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71-6698

MEMORANDUM FOR: Leo B. Higgenbotham, Assistant Director
Division of Fuel Facility and Materials
Safety Inspection, I&E

FROM: Donald A. Nussbaumer, Assistant Director
for Material Safety and Licensing
Division of Fuel Cycle and Material
Safety, NMSS

SUBJECT: NONCOMPLIANCE OF NFS-4, SERIAL NO. A CASK
OWNED BY DUKE POWER COMPANY

At a meeting with Nuclear Assurance Corporation (NAC) on March 29, 1979, we were informed by Messrs. Ralph Best and Joe Demko, NAC, that NAC used and then sold a Model No. NFS-4 (NAC-1), Serial No. A, cask to Duke Power Company that may not meet the design approved by the Commission in Certificate of Compliance No. 6698.

Apparently, one or more of the shells is warped or bowed. The exact cause or extent of the warp or bow is unknown to NAC (and Duke Power Company) at this time. The condition was suspected by gamma scanning during construction of the package in 1974 by the cask manufacturer, EXCELCO, Silver Creek, NY.

Apparently, NAC authorized the manufacturer to increase the shielding material in the area of reduced shielding thickness by welding copper plates to the outer cask shell. This design modification was reported to the NRC in the meeting on March 29, 1979.

The safety implications of this reported defect have not been assessed, however, this could represent a substantial reduction in the effectiveness of the packaging.

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We believe I&E should take the following steps promptly:

1. Investigate the allegations made by NAC representatives as reported in this memo. If the allegations are correct, require all owners (users) to take physical measurements of all existing NFS-4 casks prior to continued use to determine if buckling may have occurred.
2. All packaging showing possible signs of inner shell buckling should be removed from service until their safety can be assessed by the cask owners (users). Any deviations from the NRC approved design would require an amendment to the certificate prior to putting the cask back into service.

Original Signed by
DONALD A. NUSSBAUMER

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