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Date: Tue, Nov 16, 1999 2:35 PM
Subject: Decommissioning Meeting Summary

MEETING: Commission Briefing on Integrated Review of
Decommissioning Requirements

DATE: November 8, 1999 **APPLICABILITY:** PWR/BWR

NUMBER: MS-99-97 **KEY SUBJECT:**
Decommissioning

Overview:

- The Staff plans to release its draft study on spent fuel pool risk for decommissioning reactors for public comment in early January 2000; a final report is expected to be issued in early April 2000.
- Under a decommissioning regulatory improvement initiative, the Staff has recommended that the reactor decommissioning regulations be consolidated into a dedicated part within the 10 CFR. A rulemaking plan for this effort is scheduled to be developed by July 2000.

Discussion:

The Commission met with representatives from the Staff, NEI, and other stakeholders to discuss issues related to improving decommissioning regulations. The Staff's plan to improve the regulatory process for decommissioning reactors is discussed in SECY-99-168. As part of this effort, a technical working group (TWG) was formed to assess the risks associated with spent fuel pool (SFP) accidents in decommissioning plants to provide a technical basis for the development of rulemaking and review of exemption requests. Several public meetings have been held to discuss the Staff's activities in this area, including a meeting in April 1999 (see SERCH MS-99-42).

An overview of the TWG activities was provided by Diane Jackson, TWG Lead Engineer. A preliminary draft of the TWG study was released in June 1999; two key areas addressed in the report were an estimation of decay time for spent fuel heatup analyses and a risk assessment of initiating events that could lead to fuel uncover. For the risk assessment, a broad set of initiating events were reviewed, including loss of SFP cooling, tornado missiles, seismic, heavy load handling, internal fire, aircraft,

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and loss of SFP inventory. Following release of the preliminary report, a number of comments and additional information were received from several stakeholders, including NEI and the Union of Concerned Scientists (UCS). A major concern raised by the industry was that the Staff's risk analysis did not give sufficient credit for actual plant conditions and operator actions in the event of a SFP accident. To address the stakeholder concerns, the TWG is conducting several follow-up activities in the following areas:

Human Reliability: Comments have been requested on an approach developed by the Staff to identify conditions to support an assumption of high human reliability (e.g., procedures, training).

Seismic: The Staff is reviewing a proposed checklist submitted by NEI that can be used to identify potential SFP structural vulnerabilities to seismic events.

Heavy Loads: A reassessment of the risk related to heavy load movement is being done using an NEI proposal that all decommissioning plants would implement Phase I and II actions from NUREG-0612 for the control of heavy loads.

Criticality: A reassessment is underway to look at the potential for criticality based on an expanded scope of scenarios.

Jackson added that the Staff is also addressing other concerns raised by stakeholders, such as those related to concrete aging and safeguards. Remaining activities to complete the TWG study include the conduct of additional technical work by NRC contractors and performance of an independent technical review. In addition, conclusions from the technical study will be formulated based on the risk-informed principles in Regulatory Guide 1.174. With regard to schedule, Jackson stated that the TWG plans to release a draft report for public comment in early January 2000; a final report is expected to be issued in early April 2000.

A description of the Staff's plans for rulemaking activities was provided by Bill Huffman. He noted that the results from the SFP risk study will be needed before proceeding with the rulemaking activities. Stuart Richards indicated that the decommissioning rulemakings may not meet the backfit criteria; thus, the Staff may offer these changes as a package for voluntary implementation. As discussed in SECY-99-168, two rulemaking activities are planned:

- 1) As a short-term effort, an integrated decommissioning

rulemaking package will be developed to address requirements in five areas: emergency planning, safeguards, insurance, backfit, and operator staffing and training. An integrated rulemaking plan is expected to be developed by May 31, 2000.

- 2) As a longer term activity, a decommissioning regulatory improvement initiative will be conducted to clarify the entire regulatory structure for decommissioning. This initiative involves a comprehensive regulatory review of existing regulations and development of rulemaking to clarify which regulations are applicable to decommissioning. Based on an initial screening, 41 potential areas have been identified that need clarification. Under this initiative, the Staff has recommended that the reactor decommissioning regulations be consolidated into a dedicated part within the 10 CFR. The rulemaking plan for this effort is scheduled to be developed by July 2000.

Several comments were given by the Commissioners regarding the timeframe for completion of the SFP risk study and proposed schedule for the rulemaking activities. Commissioner Diaz expressed concerns regarding the amount of time it is taking to develop a sound technical basis to address these issues and felt that it is imperative that work proceed faster to reach a resolution. Chairman Meserve indicated that Commissioner Dicus, who was not in attendance, has also expressed concerns regarding the length of time proposed for rulemaking. One issue raised is whether completion of the SFP risk study could proceed in parallel with development of a proposed rulemaking package. Huffman indicated that the Staff could possibly proceed with rulemaking after the draft study is released for public comment. However, both Commissioners McGaffigan and Merrifield felt that the study should be finalized before proceeding with rulemaking since there has been controversy relative to the preliminary findings from the study.

An industry perspective on decommissioning issues were provided by Lynette Hendricks and Mike Meisner. Hendricks noted that there are three main issues that affect decommissioning plants: certifications of spent fuel cask designs, an efficient license termination process, and risk informing the decommissioning regulations. With regard to cask certification, Hendricks stated that a more efficient process needs to be established for adding a cask design to the list of approved casks in Part 72 and for amending existing cask certificates. She added that maybe "smarter" certificates could be issued that would provide a design margin to cover all fuel types, both standard and non-standard fuel. Other areas that need to be addressed include allowing burnup credit in the cask designs. Commissioner McGaffigan

suggested that a separate briefing be held to further discuss issues related to dry cask storage.

Industry's views on the Staff's preliminary SFP risk study was presented by Meisner. He noted that, although the Staff has developed a good risk assessment model, the study included a number of conservatisms and worst case estimates that bias the risk profile and risk insights. In particular, significant conservatisms were identified in the human reliability analysis and upper bound values were used to determine the consequences from a heavy load drop. In addition, the Staff used fuel uncoverly as the endpoint of the analysis instead of calculating the risk associated with a zirconium fire. To address these concerns, the industry recommends that the study include the use of best estimate values to remove conservatisms, take credit for industry commitments, and use a more consistent approach as that used in existing PRAs for determining human error probability.

Other stakeholders also presented their views on improving the decommissioning regulations; some of the specific comments are summarized below:

Raymond Shadis, who serves on the Maine Yankee Community Advisory Panel, supported the Staff's efforts to conduct an in-depth review of the risks associated with SFP accidents. He noted that there is no need to rush this effort and expressed dismay that some of the Commissioners seemed only concerned about moving the study along. As part of establishing new decommissioning regulations, Shadis believes that some type of adjudicatory process, with simple access for stakeholders, should be established and noted that he was not aware of any legal grounds to prohibit the NRC from holding joint hearings with other agencies or governmental entities.

Paul Blanch stated that there are other significant issues that need to be addressed for decommissioning plants beyond those that are identified in SECY-99-168. For example, clear criteria needs to be established for site remediation requirements and other potential accidents, such as resin fires, should be evaluated. Furthermore, there needs to be consistent application of existing regulations as certain Part 50 requirements, including those related to security, fitness-for-duty, fire protection, and quality assurance are being implemented differently among the decommissioning sites. To provide consistency in addressing these issues, Blanch recommended that NUREG/CR-6451 be used to provide interim guidance for decommissioning. With regard to dry cask storage, Blanch believes that the site-specific requirements under 10 CFR 72 should be applied to decommissioning plants as Part 50 does not properly address high-level waste storage and the provisions under Part 72, Subpart K for a general license were only

intended for operating reactors.

David Stewart-Smith provided observations based on the Oregon's experience with decommissioning the Trojan facility. He felt that the Staff is on the right track in developing an integrated rulemaking package and believes consolidation of the decommissioning rules into a separate part of Title 10 is the best approach. Stewart-Smith added that the zirconium fire scenario is not the only source of risk at decommissioning plants. At Trojan, the worst case accident for offsite consequences was considered to be a fire in the low level waste storage area.

Copies of the following handouts are available upon request from the SERCH Staff:

- a) 14-page NRC vugraph, "Integrated Approach to Reactor Decommissioning Requirements"
- b) 25-page NEI vugraph, "Decommissioning - What's at Stake?"
- c) 14-page comments, "A Citizen Perspective Regarding an Integrated Review of Decommissioning Requirements," by Raymond Shadis
- d) 3-page summary of comments, "A Citizen Perspective Regarding an Integrated Review of Decommissioning Requirements," by Raymond Shadis
- e) 11-page vugraph, "Improving Decommissioning Regulations," by Paul Blanch
- f) 4-page vugraph, "Comments and Experience with Reactor Decommissioning," by David Stewart-Smith

NRC Staff Representatives:

William Travers, Executive Director for Operations (EDO)
Sam Collins, Director, Office of Nuclear Reactor Regulation (NRR)
William Kane, Director, Office of Nuclear Material Safety and Safeguards (NMSS)
Stuart Richards, Director, Project Directorate IV & Decommissioning (PDIV&D), NRR
John Greeves, Director, Division of Waste Management, NMSS
Bill Brach, Director, Spent Fuel Project Office, NMSS
Diane Jackson, Plant Systems Branch, NRR
William Huffman, PDIV&D, NRR

Stakeholders:

Mike Meisner, Maine Yankee, Chairman of NEI Decommissioning Working Group

Lynette Hendricks, NEI

Raymond Shadis, New England Coalition on Nuclear Pollution, Inc.
and Friends of the Coast - Opposing Nuclear Pollution

Paul Blanch, Energy Consultant

David Stewart-Smith, Office of Energy, State of Oregon

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