

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES  
SAFETY EVALUATION OF SOURCE  
(AMENDED IN ITS ENTIRETY)

NO.: NR-220-S-830-S      DATE: September 11, 2003 PAGE 1 OF 2  
(Previously NR-0169-S-124-U)

SOURCE TYPE: Irradiator Source

MODEL:      C-133

MANUFACTURER/DISTRIBUTOR:      **MDS Nordion**  
A division of MDS (Canada) Inc.  
(Formerly Atomic Energy of Canada)  
447 March Road  
Ottawa, Ontario  
Canada, K2K 1X8

ISOTOPE:

Cobalt-60

MAXIMUM ACTIVITY:

15,000 Ci (555 TBq)

LEAK TEST FREQUENCY:      6 Months

PRINCIPAL USE:      (I) Gamma Irradiator, Category 1

CUSTOM SOURCE:      \_\_\_\_\_ YES      X \_\_\_\_\_ NO

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SOURCE TYPE: Irradiator Source

DESCRIPTION:

The AECL Model C-133 sealed source is a singly-encapsulated, fusion-welded, (#316L) stainless steel capsule. Originally its length was to vary from 9/16" to 36" and diameter to vary from 0.18" to 1.223". It's wall thickness is 0.025". The physical dimensions of the capsule have been subsequently modified to include a diameter of up to 1.254" and a length only up to 18" (longer maximum lengths require special agreement with AECL). This source may contain jacketed slugs, unjacketed slugs, and nickel plated pellets. This capsule may be used in other AECL capsules. It is tested for contamination by two wipe tests (dry) taken seven days apart (0.005 microcurie).

REFERENCES:

The following supporting documents for the Model C-133 irradiator source are hereby incorporated by reference and are made a part of this registry document.


- MDS Nordion's letters dated November 1, 2001, November 21, 2001, December 14, 2001, with enclosures thereto.
- MDS Nordion's letter dated April 4, 2003, and electronic mails dated April 27, 2003, June 4, 2003, June 25, 2003, and June 26, 2003, and July 2, 2003 with enclosures thereto.

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

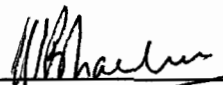
Date: September 11, 2003

Reviewer: \_\_\_\_\_

  
John P. Jankovich

Date: September 11, 2003

Concurrence: \_\_\_\_\_

  
Ujagar S. Bhachu