

May 5, 2004

MEMORANDUM TO: William D. Travers
Executive Director for Operations

FROM: Annette L. Vietti-Cook, Secretary **/RA/**

SUBJECT: STAFF REQUIREMENTS - SECY-04-0029 - OPTIONS FOR
FULL-SCALE SPENT NUCLEAR FUEL TRANSPORTATION
CASK TESTING UNDER THE PACKAGE PERFORMANCE
STUDY

The Commission has approved implementation of the Package Performance Study as described in the following paragraphs.

The Commission has approved testing of a full-scale, certified transportation rail cask. The staff is authorized to commence the purchase of a certified rail cask of a type which is currently being used, or expected to be used in the foreseeable future, to transport spent fuel. Prior to publishing the request for bids, staff will inform the Commission of the specific details and justification of the cask design desired.

The staff shall submit, for Commission approval, a test plan for the rail transportation cask which includes details of the proposed test and projected costs. The staff shall also provide the Commission, for information, its predictions of specific cask performance measurements to be collected during cask testing before the predictions are made public. The cask predictions should include appropriate range bands for acceptable performance, as opposed to point values, to account for uncertainties.

The cask test shall consist of a demonstration test with sufficient instrumentation to collect data which confirms the validity of appropriate key analytical methods and assumptions, including scaling methodology, that serve as the basis for NRC regulations and regulatory review of transportation cask applications. The demonstration test should be realistically conservative (e.g., train traveling 75 miles per hour) and include exposure of the cask to a fully-engulfing fire. The basis for the staff's proposed test plan should be clearly articulated when provided to the Commission. If necessary, staff can provide appropriate alternatives (with justification and cost estimates) for the test plan.

One criterion which the staff should use when determining the test protocol is that it will not be necessary to conduct additional tests on other certified spent fuel transportation rail casks because the tested cask should be representative of those currently in use or expected to be used in the foreseeable future.

Finally, the staff should continue to interact with DOE to determine if DOE will provide funding for this rail cask test. The staff may inform DOE that the study could be expanded in the future to include testing of a certified truck cask, if DOE selects a truck cask design and provides sufficient funding to support the testing, including construction of a full size cask. The staff should discern from DOE when they believe truck casks might be available for testing. When these conditions are met, the staff should propose a plan for testing a truck cask design to the Commission for approval.

cc: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield
OGC
CFO
OCA
OIG
OPA
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)
PDR