



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

April 3, 2014

Ms. Lori Podolak  
Manager, Regulatory Affairs/Quality Assurance  
QSA Global, Inc.  
30 North Avenue  
Burlington, MA 01803

SUBJECT: APPLICATION FOR REVISION 1 TO CERTIFICATE OF COMPLIANCE NO.  
6613 FOR THE MODEL NO. 702 PACKAGE – REQUEST FOR ADDITIONAL  
INFORMATION

Dear Ms. Podolak:

By letter dated December 12, 2013, QSA Global, Inc. (QSA) submitted an application for amendment of Certificate of Compliance (CoC) No. 6613 for the Model No. 702 transportation package.

In connection with our technical review, we need the information identified in the enclosure to this letter. We request that you provide this information by April 18, 2014.

Please reference Docket No. 71-6613 and TAC No. L24870 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) 287-9165.

Sincerely,

A handwritten signature in blue ink, reading "John A. Vera", is positioned above the typed name.

John Vera, Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-6613  
TAC No. L24870

Enclosure: Request for Additional Information

Ms. Lori Podolak  
Manager, Regulatory Affairs/Quality Assurance  
QSA Global, Inc.  
30 North Avenue  
Burlington, MA 01803

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**/RA/**

John Vera, Project Manager  
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|------|---------|---------|---------|---------|----------|------|
| OFC  | SFST    | SFST    | SFST    | SFST    | SFST     | SFST |
| NAME | JVera   | MDebose | VWilson | MRahimi | MSampson |      |
| DATE | 3/31/14 | 4/1/14  | 4/1/14  | 4/1/14  | 4/3/14   |      |

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REQUEST FOR ADDITIONAL INFORMATION  
FOR THE  
MODEL NO. 702 PACKAGE

DOCKET NO. 71-6613

By letter dated December 12, 2013, QSA Global, Inc. (QSA) submitted an application for amendment of Certificate of Compliance (CoC) No. 6613 for the Model No. 702 transportation package. The application proposed to increase the maximum content weight from 200 grams to 400 grams, to revise the package thermal and pressure calculations based on new supplemental information, adding reference to a new source capsule for contents, and clarifying the output activity when transporting Ir-192.

This request for additional information (RAI) identifies information needed by the staff in connection with its review of the Model No. 702 package application. The staff reviewed the application using the guidance in NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material."

Each individual RAI section describes information needed by the staff to complete its review of the application and to determine whether the applicant has demonstrated compliance with the regulatory requirements.

**SHIELDING**

1. Discuss how the activity of the Ir-192 source was determined.

The applicant requested a content of 6,500 Ci of Ir-192. The applicant states that this is differentiated from the existing Ir-192 content limit of 15,000 Ci in that they have specified this as "output activity" rather than "content activity." The staff notes that the certificate (Rev. 16) already specifies the maximum quantity of material per package as "output activity." This was requested by the applicant when requesting Revision No. 7 of the CoC (Reference: Letter from C. Roughan (Amersham) to C. Chappell (US NRC), March 1, 1996, Agencywide Documents Access & Management System (ADAMS) Accession No. ML030280652).

In a teleconference with the applicant on March 26, 2014, the applicant stated that the evaluation basis for this certificate has always been content activity and that the 15,000 Ci should be specified as "content activity."

The safety analysis report (SAR) does not provide enough information to make this distinction clear. Current package limits were based on scaling measured prototypes and although activity of the source is provided in the SAR, the SAR is silent on how this activity was determined (output or content activity). The applicant should state how the activity was determined for the sources used for these measurements to clarify the basis of the content limits. The applicant should also provide information clarifying why a request was made to change contents to output activity and reconcile this with statements made during the March 26, 2014, teleconference that the package evaluation had always been based on content activity.

This information is needed to determine compliance with the dose rate regulations in 10 CFR 71.47 and 10 CFR 71.51(a)(2).

2. Provide additional information on the factor of 2.3 used to determine the 6,500 Ci of Ir-192 including the range of source geometries for which this factor applies.

The applicant requested an additional content of 6,500 Ci of Ir-192. The applicant states that the 6,500 Ci is equivalent to the 15,000 Ci of Ir-192 but divided by a factor of 2.3 to account for source capsule attenuation and self-absorption effects. This factor implies that there is some kind of consistent material and thickness for the source geometry and encapsulation, yet the certificate contains no restriction on source geometry. Based on a teleconference with the applicant on March 26, 2014, the applicant stated that the factor of 2.3 is a conservative value that bounds all possible source geometries that could be created. The CoC should be limited to the applicable source geometries. Provide the basis for the factor of 2.3 as well as the limits for the source geometries for this factor.

This information is needed to determine compliance with the dose rate regulations in 10 CFR 71.47 and 10 CFR 71.51(a)(2).