

**FACSIMILE TRANSMISSION**

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Mr. Steve Baggett, Project Manager
Licensing Section, Mail Stop 013D13
Spent Fuel Project Office
U.S. Nuclear Regulatory Commission
One white Flint North
11155 Rockville Pike
Rockville, MD 20852

Fax Number: 301-415-8555

Subject: Docket 71-9036
Consolidated Application for Certificate of Compliance
SPEC Model C-1 Transportation Package
Package Identification Number USA/9036/B(U)

Dear Mr. Baggett:

In response to your question regarding the thermal test performed on the SPEC C-1 inner package, we hereby offer the following:

The SPEC C-1 inner package was tested in a furnace with inside dimensions of 24 inches in width by 24 inches in height by 36 inches in depth. The furnace is heated by four natural gas burners. Each burner has a one inch supply line. Total heat input to the furnace is approximately 2 million BTUs. The furnace is lined on all sides (except for the insulated steel front door) with fire brick. The fire bricks and combustion chamber are not sealed. They natural gas mixes with outside air and has an induced draft system to bring in excess outside air so that the furnace is not deficient in oxygen. In operation, the furnace is started up and brought to the desired temperature. The specimen is then introduced to the preheated furnace. At completion of the test, the furnace is shut off, the door opened, and the specimen is allowed to cool without external assistance. The fire brick serves to moderate variations in temperature so that together with the digital controller the temperature in the furnace can be maintained to the desired temperature plus or minus 10F.

The furnace was brought to a steady state temperature of 1475 F and the SPEC C-1 inner package was placed in the furnace. After 30 minutes, the natural gas was shut off and the furnace door opened. The C-1 was allowed to cool to room temperature.

In some respects this test was more severe than a hydrocarbon fire in that natural gas produces a hotter flame as indicated by the color of the flame. Also, the fire brick was in intimate contact with the surface of the C-1. In order to maintain a furnace temperature of 1475, the fire brick had

**Source Production & Equipment Co., Inc.**

113 Teal Street St. Rose, LA 70087-9691 Phone 504/464-9471 FAX 504/467-7685 Website: www.spec150.com

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to be slightly hotter than 1475 F in order to maintain the 1475 F furnace temperature. As a result, the surface of the C-1 in contact with the fire brick was subjected to a temperature judged to be slightly higher than that specified. Also, the temperature in the furnace was 1475 F throughout the furnace. In an open hydrocarbon fueled fire the temperature of areas not in direct contact with the flame is less than 1475 F - in some areas significantly less than 1475 F - whereas the C-1 in the furnace was completely surrounded by the 1475 F or higher environment for the full 30 minute test period.

It should also be pointed out that the SPEC C-1 transport package consists of the inner package (which was subjected to the thermal test) and the steel drum outer package. By testing the inner package alone the test was much more severe and added an extra measure of conservatism to the test results. Even with this added severity, the SPEC C-1 inner package met the test requirements, as proven by the radiation survey readings taken before and after the thermal test.

Please do not hesitate contact me or my staff if you need further assistance or clarification.

Sincerely,



Kelley Richardt
Quality Assurance and Regulatory Manager