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From: Scott Palmer <orslbc@aol.com>
To: <nrcprep@nrc.gov>
Date: Wed, Dec 21, 2005 2:29 PM
Subject: Response from "Comment on NRC Documents"

Below is the result of your feedback form. It was submitted by
Scott Palmer (orslbc@aol.com) on Wednesday, December 21, 2005 at 14:28:44

Document Title: Nureg/CR-6886
Baltimore tunnel fire

Comments: In NRC's report on the Baltimore Tunnel fire, it appears that far too much emphasis is placed on investigating the possibility of loss of containment and not enough on the possibility of a loss of shielding scenario regarding the TN-68, Hi-Star 100, and NAC LWT SNF shipping casks.

Loss of shielding is of particular concern to the Brotherhood of Locomotive Engineers and Trainmen for the following reasons;

1. Shielding is an internal component of the cask design and any damage to the shielding would not be visually apparent to railroad employees.
2. Train crews are not expected to be provided with dosimetry to measure off-link or on-link exposure during normal transportation, let alone emergency situations.
3. There are no plans to equip locomotives with radiation detectors to alert crews to dangerous spikes in dose rate.

In all three models, the loss of neutron shielding was a given, but loss of gamma shielding was scarcely touched upon.

Lead has a melting point of 621 degrees. In all three models, the gamma shield exceeded that temperature. The TN-68 exceeded that temperature after 5 hours, both the Hi-Star 100 and the NAC LWT casks reached that point in just two hours.

The NAC LWT uses lead rather than carbon steel as its gamma shield. The shielding would have likely failed at the two-hour mark, eventually reaching 1378 degrees after 6.75 hours in the fire.

Substantial loss of shielding will occur as the lead melts or slumps, settling to the lowest point.

The BLET is concerned that the study does not effectively address the possibility of loss of shielding scenarios for both lead and carbon steel gamma shields and the potential radiation levels that would result.

Sincerely,

Scott Palmer
Radiation Safety Officer
Brotherhood of Locomotive Engineers & Trainmen

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SISP Review Complete

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