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## **POLICY ISSUE**

SECY-90-058

For: The Commissioners (Information)

From: James M. Taylor  
Executive Director  
for Operations

Subject: PROGRESS MADE BY U. S. DEPARTMENT OF ENERGY (DOE) AND THE  
INDUSTRY TO DEVELOP CASK DESIGNS TO ACHIEVE COMPATIBILITY  
FOR DRY STORAGE AND TRANSPORTATION PURPOSES

Purpose: To inform the Commission of progress made by DOE and the  
industry in addressing potential compatibility problems  
between dry spent fuel storage system designs and offsite  
transportation of spent fuel from such systems, without  
need to return fuel to reactor basins.

Summary: In response to the Commission's concern about the need to  
ensure compatibility of various steps in the storage,  
transportation, and disposal of spent fuel to enhance the  
safety and efficiency of fuel handling, DOE and industry  
have continued to actively pursue resolution of this issue.  
The principal mechanism for DOE-industry cooperation is  
through DOE's preparation of its Annual Capacity Report (ACR).  
Planning for acceptance of utility spent fuel by DOE is  
integral to report preparation. The Utility Nuclear Waste  
and Transportation Program, in concert with the U. S. Council  
on Energy Awareness, acted to form an ACR Steering Committee.  
The Committee has worked with DOE in identifying issues for  
resolution, including transportation interface issues. Two  
issues under consideration are acceptance and handling of  
dual purpose casks and Multi-Element Sealed Canisters (e.g.,  
the sealed canisters for dry storage in Nutech Horizontal  
Modular System (NUHOMS) concrete module and stainless steel  
canister systems at the H. B. Robinson 2 and Oconee nuclear  
power plant sites).

Dry storage system vendors have pursued resolution of  
compatibility problems in independent actions as well.  
Nuclear Assurance Corporation (NAC) will submit a dual  
purpose cask design to the Nuclear Regulatory Commission  
(NRC) this year. In parallel actions, NAC will submit this  
summer an application for dry storage cask design approval,  
and an application for transportation cask approval after  
cask drop testing is completed.

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NOTE: TO BE MADE PUBLICLY  
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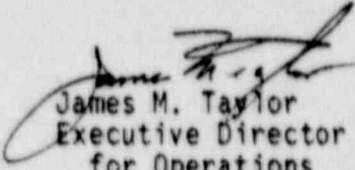
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Pacific Nuclear Fuel Services, Inc. (PNFSI, formerly NUTECH, Inc.) has discussed with NRC staff its planned submittal of a topical report for the design of a stainless steel canister (from its NUHOM-24P system) for approval under Part 71 as a sealed transportation cask basket. PNFSI has also announced that this is part of a cooperative effort with Kawasaki Heavy Industries, Electric Power Research Institute, and NUHOMS utilities (Duke Power Company and Baltimore Gas and Electric Company). PNFSI also seeks to develop a transportation cask for NUHOMS-24P-type canister shipment. On January 24, 1990, this group met with DOE to discuss possible DOE participation in the first step of this phased development, submittal of the canister design topical report. DOE indicated moral support for this effort. Regardless of whether DOE provides financial support, PNFSI plans to submit to NRC staff the topical report for the canister design. PNFSI will submit a letter of its intent to do so this month (February 1990).

This summer, Public Service Company of Colorado will submit an application for dry spent fuel storage at its Fort St. Vrain high temperature gas reactor (HTGR) plant site. The design chosen is a modified Modular Vault Dry Store (MVDS) design by FW Energy Applications, Inc. Since the Fort St. Vrain plant is to be fully decommissioned with termination of the Part 50 operating license (OL), the modified MVDS is being designed to operate after OL termination and to accept shipping casks for direct shipment of HTGR spent fuel offsite.

Office of Nuclear Material Safety and Safeguards staff members continue to address the Commission's concern for a safe and efficient back end of the fuel cycle in interactions with DOE and the industry in spent fuel transportation and dry storage activities. DOE and industry have responded to the Commission's concern positively by initiating actions aimed at resolving this issue.

  
James M. Taylor  
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