

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

RECEIVED

1110 Chestnut Street Tower II

February 17, 1982

FEB 22 AM 11 27
U.S. NUCLEAR REG.
COMMISSION
NMSS MAIL SECTION

U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safeguards
Division of Fuels Cycle and Material Safety
Washington, D.C. 20555

Attention: Mr. Paul Guinn, Material Branch, Division of Material and Fuels
Cycle Licensing

Gentlemen:

RAPID SULFUR METER LICENSE NO. 41-08165-12 REQUEST FOR AMENDMENT NO. 1

This amendment request is to document several phone conversations with Mr. Earl Wright discussing control No. 81-81, and is pursuant to the guidelines set forth in the Code of Federal Regulations, Title 10, Part 30, 30.38. We request that our by-product material license No. 41-08165-12 be amended as indicated below.

Item 7, of the license should be changed to an Amersham sealed source as shown in drawing No. 3A 11154/S.

The enclosed supporting drawings (No. 3A11153/S and ARC 10623/S) show the outer (XN247) and inner encapsulations. The inner encapsulation is made of zircalloy (XN142). It is special-form approved as detailed in certificate No. GB/210/S (attached).

If you have any questions or require additional information, please contact Gary MacDonald or me at FTS 858-5675, 1110 Chestnut Street Tower II, Chattanooga, Tennessee 37401.

Sincerely,

J. B. Brellenthin

J. B. Brellenthin
Chief, Environmental Support Staff

FEE EXEMPT


Enclosure

cc: Mr. Earl Wright
U.S. Nuclear Regulatory Commission
Office of Nuclear Material Safeguards
Division of Fuels Cycle and Material Safety
Washington, DC 20555

8505290631 850515
NMSS LIC30
41-08165-12 PDR

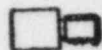
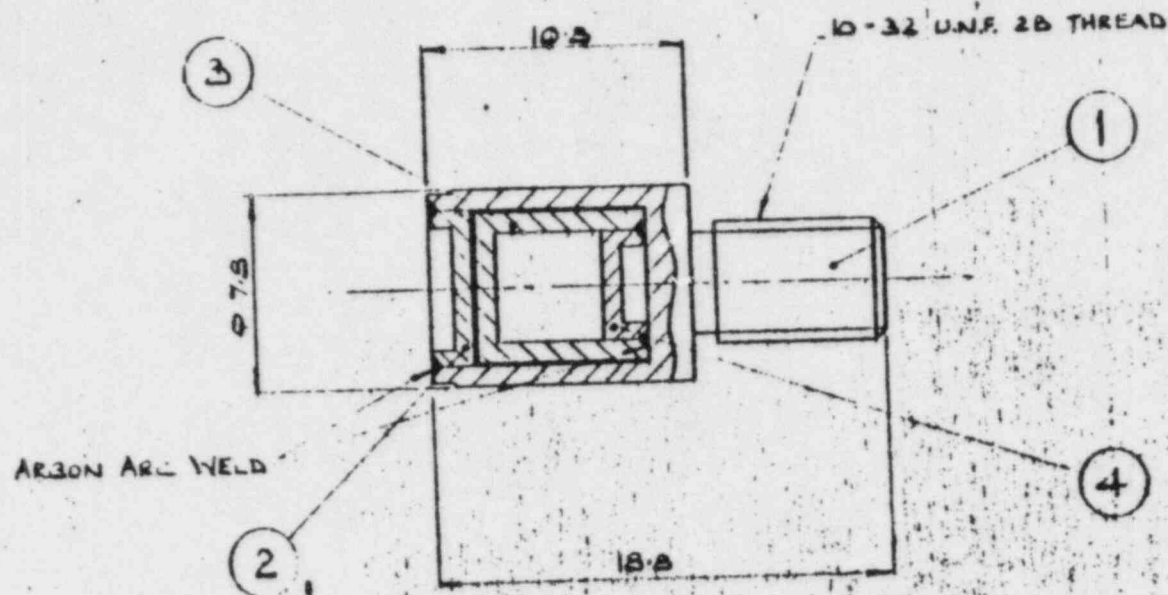
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10446

Third Angle Projection 
This drawing conforms to B.S. 308


This drawing is the private and confidential property of The Radiochemical Centre and must not be loaned, copied or reproduced without written permission.

Item No	Drawing No	Description	No. off
1	3A 11153/ISSUE B ITEM 1	SHEATH XN241	1
2	3A 11153/ISSUE B ITEM 2	LID XN247	1
3	3A 61097 ISSUE A ITEM 1	BODY XN142	1
4	3A 61097 ISSUE A ITEM 2	LID XN142	1



ACTUAL SIZE

B	19-2-81	M5021
A	10-10-81	
Issue	Date	Mod No.

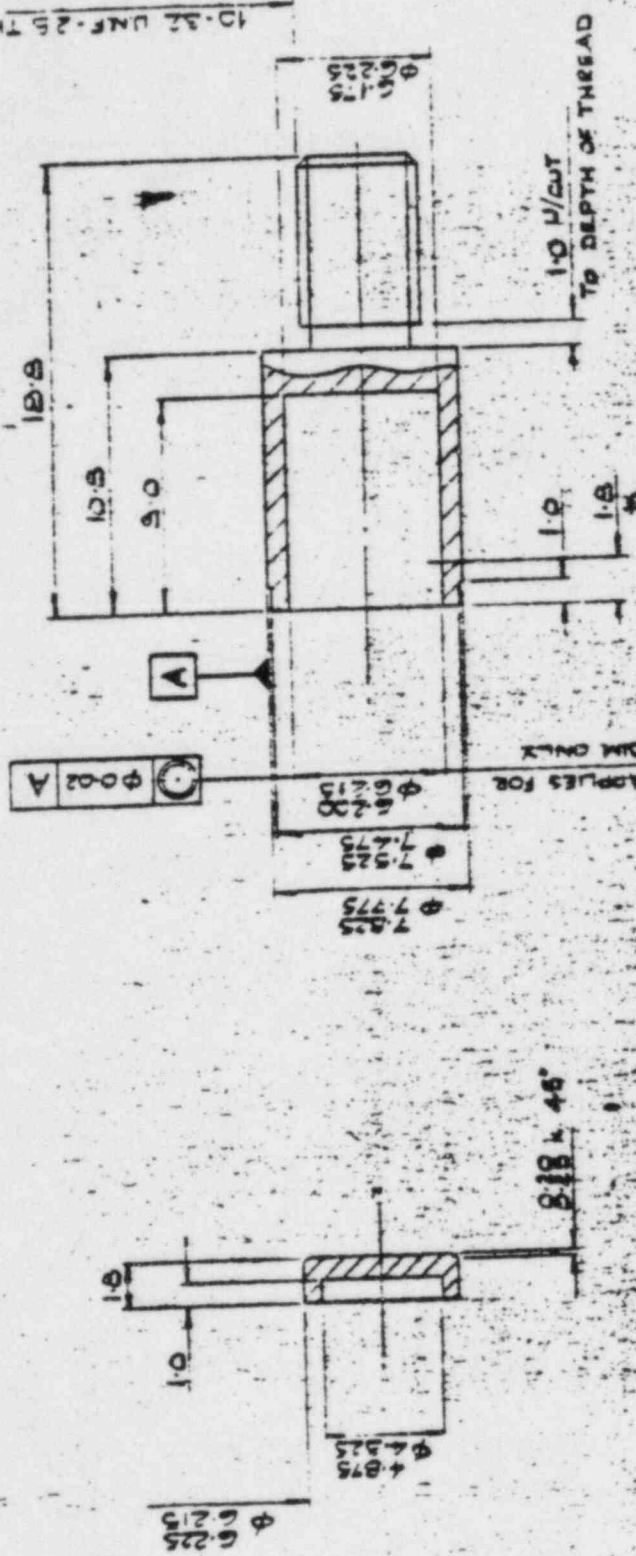
Material & Spec. ZIRCALOY	Tolerances Unless stated	Surface Texture <input checked="" type="checkbox"/> Unless stated	Finish Remove all burrs	© The Radiochemical Centre Amersham 	
Original Scale 10:1 Do not scale	Dim. in millimetres	Drawn D.W. Approved	Used on	Title XN142/XN247 CAPSULE ASSEMBLY	Job No. 3A 11154/S

10146

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Third Angle Projection
This drawing conforms to B.S. 308

10-32 UNF-2B THREAD



Issue	Date	Mod.No.
B	19-2-64	MSGL
A	23-10-64	

ITEM 1, SHEATH

ITEM 2, LID

<p>© The Radiochemical Centre Amersham</p>	
<p>SHEATH AND LID XN 247 CAPSULE</p>	
<p>Job No.</p>	<p>Job No.</p>
<p>Drawn</p>	<p>Approved</p>
<p>Original Scale 5:1</p>	<p>Do not scale</p>
<p>Material & Spec. ZIRCALLOY</p>	<p>Surface Texture</p>
<p>Tolerances ± 0.1</p>	<p>Finish CLEAN</p>
<p>Unless stated</p>	<p>Remove all burrs</p>
<p>Diags. in millimetres</p>	<p>Used on A 1104</p>
<p>Original Scale 5:1</p>	<p>Do not scale</p>

Drawn 3A 11153/S

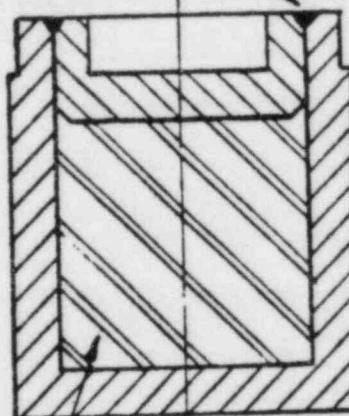
USED ON

DRG.
No.

ARC 10623/5

THIRD ANGLE PROJECTION

NOT FOR PUBLICATION
THE INFORMATION ON THIS DRAWING IS NOT TO BE COMMUNICATED
EITHER DIRECTLY OR INDIRECTLY TO THE PRESS OR TO ANY PERSON
NOT AUTHORISED TO RECEIVE IT.

ARGON ARC WELD

CALIFORNIUM-252
AS OXIDE OR CERMET
WIRE UP TO 400 μ g

SOURCE CELL AND LID
BRC 10021/5.

JOB No.

PROJECT No

MATERIAL & SPEC
CELL & LID - AISI 316 L
OR ZIRCONIUM 10

FINISH

CLEAN

SURFACE TEXTURE

DRAWN
H & L.

REMOVE ALL BURRS

✓ UNLESS STATED

TCD.

DIMS.
IN —

TOLERANCES — UNLESS STATED

CHKD.

SCALE 10 : 1

A 12.1.77

ISSUE DATE

D.O.I.
MOD

APPD.

THE RADIOCHEMICAL CENTRE
AMERSHAM BUCKS

CONTRACTOR

TITLE

X1. CELL ASSY.DRG.
No.

ARC 10623/5



Refer GB/210/S
Certificate Issue 1

Certificate of Approval of Design for Special Form Radioactive Material

Title	
Neutron Capsules XN.142 and XN.146	
Drawing Nos and/or Specification	
Assembly ARC 10714/S Issue B (XN.142) Assembly SRC 10623/S Issue E (XN.146)	
Radioactive Material	Maximum Activity
Californium 252	500 mCi

THIS IS TO CERTIFY that the ^{Minister of}~~Secretary of State for~~ Transport being, for the purposes of the Regulations of the International Atomic Energy Agency, the Competent Authority of Great Britain in respect of inland surface transport and the Secretary of State for Trade being the Competent Authority of the United Kingdom of Great Britain and Northern Ireland in respect of sea and air transport, have approved the above-mentioned Special Form Design. Radioactive material manufactured to the above-mentioned design qualifies as special form radioactive material and as such will meet the requirements of the regulations overleaf.

This Certificate of Approval applies only to the design as set out in the above named drawings and/or specifications submitted by The Radiochemical Centre, Amersham.

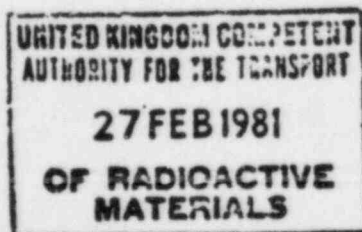
Reference RSD/CTR/91

Dated 14 October 1980

This Certificate Cancels all Previous Issues and is valid until 31 March 1984.

COMPETENT AUTHORITY
IDENTIFICATION MARK:

GB/210/S



W. Hartridge

Transport Radiological Adviser
Department of Transport
2 Marsham Street
London SW1P 3EB

Minister of
On behalf of the ~~Secretary of State for~~
Secretary of State for Trade

Regulations and Codes of Practice Governing the Transport of Radioactive Material

INTERNATIONAL

International Atomic Energy Agency (IAEA) Safety Series No 6 Regulations for the Safe Transport of Radioactive Materials 1973 Edition. (As amended)

Intergovernmental Maritime Consultative Organisation (IMCO). International Maritime Dangerous Goods Code - Class 7 Radioactive Substances.

International Air Transport Association (IATA) Restricted Articles Regulations.

ROAD

Great Britain only. The Radioactive Substances (Carriage by Road) (Great Britain) Regulations 1974. SI No 1735: The Radioactive Substances (Road Transport Workers) (Great Britain) Regulations 1970. SI No 1827: The Radioactive Substances (Road Transport Workers) (Great Britain) (Amendment) Regulations 1975. SI No 1522: Code of Practice for the Carriage of Radioactive Materials by Road (1978 Edition) and The Code of Practice for the Storage of Radioactive Material in Transit (1975 Edition).

Europe only. European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). Class 7.

RAIL

Great Britain only. British Rail publication BR 22426 (1977 Edition) - Dangerous Goods by Freight Train and by Passenger Train or similar service - List of Dangerous Goods and Conditions of Acceptance - Class 7 Radioactive Substances.

Europe only. International Convention concerning the carriage of goods by rail (CIM). Annex 1, International Regulations concerning the carriage of dangerous goods by rail (RID).

SEA

British ships registered in UK and other ships loading in UK ports or territorial waters only. The Merchant Shipping (Dangerous Goods) Rules 1978: SI No 1543 and the Report of the Standing Advisory Committee on the Carriage of Dangerous Goods in Ships 1978 (The "Blue Book") Class 7.

PORT

UK only. Code of Practice for the Carriage of Radioactive Materials through Ports - 1975 Edition.

AIR

UK only. The Air Navigation Order 1976 SI No 1783 and International Air Transport Association (IATA) Restricted Articles Regulations - Class 7 Radioactive Substances.

Notes

1 Any questions relating to this Certificate should be addressed to the Transport Radiological Adviser,
Department of Transport 2 Marsham Street, London SW1P 3EB
Telephone 01-212 7247
Telex 22221 Answer back DOE MAR G

2 This certificate does not relieve the consignor from compliance with any requirement of the government of any country through or into which any package containing the Special Form Radioactive Material specified overleaf may be transported.
