



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON NUCLEAR WASTE AND MATERIALS  
WASHINGTON, D.C. 20555-0001

ACNWMR-0272

November 20, 2007

The Honorable Dale E. Klein  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: Proposed Rulemaking to Prevent Legacy Sites<sup>1</sup>

Dear Chairman Klein:

At its 183<sup>rd</sup> Meeting, the Advisory Committee on Nuclear Waste and Materials (ACNW&M or "the Committee") received a presentation from the NRC staff on the proposed rulemaking approach to prevent legacy sites. The Committee has been following the staff's activities on this subject and related topics and previously provided observations and recommendations to the Commission on several occasions (References 1 through 4).

## OBSERVATIONS

The Committee offers the following observations:

- In presentations to the Committee, the NRC staff stressed the importance of adequate financial resources and accurate estimates of decommissioning costs in preventing legacy sites.
- The Committee informed the Commission of the ACNW&M-preferred approach to prevent the creation of legacy sites. Licensees should maintain an environment that needs minimal restoration at the time of decommissioning (References 1 through 4). The Committee believes that legacy sites can be prevented through: (1) prevention of unplanned releases, (2) unplanned release detection, and (3) prompt remediation of unplanned releases rather than delaying remediation until final decommissioning.
- In presentations on decommissioning lessons learned, the NRC staff has stressed the importance of similar principles in preventing legacy sites. At the 172<sup>nd</sup> Committee Meeting, the staff presented preliminary plans for proposed rulemaking to prevent legacy sites. The staff explained that proposed changes for 10 CFR 20.1406, "Minimization of Contamination," would (1) improve unplanned release controls, (2) improve the monitoring if there is an undetected release, and (3) require remediation promptly although not necessarily immediately.<sup>2</sup>

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<sup>1</sup> U.S. Nuclear Regulatory Commission, SECY-07-0177, "Proposed Rule: Decommissioning Planning (10 CFR PARTS 20, 30, 40, 50, 70, AND 72; RIN: 3150-AH45)," October 3, 2007.

<sup>2</sup> U.S. Nuclear Regulatory Commission, Transcript from the ACNW&M 172nd Meeting, July 19, 2006, Pages 17 and 18, and Slide Number 7 from Office of Federal and State Materials and Environmental Management Programs Presentation Viewgraphs, included on Page 3 of Attachment 1 to the Transcript.

- The Committee believes that complying with worker dose (5 rem/yr) and fence line dose limits to members of the public (100 mrem/yr) alone are inadequate measures for avoiding legacy sites. The unrestricted release criteria of 10 CFR Part 20.1402, “Radiological Criteria for Unrestricted Use,” apply the “as low as reasonably achievable” (ALARA) principle. Early cleanup of unplanned releases before contamination of large surface areas, surface waters, and ground water occurs comports with the ALARA principle. The Committee believes that it is not good practice to defer remediation to final decommissioning, which can be years or decades away.
- The proposed rule does not address the need for prompt remediation or remediation in general. The Committee is concerned that, as a result of this omission, the staff is missing an opportunity to revise the rulemaking to effectively prevent the creation of legacy sites.
- The Committee believes that unplanned releases that could contaminate ground water deserve special attention because large volumes of soil and ground water can be contaminated over time. If large volumes of soil and ground water become contaminated, the NRC may not be able to release sites for unrestricted use.
- Based on previous working groups and the 183<sup>rd</sup> meeting, the Committee believes that if the rule is revisited there would be significant stakeholder interest in the guidance developed for prompt rather than deferred remediation.

## RECOMMENDATIONS

- The Committee believes that legacy sites can be prevented through (1) prevention of unplanned releases, (2) unplanned release detection, and (3) prompt remediation of unplanned releases rather than delaying remediation until final decommissioning. The Committee recommends that the NRC require licensees to promptly assess and remediate unplanned releases. The staff should develop criteria specifying the assessments and actions a licensee should take to characterize and mitigate the impacts of unplanned releases. These criteria should preclude most licensees from deferring action until eventual decommissioning. These criteria should also emphasize the application of the ALARA principle to fully account for the impacts of contamination if remediation is deferred.
- The Committee recommends that the Commission consider gathering additional stakeholder input regarding prevention of legacy sites from a broad range of stakeholders including licensees, advisory or community groups, and State and local governments that participate in decommissioning.

Sincerely,

*/RA/*

Michael T. Ryan  
Chairman

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- The proposed rule does not address the need for prompt remediation or remediation in general. The Committee is concerned that, as a result of this omission, the staff is missing an opportunity to revise the rulemaking to effectively prevent the creation of legacy sites.
- The Committee believes that unplanned releases that could contaminate ground water deserve special attention because large volumes of soil and ground water can be contaminated over time. If large volumes of soil and ground water become contaminated, the NRC may not be able to release sites for unrestricted use.
- Based on previous working groups and the 183<sup>rd</sup> meeting, the Committee believes that if the rule is revisited there would be significant stakeholder interest in the guidance developed for prompt rather than deferred remediation.

**RECOMMENDATIONS**

- The Committee believes that legacy sites can be prevented through (1) prevention of unplanned releases, (2) unplanned release detection, and (3) prompt remediation of unplanned releases rather than delaying remediation until final decommissioning. The Committee recommends that the NRC require licensees to promptly assess and remediate unplanned releases. The staff should develop criteria specifying the assessments and actions a licensee should take to characterize and mitigate the impacts of unplanned releases. These criteria should preclude most licensees from deferring action until eventual decommissioning. These criteria should also emphasize the application of the ALARA principle to fully account for the impacts of contamination if remediation is deferred.
- The Committee recommends that the Commission consider gathering additional stakeholder input regarding prevention of legacy sites from a broad range of stakeholders including licensees, advisory or community groups, and State and local governments that participate in decommissioning.

Sincerely,

*/RA/*

Michael T. Ryan  
Chairman

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LETTER TO: The Honorable Dale E. Klein  
NRC Chairman

FROM: Michael T. Ryan  
ACNW&M Chairman

SUBJECT: Proposed Rulemaking to Prevent Legacy Sites

DATED: November 20, 2017

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