CERTIFICATE NO. ZA/NNR 1004/B(U)–96

REVISION 04

PACKAGE DESIGN APPROVAL

This is to certify that the National Nuclear Regulator, being, for the purpose of the International Atomic Energy Agency (IAEA), the Competent Authority in the Republic of South Africa, in respect of the transport of radioactive material, has recertified the package design, as described herein. The package design is intended to contain the authorised radioactive materials described herein, as having met the regulatory requirements for Type B(U) packages as described in the International Atomic Energy Agency Specific Safety Requirements No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, Vienna, 2012.

1 CERTIFICATE

Effective Date: 1 June 2019

Expiry Date: 31 May 2024

2 COMPETENT AUTHORITY

National Nuclear Regulator
P O Box 7106
Centurion
0046
South Africa

3 THIS CERTIFICATE IS ISSUED ON THE BASIS OF THE APPLICATION SUBMITTED BY

Name and Address of Applicant:

South African Nuclear Energy Corporation Limited (Necsa)
P O Box 582
Pretoria
0001
South Africa

4 TITLE AND IDENTIFICATION OF REPORTS

4.1 Document Number: NTP-SAR-9001, Revision 3, being Safety Analysis Report: "RIA" Transport Package ZA/NNR 1004/B(U)–96, dated 27 September 2018.

4.2 The package is fabricated in accordance with drawings:

(i) I:B 148:003 Revision F (17 September 2013),
(ii) I:B 148:012 Revision E (17 September 2013),
(iii) I:B 148:013 Revision E (17 September 2013),
(iv) I:B 148:015 Revision E (17 September 2013),
(v) I:B 148:016 Revision F (17 September 2013),
(vi) I:B 148:017 Revision F (17 September 2013),
(vii) I:B 148:018 Revision F (17 September 2013),
(viii) I:B 148:021 Revision L (17 September 2013),
(ix) I:C 148:000 Revision H (17 September 2013),
(x) I:C 148:001 Revision G (17 September 2013),
(xi) I:C 148:002 Revision H (17 September 2013),
(xii) I:C 148:014 Revision G (17 September 2013),
(xiii) I:C 148:020 Revision M (17 September 2013),
(xiv) I:D 148:010 Revision G (17 September 2013),
(xv) I:D 148:011 Revision G (17 September 2013).

4.3 Quality assurance programmes as described in NTP-SAR-9001, Rev 3, Part IX – "MANAGEMENT SYSTEMS", must be applied to the fabrication, testing and usage of the packaging.

4.4 Document number: NTP-SOP-9001: Handling Instructions for the ZA/NNR 1004/B(U)–96 "RIA" Transport Package.

5 PACKAGE IDENTIFICATION

5.1 The package is identified by the Model Number

ZA/NNR 1004/B(U)–96

6 PACKAGE DESCRIPTION

6.1 The packaging authorised by this Certificate consists of a flask designed for the transport of sealed radioactive sources. The container consists of an outer casing made of grade 304L stainless steel.

6.2 A rigid Polyurethane foam liner serves as a thermal shield and as protection for the depleted uranium shield against mechanical shocks.

6.3 The uranium shield is cast with six zirconium tubes inside. The sources are placed within these tubes; a lid is placed over the source assemblies, and screwed down with the round container handle.

6.4 The lid is secured by means of a stainless steel cable and security pin.

7 AUTHORISED CONTENTS

The flask contents will not exceed either:

a) Ir-192 sealed sources.
Maximum amount of material per package: 6 x 5.55 TBq.

b) Se-75 sealed sources
Maximum amount of material per package: 6 x 5.18 TBq

c) A combination of the above to a maximum load of 6 sealed sources with an individual activity not exceeding 5.55 TBq Ir-192 and 5.18 TBq Se-75.

8 CONDITIONS FOR USE OF THE PACKAGING

8.1 The maintenance required on this transport package is described in the handling instructions, document NTP-SOP-9001: Handling Instructions for the ZA/NNR 1004/B(U)–96 "RIA" Transport Package.

9 NOTIFICATION

9.1 The owner of a package, manufactured in accordance to the design covered by this Certificate, shall forward the packaging serial number to the competent authority.

9.2 Should a package be disposed of or change ownership, then this change must be notified to the competent authority.

9.3 Accordingly, the party relinquishing ownership of a package shall forward the name of the new owner to the competent authority.

9.4 The consignor of a package compliant with the design covered by this Certificate shall check that the package bears a serial number, as well as a Model Number, as identified in 5 above.

10 MODE(S) OF TRANSPORT

10.1 The packaging described by this Certificate may be transported by all modes of transport.

11 SPECIFICATIONS OF QUALITY ASSURANCE PROGRAMME

11.1 A quality assurance programme as described in document NTP-SAR-9001, Rev 3, Part IX – "MANAGEMENT SYSTEMS",

must be applied to the fabrication, testing and usage of the packaging.

11.2 All packages must be periodically inspected and as necessary, repaired and maintained in good condition so that they continue to comply with the relevant requirements and specifications, even after repeated use.

12 GENERAL CONDITIONS

12.1 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.

12.2 This Certificate does not relieve the consignor or carrier from compliance with any requirements of the government of any country through or into which the package will be transported.

13 MARKING AND LABELS

13.1 The packing must bear the marking ZA/NNR 1004/B(U)–96 in addition to any other required markings and labelling.

14 RELEVANT REGULATIONS

14.1 International Atomic Energy Agency Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, Vienna, 2012

15 EXPIRY DATE

This Certificate expires at midnight on 31 May 2024.

29/04/2019

DR M.B. TYOBEKA
CHIEF EXECUTIVE OFFICER

DATE

National Nuclear Regulator
P O Box 7106
CENTURION
0046

APPENDIX A

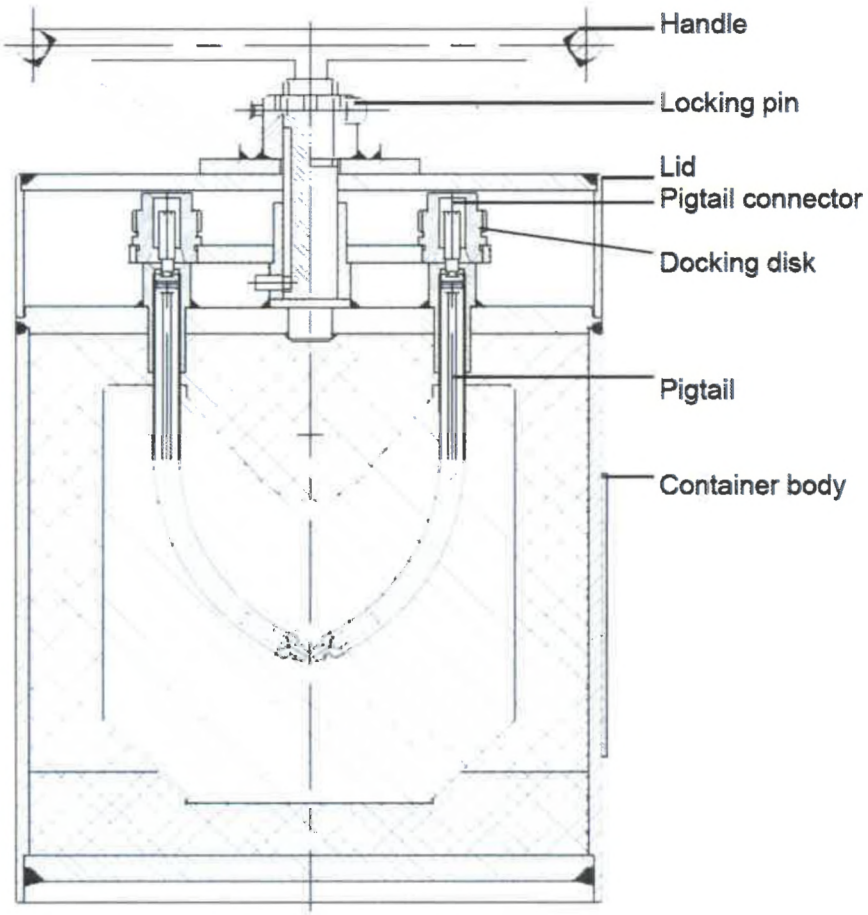

Figure 1: Outline Drawing of Transport Package: ZA/NNR 1004/B(U)–96