



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 29, 2014

Mr. Scott P. Murray  
Manager, Facility Licensing  
GE Hitachi Nuclear Energy  
3901 Castle Hayne Road  
Wilmington, NC 28402

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR SPECIAL  
AUTHORIZATION REQUEST FOR THE MODEL NO. 2000 PACKAGE

Dear Mr. Murray:

By application dated June 30, 2014, General Electric-Hitachi (GEH) submitted a special authorization request to Certificate of Compliance No. 9228 for the Model No. 2000 package.

In connection with the staff's review of your application, we need the information identified in the enclosure to this letter. We request that you provide this information by September 5, 2014.

Please reference Docket No. 71-9228 and TAC No. L24930 in future correspondence related to this request. The staff is available to meet with you to discuss your proposed responses. If you have any questions regarding this matter, I may be contacted at (301) 492-3408.

Sincerely,

**/RA/**

John Vera, Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9228  
TAC No. L24930

Enclosure: Request for Additional Information

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Enclosure: Request for Additional Information

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**ADAMS Accession No. : ML14245A561**

<b>OFC:</b>	SFST		SFST	
<b>NAME:</b>	JVera		TLupold	
<b>DATE:</b>	8/29/2014		8/29/2014	

OFFICIAL RECORD COPY

**Request for Additional Information  
for the  
Model No. 2000 Package  
Docket No. 71-9228**

By application dated June 30, 2014, General Electric-Hitachi (GEH) submitted a special authorization request to Certificate of Compliance No. 9228 for the Model No. 2000 package.

This Request for Additional Information (RAI) identifies information needed by the staff in connection with its review of the application. The requested information is listed by chapter number and title in the applicant's Safety Analysis Report. The staff reviewed the application using the guidance in NUREG 1609, "Standard Review Plan for Transportation Packages for Radioactive Material."

**Chapter 5 – Shielding Analysis**

1. Clarify the discordance between the assumptions in the shielding analyses and the structural analysis regarding bolt deformation and PIG lid separation, and justify compliance with regulatory requirements relating to the information requested below.

The application provides shielding analyses for normal conditions of transport (NCT) and hypothetical accident conditions (HAC), where a primary assumption is that the lid of the internal component identified as the PIG is fully closed. However, in the structural demonstration for HAC 30-foot drop, the application states that an expected yield value for the steel the bolts are made of is 30,000 psi at 100°F, while the calculations show a resulting tensile bolt stress of 48,107 psi. This implies that, at 100°F (and ergo, at the assumed temperature used throughout the application of 200°F), the bolt has exceeded the yield stress and plastic deformation is to be expected. This plastic deformation could result in lid separation. In turn, this separation could open up streaming paths that have not been evaluated in the application.

In addition, the bolt preload calculation is based on a minimum yield strength of 30,000 psi at 100°F. Staff determined that the bolt preload is expected to result in tensile stress of around 25,000 psi. However, a lower yield strength should be expected at the higher assumed temperature used throughout the application (200°F). This could result in the bolt exceeding yield due to preload as the temperature rises within the package.

This information is needed to determine compliance with 10 CFR 71.47.