

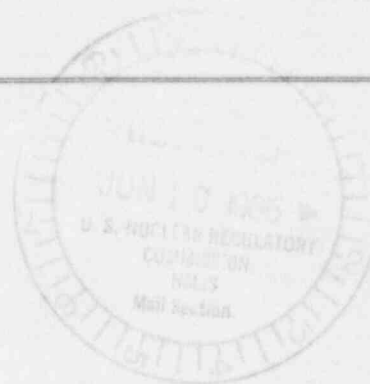


# GENERAL NUCLEAR SYSTEMS, INC.

A CHEM-NUCLEAR COMPANY

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June 19, 1985

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Mr. John P. Roberts, Project Manager  
Advanced Fuel and Spent Fuel  
Licensing Branch  
Division of Fuel Cycle and  
Material Safety  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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Subject: NRC Project M-37  
CASTOR V/21 Topical Safety Analysis Report

Enclosure: Design Analysis for CASTOR V/21 Impact Limiter

Gentlemen:

This transmittal provides you with our final design and analysis for the impact limiter applicable to the CASTOR V/21 cask. The attached metal impact limiter design supercedes the description of the wooden impact limiter as described in Section 8.2.1.2.3.2 of the TSAR Revision 1.

The existing analysis in the TSAR for the top and bottom end drops demonstrate acceptable results based on a peak acceleration of 50 G's with the wooden impact limiter. The attached analysis of the metal impact limiter also restricts the maximum cask acceleration to less than 50 G's (32.4 G's maximum calculated based on 6 foot drop). Therefore, the cask body stresses previously determined remain valid and bounding for the enclosed design.



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Operationally, the impact limiters (top and bottom) provide protection during the transfer of the cask onto the ISFSI storage pad. The cask is hoisted over it's final position and lowered to a height that permits easy removal at the bottom limiter. Section 8.2.1.2.3.5 of the TSAR shows that a cask height of 15 inches during this operation is acceptable. Since the enclosed limiter design is approximately 10 inches high, the 15 inch height limitation can be easily maintained while the bottom limiter is removed. Once the cask is properly positioned on the pad, the top impact limiter is removed.

Information contained within this transmittal will be incorporated in the CASTOR V/21 TSAR.

Please feel free to contact me at 203-677-0457 with any further comments or questions.

Very truly yours,

General Nuclear Systems, Inc.

A handwritten signature in dark ink, appearing to read "Victor J. Barnhart", followed by the text "for VJES" in a smaller, less legible script.

Victor J. Barnhart  
Vice President & Project Manager

CC: H. S. McKay (VEPCO)  
M. Schwartz (LLNL)

/ld  
0296C

Enclosures