

November 2, 2001

MEMORANDUM TO: William D. Travers  
Executive Director for Operations

FROM: Samuel J. Collins, Director */RA/*  
Office of Nuclear Reactor Regulation

SUBJECT: DENIAL OF PETITION (PRM 54-1) FOR RULEMAKING TO REVISE  
10 CFR PARTS 54 AND 51 TO INCLUDE RADIOACTIVE WASTE  
MANAGEMENT SYSTEMS WITHIN THE SCOPE OF LICENSE  
RENEWAL

PURPOSE:

To obtain your approval for denying the petition for rulemaking to revise the requirements from 10 CFR Parts 54 and 51 to include radioactive waste management systems within the scope of license renewal (PRM 54-1).

BACKGROUND:

By letter dated May 3, 2000, the Union of Concerned Scientists (UCS or the petitioner) submitted a petition for rulemaking to revise 10 CFR Parts 54 and 51. The petitioner requested that the NRC regulations governing requirements for renewal of operating licenses for nuclear power plants be amended to address potential concerns about aging degradation of liquid and gaseous radioactive waste management systems.

A notice of receipt of the petition was published in the *Federal Register* on July 10, 2000 (65 FR 42305). The comment period closed on September 25, 2000. The NRC received letters from 12 commenters. Eleven of the comment letters opposed the petition. Ten of those letters were from nuclear utilities and the 11<sup>th</sup> was from the Nuclear Energy Institute. One commenter, a member of the public, supported the petition.

This petition for rulemaking was submitted in conjunction with a Hatch Nuclear Plant petition pursuant to 10 CFR 2.206. In the Hatch Nuclear Plant 2.206 petition, UCS identified a number of apparent nonconformances with the facility licensing bases for the liquid and gaseous radioactive waste management systems. The NRC issued an October 18, 2000, letter to UCS, "Director's Decision Under 10 CFR 2.206." The Director's Decision disagreed with the petitioner's contentions and concluded that the Hatch Nuclear Plant was being operated consistent with its design and licensing bases because the material condition of piping, tanks, and other components of the liquid and gaseous radioactive waste management systems was being properly inspected and maintained.

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## DISCUSSION:

The Petition

UCS requests the NRC revise 10 CFR Part 54, and Part 51 if appropriate, to specify that the liquid and gaseous radioactive waste management systems must be covered by aging management programs during the license renewal term. With respect to 10 CFR Part 54, the petitioner states that potential aging degradation of the liquid and gaseous radioactive waste management systems at the Hatch Nuclear Plant identified in the accompanying 10 CFR 2.206 petition, may result in an increase in the probability of and/or consequences of design and licensing bases events. The petitioner also requests 10 CFR Part 51 be revised, if appropriate, to clarify that the liquid and gaseous radioactive waste management systems must be covered by aging management programs during the license renewal term. The petitioner states that the conclusions made in Appendix B to 10 CFR Part 51, Subpart A, that radiation exposures to the public and occupational exposures to workers during the license renewal term will continue at current levels below regulatory limits, were predicated on the liquid and gaseous radioactive waste management systems not experiencing greater failure rates throughout the license renewal term. However, aging degradation of the radioactive waste management systems could lead to an increase in component failure rates, thereby, invalidating the conclusions.

Basis for Denying the Petition*1. Potential Aging Degradation of the Radioactive Waste Management Systems May Increase the Probability of and/or Consequences of Design and Licensing Bases Events*

The NRC does not agree that aging degradation of these systems would increase the probability of and/or consequences of design basis events that would necessitate consideration within the scope of the license renewal. The scope of the license renewal rule focuses on systems, structures, and components that are of principal importance to the safety of the plant.<sup>1</sup> As the petitioner concedes, the liquid and gaseous radioactive waste management systems have no intended functions which are considered by the Commission to be of principal importance to the safety of the plant (that is why these systems do not fall within the scope of systems, structures, and components for which aging management must be considered for license renewal). Furthermore, the consequences of any failure of a radioactive waste component were analyzed during the initial license review and are bounded by the 0.5 rem acceptance criterion, which is a small fraction of the 10 CFR Part 100 limits used in the scoping criteria of license renewal cited by the petitioner.

In the related 10 CFR 2.206 petition on the Hatch Nuclear Plant, the petitioner did not identify any new failure mechanisms or consequences associated with operations of the liquid or gaseous radioactive waste management systems or any intended functions that prevent or mitigate consequences of design basis accidents that would cause the NRC to reconsider its determination not to specifically include radioactive waste management systems within the scope of license renewal pursuant 10 CFR Part 54. In the absence of such new information,

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<sup>1</sup> "Statements of Consideration," for 10 CFR Part 54 [60 FR 22464; May 8, 1995].

the NRC continues to believe that the current regulatory process is acceptable to manage the performance of these systems throughout the license renewal term without the need for additional aging management considerations. Therefore, Part 54 adequately maintains public health and safety as issued and does not need to be revised to include radioactive waste management systems.

*2. Aging Degradation of the Radioactive Waste Management Systems Could Lead to an Increase in Component Failure Rates; thereby, Invalidating the Conclusions Made in Appendix B to 10 CFR Part 51, Subpart A*

In addressing environmental effects in Appendix B to 10 CFR Part 51, the Commission determined that the impact of radiological exposures to the public and occupational exposures would be "small." In the context of assessing radiological impacts, this "small" significance determination was defined in Footnote 3 of Table B-1 of Appendix B to 10 CFR Part 51, Subpart A as impacts that do not exceed permissible levels in the Commission's regulations. The data supporting Appendix B were contained in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (hereinafter the GEIS).

The NRC has regulatory requirements and licensees implement programs and practices that provide reasonable assurance that exposures to radiation will remain within permissible levels consistent with Appendix I to 10 CFR Part 50 design objectives for exposures to the public and Part 20 dose limits and ALARA for occupational exposures, irrespective of the cause. These design objectives have been determined by the Commission to represent "small" environmental consequences. The petitioner did not raise any information that would challenge the conclusions of the GEIS that the impacts of radiation doses to the public and occupational exposures will be "small" for the license renewal term.

### Conclusion

The NRC staff finds that the information presented in the petition does not support rulemaking to revise 10 CFR Parts 51 and 54 to include aging management of the liquid and gaseous radioactive waste management systems during the license renewal term. If new information in the future provides a basis that aging degradation of the liquid and gaseous radioactive waste management systems needs aging management consideration under 10 CFR Parts 51 and 54, then the NRC may revisit the need for rulemaking.

### Related Staff Activities on License Renewal Rulemaking

In response to an August 27, 1999, staff requirements memorandum (SRM) to SECY-99-148, "Credit for Existing Programs for License Renewal," the Commission directed the staff to "prepare a detailed analysis and provide recommendations to the Commission on whether it would be appropriate to resolve generic technical issues, including any credit for existing programs, by rulemaking." SECY-99-148 discussed options and provided a staff recommendation to address an NEI comment on credit for existing programs for license renewal. The Commission approved the staff recommendation and directed the staff to develop improved guidance documents to focus the staff's review on areas where existing programs should be augmented. On April 26, 2001, the staff forwarded the completed guidance documents to the Commission in SECY-01-0074, "Approval to Publish Generic

License Renewal Guidance Documents.” In a July 2, 2001, SRM in response to SECY-01-0074, the Commission approved the issuance of these guidance documents. In SECY-01-0157, dated August 17, 2001, the staff recommended that 10 CFR Part 54 need not be revised. In a September 5, 2001, SRM in response to SECY-01-0157, the Commission did not object to the staff’s proposal that rulemaking need not be pursued at this time.

COORDINATION:

The Office of the General Counsel has no legal objection to the denial of the petition.

RECOMMENDATION:

That the EDO:

Approve publication of the attached Notice of Denial of Rulemaking Petition in the *Federal Register* and the issuance of the attached letter of denial to the petitioner.

Attachments:

1. *Federal Register* Notice
2. Letter of Denial
3. Notice of Petition Denial Signed by EDO

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