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May 19, 2003

Dr. Andrew J. Murphy, Jr.  
Mail Stop T-10-D-20  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

4/21/03

68FR 8530

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Re: Draft NUREG-1768

Dear Dr. Murphy:

On behalf of The Council of State Governments' (CSG) Midwestern Radioactive Materials Transportation Committee, I am writing to provide you with comments regarding the Nuclear Regulatory Commission's (NRC) *Draft Package Performance Study Test Protocols* (NUREG-1768). Our regional comments are based in large part on the comments the individual states raised during the March 19 public workshop in Chicago.

I feel it is important to emphasize that robust casks are just one component of a safe transportation system. Industry compliance and government partnerships with stakeholders are also important components. The regional planning process developed for the U.S. Department of Energy's (DOE) shipments of transuranic waste and spent fuel demonstrates that it is possible to move spent fuel safely and efficiently with input from the affected corridor states. The states must be involved early in the process, though. As noted in Chicago, the states will need the resources to continue being an active partner in planning and executing shipments of spent fuel.

I feel it is also important to comment on the March 19 workshop. The Midwestern states are grateful to have had the opportunity to participate in the roundtable discussion. We appreciate the NRC's willingness to hold a meeting in the Midwest, since our region will bear a heavy impact from shipments to the national repository.

My impression was that the NRC decided to hold regional workshops so as to hear the views expressed by states and other stakeholders in the different

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regions. If that is the case, then the purpose was entirely defeated by having representatives of the state of Nevada sit at the table for all three workshops. I understand that the state has a significant interest in the tests. Nevertheless, it would have been more appropriate for Nevada to have been on the roundtable solely at the Western regional workshop and attend the other workshops as an observer.

Again, the Midwestern Radioactive Materials Transportation Committee appreciates the opportunity to participate in the development of the NRC's plans to conduct full-scale tests. If you have any questions about our regional comments, please do not hesitate to contact Ms. Lisa Sattler with CSG at 920-803-9976.

Sincerely,

A handwritten signature in cursive script, appearing to read "Timothy A. Runyon".

Timothy A. Runyon, Chief  
Division of Environmental Monitoring,  
Illinois Department of Nuclear Safety, and  
Chair, CSG Midwestern Radioactive Materials  
Transportation Committee

enclosure

**The Council of State Governments  
Midwestern Radioactive Materials Transportation Committee**

*Comments on the U.S. Nuclear Regulatory Commission's  
Package Performance Study Draft Test Protocols*

**I. Public Confidence**

Public confidence as a goal: The goal of enhancing public confidence in the shipping containers is a good one. The NRC must be mindful of the fact that the public perceives risks differently than engineers do. It will not be enough just to conduct the tests and then share the resulting data with the public. To best achieve the goal of enhancing public confidence, the NRC needs to enlist the help of social scientists to present the information to the public in a way that is meaningful.

Despite our support for the idea of enhancing public confidence, there are reasons not to consider making it a goal. First, the NRC must be very careful not to stray too far from its role as regulator. The NRC might inadvertently *undermine* public confidence by appearing to be too much of an advocate of the activities it is charged with regulating. Second, defining the metric of public confidence will be exceedingly difficult. Which "public" will the NRC make its focus, how will the current level of confidence be measured, and what will be an indicator of success? The NRC should consider not making public confidence a goal per se, but instead making the entire process of developing and conducting the tests transparent and open to the public.

The "goal" of enhancing public confidence should fall to the DOE's Office of Civilian Radioactive Waste Management (OCRWM). OCRWM should work with stakeholder groups such as the Communications Topic Group of DOE's Transportation External Coordination Working Group to develop public information materials regarding the tests and their results.

Multiple audiences: The NRC must recognize that there will be multiple audiences for the information resulting from the tests. Cask vendors, DOE engineers and other staff, the media, the public, and first responders must receive information that is tailored specifically to their needs. Another important audience would be students, since shipments to the repository will take place well into their lifetimes.

Credibility of the tests: Regardless of whether public confidence is a specific goal, the tests must be credible. Ideally, the test conditions would simulate real-world situations. Recognizing that such tests would not necessarily generate the data that the NRC needs, the Commission must make sure the test conditions are translated into real-world equivalents. In other words, the NRC should either conduct tests that "look" real or develop a list of real scenarios that would generate the conditions involved in the tests.

## II. Test Logistics

Drop versus horizontal: Drop tests might be easier, less costly, risky, and generate more reliable data than horizontal tests, but they would not be as visually impressive or meaningful for the public. The result could be no net change in public confidence. The NRC should consider conducting both types of tests: a drop test to gather the data and a horizontal test to address public confidence (e.g., Operation Smash Hit).

If the NRC decides to conduct only drop testing, the Commission should consider dropping other items (e.g., a truck or a locomotive) to put the drop test in a more familiar context.

Testing to failure: It is true that not all large, complex systems are tested to failure. But it is a legitimate question to ask, "Why *not* test the casks to failure?" As pointed out at the Chicago meeting, the casks will not be used again once they've undergone the impact tests. Testing to failure might allow the NRC to address the "what ifs" that will inevitably come up after the testing is concluded.

If the NRC does decide to test to failure, communication will be key. The Commission needs to make sure not to release information that could be used by those seeking to cause deliberate harm to casks during shipments. Also, the NRC will need to make sure the public understands that cask failure under extreme test conditions does not necessarily imply that the casks are not safe under normal or hypothetical accident conditions. Developing appropriate messages and communicating them to the public will be challenging but not impossible.

Speeds: With the Association of American Railroads considering a change in its standards regarding spent fuel shipments, the NRC might need to consider a speed of greater than 75 mph for the rail cask test. That is, for the rail cask, the NRC should at least consider the situation of a head-on collision at full speed. The NRC should also consider whether its proposal for the truck cask impact would approximate the conditions of a cask impacting onto something such as the essentially unyielding limestone bluffs along I-70 in Missouri.

Breach versus spent fuel failure: The focus seems to be on cask failure. Is there no reason to consider what would happen to the spent fuel inside the cask during severe accidents? For example, would an intact cask with spent fuel damaged en route present a problem upon arriving at its destination?

Costs: The NRC proposes using the Nuclear Waste Fund to pay for the tests. The NRC should look closely at the costs of the tests, the potential benefits, and to whom those benefits will accrue. For example, the public residing along the routes will reap a small benefit; therefore, it is appropriate for taxpayers to cover some of the costs (DOE will be shipping some defense-related fuel, after all). The ratepayers will benefit from having the spent fuel removed from

power plants and moved to Yucca Mountain. The Nuclear Waste Fund, therefore, is an appropriate source of some funding for the project. Utility shareholders will also benefit from the timely removal of spent fuel from the power plants, so this group, too, should have an interest in contributing. Lastly, cask vendors will benefit from the data generated. In particular, the vendors of the casks used in the tests will probably realize a great advantage in having the NRC publicly demonstrate their casks to be safe. The vendors, therefore, should also contribute to the tests.

### III. Other Topics

Sabotage/terrorism: This subject is better addressed through adequate safety and security planning. As observed at the Chicago meeting, it might be possible to build a cask that would withstand a direct attack by terrorists, but it might not be possible to move such a cask. An analysis of the potential worst-case scenarios should shape the development of any new safety and security measures.

Immersion test: An immersion test would only be necessary if DOE were going to conduct a significant number of barge shipments. It is likely that the citizens in the Great Lakes states and their elected officials will strongly oppose barge shipments on any of the Lakes. This issue needs to be worked out by DOE and the states together. If DOE were to decide to ship by barge, the public and the states would insist on a demonstration of the casks' ability to withstand immersion at great depths for long periods of time.