

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF SEALED SOURCE

No.: NR-8008-S-801-S
(Previously NR-459-S-101-S)

DATE: June 3, 2004

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SOURCE TYPE: Sealed Source

MODEL: 4F6Y

MANUFACTURER/DISTRIBUTOR: Minnesota Mining and
Manufacturing Company
TLAAP Building 590
New Brighton, MN 55112

Successor:
3M Corporate Health Physics
3M Center, Building 220-3W-06
St. Paul, MN 55133-3283

ISOTOPE: Cesium-137

MAXIMUM ACTIVITY: 25 mCi (0.925 GBq)

LEAK TEST FREQUENCY: 6 months

PRINCIPAL USE: (T) Instructional Aid

CUSTOM SOURCE: _____ YES _____ X _____ NO

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DESCRIPTION:

The sealed source was constructed by placing a smaller diameter capsule containing the Cesium-137 microspheres into a larger capsule to give the overall dimensions of 0.25" (6.4 mm) diameter and 0.69 ± 0.05" (17.5 mm ± 1.3 mm) in length. A plug was inserted to fill the void space and was tungsten inert gas welded to seal the Type 316 stainless steel capsule.

LABELING:

The capsule was engraved with the serial number and at 180^B from the serial number was engraved Cesium-137. Space limitation prevented any further labeling.

DIAGRAM:

See attachment.

CONDITIONS OF NORMAL USE:

Model 4F6Y was designed for the Federal Emergency Management Agency to train personnel in emergency handling of radioactive material.

PROTOTYPE TESTING:

The source had been tested in accordance with ANSI N542 and had obtained a Classification of 77C66646.

EXTERNAL RADIATION LEVELS:

The manufacturer obtained the following dose rates from a 20 millicurie loaded source.

<u>Contact</u>	<u>30 cm</u>	<u>30 cm</u>
3900 mr/hr	75 mr/hr*	90 mr/hr**

* To meterface

** To active center of meter (detector)

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QUALITY ASSURANCE AND CONTROL:

The Quality Control Group operated from policies and procedures described in the Static Control Systems Division Quality Manual (New Brighton Plant). The quality system was based on Mil-0-9858A guidelines on file with the NRC.

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

- C This source shall be distributed only to specific licensees of the NRC or Agreement States.
- C Leak Testing: This source shall be leak tested at six-month intervals using techniques approved by the licensing authority and capable of detecting the presence of 0.005 mCi (185 Bq) of activity.
- C Handling, storage, use, transfer, and disposal: To be determined by the licensing authority.
- C The source shall not be subjected to environmental or other conditions of use which exceed ANSI Classification C66646 (ANSI N542-1977).
- C This product will no longer be commercially distributed but may still be approved for licensing purposes.
- C REVIEWER'S NOTE: Model 4F6Y, was originally registered under certificate no. NR-459-S-101-S. This model was inactivated on February 29, 1996. This registration certificate, no. NR-8008-S-801-S, supercedes all previous registration certificates for Model 4F6Y.

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ATTACHMENT 1