptual plan and timeframe accomplish this.

Public meetings have been held at U.S. Nuclear Regulatory Commission Headquarters to provide guidance to licensees on how to properly perform seismic analyses and long term settlement evaluations. The revision of the RG is on a prioritized list of Dr. Bjorkman's current work activities which is reviewed each month by the SFST Director and Deputy Director.

D. **Regulatory Guide 3.61**, Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask

The most recent revision to this RG was completed in February 1989.

Recommended Staff Action: Revise.

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

It is out of date and is currently being revised by SFST.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection 1 activities?

None, storage cask vendors currently use NUREG-1536, "Standard Review Plan for Dry Cask Storage Systems" as an alternative. Most certificate holders currently use the NUREG instead of the RG since the RG is out of date.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

0.2 FTE and no contract dollars from SFST.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

SFST is already in process of revising this RG and proposes to continue and finish the revision.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

SFST proposes to provide draft to RES on August 29, 2014.

E. **Regulatory Guide 3.62**, Standard Format and Content for the Safety Analysis Report for Onsite Storage of Spent Fuel Storage Casks

The most recent revision to this RG was completed in February 1989.

Recommended Staff Action: Revise.

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

The 1989 version of the RG is out of date.

(2) What is the impact on internal and external stakeholders of not updating the RG for the known issues, in terms of licensing and inspection activities?

None, licensees would use NUREG-1567, "Standard Review Plan for Spent Fuel Dry Storage Facilities" as an alternative.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

0.1 FTE and no contract dollars from SFST to address public comments and revise RG based on comments.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

Revise the RG. SFST provided a draft revision to this RG to RES in April 2012. See Agencywide Documents Access and Management System Accession No. ML12110A181.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

RES has a draft of this document to process for publication for comment in the *Federal Register.*

F. **Regulatory Guide 7.6**, Design Criteria for the Structural Analysis of Shipping Cask Containment Vessels

The most recent revision to this RG was completed in 1979. A management decision was made to defer the review of this RG to wait for strain-based criteria to be included in the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code for transportation packages.

Recommended Staff Action: Revise.

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

The ASME 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 licensing and inspection activities?

Applicants will continue to use stress based criteria.

(3) What is an estimate of the level of effort needed to address identified issues in terms of FTE and contract dollars?

0.1 to 0.2 SFST FTE. No contract dollars required.

(4) Based on the answers to the questions above, what is the recommended staff action for this RG (Revise, Review, Administrative Change, or Withdraw)?

Revise to incorporate the new ASME Code strain based acceptance criteria.

(5) If a RG should be revised, provide a conceptual plan and timeframe to accomplish this.

The revision of the RG is on a prioritized list of activities that is reviewed each month by the SFST Director and Deputy Director.