"Designated Original"

71-9035

QSA GLOBAL

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11 August 2006

Mr. Stewart Brown, Senior Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
One White Flint
Rockville, MD 20852

Docket No.: 71-9035
TAC Nos. L23921 and L23897

Subject: Additional Supportive Information for the Model 680-OP Type B Container

Dear Mr. Brown:

In response to our conversation on 8 August 2006, we provide the following information and response:

- Drawing R680-OP Revision F is enclosed to correct the title on sheet 6 of 7 of the drawing.

- Section 8.1.5 is modified to incorporate the lock assembly component test as requested by your staff.

Drawing R680-OP Rev F and pages 8-2 and 8-3 of Revision 9 to the Model 680-OP SAR are submitted as these are the only pages that change from Revision 8 of the SAR. Changes to the text of Revision 9 of the SAR addressing items discussed in this letter are indicated by vertical lines in the right hand margin. Should you have any additional questions or wish to discuss this submission, please contact me.

NMSS01

Sincerely,

Lori Podolak
Product Licensing Specialist
Regulatory Affairs Department
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Enclosures:

A Drawing R680-OP Rev F
B Pages 8-2 and 8-3 of SAR Revision 9
C List of Affected Pages

List of Affected Pages	
Revision 1, 20 April 1999	Addition of Revision Page; Addition of List of Affected Pages; Replacement of pages 36-38; Replacement of Appendix A Index; Addition of Appendix A, Supplement - 1 Drawing Packet.
Revision 2, 09 June 2000	Replacement of Appendix A Index; Replacement of Appendix A Drawing R97012, Rev. C, pages 1 and 2.
Revision 3, 18 July 2001	Replacement of Appendix A Index; Replacement of Appendix A Drawing R680NP Rev. A sheet 1 of 1; Replacement of Drawing R68090, Rev D sheets 1 through 5.
Revision 4, 30 September 2004	Entire SAR revision including descriptive drawings. Formatted for compliance to IAEA TS-R-1 and USNRC draft Regulatory Guide DG-7003
Revision 5, 06 October 2004	Modification to reflect change in material thickness of overpack support feet from 1/16" to 13 gauge (0.09").
Revision 6, 05 May 05	Modifications to Sections 2.4.1, 2.5.1, 2.6.2, 2.7.1.3 and 2.7.4.3 per discussions with USNRC on 19 Apr 05.
Revision 7, 29 August 2005	Modification to Section 2.1.4.2 and drawings from Section 1.4.
Revision 8, 17 July 2006	Update of name to QSA Global Inc. through out, changes to pagination, drawing update R68090 Rev H and pages 1-1, 7-1, 7-2, 7-6, 7-7, 8-2, and 8-3
Revision 9, 11 August 2006	• Drawing update R680-OP Rev F correcting typographical error on sheet 6 of 7 drawing title reference. • Pages 8-2 and 8-3 to incorporate modification to Section 8.1.5 to add component test of lock assembly.

8.1.4 Leakage Tests

The source capsules (primary containment) are wipe tested for leakage of radioactive contamination upon initial manufacture. The removable contamination must be less than 185 Bq (0.005 μCi). The source capsules will also be subjected to leak tests under ISO9978:1992(E) (or more recent editions). The source capsules are not used if they fail any of these tests.

8.1.5 Component and Material Tests

Component and material compliance is achieved in accordance with the requirements in QSA Global Inc.'s USNRC approved Quality Assurance Program No. 0040.

The lock assembly of the device is tested to assure that the security of the radioactive source will be maintained. Failure of this test prevents use of the device until the lock assembly is corrected and re-tested.

8.1.6 Shielding Tests

The radiation levels at the surface of the 680 inner device and at 40 inches (1m) from the surface are measured upon manufacture. These radiation levels, when extrapolated to the rated capacity of the transport package, must not exceed 200 mR/hr at the surface, nor 10 mR/hr at 1 meter from the surface of the transport package. Failure of this test will prevent use of the device. As the use of the overpack will further reduce the measured radiation levels, a separate radiation profile is not taken of the package upon initial manufacture, it is measured prior to every shipment. If the reading exceeds 200 mR/hr at the surface or 10 mR/hr at one meter, the package is not shipped.

8.1.7 Thermal Tests

Not applicable. The source content of the Model 680-OP packages has minimal effect on the package surface temperature and therefore no additional testing is necessary to evaluate thermal properties of the packaging.

8.1.8 Miscellaneous Tests

Upon initial manufacture of the source assembly and prior to first shipment of the source assembly, subject the swage coupling between the source capsule and cable to a static tensile test with a load of 100 lbs (445 N). Failure of this test will prevent use of the source in the Type B(U) transport package.

8.2 Maintenance Program

8.2.1 Structural and Pressure Tests

Not applicable. Material certification is obtained for Safety Class A components used in the transport package prior to their initial use. Based on the construction of the design, no additional structural testing during the life of the package is necessary if the container shows no signs of defect when prepared for shipment in accordance with the requirements of Section 7 of the SAR. The 680-OP packaging system is not designed to require increased or decrease operating pressures to maintain containment during transport, therefore pressure tests of package components prior to individual shipment is not required.

8.2.2 Leakage Tests

As described in Section 8.1.4, "Leakage Tests," the radioactive source assembly is leak-tested at manufacture. In addition, the sources are leak tested in accordance with that Section at least once every six months thereafter if being transported to ensure that removable contamination is less than 185 Bq (0.005 μCi).

8.2.3 Component and Material Tests

The transport package is inspected for tightness of fasteners, proper seal wires, and general condition prior to each use as described in Section 7 of this SAR. No additional component or material testing is required prior to shipment.

8.2.4 Thermal Tests

Not applicable. The source content of the Model 680-OP packages has minimal effect on the package surface temperature and therefore no additional testing is necessary to evaluate thermal properties of the packaging prior to shipment.

8.2.5 Miscellaneous Tests

Inspections and tests designed for secondary users of this transport package under the general license provisions of 10 CFR 71.17(b) are provided in Section 7.

8.3 Appendix

Not applicable.

Security-Related Information Figure Withheld Under 10 CFR 2.390

APPROVALS	DATE
[signature]	11 Aug 06
[signature]	11 Aug 06

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
FRACTIONS ± 1/8
X.X ± 0.12
X.XX ± 0.06
X.XXX ± 0.020

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DESCRIPTIVE DRAWING

TITLE: MODEL 680–OP

SIZE	DWG. NO.	REV
A	R680–OP	F
	SCALE: NONE / SHEET 1 OF 7	

ERF #	1472

Security-Related Information Figure
Withheld Under 10 CFR 2.390

UNLESS OTHERWISE SPECIFIED: ALL DIM.S ARE INCHES, TOL ± 1/8			
SIZE A	DWG. NO. R680-OP		REV F
	SCALE: NONE	SHEET 2 OF 7	

Security-Related Information Figure
Withheld Under 10 CFR 2.390

UNLESS OTHERWISE SPECIFIED: ALL DIM.S ARE INCHES, TOL ± 1/8			
SIZE A	DWG. NO. R680-OP		REV F
	SCALE: NONE	SHEET 3 OF 7	

FIGURE WITHHELD UNDER 10 CFR 2.390

UNLESS OTHERWISE SPECIFIED: ALL DIMS ARE INCHES, TOL. ± 1/8		
SIZE A	DWG. NO. R680-OP	REV F
	SCALE: NONE	SHEET 4 OF 7

Security-Related Information Figure
Withheld Under 10 CFR 2.390

APPROVALS	DATE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
FRACTIONS ± 1/8
X.X ± 0.12
X.XX ± 0.08
X.XXX ± 0.020

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DESCRIPTIVE DRAWING

TITLE: MODEL 680-OP

ERF #	1472

SIZE	DWG. NO.	REV
A	R680-OP	F
	SCALE: NONE	SHEET 5 OF 7

FIGURE WITHHELD UNDER 10 CFR 2.390

UNLESS OTHERWISE SPECIFIED: ALL DIM.S ARE INCHES, TOL ± 1/8			
SIZE A	DWG. NO. R680-OP (F)		REV F
	SCALE: NONE	SHEET 6 OF 7	

FIGURE WITHHELD UNDER 10 CFR 2.390

UNLESS OTHERWISE SPECIFIED: ALL DIM.S ARE INCHES, TOL. ± 1/4			
SIZE A	DWG. NO. R680-OP		REV F
	SCALE: NONE	SHEET 7 OF 7	