

71-9297



Westinghouse Electric Company  
Nuclear Fuel  
Columbia Fuel Site  
P.O. Drawer R  
Columbia, South Carolina 29250  
USA

U. S. Nuclear Regulatory Commission  
Attn: Mrs. Nancy Osgood  
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Our ref: NMS-NRC-04-004

Mrs. Osgood:

April 1, 2004

Subject: Docket # 71-9297, Application for Package Approval for Traveller Shipping Package

Westinghouse Electric Co. applies for package approval for the Traveller shipping package, docket #71-9297. The Traveller will eventually replace the MCC shipping packages. As required, we hereby submit ten (10) copies of the license application (safety analysis report – SAR) pursuant to our application. We are also sending one (1) CD with a full application in .pdf format.

The Traveller is a completely new package design, which has been developed to transport non-irradiated PWR fuel assemblies with enrichment up to 5 weight percent. It will carry a single fuel assembly. It will also have the capability to transport loose rods in a rod container.

This package satisfies the requirements for Type A fissile packages contained in Title 10, Code of Federal Regulations, Part 71 (10CFR71), Packaging and Transportation of Radioactive Material, which becomes effective October 1, 2004. It furthermore satisfies the requirements contained in IAEA TS-R-1 1996 (Revised), Regulations for the Safe Transport of Radioactive Material. In this regard, Westinghouse is asking for a “-96” approval for the Traveller.

This license application has been prepared in accordance with Draft Regulatory Guide DG-7003 (Proposed Revision 2 of Regulatory Guide 7.9). In addition to 10CFR71 and TSR-1, several other guidance documents were consulted in the preparation of the document. They include:

- Standard Review Plan for Transportation Packages for Radioactive Material (NUREG 1609);
- Recommendations for Preparing the Criticality Safety Evaluation of Transportation Packages (NUREG/CR-5661);
- Engineering Drawings for 10CFR71 Package Approvals (NUREG/CR-5502);
- Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (TS-G-1.1 [ST-2]).

A review of the Standard Review Plan (NUREG-1609) was conducted. The following exceptions were identified.

- Section 2.6 – Closure bolts will be reused after visual inspection. A formal fatigue evaluation for these bolts was not performed because of the very low preload specified for the bolts (60 lb-ft for ¾”-10 outerpack top hinge bolts). Bolts will be visually inspected before reuse.

NMSS01



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- Section 3.1 – Table 3-1 “Summary Table of Temperatures for Traveller Materials” provides material temperature limits and maximum measured temperatures for the CTU burn test but does not specify when the maximum temperatures were reached. Exterior surface temperature profiles over time are provided in section 3.6.4. Data collection systems inside the package were minimized to avoid changing the package’s response to the fire test. Heat up rates can be inferred from the hypothetical thermal analysis described in section 3.6.1 and from partial package burn tests that are described in section 3.6.2 and 3.6.3, in which cases the inside of the package specimens was actually instrumented. It must be noted that measured temperatures were sufficiently below maximum allowable values to make the time of peak temperature irrelevant.
- Section 4 – The standard review plan identifies requirements for the package containment. The Traveller utilizes the fuel rod clad as the containment during normal operation. This submittal uses confinement in the evaluation of the package in hypothetical accident conditions. This approach is described in Section 6.
- Section 7 presents operational steps in the actual order of performance. The steps summarize the detailed written procedures that will be used in package operations as described in section 7 of Draft Regulatory Guide DG-7003. Actual procedures are not included in the submittal.
- Section 8 presents the acceptance test steps and maintenance steps that will be used for the Traveller. The steps summarize the detailed written procedures that will be used in acceptance testing and during maintenance as described in section 8 of Draft Regulatory Guide DG 7003. Actual procedures are not included in the submittal.

If you have any questions, please contact the undersigned at (803) 647-3552 or Wes Stilwell at (803) 647-3438.

Sincerely,

WESTINGHOUSE ELECTRIC COMPANY, LLC

A handwritten signature in black ink that reads "Norman A. Kent".

Norman A. Kent  
Manager Transport Licensing and Regulatory Compliance  
Nuclear Material Supply

Enclosures: 10 copies of Traveller License Application (SAR)  
1 CD