

September 12, 2005

Ms. Lori Podalak
Product Licensing Specialist
Regulatory Affairs Department
AEA Technology QSA, Inc.
40 North Avenue
Burlington, MA 01463

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 6613 FOR THE
MODEL NO. 702 PACKAGE

Dear Ms. Podalak:

As requested by your letter dated June 24, 2005, enclosed is Certificate of Compliance No. 6613, Revision No. 11, for the Model No. 702 package. This certificate supersedes, in its entirety, Certificate of Compliance No. 6613, Revision No. 10, dated May 12, 2003. Changes 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 Jill Caverly 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. 71-6613
TAC No. L23864

Enclosures: 1. Certificate of Compliance
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

Ms. Lori Podalak
Product Licensing Specialist
Regulatory Affairs Department
AEA Technology QSA, Inc.
40 North Avenue
Burlington, MA 01463

SUBJECT: CERTIFICATE OF COMPLIANCE NO. 6613 FOR THE
MODEL NO. 702 PACKAGE

Dear Ms. Podalak:

As requested by your letter dated June 24, 2005, enclosed is Certificate of Compliance No. 6613, Revision No. 11, for the Model No. 702 package. This certificate supersedes, in its entirety, Certificate of Compliance No. 6613, Revision No. 10, dated May 12, 2003. Changes 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 Jill Caverly 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. 71-6613
TAC No. L23864

Enclosures: 1. Certificate of Compliance
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

ML052560043

DISTRIBUTION: (Closes TAC No: L23864)

MRahimi JCuadrado NOsgood JBarto JUmana
RBellamy DCollins JMadera Bspitzberg SWilliams
E:\Filenet\ML052560057.wpd

OFC:	SFPO	SFPO	NOsgood	SFPO
NAME:	JCaverly*	MDeBose*		RLewis
DATE:	8/29 /05	9 /1 /05	/ /05	09 / 12 /05

C = COVER

E = COVER & ENCLOSURE

N = NO COPY

OFFICIAL RECORD COPY

SAFETY EVALUATION REPORT

Docket No. 71-6613
Model No. 702 Package
Certificate of Compliance No. 6613
Revision No. 11

SUMMARY

By application dated June 24, 2005, AEA Technology/QSA Inc. (AEA) requested that the Certificate of Compliance No. 6613 for the Model No. 702 package be reviewed by the U.S. Nuclear Regulatory Commission (NRC) for consistency with the requirements of Title 10 Code of Federal Regulations (CFR) Part 71 as revised in a final rule effective October 1, 2004 (69 FR 3698). In addition, AEA submitted an updated application package to follow guidance for format in NRC Regulatory Guide 7.9, Revision 2. The package identification number has been amended to include the "-96" designation identifying that it meets the updated regulations as described in the package application.

EVALUATION

By letter dated June 24, 2005, the applicant, AEA, requested an amendment to Certificate of Compliance No. 6613 for its Model No. 702 package to include the "-96" in the identification number, as specified in 10 CFR 71.19(e). The Model No. 702 package is currently certified by NRC as meeting Type B(U)-85 requirements. The package is approved for transport of Cesium-137, Iridium-192, Selenium-75, and Ytterbium-169 in sources meeting the requirements of special form radioactive material. In addition to updating the certificate with the "-96" designation, the applicant submitted an updated application to follow format in NRC guidance.

Staff evaluated the information provided by the applicant and assessed the impacts of issues identified in the final rulemaking for 10 CFR Part 71, effective October 1, 2004. Nineteen issues were considered in the rulemaking process that led to the revised rule. Five of these issues were not adopted into the final rule. The remaining 14 issues were evaluated for applicability to the Model No. 702 package.

A summary of these issues and their applicability is listed below.

Issue 1: Changing Part 71 to the International System of Units

This proposal was not adopted in the final rule. Therefore, no changes are needed in the package application or the Certificate of Compliance to conform to the new rule.

Issue 2: Radionuclide Exemption Values

This proposal does not apply based on the authorized contents of the package.

Issue 3: Revision of A_1 and A_2

The total quantity of material authorized in the certificate is based on output activity. The size of the sample is limited based on condition of the Certificate of Compliance. Therefore, this issue does not impact the certificate.

Issue 4: Uranium Hexafluoride Package Requirements

The issue is not applicable to the certificate because the package is not authorized for transport of uranium hexafluoride.

Issue 5: Criticality Safety Index

This issue is not applicable since the certificate does not authorize fissile material as contents of this package. Thus, no changes are necessary to conform to the new rule.

Issue 6: Type C Package and Low Dispersible Material

This proposal was not adopted for the final rule. Thus, no changes are necessary.

Issue 7: Deep Immersion Test

The final rule adopted an extension to the previous version of 10 CFR 71.61 to include immersion testing for Type B packages with contents greater than $10^5 A_2$. The package is not authorized for material in amounts greater than $10^5 A_2$. Therefore, this change is not applicable and no revision to the certificate is necessary to conform to the new rule.

Issue 8: Grandfathering

The final rule adopted a process for allowing continued use, for specific periods of time, of a previously approved package design without demonstrating compliance to the final rule. The applicant has decided in accordance with 10 CFR 71.19(e) to submit information demonstrating compliance with the final rule. Thus, grandfathering the design of the package is not necessary.

Issue 9: Changes to Various Definitions

The final rule adopted several revised and new definitions. These changes were adopted to provide clarity to Part 71. No change is necessary to conform to the new rule.

Issue 10 Crush Test for Fissile Material Packages.

The revised 10 CFR 71.73 expanded the applicability of the crush test to certain fissile material packages. This certificate does not authorize fissile material for this package design. Thus, no change is necessary to conform to the new rule.

Issue 11: Fissile Material Package Design for Transport by Aircraft

This provision is not applicable because the package is not authorized for fissile material. Thus, no change is necessary to conform to the new rule

Issue 12: Special Package Authorizations

The final rule adopted provisions for special package authorization that will apply only in limited circumstances and to only one-time shipments of large components. This provision is not applicable to the Model No. 702 package. Thus, no change is necessary to conform to the new rule.

Issue 13: Expansion of Part 71 Quality Assurance (QA) requirements to Certificate Holders

The final rule expanded the scope of Part 71 QA requirements to apply to any person holding or applying for a Certificate of Compliance. QA requirements apply to design, purchase, fabrication, handling, shipping, storing, cleansing assembly, inspection, testing, operation, maintenance, repair and modification of components of packaging that are important to safety. AEA is the holder of an NRC-approved QA program. No further change is needed to conform to the new rule.

Issue 14: Adoption of the American Society of Mechanical Engineers Code

This proposal was not adopted in the final rule. Thus, no change is needed to conform to the new rule.

Issue 15: Change Authority for Dual-Purpose Package Certificate Holders

This proposal was not adopted in the final rule. Thus, no change is needed to conform to the new rule.

Issue 16: Fissile Material Exemptions and General License Provisions

The final rule adopted various revisions to the fissile material exemptions and the general license provisions in Part 71 to facilitate effective and efficient regulation of transport of small quantities of fissile material. No fissile material is authorized for transport under this certificate. Thus, no change is needed to conform to the new rule.

Issue 17: Double Containment of Plutonium

The final rule removed the requirement for inner containers for certain packages containing plutonium. Plutonium is not authorized under this certificate. Thus, no change is needed to conform to the new rule.

Issue 18: Contamination Limits as Applied to Spent Fuel and High Level Waste Packages

This proposal was not adopted in the final rule. Thus, no change is needed to conform to the new rule.

Issue 19: Modification of Events Reporting Requirements

The final rule adopted modified reporting requirements. While the final rule is applicable to the package, no change is needed to either the Certificate of Compliance or the package application to conform to the new rule.

Updated SAR

In addition to updating the Certificate of Compliance to meet the new rule, a consolidated package application for the Model No. 702 package was submitted to NRC. This version of the package is essentially a full revision. The basic format has been revised to match the suggested format in Regulatory Guide 7.9, Revision 2. There have been no significant changes to the contents.

The generic format changes to application include minor grammatical changes, format changes to match the regulatory guide, and references to “shipping cask” replaced with “shield cask.” Specific changes have been listed in the front pages of the application. These changes can be categorized by the chapters of the application that contain them. A consolidated discussion of the specific changes follows.

Section 1 to the application contains general information. This section was updated to include specific details of heights and changed previously incorrect references.

Section 2 covers the structural analysis for the package design. The revisions to this section are primarily the addition of information to match the regulatory guide format. However, Sections 2.6.1.2 through 2.6.1.4 and Sections 2.7.4.2 through 2.7.4.4 added evaluations of thermal expansion effects and stress. The conclusion stated that the effects were insignificant because the analysis showed that the calculated stresses are lower than the materials strength.

Section 3 includes the Thermal Evaluation of the package. The section was primarily updated to match the format of the regulatory guide. Sections 3.4.6.1.1 and Sections 3.4.6.1.2 corrected decay heat values.

The additional sections of the application include the remaining technical evaluations and were reformatted for clarity.

Staff has reviewed the requirements of the revised Part 71 rule and the changes to the application identified by the Certificate holder and concludes that the package meets the requirements for a “-96” designation and the revisions to the application are not significant to the design and performance of the package.

Changes to Certificate Conditions

Item No. 1(b) was updated for the current revision number of 11.

Condition No. 5(b)(2) was reworded to provide clarity.

Condition No. 8 was revised to reflect the change in the section numbers of the general license requirements as set forth in the new Part 71 ruling that became effective October 1, 2004.

Condition No. 8 of the certificate allows a package to be marked with the previous package identification number, USA/6613/B(U)-85, until September 30, 2006. This is to allow time to replace the packaging nameplate that shows the revised package identification number, USA/9263/B(U)-96.

The June 24, 2005, submittal was included in the References section.

CONCLUSION

Based on the statements and representation in the application, the staff concludes that the Model No. 702 meets the requirements of the revised 10 CFR Part 71 and can be designated with "-96" in the identification number and that the revisions to the SAR are not significant to the design of the package.

Issued with Certificate of Compliance No. 6613, Revision No. 11
on September 12, 2005.