January 12, 2006

Mr. B. K. Miles
Naval Reactors
Department of Energy
Washington, DC 20585

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 5757 FOR THE MODEL NO. NEUTRON SOURCE SHIPPING AND INSTALLATION CONTAINER PACKAGE - REQUEST FOR ADDITIONAL INFORMATION

Dear Mr. Miles:

This refers to your application dated May 26, 2005, requesting an amendment to Certificate of Compliance No. 5757 for the Model No. Neutron Source Shipping and Installation Container package.

In connection with our review, we need the information identified in the enclosure to this letter. Additional information requested by this letter should be submitted in the form of revised pages. To assist us in scheduling staff review of your response, we request that you provide this information by May 1, 2006. If you are unable to provide a response by that date, our review may be delayed.

If you have any questions regarding this matter, we would be pleased to meet with you and your staff. I may be contacted at (301) 415-8513.

Sincerely,

/RA/
Nancy L. Osgood
Senior Project Manager
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-5757
TAC No. L23857

Enclosure: Request for Additional Information

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Request for Additional Information
Docket No. 71-5757
Model No. Neutron Source Shipping and Installation Container Package
Certificate of Compliance No. 5757

By application dated May 26, 2005, the Department of Energy, Naval Reactors, requested an amendment to Certificate of Compliance No. 5757 for the Model No. Neutron Source Shipping and Installation Container package. This request identifies additional information needed by the Nuclear Regulatory Commission staff in connection with its review of the application. The requested information is listed by chapter number and title in NUREG-1609, "Standard Review Plan for Transportation Packages," which was used by the staff in its review of the application. This request describes information needed by the staff for it to complete its review of the application and to determine whether the applicant has demonstrated compliance with regulatory requirements.

4.0 CONTAINMENT

4-1 Revise the application to show that the package meets the containment requirements of 10 CFR 71.51 assuming that the neutron sources do not meet the requirements of special form radioactive material, as defined in 10 CFR 71.4.

The application requested that the Certificate of Compliance be amended to remove the special form material designation for the neutron sources, since the sources identified in the safety analysis report that are shipped in the package were not specifically tested in accordance with 10 CFR 71.75. However, the application does not demonstrate that the package would provide adequate containment under normal or accident conditions if the radioactive material were not in special form. Revise the application to show that the outer package would provide adequate containment under normal and accident conditions to meet the release standards in 10 CFR 71.51. It is noted that the package seal may melt under fire test conditions. Alternatively, show that the design of the sources is adequate to ensure the release limits are met, i.e., the sources (irradiated and unirradiated) maintain adequate containment under normal or accident conditions. Note that ANSI N14.5-1997, "Leakage Tests on Packages for Shipment," includes information that may be helpful in demonstrating that the package meets the requirements of 10 CFR 71.51 and 71.87(c).

5.0 SHIELDING

5-1 Revise the application to show that the package meets the external radiation limits of 10 CFR 71.47 and 10 CFR 71.51 under normal and accident conditions, for radioactive material not in special form.

Clarify that the dose rates meet the applicable limits even if the material is not in special form, i.e., if the material is dispersible. Alternatively, show that the neutron sources (unirradiated and irradiated) retain the radioactive material under normal and accident conditions.

7.0 PACKAGE OPERATIONS

7-1 Revise the application to include tests or determinations (e.g., leakage tests) that are made to ensure that the package is properly sealed and prepared for transport.

For material not in special form, the package containment boundary (the outer package or the source itself) should be tested prior to each shipment to ensure that it is properly sealed. These tests should demonstrate that the package meets the requirements of 10 CFR 71.51 and that the package is operated in accordance with 10 CFR 71.87(c).

8.0 ACCEPTANCE TESTS AND MAINTENANCE PROGRAM

8-1 Revise the application to include a description of acceptance tests and the maintenance program for the package that demonstrates that the containment system of the package meets the requirements of 10 CFR 71.51.

For radioactive material not in special form, the acceptance tests (e.g., leakage tests) should show that the containment system meets the release limits in 10 CFR 71.51. The maintenance program should ensure that the containment system maintains its performance throughout the service life of the package.