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Regulatory Improvements for Power Reactors Transitioning to Decommissioning

Comment On: NRC-2015-0070-0178

Regulatory Improvements for Power Reactors Transitioning to Decommissioning; Request for Comment on Draft Regulatory Basis

Document: NRC-2015-0070-DRAFT-0213

Comment on FR Doc # 2017-05141

Submitter Information

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General Comment

Omaha Public Power District (OPPD) is the licensee for Fort Calhoun Station (FCS). FCS permanently shutdown in late 2016 making it the most recent 10 CFR 50 facility to enter decommissioning. On March 15, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a notice in the Federal Register soliciting public comments on the agency's draft Regulatory Basis Document (RBD) for a rulemaking proposing changes to the Commission's decommissioning regulations. Subsequently, on May 9, 2017, the NRC issued a notice soliciting public comments on a preliminary draft regulatory analysis that supports the RBD. This document provides OPPD comments on the proposed rulemaking.

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI) has provided comments on both the RBD and the preliminary draft regulatory analysis. In general, OPPD supports the NEI responses to the proposed rulemaking and the questions posed in the Federal Register Notice. In addition to the NEI comments, OPPD is providing the following comments for emphasis from the perspective of the most recent nuclear facility to enter decommissioning.

Mary J. Fisher

Senior Director, Fort Calhoun Station Decommissioning
Omaha Public Power District

Attachments

NRC-2015-0070 OPPD response

SUBJECT: OPPD Comments on the NRC Draft Regulatory Basis Document Regulatory Improvements for Power Reactors Transitioning to Decommissioning; Docket ID: NRC-2015-0070

Omaha Public Power District (OPPD) is the licensee for Fort Calhoun Station (FCS). FCS permanently shutdown in late 2016 making it the most recent 10 CFR 50 facility to enter decommissioning. On March 15, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued a notice in the Federal Register soliciting public comments on the agency's draft Regulatory Basis Document (RBD) for a rulemaking proposing changes to the Commission's decommissioning regulations. Subsequently, on May 9, 2017, the NRC issued a notice soliciting public comments on a preliminary draft regulatory analysis that supports the RBD. This document provides OPPD comments on the proposed rulemaking.

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Impact on Currently Decommissioning Plants

Based on the proposed rulemaking, it appears that the NRC does not intend to impose the new requirements on Part 50 licensees that have permanently shut down and defueled prior to the effective date of the final rule. An OPPD representative attended the May 8 & 9, NRC public meeting on the "Regulatory Improvements for Power Reactors Transitioning to Decommissioning" rulemaking. At the meeting, the OPPD representative asked the NRC presenters to confirm that the new rulemaking would not apply to FCS and the NRC staff confirmed this position. However, the NRC should formally clarify its explanation of applicability to clearly communicate that the regulatory changes being proposed: (1) will serve as an alternative to the legally binding requirements currently applicable to facilities that have shut down and defueled prior to the effective date of the final rule, and (2) will not be imposed on power reactor licensees that have shut down and permanently defueled prior to the effective date of the final rule, even if they have retained a Part 50 license. Considering some of the potential backfitting discussion in the NRC documents, this clarification is important for plants currently in decommissioning.

Inconsistent Use of Event Mitigation Times for a Decommissioning Plant

The NRC documents use inconsistent event mitigation times when discussing the proposed rulemaking. The NRC staff uses a 10 hour heat up time associated with a zirconium fire as a basis for emergency preparedness, insurance, and cybersecurity changes. However, on page 14 of the RBD, the NRC references a 2 hour event response time as follows: "Recognizing that the SFP is more susceptible to a release when the spent fuel is in a non-dispersed configuration, the guidance also specifies that the portable equipment is to be capable of being deployed within 2 hours for a non-dispersed configuration." This 2 hour reference is also included on page 25 of the draft regulatory analysis: "In the four most recent EP exemptions issued between 2014 and 2015, the licensees were required to have sufficient trained personnel on-shift, and equipment and procedures to implement their site-specific preplanned mitigation strategies within a 2 hour timeframe; these mitigation strategies are required by a license condition until such time as the spent fuel is removed from the SFP." The regulatory basis for this 2 hour requirement is not clear. During a public meeting in May, OPPD personnel asked the NRC

staff for the basis of the 2 hour event response time for a decommissioning plant. The NRC staff took an action to follow-up on this issue.

In the RBD, the NRC references 10 CFR 50.54(hh) as a basis for the 2 hour response time. However, 10 CFR 50.54(hh)(3) clearly states: "This section does not apply to a nuclear power plant for which the certifications required under § 50.82(a) or § 52.110(a)(1) of this chapter have been submitted." The security requirements and the 2 hour event timing do not follow the justifications associated with NUREG-1738. The criteria for completing 10 CFR 50.54(hh) mitigation steps do not account for longer term fuel decay. The NRC has required evidence that the mitigation actions associated with the Nuclear Energy Institute (NEI) detailed guidance in "NEI 06 12: B.5.b Phase 2 & 3 Submittal Guideline," Revision 2, dated December 2006, could still be accomplished in the stated time after the post zirconium fire period. These actions and times are associated with an operating plant and do not account for fuel storage requirements and separation patterns or decay of fission products assumed for other program requirements. Nor does it utilize the results of the site specific shine calculation required to be performed as part of the EP exemption justification. As a result, the 2 hour response time should not be included in the decommissioning rule making.

Zirconium fire risk associated with decommissioning plants was studied and reported in NUREG-1738, which is the foundation for the reduction in EP requirements at decommissioning facilities, and is applicable for all aspects of offsite personnel dose. This document provided the conservative technical justification for the reduction in the probability of the remaining events affecting the public. These events include both the remaining design basis events and also selected beyond design basis events, one being the complete draining of the spent fuel pool (SFP). NUREG-1738 shows that a 10 hour response window is applicable once SFP decay heat has lowered to acceptable levels. This premise did not specify the cause of the drain down and does not restrict the cause to non-security events.

SECY-00-145, Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning, dated June 28, 2000, provided the expectations for managing decommissioning plant risks, including the requirements associated with EP, insurance and security. This rulemaking was centered on the resolutions to portions of Generic Issue 82, Beyond Design Basis Accidents in Spent Fuel Pools, and included as the main concern the beyond Design Basis event associated with self-sustaining zircaloy reactions. This work also included a commitment from SECY-99-168, dated June 30, 1999, to provide risk-informed principles for the SFP. This information was later supported by NUREG-2161, Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor, dated September 2014. The overall conclusion of these studies provides the basis for amendments to regulations in the areas of EP, insurance, security, staffing, training, and backfit for licensees who have certified, pursuant to 10 CFR 50.82(a), they have permanently ceased facility operations and have permanently defueled the reactor vessel. As a result, any reference to a 2 hour event time should be removed from the proposed rulemaking and the 10 hour event response time associated with EP exemptions should be the only standard referenced to maintain consistency across all aspects of the RBD and associated regulatory analysis.

Community Advisory Boards

In the proposed rulemaking, the NRC discussed the Community Advisory Board (CAB) and offered three options: Option 1 – No Action, Option 2 – Guidance Development/ Enhancement, and Option 3 – Rulemaking to Mandate Creation of Community Advisory Board. During the discussion of the options,

the NRC recognized “any formal NRC sponsorship or participation in a local advisory panel could be viewed as biased by all participants” and recognized the roles of State and local government. Despite the conclusion the current guidance on stakeholder participation is adequate, the NRC staff recommends Option 2 which updates guidance documents to include a discussion of best practices for creating a community advisory board at decommissioning facilities.

OPPD is a publicly-owned electric utility, governed by a publicly elected Board of Directors, and is a political subdivision of the state of Nebraska. As such, OPPD has regularly scheduled public meetings which include the opportunity for citizens to comment on any issues associated with OPPD, including items associated with FCS decommissioning. Further, a decommissioning status report is verbally provided at the Board Committee meeting. Both the monthly Committee and Board meetings are live streamed, and available afterwards to the public on the OPPD website. Additional guidance for OPPD to create a CAB is not needed nor warranted. Based on this, OPPD strongly recommends Option 1, which maintains the provisions in the current decommissioning regulations and guidance, deferring decisions on a CAB to the State and local authorities.

Mary J. Fisher
Senior Director, Fort Calhoun Station Decommissioning
Omaha Public Power District