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Subject: Response from "Comment on NRC Documents"

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Rules and Directives Branch (NRC)

Below is the result of your feedback form. It was submitted by

Judy Treichel (judynwtf@aol.com) on Tuesday, May 27, 2003 at 15:54:59

Document Title: NUREG-1768
Package Performance Study Test Protocols

Comments: Re: Comments: NUREG 1768
Package Performance Study Test Protocols

In establishing a protocol for physical, full-scale transportation cask tests, the Nuclear Regulatory Commission is considering conditions that must be found to be realistic. During discussions between the NRC, Department of Transportation, Department of Energy, and the public there have been disagreements about "worst case scenarios" and what transportation incidents and related cask damage potential can be considered realistic. The Nevada Nuclear Waste Task Force was a participant in a day-long discussion about this topic. During the roundtable debate regarding what could be considered likely enough to be considered in the protocols, opinions varied. I believe that analyses of recent accidents could clear up much of the speculation.

For example, during one day, May 23, 2003, there were two highway incidents/accidents that may settle some of the disagreement regarding likelihood of occurrence. A 17-mile portion of Interstate 68 in Maryland was closed because 90 vehicles were involved in accidents that injured and killed people. The situation occurred in fog on a mountain ridge.

The second accident forced the closure of ten miles of Interstate 80 in Nebraska. A tractor-trailer hit an overpass support, causing the bridge to fall on the truck, smashing it and killing the driver.

The Task Force believes that the NRC and DOT should consider all aspects of these two incidents as well as conditions that could have occurred but did not. For instance: a vehicle could have gone off the mountain in the Maryland accident. And there could have been a heavy vehicle on the bridge at the time that it collapsed on to the truck in Nebraska. These accidents should be analyzed to consider the stresses, pressures and forces that a cask loaded with spent nuclear fuel could be subjected to during transport.

An examination of the accidents should also consider who the first responders were. Were they other motorists with no knowledge of placards or emergency procedures? How long did it take for trained personnel to arrive? In dense fog would anyone know what the scope of the accident was - or even if a truck had gone off the ridge? If 90 vehicles were involved in the Maryland incident, how many people were there? What are the consequences of extended response times? Assume that a waste truck had been involved in either of those accidents and there was no escort vehicle. Would the tracking system know that there was an emergency? These questions may not be within the scope of the PPS but they must be considered for public safety.

When analyzing the consequences of a truck going off the road on a mountain ridge a "drop test" in the protocol should assume that the truck and cask has already been subjected to a crash. Also consider the maximum forces that could be put on a cask from the weight of a falling bridge and one or more vehicles falling with it after the truck and cask had also been involved in a crash into the bridge support. Tests should then be designed with those conditions considered and the consequences of actions by untrained members of the public becoming involved in the accident and trying to assist drivers

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and possibly on-board escorts who perhaps cannot communicate with them.

The NRC did studies and analyses of the Baltimore tunnel fire. Comprehensive studies should now also be done on these recent accidents. Testing labs must have insight into combinations of events and not just single events. These accidents should provide direct evidence and guidance to protocol designers regarding what can be realistic for consideration. It is also essential to understand, both in the PPS scope and in all planning for high-level nuclear waste transport, that accidents or incidents may have relatively small releases of radionuclides but result in significant consequences because of exposures to many people in emergency circumstances.

Submitted by,

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