November 7, 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. 865 PACKAGE

Dear Ms. Podolak:

By letter dated July 14, 2008, QSA Global, Inc. (QSA) submitted a renewal and amendment request to the U.S. Nuclear Regulatory Commission for Certificate of Compliance No. 9187, for the Model No. 865 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 December 8, 2008. Inform us at your earliest convenience, but no later than November 24, 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. 71-9187 and TAC Nos. L24229 and L24230 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) 492-3210.

Sincerely,

/RA/

Luis Cruz-Perez, Project Manager
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9187
TAC Nos. L24229 and L24230

Enclosure: Request for Additional Information

Ms. Lori Podolak
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QSA Global, Inc.
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Enclosure: Request for Additional Information

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DATE	11/10/2008		11/7/2008		11/7/2008		11/7/2008		11/7/2008	

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Request for Additional Information
QSA Global, Inc.
Docket No. 71-9187
Certificate of Compliance No. 9187
Model No. 865 Package

By application dated July 14, 2008, QSA Global, Inc. (QSA) requested an amendment to Certificate of Compliance (CoC) No. 9187 for the Model No. 865 package. This request for additional information (RAI) identifies information needed by the U.S. Nuclear Regulatory Commission (NRC) staff in connection with its review of the application.

Each individual RAI 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.

Chapter 1 General Information

1-1 Specify in the safety analysis report (SAR) and in the engineering Drawing No. R86590, the American Society for Testing and Materials (ASTM) or American Society of Mechanical Engineers (ASME) specifications for materials used in safety related components (including screws and bolts) for construction of the Model No. 865 package. The materials should be identical to the materials which were used to construct the Model No. 865 package that was used for the qualifying drop tests.

In order to take credit for acceptable performance during a drop accident test, safety related components (including screws and bolts) must be constructed from materials which are identical to the materials used to construct the Model No. 865 package which was used for drop testing.

Describing safety related components as “steel” or “stainless steel” is not adequate. Components which are safety related should be constructed from materials that meet a nationally recognized industry standard (e.g., ASTM, ASME, etc.).

This information is needed to determine compliance with 10CFR 71.31(c) and 10 CFR 71.33(a)(5)(iii).

1-2 Confirm that the term, “or equivalent” used in Drawing No. R86590, Revision H, Note 2 of sheet 1 of 8 means the qualifications of the welding inspectors will be identical to those of American Society for Nondestructive Testing (ASNT) SNT-TC-1 A.

The NRC staff requests clarification of the term “or equivalent” as used in Note 2 on sheet 1 of 8, Revision H of the engineering Drawing No. R86590.

This information is needed to determine compliance with 10CFR 71.31(c) and 10 CFR 71.33(a)(5).

1-3 Specify a minimum weight for the depleted uranium (DU) shield on sheet 6 of 8 of Drawing No. R86590.

The general dimensions of the DU shield are specified in the engineering drawings, but since density is an intrinsic material property, QSA needs to justify how a package constructed within the manufacturing tolerances specified in the engineering drawings could fall below a minimum weight. As precedence, the staff refers back to sheets 7 and 8 of engineering Drawing No. R70290 for QSA's Model 702 package, (CoC No. 6613), where a minimum and maximum weight for the DU shield is given.

The staff also notes that a DU shield may be dimensionally acceptable, but porous, and still meet the radiation dose criteria for the package. During a drop accident, porosity in the DU shield could promote cracking and allow radiation streaming. Thus, a minimum weight for the uranium shield should be specified.

This information is needed to determine compliance with 10 CFR 71.33(a)(5)(iii), 10 CFR 71.47(b)(1) and 10 CFR 71.73(c)(1).

1-4 Include inspection of bolts and welds as part of the packaging maintenance and inspection program prior to loading for the package in Section 7.1.1.2 of the application.

Due to the potential for fatigue cracking, the bolts on the Model No. 865 package should be inspected prior to loading.

The maintenance program in Section 7.1.1.2 of the application does not mention the inspection of the welds, which is also important to the safe operation of the Model No. 865 package.

This information is needed to determine compliance with 10 CFR 71.35(a).

Editorial Comments

The following editorial comments were identified in the application. For consistency and clarification consideration should be given to these annotations.

E-1 Add a qualifying remark to Table 3.2a of the application to note that the thermal expansions of the materials listed in Table 3.2a are temperature dependent.

Table 3.2a may lead the reader to incorrectly conclude that the thermal expansions of materials used throughout the application are temperature independent. The thermal expansions of the materials in the finite element analysis (with the exception of brass) are, however, temperature dependent, according to Section 4.2 of the supporting thermal analysis conducted by MPR Associates Inc.