

EDO Principal Correspondence Control

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EDO CONTROL: G20030139
DOC DT: 03/18/03
FINAL REPLY:

Sen. Richard J. Durbin

TO:

Chairman

FOR SIGNATURE OF :

** GRN **

CRC NO: 03-0159

Travers, EDO

DESC:

Concerns Regarding the Draft Test Protocols
(NUREG-1768)

ROUTING:

Travers
Paperiello
Kane
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Craig
Burns/Cyr

DATE: 03/19/03

ASSIGNED TO:

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SPECIAL INSTRUCTIONS OR REMARKS:

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AUTHOR: SEN Richard Durbin ✓
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EDO --G20030139

RICHARD J. DURBIN
ILLINOIS

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March 18, 2003

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The Honorable Richard Meserve, Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Chairman Meserve:

I am writing to provide comments on the draft test protocols (NUREG-1768) recently released by the Nuclear Regulatory Commission (NRC), which describe physical tests you intend to conduct on spent fuel casks. While I am encouraged that the NRC is seeking to examine the adequacy of the analytical methods and data that are used to evaluate the robustness of spent fuel casks, I am concerned that the draft test protocols fall short of this goal. I hope the NRC will explore other critical areas of inquiry, and work to increase standards and safeguards as necessary, in order to ensure that spent fuel, also known as nuclear waste, can be transported safely and securely.

First, there are no provisions in your draft protocols for testing the resistance of nuclear waste casks to explosives or other terrorist attacks. Spent fuel casks could be targeted by terrorists seeking to create a high-level "dirty bomb." We cannot ignore this and other terrorist threats when testing our nuclear waste transportation casks.

In addition to failing to address terrorist threats, the draft protocols would test only two of four criteria that casks are required to meet. Whereas the draft test protocols would subject a transportation cask to impact and fire, the protocols do not call for tests on the cask's response to immersion in water or puncture by a spike. Thresholds regarding immersion in water and puncture are included in your regulatory requirements, so it would make sense to include full-scale testing along these lines. Testing immersion is particularly important, given that our interstate highway and railroad transportation systems traverse or border numerous lakes, streams, rivers, and wetlands, including the Great Lakes, our largest national freshwater resource.

It is promising that the NRC is proposing to conduct full-scale tests on casks, especially given that none of the sixteen casks currently certified by the NRC have been tested on a full-scale basis. However, the recently proposed draft test protocols involve demonstration tests of only two shipping casks as part of the Package Performance Study (PPS) to be conducted at Sandia National Laboratories. The planned PPS tests may provide significant new information about cask durability and performance, but as proposed do not provide a thorough approach to verifying the accuracy of NRC's computer modeling.

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Some material scientists and mechanical engineers note that even small variations in the atomic structure of materials under stress can cause those materials to behave unpredictably. Computer modeling cannot always substitute for physical testing. At a bare minimum, the NRC should rigorously and continuously assess the accuracy of its computer modeling methods.

NRC notes that "the PPS is not intended to involve the development of new standards for transportation casks." I believe the results from this study could meaningfully contribute to a thorough analysis of whether new standards for transportation casks are necessary, and I encourage the NRC to pursue such an analysis. In addition, I believe it is imperative that the NRC routinely assess the nuclear waste transportation cask standards, in light of new information and circumstances, in order to determine their adequacy and identify areas for improvement.

The release of radioactive materials from a spent fuel cask could have serious consequences for communities along existing and potential shipping routes in Illinois and throughout the country. Therefore, the NRC should thoroughly understand, and help mitigate, the risks of nuclear waste transportation and the potential consequences of a serious accident, terrorist attack, or other adverse events or circumstances.

Thanks for your attention to my comments and concerns. I look forward to working with you on these issues.

Sincerely



Richard J. Durbin
United States Senator

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