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VIA FEDERAL EXPRESS

DOCKET NUMBER

PETITION FILE PFR 73-10

(64FR 49410)

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USNRC

April 15, 2002 (3:07PM)

The Secretary of the Commission
U.S. Nuclear Regulatory Commission
Attn: Rulemakings and Adjudications Staff
Washington, D.C. 20555-0001

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Re: Petition for Rulemaking 73-10

Dear Sir or Madam:

As you know, the State of Nevada filed the subject Petition for Rulemaking (PFR 73-10) more than two years ago and is still awaiting Commission action. Predictably, information relevant to Nevada's Petition and the Commission's action thereon has come to our attention during the lengthy interim it has been pending. As an attorney representing the State of Nevada, I wish to submit just one example of significant additional analysis of which Nevada has become aware relevant to its Petition for Rulemaking.

The Commission's Mr. Allen Howe recommended that I provide this information to you with the request that it be added to the Commission's record in PFR 73-10. Accordingly, I am enclosing to you a copy of a videotape documenting a test conducted June 25, 1998, by the United States Army for International Fuel Containers, Ltd. (IFC) at Aberdeen Proving Grounds. The test which was conducted illustrated the consequence of exposing a popular spent nuclear fuel transportation cask to the effects of a TOW anti-tank missile warhead.

The TOW missile, as you may know, is the most widely distributed anti-tank guided missile in the world, with more than 500,000 known to be in existence. The transportation cask used in the test — the CASTOR — is one of the most (if not the most) robust cask in existence. This test and its results are particularly pertinent in view of the enhanced risk of terrorist attack, the availability of the TOW missile, and its small and manageable size, enabling a perpetrator to utilize it from the back of a pickup truck.

Because the only new information secured by NRC since September 11, 2001, of which I am aware regarding transportation safety (or lack thereof) is a ridiculous computer

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modeling of a single jet engine (without aircraft attached) striking a transportation cask, the more realistic and more likely scenario addressed in the enclosed videotape is very important for NRC to have and to consider.

I am also enclosing a fact sheet regarding the TOW missile and a fact sheet regarding the CASTOR cask used in the 1998 U.S. Army test. I would appreciate your including these materials in the record of the State of Nevada's PFR 73-10 proceeding.

Sincerely,



Charles J. Fitzpatrick

CJF:sm

cc: Mr. Robert R. Loux (via fax; w/o encl)
Joseph R. Egan, Esq. (via fax; w/o encl)

MISSILE TEST VIDEO FACT SHEET

- Test conducted 6/25/98 by U.S. Army for International Fuel Containers, Ltd. (IFC) at Aberdeen Proving Grounds.
- IFC is U.S. agent for Gesellschaft für Nuclear-Behälter mbH (GNB), a large German cask manufacturer owned by the German utilities.
- The cask is GNB's dual-purpose CASTOR cast-iron cask, used for transport and dry storage of spent nuclear fuel. (Some 600 casks are already in use worldwide, including in the U.S.)
- The weapon piercing the cask is a TOW anti-tank missile warhead.
- TOW missiles are 5 inches in diameter, less than 4 feet long, and weigh less than 50 pounds. They can be launched from a portable tripod launcher and have a range of over 3000 meters. TOW is the most widely distributed anti-tank guided missile in the world, with more than 500,000 built and in service in the U.S. and 36 other countries. (Iran may have obtained 1750 or more TOW missiles.)
Source: Military Analysis Network.
- DOE has not yet specified the casks to be used to transport waste to Yucca Mountain, but CASTOR is currently one of the most (if not the most) robust cask in existence. Some environmental groups (*e.g.*, NRDC) have argued it is the "Cadillac" of shipping casks.
- CASTOR is licensed by NRC for storage in the U.S., and a transport license is currently pending at NRC. The cask is licensed for storage and transport by numerous other countries.

SPENT FUEL STORAGE AND TRANSPORT CASKS

- There are currently 13 spent fuel casks licensed for storage by the NRC, and CASTOR is one of them.
- Only one dual-purpose cask (Holtech Hi-Star) has been licensed in the U.S. for storage and transport. Others are expected to be licensed. (The GA-4 and GA-9 have also been licensed but have not been manufactured). GNB intends to re-submit its application for a transport license for the CASTOR cask. The CASTOR cask has been licensed for transport in numerous other countries.
- There are collectively under a dozen casks in use that are licensed for transport only (not storage) in the U.S.
- According to representatives of GNB, CASTOR is at least as robust against armor-piercing weapons as any cask in the world, and is probably significantly more robust (it boasts 15-inches of solid cast iron and is one of the heaviest casks).
- Though concrete shielding for casks in storage is feasible, concrete shielding for casks in transport would require a major reduction in cask capacity and/or substantial transportation restrictions. Such restrictions could render transport impracticable.
- Casks can currently be licensed in the U.S. without any physical tests to determine their robustness against a terrorist threat.
- Casks actually proposed by DOE for shipments to Yucca Mountain will hold a greater number of fuel assemblies than existing casks and will be less heavily shielded due to the age of the spent fuel in them. Thus, they are very likely to be less robust than the CASTOR against a terrorist threat.
- DOE has not evaluated the nuclear criticality risk of a TOW missile hit on a spent fuel cask (i.e., if the missile penetrated the cask, could the damaged spent fuel assemblies achieve a nuclear chain reaction, vastly compounding radiological impacts?).