



U.S. Department
of Transportation

Pipeline and
Hazardous Materials
Safety Administration

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

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS

CERTIFICATE USA/0036/S-96, REVISION 12

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - NRD Model A-001.
2. Source Description - This Special Form material is a laminated metallic foil of silver, gold, and americium dioxide, as shown on NRD Inc. Drawing No. 92A071 (attached). The foil may be single or double. The single foil consists of successive layers of plating, gold, Am-241 and gold, gold, silver, and flash plating for identification. In the double foil the flash plating is replaced by gold, Am-241 and gold, gold, and plating. The plating is yellow gold, white gold, or palladium. During transport the material may be in the form of free foils or secured in a variety of holders or mounts.
3. Radioactive Contents - Americium-241 as an oxide with the activity per foil ranging from less than 0.037 MBq (1 uCi) to 2.035 GBq (55 mCi). Activity per unit area does not exceed 0.086 MBq per square millimeter (1500 uCi per square inch).
4. Management System Activities - Records of Management System activities required by Paragraph 306 of the IAEA regulations 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 requirements of Subpart H of 10 CFR 71.

¹ "Regulations for the Safe Transport of Radioactive Material, 2012 Edition, No. SSR-6" published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

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

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5. Expiration Date - This certificate expires on December 31, 2023. Previous editions which have not reached their expiration date may continue to be used.

This certificate is issued in accordance with paragraph(s) 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the December 14, 2018 petition by NRD, Grand Island, NY, and in consideration of other information on file in this Office.

Certified By:

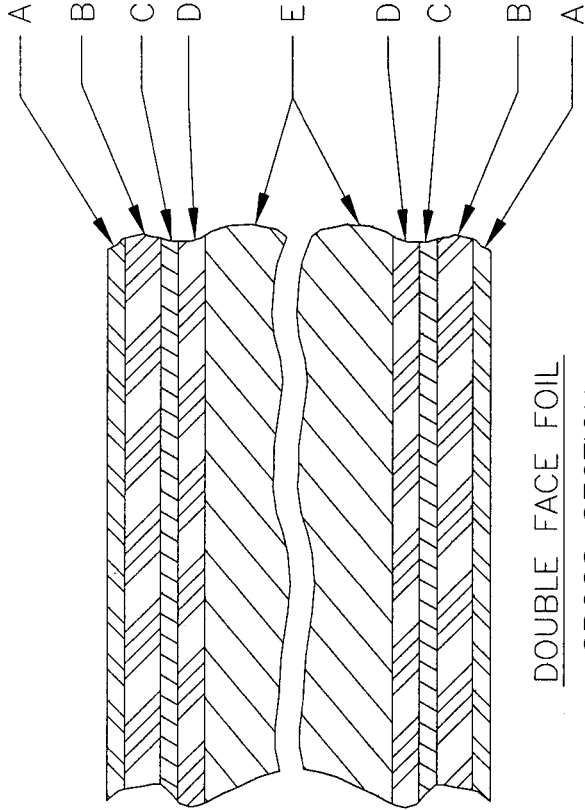


December 20, 2018
(DATE)

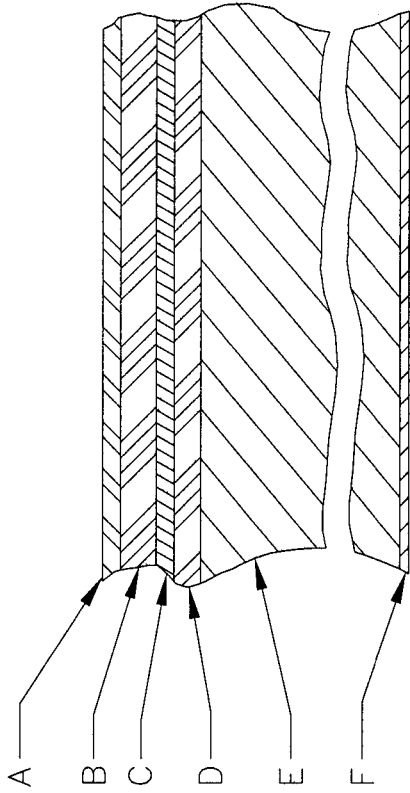
 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 12 - Issued to extend the expiration date.

| REVISIONS | | | |
|-----------|------|-------------|------------|
| REV. | DATE | DESCRIPTION | AUTH DR CK |
| | | | |



DOUBLE FACE FOIL
CROSS SECTION



SINGLE FACE FOIL
CROSS SECTION

NOTES:

- * PLATING CAN BE YELLOW GOLD, WHITE GOLD, OR PALLADIUM.
- ACTIVITY RANGE:
 - FROM LESS THAN 1 MICROCURIE UP TO 55 MILLICURIES PER FOIL.
 - NOT TO EXCEED 2.33 MICROCURIES PER SQUARE MILLIMETER. (OR 1500 MICRO-CURIES PER SQUARE INCH)
- DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

- * PLATING 0.00002
- GOLD 0.00004
- AMERICIUM 241 & GOLD 0.00002
- GOLD 0.00003
- SILVER 0.004 TO 0.009
- FLASH PLATING FOR IDENTIFICATION

| | | |
|---|--|---------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± ANGLES ± FRACTIONS ± | SIGNATURES | DATE |
| | DRAWN C. DUNN CHECKED APPROVED APPROVED | 10JUL92 |
| THIRD ANGLE PROJECTION | | |
| DO NOT SCALE PRINT | | |
| <p>NRD INC. A SUBSIDIARY OF MARK IV INDUSTRIES, INC. 2937 ALT BOULEVARD GRAND ISLAND, NEW YORK 14072</p> | | |
| <p>A-001 FOIL GENERAL COMPOSITION</p> | | |
| MATERIAL & FINISH SEE NOTES | | |
| A | DATE 10JUL92 | DWG NO 92A071 |
| | SCALE NONE | REVISION |



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CERTIFICATE NUMBER: USA/0036/S-96

ORIGINAL REGISTRANT(S) :

NRD
2937 Alt Blvd North
Grand Island, NY, 14072
USA