UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
DUKE POWER COMPANY	)	Docket No. 70-2623
	)	
(Amendment to Material License SNM-1773 for Oconee Nuclear Station Spent Fuel Transportation and Storage at McGuire Nuclear Station	)	

TESTIMONY OF BRETT S. SPITALNY

Q. Have you previously participated in this proceeding?

A. Yes, I have been previously sworn in and have testified in this proceeding. My professional qualifications have been previously submitted and were entered as staff exhibit No. 15 (Tr. 2462).

Q. Since the adjournment of these proceedings in this case on September 13, 1979, have there been subsequent events which would warrant updating of the record?

A. Yes, as a result of the time which has lapsed, a number of topics should be updated for the information of the Board and parties.

Q. What are these topics?

A. As of September 13, 1979, the record was accurate with regard to the status of pin compaction applications, the NFS-4 cask, scheduled dates of commercial operation of Duke Power Company nuclear stations presently under construction, and available alternatives to the transshipment option. These areas should be reviewed to update the record.

Q. What circumstances have changed with regard to pin compaction?

A. Relative to the discussion of pin compaction applications, (Tr. 3997) the question was raised as to whether any applications had been submitted to the staff to utilize this alternative at any reactor. The response was that Maine-Yankee had requested authorization for such a procedure under the provisions of 10 CFR 50.59. This request did not constitute an application. To my knowledge no other utility had requested a similar action.

On September 18, 1979, however, the Maine Yankee Atomic Power Company submitted an application for amendment to its Facility Operating License No. DPR-36. This application requests authorization to expand onsite storage capacity through a modified spent fuel pin storage concept. This application was pre-noticed in the Federal Register on October 24, 1979 (44 FR 61273) and will be the subject of a prehearing conference to be held at a later date. The need for a hearing has not yet been determined.

The staff documents, both Environmental Impact Appraisal and Safety Evaluation Report, are still being prepared. Both documents may be published in May-June 1980.

Q. What is the latest information relative to the use of the NFS-4 cask?

A. Previous testimony (Tr. 3943) discussed the show-cause order dated April 6, 1979 which had removed all casks of this design (Certificate of Compliance No. 6698) from service.

On December 12, 1979 an amendment to the Certificate of Compliance was issued. This amendment revised the certificate in its entirety and resulted in issuance of Revision 9. Revision 8 of this certificate was entered into the record as Staff exhibit No. 29 (Tr. 3922). The new revision is attached as an enclosure to this testimony (Enclosure 1).

This amendment lifts the suspension of the general license to use casks having Serial Nos. NAC-1B, NAC-1D and NAC-1E. Use of these casks is limited to dry shipments only with a maximum decay heat load of 2.5 kilowatts. Duke Power Company is the present owner of NAC-1B.

Q. The scheduled dates of operation of Duke Power nuclear stations which are presently under construction were submitted and discussed in the "Testimony of Brett S. Spitalny and R. Daniel Glenn," (staff exhibit No. 19B). This schedule was also updated during the proceeding (Tr. 2654). Are there any other changes which should be identified for the record?

A. Yes, as a result of licensing and construction delays, Duke Power has revised their estimated date of commercial operation in a few cases. As an effort to supply the latest estimate for all plants, the following information is being furnished:

Station	Date of Commercial Operation
McGuire	
Unit 1	11/80
Unit 2	04/82
Catawba	
Unit 1	07/83
Unit 2	01/85
Cherokee	
Unit 1	01/90
Unit 2	01/92
Unit 3	*
Perkins	
Unit 1	*
Unit 2	*
Unit 3	*

* Duke has indicated they still have plans for Cherokee Unit 3 and Perkins Units 1, 2, and 3, although construction and respective commercial operation dates have not been scheduled.

Q. As a result of these changes, does any of the staff's previous testimony warrant changing?

A. No, the staff's position in this proceeding is that the transshipment option is acceptable in and of itself. The use of this option has minor environmental impacts and provides additional flexibility in Duke's spent fuel management program. This determination is not affected by the availability or lack there of, of the commercial operation of these units. Therefore any change in the operational dates does not affect the staff's conclusion. The staff's previous testimony did not rely on the commercial operation dates of the power plants presently planned or under construction. The present capacity for the Duke Power System was shown to be capable of storing spent fuel until the 1990's, and as a result of the options available to Duke it was not necessary to become dependent on any one given date (Tr. 2702, 2704, 2757). Further, my calculations for the transshipment option only, included Oconee, McGuire and Catawba, and did not consider the availability of Cherokee and Perkins (Tr. 2700).

As I have testified earlier; many alternatives are available to Duke for the storage of spent fuel and therefore it is too premature to evaluate exactly what option should or should not be pursued at this time (Tr. 2705, 2706, 2747, 2748). As a result of delays in this proceeding and the need to acquire additional storage space, Duke has exercised their option to use these alternatives, as evidenced by their recent actions.

Q. How have recent proposals by Duke Power Company changed the fuel storage picture at Oconee Nuclear Station?

A. By letter dated February 15, 1980, Duke informed the staff of their intent to install poison racks in the Oconee 1 and 2 pool. Reasons for such an action have been provided by proposed supplemental testimony of Ralph W. Bostian dated March 14, 1980. As indicated by Mr. Bostian's testimony, Duke Power has discontinued the installation of high-density stainless steel racks in an effort to facilitate the installation of poison racks.

The installation of these poison racks will increase onsite capacity at Oconee to 1786 assemblies (1312-Units 1&2, 474-Unit 3). There are presently 737 fuel assemblies in storage at the Oconee site. This modification will move the date of arriving at a full core reserve capacity at November 1986. Loss of all onsite storage would be September 1987.*

* These dates were derived by the applicant based on the current discharge schedule.

Q. Is there still a need for authorization of the transshipment option?

A. Yes, transshipment provides more than just an available option. Besides being an alternative by itself, it also becomes a necessity to accomplish the poison reracking of Oconee Unit 3 spent fuel pool. As discussed in previous testimony (Tr. 3480-82), the reracking of Oconee Unit 3 requires the draining of the pool, and some transshipment. Additionally, the availability of this alternative provides flexibilty in the event of unforeseen licensing delays of the presently planned rerack of the Oconee Unit 1 and 2 pool.

Q. What options remain available to Duke Power Company for the storage of Oconee spent fuel?

A. Remaining options available to Duke Power include: poison reracking of Oconee Unit 3 spent fuel pool, the construction of a new storage facility onsite, or transshipment to McGuire. The attached document (Enclosure 2) provides details of the available options, as well as dates such an action becomes necessary.

Q. Has the staff position changed in view of the developments at Oconee?

A. No, as I have testified previously, the option of reracking is a viable option (Tr. 3513). As shown by the attached diagram, the use of transshipment is needed for all options with the exception of building a new pool. The staff's evaluation of the environmental impacts of the proposed action has not changed, and the benefits to be gained by having this option clearly outweigh the costs of not having it.

Form NRC-618
(12-73)
10 CFR 71

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF COMPLIANCE

For Radioactive Materials Packages

1.(a) Certificate Number	1.(b) Revision No.	1.(c) Package Identification No.	1.(d) Pages No.	1.(e) Total No. Pages
6698	9	USA/6698/B( )F	1	6

2. PREAMBLE

2.(a) This certificate is issued to satisfy Sections 173.393a, 173.394, 173.395, and 173.396 of the Department of Transportation Hazardous Materials Regulations (49 CFR 170-189 and 14 CFR 103) and Sections 146–19–10a and 146–19–100 of the Department of Transportation Dangerous Cargoes Regulations (46 CFR 146–149), as amended.

2.(b) The packaging and contents described in item 5 below, meets the safety standards set forth in Subpart C of Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Materials for Transport and Transportation of Radioactive Material Under Certain Conditions."

2.(c) This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported.

3. This certificate is issued on the basis of a safety analysis report of the package design or application–

3.(a) Prepared by *(Name and address)*:
Nuclear Fuel Services, Inc.
P.O. Box 124
West Valley, NY 14171

3.(b) Title and identification of report or application:
NFS application dated October 6, 1972, as supplemented.

3.(c) Docket No. 71-6698

4. CONDITIONS
This certificate is conditional upon the fulfilling of the requirements of Subpart D of 10 CFR 71, as applicable, and the conditions specified in item 5 below.

5. Description of Packaging and Authorized Contents, Model Number, Fissile Class, Other Conditions, and References:

(a) Packaging

(1) Model No.: NFS-4

(2) Description

A steel, lead and water shielded shipping cask. The cask is a right circular cylinder with upper and lower steel encased balsa impact limiters. The overall dimensions are 214 inches in length and 50 inches in diameter. The gross weight of the cask is approximately 50,000 pounds. The inner cavity is 178 inches long and 13.5 inches in diameter. The thickness of the inner shell is 5/16 inch and 1-1/4 inches for the outer shell. The two stainless steel shells are welded to a 2-inch thick stainless steel shield disc at the bottom. The annulus between the inner and outer shells is filled with lead (max. lead thickness 6-5/8 inches, minimum 5 inches).

The lid is stainless steel frustum of cone 7.5 inches thick. The lid is secured to the cavity flange by six ASTM A320, Grade L43, 1-1/4 inch diameter
afluoroethylene O-rings. Four
nd rupture disc, provide a
ycol mixture around the outer
side of the upper or lower
tures include two drain valves
, head closure gasket leak
ve system located in the
shipments, and spacers to
nsport the cask may be enclosed

DUPLICATE DOCUMENT

Entire document previously entered into system under:

ANO 7912280038

No. of pages: 7

7912280038

Enclosure(1) 7 pp.