

January 17, 2006

Mr. Norman A. Kent, Manager  
Transport Licensing and Regulatory Compliance  
Westinghouse Electric Company  
P.O. Drawer R  
Columbia, SC 29250

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 9292 FOR THE MODEL NO. PATRIOT  
PACKAGE

Dear Mr. Kent:

As requested by your application dated September 22, 2005, as supplemented January 6, 2006, enclosed is Certificate of Compliance (CoC) No. 9292, Revision No. 4, for the Model No. PATRIOT package. Changes made to the enclosed certificate are indicated by vertical lines in the margin. The staff's Safety Evaluation Report is also enclosed.

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. 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. 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 Mr. Jose R. Cuadrado of my staff at (301) 415-8500.

Sincerely,

*/RA/*

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

Docket No. 71-9292  
TAC No. L23900

Enclosures: 1. Certificate of Compliance No. 9292, Rev. No. 4  
2. Safety Evaluation Report  
3. Registered Users List

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

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## **SAFETY EVALUATION REPORT**

**Docket No. 71-9292**  
**Model No. PATRIOT Package**  
**Certificate of Compliance No. 9292**  
**Revision No. 4**

### **SUMMARY**

By application dated September 22, 2005, as supplemented January 6, 2006, Westinghouse Electric Company, LLC, submitted an amendment request for Certificate of Compliance (CoC) No. 9292 for the Model No. PATRIOT package. Specifically, Westinghouse requested to revise the package drawings to include the inner container of the CE-B1 package as an alternative inner container for use with the PATRIOT package.

The amendment request included the necessary analyses and proposed CoC and application page changes to support the amendment request. The new application page changes will be referenced in the CoC.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the amendment request, including the proposed CoC and application revisions, and other supporting documents submitted with the request. Based on the statements and representations in the application, as supplemented, the staff concludes that the Model No. PATRIOT package, as amended, meets the requirements of 10 CFR Part 71.

### **1.0 GENERAL INFORMATION**

The applicant requested to revise Condition 5(a)(3) of the CoC, "Drawings," to include a new alternative inner container for the PATRIOT package. The revision will allow the inner container of the CE-B1 package (CoC No. 9272) to be used as an alternative inner container inside the PATRIOT outer package. The specific changes made to the CoC are discussed below, in the "Conditions" section of this Safety Evaluation Report (SER). Given the limited nature of this amendment request, only those sections affected will be discussed.

#### **1.1 Drawings**

The applicant provided additional engineering drawings describing the CE-B1 inner container to be used as an alternative (version #2) inner container in the PATRIOT package (Drawing No. 10015E58, Sheets 1 and 2, Rev. 1). Also, the applicant provided additional drawings and sketches illustrating the optional inner container configurations resulting from new maintenance and refurbishment activities. These drawings are provided in Chapter 8 of the application (Figure 8-1, Figure 8-7, and Figure 8-9).

## **2.0 STRUCTURAL**

The applicant requested an amendment to CoC No. 9292 for the PATRIOT package, to include a new alternate inner container to be used inside the PATRIOT outer container. Specifically, the applicant provided additional engineering drawings to be referenced in the CoC that allow the inner container of the CE-B1 package (CoC No. 9272) to be used as an alternate inner container (version #2).

The PATRIOT and the CE-B1 packages belong to the same family of BWR fuel packages. A review of the engineering drawings for both the PATRIOT and the CE-B1 inner containers show that both inner containers are essentially the same in most aspects, excluding some minor dimension differences. The drawings show that both inner containers are fabricated from the same materials and, therefore, have the same weight when empty.

Based on a review of the engineering drawings and the information provided in the amendment application, the staff concludes that adding the CE-B1 inner container as an alternate inner container of the PATRIOT package will not affect the ability of the package to meet the structural performance requirements of 10 CFR Part 71.

## **6.0 CRITICALITY**

The proposed amendment adds a new alternative inner container for use inside the PATRIOT outer container. The applicant requested to include the inner container of the CE-B1 package as an alternative inner container for the PATRIOT package. In order to determine the applicability of the PATRIOT criticality analysis to the CE-B1 inner container, the applicant performed a detailed comparison of the criticality analyses presented in both PATRIOT (CoC No. 9292) and CE-B1 (CoC No. 9272) Safety Analysis Reports (SARs).

The applicant's comparison of the criticality analyses for both the PATRIOT and the CE-B1 package show that both analyses use identical assumptions, models, and both draw the same conclusions. Only minor differences between the dimensions used for the inner container are observed, and these do not create any discrepancies in the criticality safety conclusions. Both criticality safety analyses assume the same fuel assembly types as the authorized contents of the packages.

Based on the review of the criticality safety analyses for both packages and the applicant's comparison of both analyses provided in the application, the staff concludes that the use of the CE-B1 inner container as an alternative inner container inside the PATRIOT package will not affect the ability of the package to meet the criticality safety requirements of 10 CFR Part 71.

## **8.0 ACCEPTANCE TESTS AND MAINTENANCE PROGRAM**

The applicant provided revised maintenance procedures applicable to the current PATRIOT inner container and the new CE-B1 inner containers.

The new maintenance procedure describes the cleaning and painting process for the inner containers. The applicant provided a detailed outline of the steps performed during the cleaning and painting process, including a description of specific steps of the process that

involve altering or modifying the configuration of the package as described in the engineering drawings. The applicant provided additional drawings (Figure 8-1, Figure 8-7, and Figure 8-9), detailing the possible package configurations resulting from these maintenance activities.

## **CONDITIONS**

The following conditions in CoC No. 9292, Revision No. 4, have been revised as follows:

Condition No. 5(a)(2) was revised to include revised dimensions for the outer container, and to reference the new type of inner container. The original PATRIOT inner container is identified as “version #1 inner container,” and the CE-B1 inner container is identified as “version #2 (optional) inner container.”

Condition No. 5(a)(3) was revised to include new engineering drawing references describing the new type of inner container, and the possible package configurations resulting from maintenance and refurbishment activities.

Condition No. 9 of the certificate has been added to specify that the use of the version #2 (optional) inner container (CE-B1 inner container) is limited to those containers with Serial Nos. 001 through 039, inclusive. This condition is added to ensure that no additional fabrication of this inner container is performed, as specified in CoC No. 9272, Rev. 6. All other conditions have been renumbered accordingly.

A new Condition No. 11 was added to authorize the use of the previous revision of the certificate for a period of approximately one year.

## **CONCLUSIONS**

Based upon the staff’s review, the statements and representations in the application, as supplemented, for the reasons stated in this Safety Evaluation Report, and with the conditions listed above, we conclude that these changes will not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9292, Revision No. 4,  
on January 17, 2006.