April 28, 2008

Ms. Lori Podolak
Product Licensing Specialist
Regulatory Affairs Department
QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE MODEL NO. 702 PACKAGE

Dear Ms. Podolak:

By letter dated October 5, 2007, as supplemented October 25, 2007, QSA Global, Inc. (QSA) submitted an amendment request for Certificate of Compliance No. 6613 for the Model No. 702 package.

In connection with the staff's review, we need the information identified in the enclosure to this letter. We request that you provide this information by May 19, 2008. Inform us at your earliest convenience, but no later than May 5, 2008, if you are not able to provide the information by that date. To assist us in re-scheduling your review, you should include a new proposed submittal date and the reasons for the delay.

Please reference Docket No. 71-6613 and TAC No. L24138 in future correspondence related to this request. The staff is available to meet to discuss your proposed responses. If you have any questions regarding this matter, I may be contacted at (301) 492-3285.

Sincerely,

/RA/
Jessica Glenny, Project Manager
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-6613
TAC No. L24138

Enclosure: Request for Additional Information

April 28, 2008

Ms. Lori Podolak
Product Licensing Specialist
Regulatory Affairs Department
QSA Global, Inc.
40 North Avenue
Burlington, MA 01803

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE MODEL NO. 702 PACKAGE

Dear Ms. Podolak:

By letter dated October 5, 2007, as supplemented October 25, 2007, QSA Global, Inc. (QSA) submitted an amendment request for Certificate of Compliance No. 6613 for the Model No. 702 package.

In connection with the staff's review, we need the information identified in the enclosure to this letter. We request that you provide this information by May 19, 2008. Inform us at your earliest convenience, but no later than May 5, 2008, if you are not able to provide the information by that date. To assist us in re-scheduling your review, you should include a new proposed submittal date and the reasons for the delay.

Please reference Docket No. 71-6613 and TAC No. L24138 in future correspondence related to this request. The staff is available to meet to discuss your proposed responses. If you have any questions regarding this matter, I may be contacted at (301) 492-3285.

Sincerely,

/RA/
Jessica Glenny, Project Manager
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-6613
TAC No. L24138

Enclosure: Request for Additional Information

DISTRIBUTION:
SFST r/f
G:\SFST\Glenny\QSA Global702 RAIs.doc

OFC:	SFST	E	SFST	E	SFST		SFST		SFST		SFST	
NAME:	JGlenny		MDeBose		MGordon		RBerry		CRegan		MRahimi	
DATE:	4/21/2008		4/21/2008		4/18/2008		4/21/2008		4/28/2008		4/28/2008	

C = COVER E = COVER & ENCLOSURE N = NO COPY OFFICIAL RECORD COPY

Request for Additional Information
QSA Global, Inc.
Docket No. 71-6613
Certificate of Compliance No. 6613
Model No. 702

By application dated October 5, 2007, supplemented October 25, 2007, QSA Global, Inc. (QSA) submitted an amendment request for Certificate of Compliance No. 6613 for the Model No. 702 package. This request for additional information (RAI) identifies information needed by the U.S. Nuclear Regulatory Commission staff (the staff) in connection with its review of the safety analysis report (SAR). The requested information is listed by chapter number and title in the SAR. NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material," was used for this review.

Chapter 1 General Information

1-1 Clarify which welding code or codes are used in the fabrication of the package.

Drawing No. R70290, Revision R, sheet 1 of 10, Note 2 states that welding and examination procedures are made according to American Welding Society (AWS) or American Society of Mechanical Engineers codes, but no specific codes (e.g., AWS D1.1) are mentioned.

This information is needed to determine compliance with 10 CFR 71.33(a)(5)(iii).

1-2 Describe how a ¼ inch fillet weld can be produced on more than two surfaces of the corner pads on the skid weldment due to the presence of an apparent bevel running the length of the skid weldment. Provide the necessary diagrams and explanation to demonstrate the ability to produce this weld found in Drawing No. R70290, Revision R, sheet 3 of 10.

The referenced drawing called out a fillet weld of ¼ inch on all four sides of the skid pads. This fillet weld on the corner pads is currently being revised to read on three sides because a fillet weld cannot be produced on a flush surface. There appears to be the potential for two flush surfaces.

This information is needed to determine compliance with 10 CFR 71.7

1-3 a) Specify the grade, and state the minimum yield strength, tensile strength and elongation to failure of the proposed 18-8 stainless steel cask lid bolts, and of the 304 stainless steel bolts currently in service, which are described in Drawing No. R70290, Revision R, sheet 6 of 10.

b) Provide specific material codes or manufacturing specifications as references.

c) Demonstrate that the lower bound of the mechanical properties of the proposed 18-8 stainless steel bolts match or exceed the minimum mechanical properties of the 304 stainless steel bolts currently used in service.

The bolts in question are important to safety. Justification is necessary to demonstrate that the substitution of 18-8 stainless steel bolts will not reduce the safety of the Model No. 702 package.

This information is needed to determine compliance with 10 CFR 71.33(a)(5)(iii) and 71.51(a)(2).

1-4 Specify the safety classification (A, B, or C) of the proposed 18-8 stainless steel cask lid bolts, described in Drawing No. R70290, Revision R, sheet 6 of 10.

The cask lid bolts are important to the safe operation of the Model No. 702 package. An appropriate safety classification, in accordance with NUREG/CR-6407, should be used to classify the bolts.

This information is needed to determine compliance with 10 CFR 71.37(b).

1-5 Justify the deletion of a spacer in Section B-B in Drawing No. R70290, Revision R, sheet 8 of 10. Additionally, provide any supporting calculations or information which evaluates the implications involved with the elimination of this spacer.

The spacer between the cover plate and the depleted uranium inner shell no longer appears in Revision R of Drawing No. R70290, but appeared in Revision N. This appears to be a change that was not referenced and does not appear to be documented.

This information is needed to determine compliance with 10 CFR 71.7.

1-6 Clarify the change on the cask cover in Drawing No. R70290, Revision R, sheet 8 of 10. Explain what the dimensions of the old penetration were and what the dimensions of the new penetrations will be.

The drill tap around the new stainless steel flat washer appears to be altered. The changes to penetration dimensions do not appear to be referenced in the cover letter.

This information is needed to determine compliance with 10 CFR 71.7

Chapter 2 Structural

2-1 Correct or delete the analysis presented in Section 2.7.4.2, and the corresponding in Section 2.7.4.3 of the SAR.

The finite element analysis in Section 2.12.3 is sufficient justification that the Model No. 702 package has met the requirements of 10 CFR Part 71.73(c)(4). The analytical analysis presented in Section 2.7.4.2, and the corresponding result in Section 2.7.4.3 is not necessary to support the technical basis and should therefore, for clarity, be deleted. If a correction to the analysis is made, the NRC staff considers that the room temperature elastic modulus of α-phase uranium ranges from 165 to 179 GPa and the room temperature elastic modulus of 304 stainless steel is 195 GPa.

This information is needed to determine compliance with 10 CFR 71.73(c)(4).

2-2 Correct the discrepancy between the mass of depleted uranium indicated on page 2-1 and page 5-1 of the SAR for the Model No. 702 package.

Page 2-1 of the SAR states that the mass of depleted uranium in the package is 217 ± 7 lbs, but page 5-1 states the mass is “approximately 209 lbs.”

This information is needed to determine compliance with 10 CFR 71.33(a)(5)(iii) and 10 CFR 71.7(a).

Chapter 3 Thermal

3-1 Add a qualifying remark to Table 3.2.1.a of the SAR stating that the thermal expansions of the materials listed in Table 3.2.1.a are temperature dependent.

Table 3.2.1.a may lead the reader to incorrectly conclude that the thermal expansions of materials used throughout the SAR are temperature independent, for example, the thermal expansion of uranium more than doubles over the temperature range of 25 to 800° C. The thermal expansions of the materials in the finite element analysis (Section 2.12.3); however, are temperature dependent.

This information is needed to determine compliance with 71.7(a).

Chapter 8 Acceptance Tests and Maintenance Program

8-1 Specify an inspection and/or replacement protocol in the SAR for the proposed 18-8 stainless steel cask lid bolts described in Drawing No. R70290, Revision R, sheet 6 of 10.

A routine inspection and/or replacement of the bolts as part of the maintenance program is necessary, due to the susceptibility of any bolt to fatigue cracking when reused.

This information is needed to determine compliance with 10 CFR 71.37(b).