

September 22, 2005

Ms. Leah R. Morrell  
Manager, Licensing & Safety Analysis  
BWX Technologies  
Nuclear Products Division  
P.O. Box 785  
Lynchburg, VA 24505

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9250 FOR THE MODEL NO. 5X22  
PACKAGE

Dear Ms. Morrell:

As requested by your application dated June 13, 2005, enclosed is Certificate of Compliance No. 9250, Revision No. 10, for the Model No. 5X22 package. This certificate supersedes in its entirety, Certificate of Compliance No. 9250, Revision No. 9, dated July 23, 2004. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's Safety Evaluation Report is also enclosed.

The approval constitutes authority to use the package for shipment of radioactive material and for the package to be shipped in accordance with the provisions of 49 CFR 173.471. Those on the attached list have been registered as users of the package under the general license provisions of 10 CFR 71.17 or 49 CFR 173.471. Registered Users may request by letter to remove their names from the Registered Users List.

If you have any questions regarding this certificate, please contact me or Jessica Umana of my staff at (301) 415-8500.

Sincerely,

/RA/

Robert J. Lewis, Chief  
Licensing Section  
Spent Fuel Project Office  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-9250

Enclosures: 1. Certificate of Compliance No. 9250, Rev. 10  
2. Safety Evaluation Report  
3. Registered Users

cc w/encls 1 & 2: R. Boyle, Department of Transportation  
J. Shuler, Department of Energy  
RAMCERTS  
Registered Users

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 J. Shuler, Department of Energy  
 RAMCERTS  
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SAFETY EVALUATION REPORT  
Docket No. 71-9250  
Model No. 5X22 Package  
Certificate of Compliance No. 9250  
Revision No. 10

## SUMMARY

By application dated June 13, 2005, BWX Technologies (BWXT or the applicant) requested an amendment to Certificate of Compliance No. 9250, for the Model No. 5X22 package. BWXT requested to eliminate the use of washers for the 5X22 package. The applicant also made other revisions to the application to provide clarification. BWXT submitted a consolidated application for the package.

## EVALUATION

By application dated June 13, 2005, BWXT requested an amendment to Certificate of Compliance No. 9250, for the Model No. 5X22 package. The applicant requested eliminating the use of washers for the inner vessel closure bolts. BWXT also provided revisions to the operating procedures and maintenance program in the Safety Analysis Report (SAR) for clarification.

Condition No. 3 of the certificate was revised to reflect the latest version of drawing no. 1220276, which eliminates washers. Washers are used to prevent the closure bolts from loosening. Additionally, washers also increase the contact area between the bolt head and the connecting surface to reduce the bearing stresses due to the bolt pre-load. As a result of this the elimination of washers is not desirable. However, the bearing stress under a standard hexagon bolt head due to the maximum 4000 lbs pre-load, is approximately 12,500 psi. This is below the 16,700 psi allowable stresses for membrane stresses. The inner vessel is well protected by the 55-gallon outer drum and the fiberboard disks. The applicant also stated, "[o]nce a container is torqued, the container is shipped within five days and is typically en route for a maximum of two days." Based on the statements and representations in the application, the staff concluded that the absence of washers will not reduce the effectiveness of the package and will not create a situation adversely affecting public health and safety.

Condition No. 5(b) of the certificate was revised to be consistent with 10 CFR 71.4 and to delete "transport index" and "Minimum Transport Index."

Condition No. 8 of the certificate was revised to clarify that the package is approved for use under general license provisions of 10 CFR 71.17. This change is due to a revision in the numbering of the sections in 10 CFR Part 71, that became effective on October 1, 2004 (69 FR 3698).

Sections 7 and 8, the operating procedures and the acceptance tests and maintenance programs, respectively, have also been revised. Section 7 and 8 have been revised to ensure that the annual weight values are compared to the initial receipt weight value. If the annual weight for the package is compared to the previous annual value the 5-pound pickup of water, conceivably there could be an accumulation over the years of more than 5-pounds above the original weight and the package will still be acceptable.

#### CONCLUSION

These changes do not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9250, Revision No. 10 on September 22, 2005.

