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# CITIZENS AWARENESS NETWORK

May 29, 2003

Mr. Michael Lesser  
Chief, Rules Review and Directives Branch  
U.S. Nuclear Regulatory Commission  
Mail Stop T-6-D-59  
Washington, DC 20555-0001

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Rules and Directives

Dear Mr. Lesser:

On behalf of the Citizens Awareness Network, we hereby submit the following comments on NUREG-1768, the Nuclear Regulatory Commission's proposed protocols for testing transportation casks for high-level nuclear waste (HLW).

A number of commenters to date have praised the NRC for finally deciding that physical testing of transportation casks is necessary to determine their safety, while offering criticism of the limited and/or unrealistic scope of the proposed tests. CAN believes such praise is unwarranted and unnecessary, and sends a mixed message to NRC: that the agency is trying to do the right thing but simply has not gone far enough to protect the public. Rather, NRC's test proposals are testimony to the Commission's basic unwillingness to protect the public health and safety and national security rather than the interests of the nuclear industry.

NRC appears to be engaging in public relations rather than protecting the public health and safety. It has developed a user-friendly veneer in its dealing with the public, in which public comment is solicited and then ignored. No hearings on these test proposals were scheduled in the Northeast, even though over 25% of proposed nuclear waste shipments will travel through New England and New York State.

The Commission has asked members of the public to restrict their comments to the scope of the studies NUREG-1768 sets forward. CAN declines to restrict its comments in that fashion. The proposed tests will not be able to assure the safety of nuclear waste transportation. Existing plans for transporting waste are inherently flawed. NRC refuses to address the real dangers involved in transporting HLW on our nation's roads, rails, and waterways. These dangers include the possibility of malicious acts of destruction, as well

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as severe accident conditions and scenarios that far surpass the type of damage to be simulated under NRC's proposed tests.

CAN acknowledges the practical implications of making transportation casks attack-proof for the purposes of moving the nation's entire inventory of HLW to the proposed Yucca Mountain and Private Fuel Storage (PFS) dumps. It may be prohibitively expensive if not practically impossible to provide significant hardening and security to withstand malicious attacks or acts of terrorism for such a high volume of waste over transcontinental distances. However, if NRC does not take such threats into consideration in issuing its cask test protocols and in licensing proposed storage facilities to which waste would be moved, then it is creating a major threat to the public health and safety and national security by making the security problem fall into a bureaucratic black hole.

CAN believes that, until Congress issues NRC and the nation a mandate on the matter of responsibility for protection against the risks of terrorist action, NRC must assume regulatory responsibility for ensuring that the transportation and storage of HLW does not threaten the public health and safety or national security. If NRC does not assume jurisdiction for the foreseeable future and set threshold transportation security standards in the design and licensing of casks and/or storage facilities, local, state, and federal (to say nothing of private) agencies and security authorities will be set at an impossible disadvantage in dealing with potential threats.

It is irrational that NRC will not require full-scale, destructive tests of all cask designs for transporting the most lethal substances in the world. Such testing is standard for ordinary passenger automobiles and many consumer products. It is a sad statement that we may know more about how a Ford Focus would fare in an accident than we will a nuclear waste transportation cask, containing the toxic equivalent of many atomic bombs' worth of radioactive material.

The only reasons for not requiring such testing are to facilitate plans for large-scale transportation of HLW by lowering the regulatory and technical "hurdles" to cask and facility licensing. The public cannot have confidence in the NRC's ability to protect the public so long as it places the economic and political interests of the industry it regulates before the safety of the people it is mandated to protect.

The tests NRC is proposing are insufficient, as well. NRC intends to test one train cask by crashing one corner of it, cushioned by an "impact limiter," at 60-90 miles per hour (mph). NRC will also test one truck cask by dropping it on its side onto a round surface at 60-90 mph. Why not subject both casks to both types of tests? Why not drop them onto sharp objects instead of smooth, rounded objects? Why not subject them to many different points of impact in the same fall, as in a tumbling down a rugged mountainous pass? Many proposed transportation routes pass through mountainous terrain, valleys, and elevated highways, such as the Deerfield River Valley in Western Massachusetts.

The fire tests appear to be equally insufficient. NUREG-1768 proposes to subject the same type of casks to burning JP-8 aviation fuel for one hour. NUREG-1768 does not actually provide the actual temperature at which JP-8 fuel burns. However, members of the public reportedly inquired about this issue at the March 19, 2003 public meeting in Rosemont, Illinois. It is CAN's understanding that JP-8 fuel burns at very close to the 1475° F temperature used in NRC cask certification standards. Diesel fuel burns much hotter, at approximately 1800° F.

Based on its as-yet untested assumptions, NRC may believe that a severe accident like the 2001 Baltimore Tunnel fire – which lasted three days – is unlikely to cause a cask to leak. Nevertheless, the agency's faith will do nothing to ensure that a city like Baltimore would not be rendered uninhabitable in a similar accident – to say nothing of an act of malice or terrorism – involving a Holtec HI-STAR 100 cask with nuclear fuel assemblies containing over 1 million curies of cesium-137.

The lack of full-scale, physical testing of transport casks is an unjustifiable omission. If there were any scientific or regulatory integrity to the proposed studies, NRC would be designing them to determine:

- *whether* certified casks are safe for the transportation uses they are intended for;
- and *whether* NRC's theoretical models stand up to reality, particularly in a post-9/11/01 world.

Instead, the agency is setting up a series of staged exercises designed to validate the its long-held but never tested assumptions. NRC's description of its intentions for the studies are revealing:

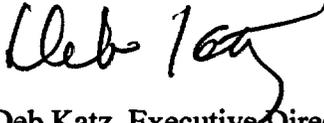
The testing described in this protocol report is not intended to validate or confirm the process with which the NRC certifies spent fuel packages. In the certification process it is required that packages be subjected to the various hypothetical accident conditions in the orientation that causes the most damage. The orientation chosen for the PPS test may not be the most damaging orientation for all of the cask components. It will be chosen to best meet the objectives of the PPS program—to demonstrate the inherent safety of certified casks and to demonstrate that finite element analyses can accurately predict the release (or lack of release) of radioactive material from a spent fuel cask subjected to an extreme impact. (NUREG-1768, page 8; emphasis added)

The proposed study is designed as public relations, not as scientific investigation – a technical propaganda exercise to assuage fear and anger in the public over nuclear waste transport and to provide government officials with justification for approving the transportation of thousands of untested casks on our roads and rails.

NRC appears to be completely out of touch with the public's concerns about transportation security and safety. In order to protect the public health and safety, the agency must first admit that the proposed transportation schemes for HLW are premature and inherently unsafe, particularly with the ongoing threat of terrorist attacks. NRC should redirect its efforts toward developing regulations on waste security and participate in evaluating new methods for securely storing waste at reactor sites, where waste will

remain stored on-site for decades, regardless of whether proposed off-site storage facilities are opened.

Sincerely,



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