



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/0192/S-96, REVISION 8

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 - Isomedix Model No. ISO-1000 (Manufactured prior to June 30, 1998).
2. Source Description - The source is a welded double encapsulation constructed of Type 304L stainless steel. Outer dimensions are 1.26 cm (0.497 in.) diameter and 21.13 cm (10.68 in.) length. Construction shall be in accordance with attached Union Carbide Corporation Drawing No. C-SK1887 (2 pages).
3. Radioactive Contents - No more than 26.64 TBq (720 Ci) of Cesium-137 as cesium chloride powder.
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.
5. Expiration Date - This certificate expires on October 31, 2022. Previous editions which have not reached their expiration date may continue to be used.

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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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 September 13, 2017 petition by J.L. Shepherd & Associates, San Fernando, CA, and in consideration of other information on file in this Office.

Certified By:



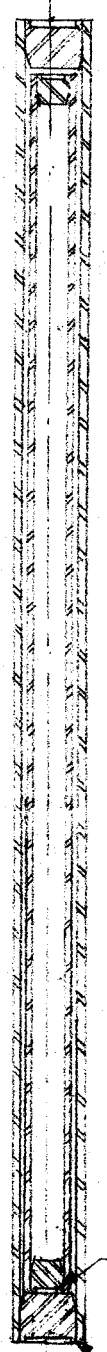
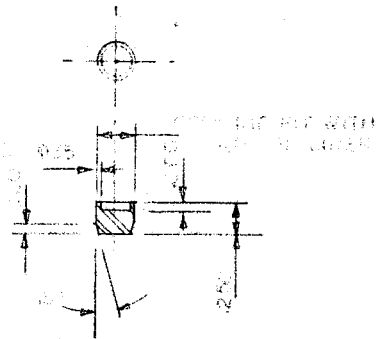
October 20, 2017

(DATE)

 William Schoonover
Associate Administrator for Hazardous
Materials Safety

Revision 8 - Issued to extend the expiration date.

SQUAD CHECK							REVISIONS					
EC	EE	EM	IE	MA	MD	PE	REV.	ZONE	DESCRIPTION	DATE	BY	APP'D
							1	3-A	REMOVE TAPPED CAPSULE PLUG	12-8-79	C.S.	SEE
							2	1-D	REVISED NOTES	1-11-80	CS	SEE



- NOTES:
1. FABRICATION SHOP TO WELD ONE LINER AND ONE CAPSULE PLUG PER WPS-307.
 2. MACHINE ANY WELD OVERLAP FROM OUTER CAPSULE.
 3. CENTERLESS GRIND OUTER CAPSULE O.D. TO $.497 \pm .002$.
 4. SHOP FABRICATED OUTER CAPSULE TO BE STRAIGHT WITHIN 0.010 T.I.R. AND ROUND WITHIN 0.005 T.I.R. OVER ENTIRE LENGTH.
 5. HELIUM LEAK TEST BY METHOD SENSITIVE TO 1×10^{-7} cc/sec.

FABRICATION SHOP WELD PER NOTE 1.

ASSEMBLY

MECHANICAL QUALITY ASSURANCE DOCUMENTATION REQUIREMENTS

* DETAILS IN DRAWINGS, BAPP, ETC.	QA LEVEL
QA PROGRAM PLAN NO.	
1 MATERIAL MILL CERTIFICATION	X
2 UCC-NO MATERIAL INSPECTION REPORTS	
3 DEVIATION REPORTS	X
4 SHOP MANUFACTURING AND INSPECTION PLAN	
5 CONSTRUCTION AND INSPECTION PLAN	
6 MATERIAL/PART TRAVELER	
7 WELD AND/OR BRAZE INSPECTION REPORTS	X
8 HEAT TREAT REPORT WITH T-T CHART(S)	
9 DIMENSIONAL INSPECTION AND REPORTS**	X
10 PRESSURE TEST REPORTS	
11 LEAK TEST REPORTS	X
12 CLEANING REPORTS	
13 NONCONFORMANCE REPORTS	X X
14 FUNCTIONAL TEST REPORTS	
15 COMPLETED ITEM CERTIFICATE OF COMPLIANCE	
16	
17	

**INSPECTION SYMBOL LEGEND
 (X) RECORD ACTUAL DIM. (IN OR OUT OF TOLERANCE)
 (O) RECORD OUT OF TOLERANCE DIM. ONLY (RECORD IN TOL. DIM.)

H. Smith 12-11-79
 UCC-1980A13 5/78 DATE

TOLERANCES* OTHERWISE SPECIFIED	DESIGN	H-920-79	CS
LS ±	DRAWN	12-10-79	C. Smith
ALS ±	CHECKED	1-16-80	RWS
RP EDGES _____ MAX.	SECTION		
	DEPT.		
	DIVISION		
	OPERATOR		
1909	EQ. T & I/MID		
	SAFETY		
	FIRE PROT.		
	NUC. SAFETY		
	AIR & WATER POLL. CONTR.		

UNION CARBIDE CORPORATION • NUCLEAR DIVISION
 operated for the ATOMIC ENERGY COMMISSION under U.S. GOVERNMENT contract W 7405 eng 28
 Oak Ridge, Tennessee

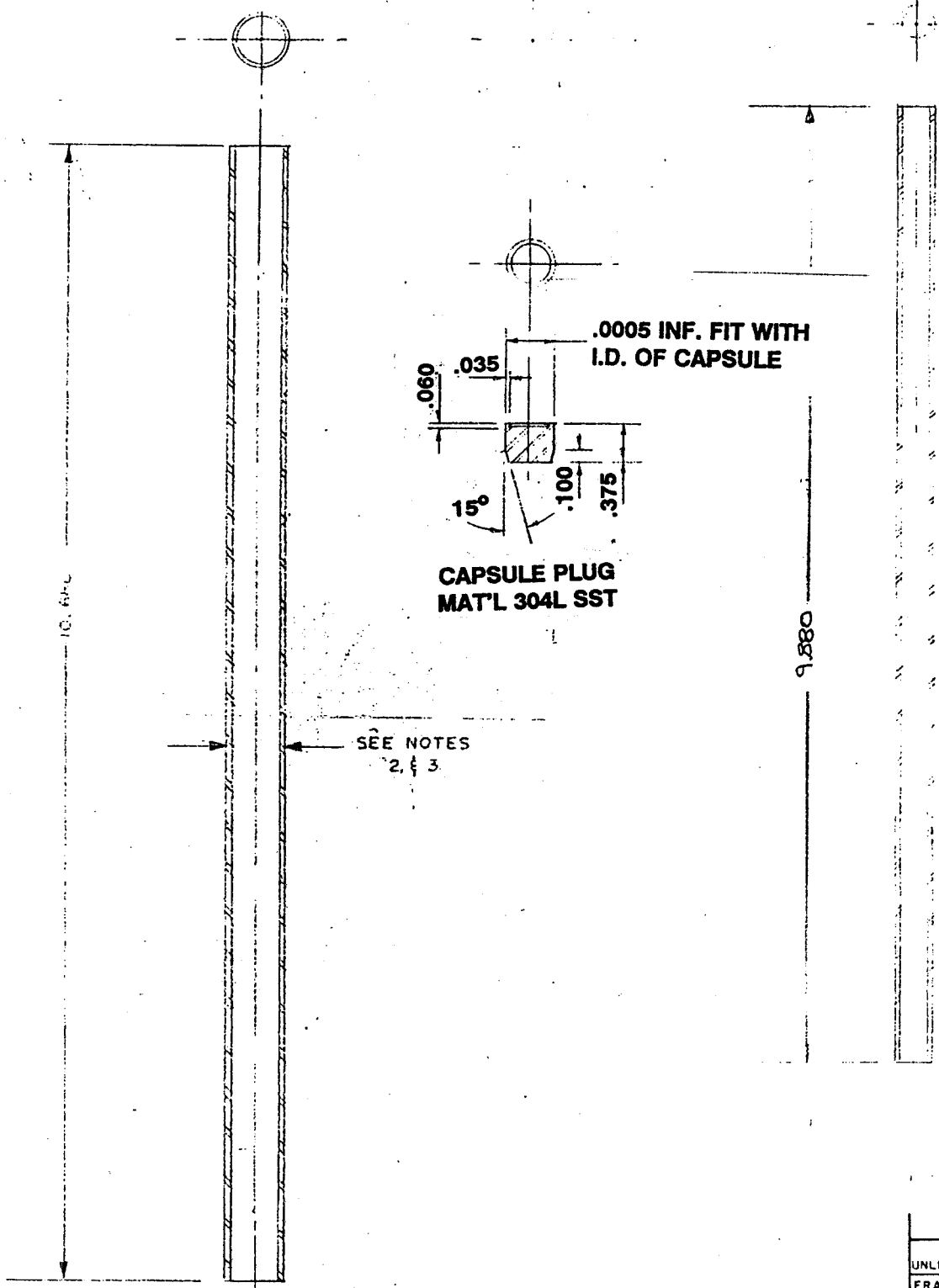
137 Cs SOURCE (ISO-1000)

SCALE: FULL SHEET OF CLASS

PLANT BLDG. FL. SHOP C - SK 1587 REV. 2

			SC
CA	CP	EC	

D
C
B
A



.0005 INF. FIT WITH I.D. OF CAPSULE

CAPSULE PLUG
MAT'L 304L SST

SEE NOTES
2, 3

CAPSULE
MAT'L $\frac{1}{2}$ " X .035 WALL
304L SST TUBING, PER ASTM A 312
REQ'D

TOLERANCES
UNLESS OTHERWISE
SPECIFIED:
FRACTIONS
XX DECIMALS
XXX DECIMALS ±
ANGLES ±
BREAK SHARP EDGES

REFERENCES:
C S K 1009

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ORDER NO.
W. O.
B. M. No.



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1200 New Jersey Ave, SE
Washington, D.C. 20590

CERTIFICATE NUMBER: USA/0192/S-96

ORIGINAL REGISTRANT(S) :

MDS Nordion
MDS Nordion
447 March Road
Ottawa, Ontario, K2K 1X8
Canada

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San Fernando, CA, 91340-1822
USA