

# **Status of Spent Fuel Reprocessing Rulemaking**

March 4, 2020

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# Opening Remarks

Christopher Regan

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# NRC Staff Presentation

Wendy Reed

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Office of Nuclear Material Safety and Safeguards

# Purpose



Discuss the status of the proposed rulemaking on spent fuel reprocessing from light water reactors and provide opportunity for public input.

# Background



- In 2006, the staff submitted SECY-06-0066 to the Commission which described the potential regulatory and resource implications for the NRC to license spent fuel reprocessing facilities.
- In 2009, the staff provided the Commission a summary of its final reprocessing regulatory gap analysis as part of the effort to establish a reprocessing regulatory framework (SECY-09-0082). In total, 23 gaps were identified.
- In 2011, the staff submitted SECY-11-0163 to the Commission which summarized the staff's progress and a path forward for updating the regulatory framework for licensing a reprocessing facility.

# Background (cont.)



- In 2012, the staff was asked to provide the Commission with the staff's assessment of the current state of activity and Department of Energy (DOE) and industry plans regarding reprocessing.
- In 2013, the staff submitted SECY-13-0093 in response to the Commission's questions, and to seek direction regarding a path forward on the regulatory framework for licensing a reprocessing facility.
- The Commission approved staff's recommendation from SECY-13-0093 to develop a reprocessing-specific rule as a new part of the NRC regulations.
- The staff was also directed to limit the development of the framework to the resolution of Gap 5, "Safety and Risk Assessment Methodologies and Considerations for a Reprocessing Facility."

# Letters of Interest



- Between 2008 and 2013, four nuclear industry companies informed the NRC of their support for updating the regulatory framework. Industry interest in reprocessing spent fuel provided the primary impetus for NRC to move forward on rulemaking.
- In 2016, the NRC suspended work on the rulemaking due to budgetary constraints and an apparent lack of commercial interest in constructing and operating a spent fuel reprocessing facility.



# Current Status



- The Commission is expecting a final technical basis on the Gap 5 resolution and proposed path forward on spent fuel reprocessing rulemaking in early 2021.
- The DOE recently has expressed renewed interest in exploring options for reprocessing of spent nuclear fuel for light water reactors.
- Industry interest in reprocessing spent fuel in recent years appears not to be as strong.

# Planned Next Steps



- Information from this public meeting will help the staff develop a paper to the Commission pertaining to the spent fuel reprocessing regulatory basis and any rulemaking that may be an outcome.

# Discussion Questions



- A typical rulemaking costs approximately 2.4 million dollars. Should the NRC discontinue the spent fuel reprocessing rulemaking?
- What is the intention of industry with regard to the construction, licensing and operation of spent fuel reprocessing facilities?

# Closing Remarks

# How did we do?

- Link to NRC Public Meeting Feedback form:



- Email feedback to [Wendy.Reed@nrc.gov](mailto:Wendy.Reed@nrc.gov) and [Edward.Lohr@nrc.gov](mailto:Edward.Lohr@nrc.gov)

# References



- SECY-06-0066, “Regulatory and Resource Implications of a Department of Energy Spent Nuclear Fuel Recycling Program,” dated March 22, 2006 (ADAMS Accession No. ML060370037).
- SECY-09-0082, “Update on Reprocessing Regulatory Framework - Summary of Gap Analysis,” dated May 28, 2009 (ADAMS Accession No. ML091520243).
- SECY-11-0163, “Reprocessing Rulemaking: Draft Regulatory Basis and Path Forward,” dated November 18, 2011 (ADAMS Accession No. ML113202350).
- SRM-SECY-11-0163, “Reprocessing Rulemaking: Draft Regulatory Basis and Path Forward,” dated August 30, 2012 (ADAMS Accession No. ML122430189).

# References (cont.)



- SECY-13-0093, “Reprocessing Regulatory Framework – Status and Next Steps,” dated August 30, 2013 (ADAMS Accession No. ML13178A243).
- SRM-SECY-13-0093, “Reprocessing Regulatory Framework – Status and Next Steps,” dated November 4, 2013 (ADAMS Accession No. ML13308A403).