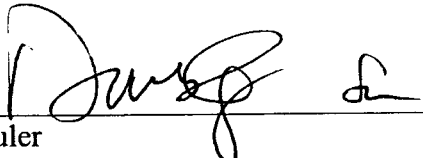


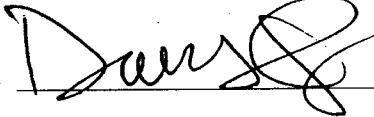
SAFETY EVALUATION REPORT

**Request for Technical Interpretation on T-3 Spent Fuel Shipping Cask
Viton Seals, Replacement Bolts, and Use of Inserts**

Dockets 07-03-9132 and 07-05-9132

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Date: 1/4/07

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Date: 1/4/07

The staff has reviewed the requested page changes and the additional information referenced in the memorandum from the Richland Operations Office (DOE-RL), "Requested Page Changes to T-3 Spent Fuel Shipping Cask SARP, Document No. SED:RJS/07-SED-0061, December 15, 2006". In the memorandum, DOE-RL responded to the EM-60 memorandum "Request Page Change to T-3 Spent Fuel Shipping SARP, EM-60 (Dr. James Shuler) to Keith Klein, Manager, Richland Operations Office, November 21, 2006" to provide all of the supporting documentation for a page change to the T-3 Cask SARP.

The staff agrees with the conclusions of DOE-RL with respect to page changes to the T-3 Spent Fuel Shipping Cask, the substitution of Viton® GLT-S for Viton® GLT O-ring material, the use of the L43-grade bolt, and the threaded insert repair.

The first issue concerns DuPont's replacement of Viton GLT O-ring material with Viton GLT-S material. According to Attachment 1 of the DOE-RL October 31, 2006 memorandum "Request for Technical Interpretation on T-3 Spent Fuel Shipping Cask Viton Seals and Carbide Fuel Payload", the T-3 cask Safety Analysis Report for Packaging (SARP) specifies use of Viton GLT O-rings. DuPont has replaced the Viton GLT O-rings with Viton GLT-S O-rings. Viton® GLT has been discontinued. DuPont considers the Viton GLT-S O-rings to be a one-for-one substitute for the GLT O-rings. DOE-RL has provided references that discuss replacement of Viton® GLT with Viton® GLT-S as O-ring material in the T-3 Spent Fuel Shipping Cask and referred to a separate, but related, effort for the Savannah River Site 9975 Program to incorporate long term aging and radiation resistance evaluation of GLT-S as part of its KAMS storage program for the 9975s used as waste packages.

Based on the manufacturer's data, the Viton GLT-S has similar or superior properties to the Viton GLT and should be suitable as a one for one substitution on a material basis. Both Viton GLT and Viton GLT-S meet the appropriate specifications for low temperature use (MIL-R-83485 and AMS-R-83485). The maintenance program requirements and the intended aging study will provide evidence of continued acceptability in the intended configuration.

The second issue concerns screw and bolt sizes and material grades (closure-bolt changes). The memorandum from the DOE-RL, "Requested Page Change to T-3 Spent Fuel Shipping Cask SARP," dated October 31, 2006 addressed these items. The technical information provided by DOE-RL is satisfactory to support the request. The corrective actions are acceptable and would not change the safety margin of the packaging design as described in the original license and SARP. The currently-used L43-grade bolt is actually tougher (less brittle) than the originally-specified L7-grade bolt. The closure-bolt designs provide sufficient engagement length to overcome the 0.25-inch discrepancy in the bolt length. The updated Drawing H-4-66230, Sheet 1 reflects the change in the torque range for the top closure cover bolts.

The third issue concerns the repair of the impact-limiter-attachment-bolt hole (also raised in the DOE-RL October 31, 2006 "Requested Page Change to T-3 Spent Fuel Shipping Cask SARP"). The corrective actions are acceptable and would not change the safety margin of the packaging design as described in the original license and SARP. The insert design complies with the Military Specifications. The force required for pulling out the insert is greater than that needed for pulling out the bolt because the insert material is stronger than the replaced bolt-hole material, the outer diameter of the insert is larger than the outer diameter of the bolt, and the insert does not significantly change the engagement length for the bolt. Also, DOE-RL follows the manufacturer's suggested procedures for installing the insert.