

71-9221



Department of Energy
Washington, DC 20585

NR:RM:DDLeege S#06-01881
May 31, 2006

E. William Brach
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
Nuclear Regulatory Commission
Washington, D.C. 20555

**NUCLEAR REGULATORY COMMISSION CERTIFICATE OF COMPLIANCE FOR THE
NRBK-41 RADIOACTIVE MATERIAL SHIPPING CONTAINER; REQUEST FOR
RENEWAL**

Background: Nuclear Regulatory Commission (NRC) Certificate of Compliance (COC) USA/9221/B()F, which authorizes the shipment of various irradiated components in the NRBK-41 Radioactive Material Shipping Container, expires on September 30, 2006. This container is used to ship small quantities (less than 350 grams equivalent U-235) of test specimens between Naval Nuclear Propulsion Program (NNPP) sites and subcontractors.

To support the shipment of many different types of test specimens, the COC is written to provide a series of constraints or bounding conditions, rather than a specific cargo description. For shipments of the NRBK-41 cask, the MIN-41 or HIP-41 inner container acts as the primary containment boundary. The MIN-41 containers have a leak test penetration that is sealed with a small pipe plug. During an engineering evaluation of another NNPP container (not used for radioactive material transportation), a question was raised as to the ability of the MIN-41 to meet the leak-tight criteria after the hypothetical fire accident condition. Thermal testing was performed on a MIN-41 container which identified the leak test penetration was unable to meet the specified leak-tight criteria specified in the safety analysis report for packaging (SARP). This concern is also applicable to the HIP-41 inner container.

Discussion:

- a. The leak test penetration is currently being re-designed to re-establish the integrity of the MIN-41 and HIP-41 containment boundary seals. These container design changes will be incorporated into the upcoming SARP revision which will also demonstrate compliance with the 10CFR71 standards issued in January of 2004. The revised SARP is

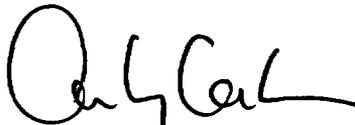
NmSSO1

planned to be issued to the NRC for review and concurrence prior to the grandfathering cutoff date for B()F designated COCs of October 1, 2008.

b. Until the re-design and subsequent SARP revision is complete, Naval Reactors has restricted shipments of the NRBK-41 cask to cargo that can be shown to meet the applicable radioactive material release requirements for the hypothetical fire accident conditions (10CFR71.51) through cargo-specific material evaluations prior to shipment. Specifically, shipments of NRBK-41 casks are prohibited unless the total radionuclide content available for release is less than 10 A₂ per week for krypton-85 and less than one A₂ per week for other radionuclides after the hypothetical fire accident condition.

Request for NRC Review and Concurrence: Renewal of the current NRC COC is requested until October 1, 2008 with the restriction identified above.

If you have any questions, please call me at (202)781-6255 or David Leege at (202) 781-6045.



A. P. Cochran
Naval Reactors

Copy to:

W. H. Ruland, Licensing and Inspection Directorate, SFPO, NMSS,
NRC

N. L. Osgood, Spent fuel Licensing, SFPO, NMSS, NRC
Manager, PNRO

General Manager, Bettis

Manager, Refueling Engineering and Operations, Bettis

Manager, Shipping Containers, REO, Bettis

Manager, Container Design and Support, SC, REO, Bettis