Department of Health

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Reference: 0888/9-03
Date: 2016-07-18

CERTIFICATE NUMBER ZA/NLM52/S-2008 (Rev 4)

SOUTH AFRICAN COMPETENT AUTHORITY CERTIFICATE OF APPROVAL FOR SPECIAL FORM RADIOACTIVE MATERIAL

The Department of Health: Directorate Radiation Control, being for the purpose of the Regulations of International Atomic Energy Agency, the Competent Authority in the Republic of South Africa in respect of the transport of radioactive material, certifies herewith that the NLM52 capsule design, described herein, meets the requirements for special form radioactive material as defined in the document, IAEA Safety Series SSR-6, Regulations for Safe Transport of Radioactive Material, 2012 Edition.

1. **Identification**
   ZA/NLM52/S-2008 (Rev 3)

2. **Form Description of Special Form Radioactive Material**
   The NLM52 capsule family is designed for the encapsulation of sealed sources, which will be obtained during the conditioning of spent sources (SHARS). The material used is 316 L stainless steel. The maximum capsule outer diameter is 52.0 mm. The overall capsule lengths are 76, 152, 202, 252 and 327 mm respectively. Each capsule is identified by length as follows:
   NLM52-74
   NLM52-150
   NLM52-200
   NLM52-250
   NLM52-325
   All capsules have the same lid, which is welded into a recess at the cylinder end. The exact configuration is detailed in drawings J5182-00-00 Rev R3, J5182-00-01 Rev R3 and J5182-00-05 Rev R3.

3. **Radioactive Contents**
   The following nuclides and maximum activities are allowed:
   Co-60 (185 TBq)
   Cs-137 (740 TBq)
   Ra-226 (370 GBq)
   Sr-90 (37 TBq)
   Am-241 – each capsule's activity limit is as follows:
   NLM52-74 (3.8 GBq)
   NLM52-150 (8.7 GBq)
   NLM52-200 (11.9 GBq)
   NLM52-250 (15.1 GBq)
   NLM-52-325 (20.0 GBq)
   Capsule content shall be limited to one source type.

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4. **Quality Assurance Program**

   The design, development and qualification of the NLM52 family of capsules were performed by the Nuclear Liabilities Management (NLM), a Division of Necsa. The design, manufacture, development and qualification activities were performed in accordance with the NLM implemented quality management system which complies with the requirements of ISO 9001:2000.
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5. This certificate is issued in response to an application by the Acting Manager: Licensing Services: S & LD – a Division of Necsa, letter NLM-LET-15/183 dated 14 July 2015. Note was taken of, and consideration given to the provided Design Safety Report (NLM-REP-15/198) and the revised Manufacturing Specification (NLM-OP- 00041)
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6. This certificate expires at midnight on **30 November 2019**

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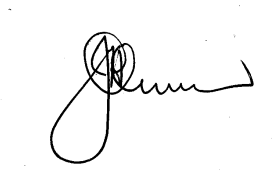
Signed at Bellville on 30 November 2016.



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