U.S. Nuclear Regulatory Commission Public Meeting Summary

June 28, 2017

Title: Public Meeting to Discuss the Scope and Related Costs and Benefits Associated with the "Reactor Vessel Materials Surveillance Program Requirements" Proposed Rulemaking

Meeting Identifier: 20170761

Date of Meeting: June 1, 2017

Location: NRC Two White Flint North, 11545 Rockville Pike, Rockville, MD 20852 (Room TWFN-02B3)

Type of Meeting: Category 3

Purpose of the Meeting:

To provide an opportunity for the Nuclear Regulatory Commission (NRC) and external stakeholders to exchange information on the scope and related costs and benefits associated with the proposed rulemaking, 10 CFR Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements." Feedback obtained at the meeting will be considered as the NRC staff' develop the draft regulatory basis and preliminary draft regulatory analysis for the proposed rule.

General Details:

The NRC conducted a public meeting scheduled from 8:00 a.m. – 12:00 p.m. eastern standard time (EST) that ran approximately 2.5 hours. The meeting began with an introduction of all participants and a review of the meeting ground rules, followed by a short presentation on the rulemaking process and schedule, and the purpose of a regulatory basis and regulatory analysis by Mr. Stewart Schneider. Subsequently, the presentation on the rulemaking background, status, outstanding technical issues, and the options being considered for revising Appendix H was given by Dr. David Rudland. The presentations focused on providing an overview of the NRC's development of the draft regulatory basis and preliminary draft regulatory analysis and obtaining public feedback on the rulemaking scope, options presented, and related costs and benefits. Questions were addressed during the presentations and at the end of the meeting. The meeting concluded with a description of how to find information for this rulemaking at regulations.gov and use of the NRC public meeting feedback form.

The meeting was attended by approximately 35 individuals, including 18 NRC staff and about 17 members of the public. Approximately half attended in person and the other half participated via webinar/teleconference. Meeting participants included representatives from the nuclear industry (e.g., Nuclear Energy Institute, Electric Power Research Institute, and American Nuclear Insurers), nuclear power licensees (e.g., Duke Energy, Florida Power and Light, and Dominion Energy), a foreign nuclear regulatory organization, and a private citizen. Several of the participants asked questions regarding the rulemaking scope and process; and the NRC staff provided responses and clarifications. The meeting was transcribed and the transcript is

available in the NRC's Agencywide Document Access and Management System (ADAMS) under Accession No. ML17173A074. A list of attendees is provided as an attachment to this meeting summary.

Summary of NRC Presentation: The NRC is in the early stage of the rulemaking process to revise the requirements in 10 CFR Part 50, Appendix H, "Reactor Vessel Materials Surveillance Program." The NRC is currently developing the draft regulatory basis and preliminary draft regulatory analysis documents. The regulatory basis document will describe the regulatory issue, options to address the issue, and the NRC's recommended option. Whereas, the regulatory analysis document will present a systematic and disciplined process in considering the costs and benefits associated with all of the approaches to resolving the issue. To this end, the NRC requested that the participants provide their thoughts and comments on the preliminary costs provided with each option. It was stated that the NRC expects to publish both documents for a 45-day public comment period in early 2018

The NRC staff presented three regulatory options pertaining to the revision of Appendix H.

> *Option A* would maintain the status quo." Appendix H would not be revised under this option.
>
> *Option B* would retain ASTM E-185-82 and make limited revisions to Appendix H. This option would maximize the burden reduction, in part, by eliminating certain requirements and extending the reporting period for surveillance capsule reports.
>
> *Option C* would revise Appendix H to incorporate ASTM E-185-16 and E2215-16, include the burden reductions of Option B, and create 13 conditions to offset increases in requirements and burden due to the incorporation of the updated ASTM standards.

The NRC staff explained that while Options B and C are technically adequate, Option C would cost more to industry and the NRC, and lengthen the rulemaking process. The NRC staff indicated that subject to public feedback from this meeting, the draft regulatory basis and preliminary draft regulatory analysis would recommend Option B to the Commission. Also, the NRC staff noted that it's considering the need for developing a companion regulatory guide for this rulemaking. Currently, there is no regulatory guide specific to Appendix H.

The NRC's presentation slides are available in ADAMS under Accession No. ML17144A043.

Public Participation Themes:

NRC staff addressed questions on the following topics:

- Question: Has the NRC considered eliminating or reducing the current requirements to test tensile specimens? Testing of tensile specimens could be something that would be entirely optional as there is no direct use of this data in the regulations.

  NRC Response: The NRC has previously debated this issue internally and will take an action to reconsider the requirements to test tensile specimens when developing the draft regulatory basis.

- Question: How might the proposed simplifying and streamlining of the integrated surveillance program affect the current programs?

  NRC Response: The proposed revisions to the Appendix H requirements would not affect the current integrated surveillance programs. However, there are potential savings for new program designs, which could be significant for small modular reactors.

- Question: Are the NRC's cost estimates per reactor unit or for the fleet?

  NRC Response: The estimates were based on either a per capsule or per vessel cost. However, the preliminary draft regulatory analysis will also present the costs for the entire fleet for each regulatory option.

- Question: Would the options presented have any retroactive impact on existing data sources?

  NRC Response: The options presented would not require licensees to change the design of their existing surveillance programs.

- Question: Would the proposed revisions to Appendix H create a burden on licensees who are going into subsequent license renewal?

  NRC Response: The requirements in Appendix H would continue to be based on a 40-year program. Therefore, the rulemaking would not impose additional burden on these licensees.

Additionally, a representative from the Westinghouse Electric Company suggested reducing the number of required tensile specimens to one or two and holding the other one or two in reserve for potential future testing may be worth considering. Another representative from the Electric Power Research Institute (EPRI) stated that utility members are supportive of Option B. (The utility members are from an industry pressurized water reactor group known as the Material Reliability Program which is administered by EPRI.) The reasons given were its cost and relative simplicity. Also, Option B addresses most of the utility member's concerns for data reporting and eliminating certain test specimens such as heat affected zone (HAZ) specimens.

The NRC staff noted that as part of Option B, it was considering the development of a regulatory guide to include some of the current ASTM recommendations. The general reaction of the industry representatives was to not develop such guidance. Specifically, the representative from Westinghouse Electric Company cautioned that such documents could become de facto requirements and may increase burden on licensees. The NRC staff acknowledged that it would consider the industry's concerns regarding this issue.

Industry and licensee representatives agreed with many of the NRC's cost estimates, but provided feedback when these estimates did not align with their operational experience. Some participants noted that the cost savings and burdens would be greater than the dollar values presented by the NRC.

Action Items/Next Steps:

- At the public meeting, the NRC staff stated that it would establish an NRC docket identification number for the Appendix H rulemaking at regulations.gov and provide it in this summary. The NRC Docket Identification Number is NRC-2017-0151 and the Rulemaking Identification Number (RIN) is 3150-AK07.
- The NRC expects to publish the draft regulatory basis and preliminary draft regulatory analysis for a 45-day public comment period in early 2018.
- The NRC will hold another public meeting during the 45-day public comment period.

Additional Information:

- Meeting notice and agenda: ADAMS Accession No. ML17145A239
- NRC staff presentation: ADAMS Accession No. ML17144A043
- Transcript: ADAMS Accession No. ML17173A074
- Meeting Summary: ADAMS Accession No. ML17173A081

SUBJECT: PUBLIC MEETING TO DISCUSS THE SCOPE AND RELATED COSTS AND BENEFITS ASSOCIATED WITH THE "REACTOR VESSEL MATERIALS SURVEILLANCE PROGRAM REQUIREMENTS" PROPOSED RULEMAKING
DATE: June 28, 2017

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ADAMS Accession No.: ML17173A081

OFFICE	NRR/DPR/PM	NRR/DPR/RS	NRR/DPR/BC
NAME	SSchneider	GLappert	MKhanna
DATE	6/23/2017	6/27/2017	6/28/17

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LIST OF ATTENDEES FOR 6/1/2017 CATEGORY 3 PUBLIC MEETING	
Name	**Affiliation**
Theresa Barczy	NRC
Tison Campbell	NRC
Daniel Doyle	NRC
Carolyn Fairbanks	NRC
Antonio Gomez	NRC
Alan Hiser	NRC
Christopher Hovanec	NRC
Joel Jenkins	NRC
Mark Kirk	NRC
Scott Krepel	NRC
Matthew Mitchell	NRC
Jeffrey Poehler	NRC
David Rudland	NRC
Fred Schofer	NRC
Stewart Schneider	NRC
Dan Widrevitz	NRC
On Yee	NRC
Austin Young	NRC
Jana Bergman	Curtiss-Wright
Scott Boggs	Florida Power & Light
Robert Carter	EPRI
Matthew Devan	AREVA
Cory Flensburg	FirstEnergy
Stephen Geier	Nuclear Energy Institute
Brian Hall	Westinghouse Electric Company
Tim Hardin	Electric Power Research Institute
Robert Hayword	FirstEnergy
Michael Hoehn	Ameren Electric Services Company
Satira Labib	Duke Energy
Elliot Long	Electric Power Research Institute
Nathan Palm	Electric Power Research Institute
Dan Solitz	Member of the public
Tae-Kwang Song	Korea Institute of Nuclear Safety
Craig Stewart	American Nuclear Insurers
Chuck Tomes	Dominion Energy