



U.S. Department  
of Transportation  
**Pipeline and  
Hazardous Materials  
Safety Administration**

East Building, PHH-23  
1200 New Jersey Avenue Southeast  
Washington, D.C. 20590

**COMPETENT AUTHORITY CERTIFICATION  
FOR A TYPE B(U)F FISSILE  
RADIOACTIVE MATERIALS PACKAGE DESIGN  
CERTIFICATE USA/0802/B(U)F-96, REVISION 0**

**REVALIDATION OF ARGENTINIAN COMPETENT AUTHORITY  
CERTIFICATE RA/099/B(U)F-96**

This certifies that the radioactive material package design described is hereby approved for use within the United States for import and export shipments only. Shipments must be made in accordance with the applicable regulations of the International Atomic Energy Agency<sup>1</sup> and the United States of America<sup>2</sup>.

1. Package Identification - MG1.
2. Package Description and Authorized Radioactive Contents - as described in Argentine Certificate of Competent Authority RA/099/B(U)F-96, Revision 2 (attached).
3. Criticality - The minimum criticality safety index is 0. There is no restriction on the number of packages per conveyance.
4. General Conditions -
  - a. Each user of this certificate must have in his possession a copy of this certificate and all documents necessary to properly prepare the package for transportation. The user shall prepare the package for shipment in accordance with the documentation and applicable regulations.
  - b. Each user of this certificate, other than the original petitioner, shall register his identity in writing to the Office of Hazardous Materials Technology, (PHH-23), Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, Washington D.C. 20590-0001.
  - c. This certificate does not relieve any consignor or carrier from compliance with any requirement of the Government of any country through or into which the package is to be transported.

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

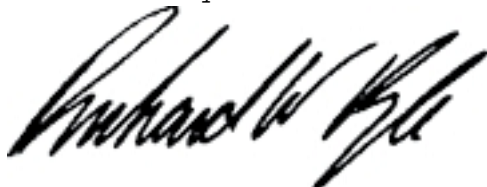
**CERTIFICATE USA/0802/B(U)F-96, REVISION 0**

- d. Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations<sup>1</sup> shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.
5. Special Conditions -
    - a. MTR fuel assembly grids, as described in Drawing Nos. 0767-1600-3BMPQ-204-1B and 0767-1600-3CFPQ-205-1A, are allowed for transport. Transport of control rod elements in any other assembly grid, as depicted in Drawing No. 0908-GU01-3ASIN-026-A, is not authorized.
    - b. The package can only be lifted using the external hoisting eyes in accordance with step 2 of Section 6.1 of the Operations and Shipment Manual (Document No. CDAD-1001-3MSGC-005-E, Revision E).
    - c. The tie-down configuration, shown in Figure 5 of the Operations and Shipment Manual (Document No. CDAD-1001-3MSGC-005-E, Revision E), is the only approved method to secure the package for transport.
  6. Marking and Labeling - The package shall bear the marking USA/0802/B(U)F-96 in addition to other required markings and labeling.
  7. Expiration Date - This certificate expires on July 31, 2018.

**CERTIFICATE USA/0802/B(U)F-96, REVISION 0**


This certificate is issued in accordance with paragraph 814 of the IAEA Regulations and Section 173.472 and 173.473 of Title 49 of the Code of Federal Regulations, in response to the December 06, 2013 petition by Edlow International Company, Washington, DC, and in consideration of other information on file in this Office.

Certified By:



**Aug 21 2015**

(DATE)

 \_\_\_\_\_  
Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Materials Safety

Revision 0 - Issued to revalidate Argentine Competent Authority Certificate  
RA/0099/B(U)F-96(Rev. 2).



®

de: T.P. Silvia Susana Real

Traductora - Perito - Intérprete

- TRADUCCIONES BUENOS AIRES ® -

desde 1981

Suipacha 472. 8° P. OF. 815. Bs. As. Argentina. Telefax: 4326-0812

e-mail: tradbsas@ciudad.com.ar

silviasusanareal@yahoo.com

SUSANA REAL  
TRADUCTORA PÚBLICA  
INGLÉS  
- F° 489. Cap. Fed.  
C.T.P.C.B.A. N° 1552  
F° 39. Prov. Bs. As.

-----TRADUCCIÓN PÚBLICA-----

*[All of the characters, words, phrases, and sentences herein written in italics and between brackets, including this one, are the certified translator's own.]*-----

*[Heading]* "2013 – The Year Paying Homage to the Bicentenary of the 1813 General Constituent Assembly" -----

ARN No. *[There follows a blank]* 113-----

THE NUCLEAR REGULATORY AUTHORITY *[In Spanish: "Autoridad Regulatoria Nuclear", abbreviation: "ARN"]*. UNDER THE AUTHORITY OF THE NATIONAL PRESIDENT'S OFFICE -----

*[Foot]* RA99B(U)F-96-R2. Effective date: 15/06/2012-----

**COMPETENT AUTHORITY'S APPROVAL CERTIFICATE** -----

**CONCERNING THE DESIGN OF B(U)-TYPE PACKAGE FOR FISSIONABLE SUBSTANCE CONTENTS, MODEL MG1** -----

**RA/0099/B(U)F-96 (Revision 2)** -----

It is hereby certified that the package, together its authorized radioactive contents, as described in paragraphs 4, 5, 6, and 7 below, complies with the regulatory requirements related to B(U)-Type Packages for fissionable substance contents set forth by AR 10.16.1 Standard, Revision 2, "Transportation of Radioactive Materials"<sup>1</sup>, for its being transported by sea,

<sup>1</sup> "Regulations for the Safe Transport of Radioactive Materials", 2009 Edition, Collection of Safety Standards N° TS-R-1 from the International Atomic Energy Agency (IAEA).

land, and air . -----

1. COMPETENT AUTHORITY'S IDENTIFICATION MARK: -----

**RA/0099/B(U)F-96** -----

2. ISSUANCE DATE: **August 12, 2013**-----

3. EXPIRATION DATE: **July 31, 2018**-----

4. PACKAGE IDENTIFICATION: -----

Model: **MG1**. Series Numbers: **01, 02, 03, 04, 05, 06, 07, and 08**.-----

5. PACKAGING DESCRIPTION: -----

The packaging is constituted by a cylindrical primary container. The walls of said container are two stainless steel plates with an intermediate insulating ceramics layer. The bases of such container are shut-down by means of two steel bolted covers. Different types of holding grids are fitted inside the cylinder, as appropriate to the type of contents to be transported. The aforesaid set is linked to an external cylindrical steel carcass. The ends of said carcass are shut-down with two types of steel bolted covers, according to the type of material to be transported.-----

The approximate external dimensions of the package are as follows: 2.90 m long and 0.90 m diameter. The gross mass of the package is of 744 kg. See attached graphs in Annex 1. -----

6. AUTHORIZED RADIOACTIVE CONTENTS: -----

The design of the package is authorized for the charge options as follows: -  
6.1 MTR-type Non-irradiated combustible elements or MTR-type non-irradiated controlling elements, containing uranium as enriched up to 20%, in U-235. The U-235 total mass should not be heavier than 2910 g. -----

6.2 Non-irradiated bar-type fuel elements containing uranium enriched up to 2.8%, in U-235. The U-235 total mass should not be heavier than 3880 g.-----

7. CRITICALITY SAFETY INDEX (CSI): -----

For both authorized radioactive contents, as indicated in paragraph 6 above, the CRITICALITY SAFETY INDEX (CSI) is equal to zero; CSI = 0.

RA/0099/B(U)-F-96 (Revision 2) ARN. Page 2 of 4 -----

8. SHIPPING AND MAINTENANCE: -----

8.1 The package should be inspected and maintained according to the INVAP S.E.'S Inspection and Maintenance Manual for MG1 Model Package, CDAD-1001-3MSGC-006-A, pursuant to AR 10.16.1 Standard, Revision 2, "Transportation of Radioactive Materials"<sup>(1)</sup>. -----

8.2 The package should be prepared for its being transported by land, sea or air, according to INVAP S.E.'S Operation Manual for MG1 Model Package, CDAD-1001-3MSGC-005-B, and pursuant to AR 10.16.1 Standard, Revision 2, "Transportation of Radioactive Materials"<sup>(1)</sup>. -----

8.3 With regard to each shipment, the sender should give the Nuclear Regulatory Authority notice of: a) the details of the pertinent shipment, at least 2 working days' in advance, by means of form F-TMR-09 Rev. 3 or such other form as may replace it, and b) any event or accident that might take place throughout the transportation. -----

8.4 The carrier should be appropriately knowledgeable on the instructions to follow in emergency cases. The carrier should hold, on board, Intervention file No. 127, as included in the applicable regulations. -----

9. QUALITY ASSURANCE-----

The package should be inspected, maintained, prepared for shipment and transported in compliance with INVAP S.E.'S Quality and Environmental Assurance Manual, CDAD-1001-3MSGC-001, INVAP S.E.'S pertinent quality assurance documents, and the applicable requirements derived from AR 10.16.1(1) Standard. -----

10. This certificate does not exempt the sender from complying with any requirement set forth by the Government of any country from/ through/whereto the package be transported. -----

11. This certificate is issued according to Section VIII, paragraphs 802, 808, 814, and 833 of AR 10.16.1 Standard, Revision 2, "Transportation of Radioactive Materials"<sup>(1)</sup>, and as requested by INVAP S.E. from the Republic of Argentina. -----

**NOTE: Revision 2 modifies Revision 1 with regard to packages series numbers 07 and 08, as included, modification of authorized radioactive contents, the ISC, and issue and expiration dates. -----**

**Revision 1 modifies the Original Version with regard to compliance with Revision 2 of AR 10.16.1 Standard, packages series numbers 02 to 06 as included, and issue and expiration dates. -----**

**Call System of Intervention in Radiological Emergencies (Sky Tel)  
TEL. 4597-9000 mentioning PIN number 1110886-----**

CERTIFIED BY: -----

SIGNATURE AND NAME: [There appears a signature below which is a seal reading as follows:] Eng. Hugo VICENS. Radiological, Safety and Safeguards Manager. -----

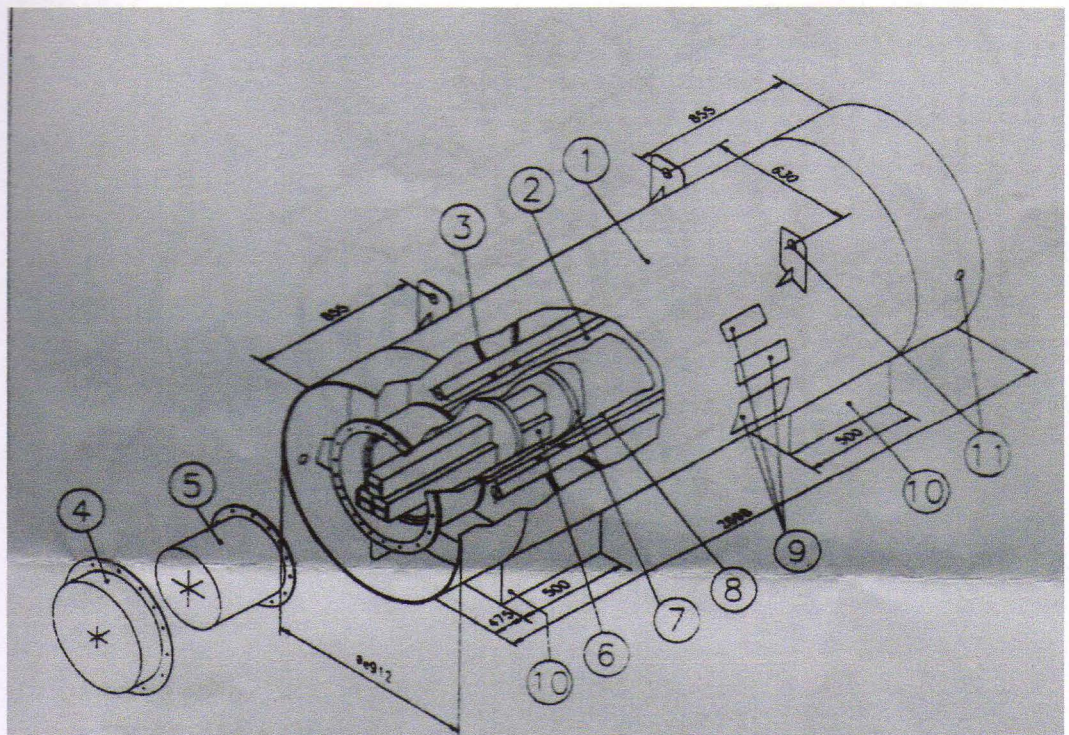
DATE: [Seal] August 12, 2013 -----

NUCLEAR REGULATORY AUTHORITY [AUTORIDAD REGULATORIA  
NUCLEAR] (ARN). [Domicile] Av. Del Libertador 8250 - (1429) - Buenos  
Aires – Republic of Argentina. TEL.: (54 11) 6323-1722/1708. FAX: (54 11)  
6323-1771/1798-----

(1) "Regulations for the Safe Transport of Radioactive Materials", 2009 Edition,  
Collection of Safety Standards N° TS-R-1 from the International Atomic Energy  
Agency (IAEA). -----

ANNEX 1 -----

RA/0099/B(U)-F-96 (Revision 2) ARN. Page 3 of 4 -----



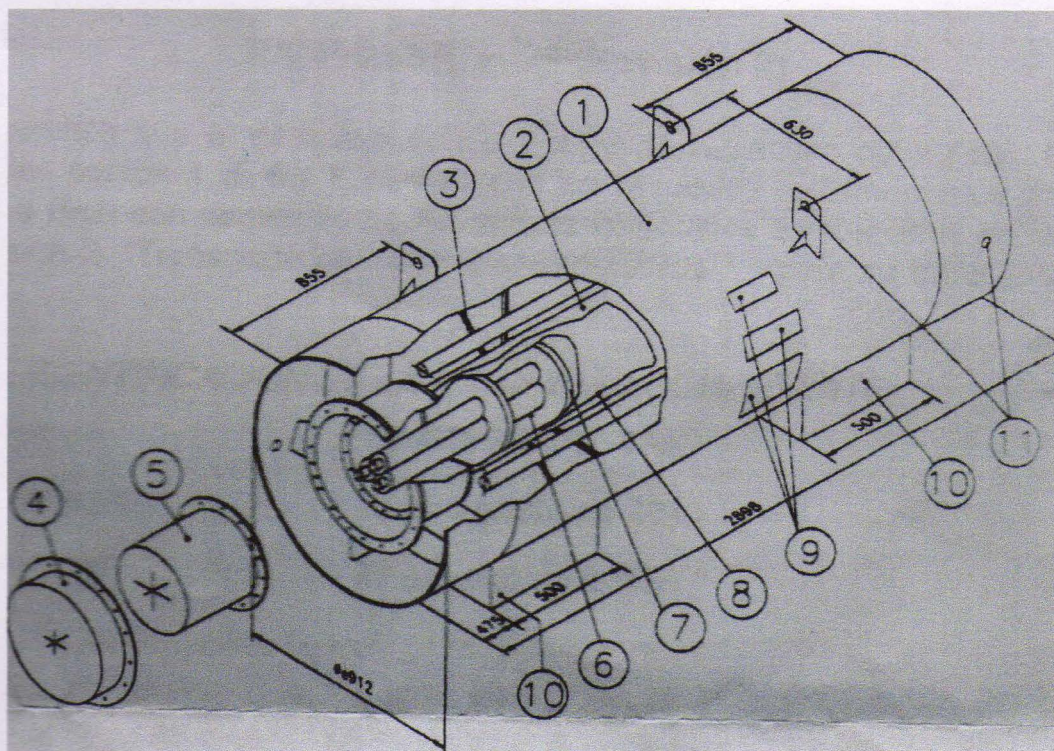
- 1. CONTAINER BODY-----
- 2. THERMAL SHIELDING -----
- 3. BODY REINFORCEMENTS (TRANSVERSAL PLATES AND  
LONGITUDINAL PIPES)-----



4. EXTERNAL COVER (16 HEXAGONAL-HEAD SCREWS, M8X20).-----
5. INTERNAL COVER (16 HEXAGONAL-HEAD SCREWS, M8X20);-----
6. FUEL BAR OR CONTROL BAR, MTR TYPE -----
7. BAR SUPPORTS -----
8. INTERNAL CYLINDER -----
9. IDENTIFICATION, WARNING, DESIGN, AND CONSTRUCTION  
 PLATES -----
10. SUPPORTING BASIS-----
11. PEEPHOLES -----

Name		Date	Signature	<b>INVAP MG1</b>
Projected by	R.A.G.	01.08.08	<i>[There appears a signature]</i>	
Drawn by	R.A.G.	01.08.08	<i>[There appears a signature]</i>	
Revised by	R.S.	06.08.08	<i>[There appears a signature]</i>	
Revised by				No.0908GU013ASIN025A
Approved by	J.C.O.	07.08.08	<i>[There appears a signature]</i>	
Scale 1: 5 (1:2.5)	<b>MG1</b>			Pattern document
	<b>B(U)F-TYPE FUELS MTR FUEL CONTAINER</b>			Replaces
				Replaced by
				Electronic file: 0908- GU01-3ASIN-025-A

RA/0099/B(U)-F-96 (Revision 2) ARN. Page 4 of 4-----

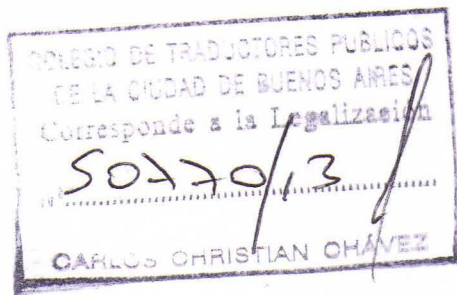


1. CONTAINER BODY-----
2. THERMAL SHIELDING -----
3. BODY REINFORCEMENTS (TRANSVERSAL PLATES AND LONGITUDINAL PIPES)-----
4. EXTERNAL COVER (16 HEXAGONAL-HEAD SCREWS, M8X20). ----
5. INTERNAL COVER (16 HEXAGONAL-HEAD SCREWS, M8X20); ----
6. FUEL BAR OR CONTROL BAR, MTR TYPE -----
7. BAR SUPPORTS -----
8. INTERNAL CYLINDER-----
9. IDENTIFICATION, WARNING, DESIGN, AND CONSTRUCTION PLATES -----
10. SUPPORTING BASIS -----
11. PEEPHOLES-----

Name		Date	Signature	<b>INVAP</b>
Projected by	R.A.G.	01.08.08	[There appears a	

			<i>signature</i>	MG1
Drawn by	R.A.G.	01.08.08	[There appears a signature]	
Revised by	R.S.	06.08.08	[There appears a signature]	
Revised by				No.0908GU013ASIN026A
Approved by	J.C.O.	07.08.08	[There appears a signature]	
Scale 1: 5 (1:2.5)	<b>MG1</b>  <b>TYPE B(U) FUEL MTR AND MR-5 FUELS CONTAINER</b>			Pattern document
				Replaces
				Replaced by
				Electronic file: 0908- GU01-3ASIN-025-A

I HEREBY CERTIFY that this translation is a true and correct English version of the pertinent part of the attached document in Spanish. Buenos Aires, August 15, 2013. *[In Spanish only for authentication purposes:]* ES TRADUCCIÓN FIEL al idioma inglés de la parte pertinente del documento adjunto, redactada en idioma castellano, que he tenido a la vista y a la cual me remito en Buenos Aires a los 15 días de agosto de 2013.-----



SILVIA SUSANA REAL  
TRADUCTORA PÚBLICA  
INGLÉS  
Mat. T° VII - F° 469. Cap. Fed.  
Inscripción C.T.P.C.B.A. N° 1562  
Mat. T° VIII F° 39. Prov. Bs. As.





U.S. Department  
of Transportation

East Building, PHH-23  
1200 New Jersey Avenue SE  
Washington, D.C. 20590

**Pipeline and  
Hazardous Materials  
Safety Administration**

**CERTIFICATE NUMBER:** USA/0802/B(U)F-96, Revision 0

**ORIGINAL REGISTRANT(S):**

Ms. Franchone Oshinowo  
Vice President of Operations  
Edlow International Company  
1666 Connecticut Ave, N.W.  
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USA

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Vice President, Marketing and Administration  
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