May 31, 2006

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF AN AMENDMENT (REVISION 5) FOR THE MODEL NO. 650L TRANSPORT PACKAGE (TAC NO. L23950)

Dear Ms. Podalak:

By letter dated March 1, 2006, QSA Global, Inc. (QSA), submitted an application to the U.S. Nuclear Regulatory Commission (NRC) requesting an amendment to the Certificate of Compliance (CoC) for the Model No. 650L package. QSA requests that Se-75 be added as authorized contents of the CoC and that the CoC be updated with the "-96" designation indicating compliance with recent changes to 10 Code of Federal Regulations Part 71. In addition, QSA requested the CoC be updated with the new corporate name. In connection with the staff's review, we have identified additional information requirements for completion of the review. The required information is identified in the enclosure to this letter.

We request that you provide this information by June 30, 2006. Please inform us immediately if you are unable to provide the information requested. 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. 71-9269 and TAC No. L23950 in future correspondence related to this request. The staff is available to meet with you to discuss your proposed responses. If you have any questions regarding this matter, I may be contacted at 301-415-8500.

Sincerely,

/RA/

Jill S. Caverly, Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9269
TAC No. L23950

Enclosure: Request for Additional Information

Ms. Lori Podalak
Product Licensing Specialist
Regulatory Affairs Department
QSA Global, Inc.
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Burlington, MA 01803

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Docket No. 71-9269
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Enclosure: Request for Additional Information
Distribution: **ML061510500**
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Request for Additional Information
QSA Global, Inc.
Docket 71-9269
Revision 5 to Model No. 650L Package

By letter dated March 1, 2006, QSA Global, Inc. (QSA), submitted an application requesting an amendment to the Certificate of Compliance (CoC) for the Model No. 650L package to include Se-75 and to update the CoC to comply with recent changes to 10 Code of Federal Regulations Part 71 to revise the model number to include a "-96" designation. 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 proposed application.

The information requested in this RAI is needed by the staff for it to complete its review of the application and to determine whether the proposed plan has demonstrated compliance with regulatory requirements.

Additional information requested includes the following:

QSA GLOBAL, INC., SAFETY ANALYSIS REPORT

CHAPTER 1.0 - GENERAL INFORMATION

1-1. Provide the package drawings located in Section 1.4 of the application.

Section 1.4 of the application is supposed to contain the drawings of the Model 650L; however, the drawings are missing. These drawings are a necessary and important part of the application.

This information is needed to confirm compliance with 10 CFR 71.7(a), 71.31(a) and (b), and 71.33.

CHAPTER 2.0 - STRUCTURAL EVALUATION

2-1 Explain why Drawing No. R-TP80, Revision D (see Appendix A of Test Plan 80 in Section 2.12.1 Appendix) was submitted in the amendment request while the approved Safety Analysis Report (SAR) has Revision E of this drawing.

This information is needed to confirm compliance with 10 CFR 71.31(b) and 71.35(a).

CHAPTER 5.0 - SHIELDING EVALUATION

5-1. Describe the radiation measurements that were performed to determine the dose rates from the Iridium-192 (Ir-192) and the Selenium-75 (Se-75) sources.

The application indicates that the dose rates were determined by measurement and that the actual measurement results required scaling to the maximum source strength of the proposed contents. However, the details of the measurements were not provided.

While the details for the Ir-192 measurements may have been provided previously, it appears this information has been removed; this information should have been retained in the application. The application should describe the measurement process(es) for both the Ir-192 and the Se-75, including the setup, the detector(s) used, the correction(s) for the volume of the detector(s), the source(s), the source strengths, package model conditions, etc.

This information is needed to confirm compliance with 10 CFR 71.31(a)(2) and (b) and 71.35(a).

5-2. Verify the dose rates shown in Tables 5.1.e~g.

The conversion between the dose rates given in mSv/hr and the dose rates given in mrem/hr appears to be incorrect in many entries of these tables.

This information is needed to confirm compliance with 10 CFR 71.7(a), 71.35(a), 71.47(a), and 71.51(a)(2).

5-3. Verify the dose rates in Table 5.1.e for the test model shown in the table.

Section 5 of the Test Plan 80 Report document (Section 2.12.2 Appendix of the application) shows dose rate values for the TP80(B) test model that differ from those reported in Table 5.1.e of the application. The correct measured dose rates need to be provided in both tables; the table containing the incorrect values should be modified. Alternatively, if the dose rates in both tables are correct, explain why they are different.

This information is needed to confirm compliance with 10 CFR 71.51(a)(2).

5-4. Clarify the test model information provided in Table 5.1.g for the 300 Ci Se-75 source dose rate measurements.

The purpose of Table 5.1.g is to demonstrate that the Se-75 source dose rates are bounded by the Ir-192 source dose rates and thus meet the regulatory limits. Measurements for the Ir-192 source were performed for three different Model 650L test units. These measurements indicate that the dose rates vary for different configurations of the Model 650L packaging. It appears that only one test unit was used for the Se-75 measurements. However, the information in the title of Table 5.1.g regarding the test unit is unclear as to which of the three Ir-192 test units the Se-75 test unit is equivalent.

For an accurate comparison of source dose rates, the measurements for the Se-75 source should be performed on a test unit that has the same configuration and has undergone the same conditions as one of the three test units for which the Ir-192 dose measurements were performed. The SAR, whether in Table 5.1.g or in a section of the text that then references Table 5.1.g, should clearly indicate which Ir-192 test unit compares to the Se-75 test unit. Also, how the two units, the selected Ir-192 test unit and the Se-75 test unit, are equivalent with regard to package configuration and experienced test conditions should be explained.

This information is needed to confirm compliance with 10 CFR 71.31(b) and 71.35(a).

CHAPTER 7.0 - PACKAGE OPERATIONS

7-1. Revise the package operations section of the application to remove the words “or equivalent” in the first sentence of Section 7.1.1.

This wording appears to have been added for this amendment. The intention behind the addition of this wording regarding procedures for loading and closing packages is not clear. Note that shippers that are authorized to transport this package are required to comply with the conditions specified in the Certificate of Compliance (CoC), which incorporates by reference the procedures given in Section 7 of the SAR.

Also note that the NRC does allow for flexibility in package design changes, including package operations, within the constraints of the CoC. The NRC has issued Interim Staff Guidance (ISG) - 20, “Transportation Package Design Changes Authorized Under 10 CFR Part 71 Without Prior NRC Approval,” which describes the flexibility that exists for making changes and how that flexibility can be built into NRC approval of the package. This ISG states that the information in Section 7 of the application, or SAR, is not intended to constitute the detailed package operating procedures; however, it is intended to provide the essential operations elements that must be included in the detailed operating procedures required by 10 CFR 71.87(f). Thus, the SAR text needs to be unambiguous regarding the necessary steps for package preparation. Text that introduces ambiguity should be removed.

This information is needed to confirm compliance with 10 CFR 71.111.

GENERAL

G-1 Identify all changes made to the SAR and provide justification for these changes.

In its review of the amendment application, the staff noticed several changes that have been made to the SAR, which were not identified and for which justification was not provided. Many of the changes appear substantive in nature. In particular, several of these changes remove package operations that appear to be essential in ensuring that the package is properly prepared for transport. It may not be appropriate to change or eliminate these operations. Changes identified by the staff include the following:

a. Removal of a step for bracing the source changer for transportation in Section 7.1.3.

b. Removal of a note for performing radiation swipes of both the Model 650L and the overpack, for cases when the package is placed into an overpack (Section 7.1.3).

c. Removal of a physical check for cropped sources in paragraph 7.3.1. (Note that only performing a radiation measurement may not be sufficient for ensuring that the package is empty.)

d. Removal of a note on using only the gauge provided with the package in paragraph 7.3.1.

e. Removal of the procedure to contact QSA for instructions in paragraph 7.3.1.5.

f. Removal of the procedure to verify that fasteners are the correct type in paragraph 8.1.1.1.c.

g. Removal of the procedure to perform a static tensile test of the swage coupling of the source capsule and cable in Section 8.1.3.

h. Removal of the requirement to inspect for the proper type of fasteners in Section 8.2.3.

i. Removal of the shielding test in Section 8.2.

j. Changes in the text referring to the Model No. 650L package in the procedures given in Section 7 and 8 of the application; the text now refers to a “transport package” and not the “source changer.”

k. Addition of the procedure given in paragraph 8.1.1.1.a.

j. Section 2.2, Table 2.2a references have changed since a previous version of the SAR.

l. Section 2.6, Table 2.6.1a appears to have a typo in the column heading.

The revisions identified above do not necessarily include all the revision that should be addressed.

This information is needed to confirm compliance with 10 CFR 71.7(a) and 71.111.