

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

NO.: NR-0155-S-805-S     DATE: May 13, 2011  
(Supersedes NR-0155-S-106-S)

PAGE: 1 of 2

SOURCE TYPE:     Radioluminous Lamp

MODEL:                             11729517

MANUFACTURER /                     Department of the Army  
DISTRIBUTOR:                     U.S. Army TACOM Life Cycle  
Management Command  
AMSTA-CSC-Z  
(Previously U.S. Army Tank-  
Automotive & Armaments Command)  
6501 E. 11 Mile Rd.  
Warren, MI 48397-5000

ISOTOPE:                             MAXIMUM ACTIVITY:

Hydrogen-3                             0.6 Curie (2.22 GBq)

LEAK TEST                             As specified in the user's materials  
FREQUENCY:                         license

PRINCIPAL USE:                     (R) Gas Sources, for use in the Model  
M114A1 Elbow Telescope

CUSTOM SOURCE:                      Yes                      No

CUSTOM USER:                     U.S. Department of Defense

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SOURCE TYPE:     Radioluminous Lamp

DIAGRAM:

See Attachments 1 and 2.

REFERENCES:

The following supporting documents for the Model 11729517 radioluminous lamp are hereby incorporated by reference and are made a part of this registry document.


- Department of the Army letter dated March 20, 1995, requesting changes to specific certificates, and letters dated January 22, 2001, May 23, 2001, and March 24, 2004, with enclosures thereto.
- Department of the Army email received September 23, 2005, with enclosures thereto.
- Department of the Army facsimile dated December 12, 2005, with enclosures thereto.
- U.S. Department of the Army License No. 12-00722-06.
- Department of the Army letter dated March 2, 2011, with enclosures thereto.

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

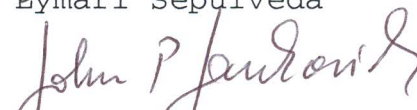
Date: May 13, 2011

Reviewer:

  
Lymari Sepulveda

Date: May 13, 2011

Concurrence:

  
John P. Jankovich

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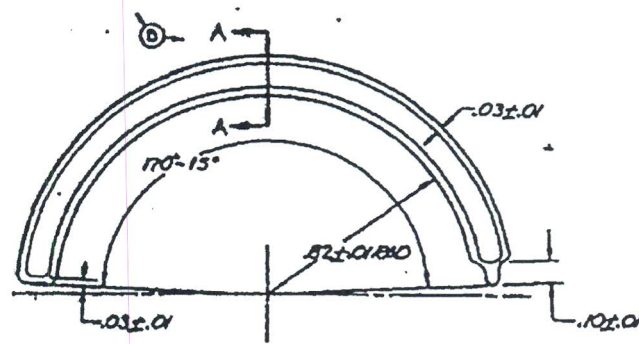
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ATTACHMENT 1 OF 2

VENDOR	VENDOR PART NO.	DESCRIPTION OF SUPPLY	VENDOR PART NO.
SALMERSFORD DEVELOPMENTS LTD. MILLINGTON ROAD HAYES MIDDLESEX UB8 4NE UNITED KINGDOM	NOT AVAILABLE	SELF-POWERED LAMING OR (COMPARIT AB 232/3 8 WEST CHESTER PLAZA TULSA, OK, U.S.A. 74116	NOT AVAILABLE
BRANCHBURST CO. LTD. PO BOX 70 HIGH WYCOMBE BUCKINGHAMSHIRE HP 12 3PS ENGLAND	NOT AVAILABLE	WBA-WB0202C, PH-FRIBERGSTRASSE, 634 01-312-NEEDSWAGEN SWITZERLAND	NOT AVAILABLE

REV	DESCRIPTION	DATE
1	PRODUCTION RELEASE (REV 11/24/07)	11/24/07
2	ISSUE ONE PRA P40 643	11/24/07
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- REQUIREMENTS**
- HANDLING, SHIPPING, LABELING AND DISPOSAL OF RADIOACTIVE COMMODITIES SHALL BE IN ACCORDANCE WITH D5AM 4145.8 'RADIOACTIVE COMMODITIES IN THE DOD SUPPLY SYSTEM'.
  - THERE SHALL BE NO EVIDENCE OF PHYSICAL FAILURE SUCH AS FRACTURING OR LIGHT LOSS DUE TO EXPOSING THE LIGHT SOURCE TO -80° AND +160°F FOR A PERIOD OF 8 HOURS AT EACH TEMPERATURE.
  - AFTER SUBMERGING THE LAMP IN ROOM TEMPERATURE WATER FOR 4 HOURS, RADIOACTIVE CONTENT OF THE WATER SHALL NOT EXCEED .005 MICROCURIES.
  - PRIOR TO MAKING BRIGHTNESS MEASUREMENTS, LAMP SHALL BE ALLOWED TO STABILIZE FOR A PERIOD OF 25 DAYS AFTER MANUFACTURE.
  - FOLLOWING THE STABILIZATION PERIOD AND UP TO 120 DAYS FROM DATE OF MANUFACTURE, BRIGHTNESS MEASUREMENTS SHALL NOT SHOW A DECAY IN EXCESS OF 2.5% WHEN MEASURED OVER ANY CONSECUTIVE 30-DAY PERIOD. FURTHER, THE FINAL BRIGHTNESS MEASUREMENT AT THE TIME OF ACCEPTANCE SHALL BE 100 MICROLAMBERTS MINIMUM.
  - VIAL TO BE FILLED WITH PRODUCTION GRADE TRITIUM (4-1) MINIMUM 94% PURE, LESS THAN 1% THORIUM OXIDE, BALANCE OF CONSTITUENTS TO BE CHEMICALLY INERT. TOTAL 22 CURIES MAXIMUM.
  - COLOR OF PHOSPHOR, GREEN. SPECTRAL PEAK 5250 Å ± 50 Å. 1/2 PEAK WIDTH 700 Å ± 50 Å.
  - VIAL MATERIAL, GLASS, TYPE I, CLASS A, SPEC ASTM E438.



LACQUER, ACRYLIC, SPEC MK-L-6152 COLOR WHITE NO. 17875 OF FED-STD-595 (PULL LENGTH OF VIAL 160° ± 10° ARC) .005 MAX THICKNESS.

SECTION A-A  
PART No. 11729517

APPLICABLE DOCUMENT(S)  
SQAP-11729517

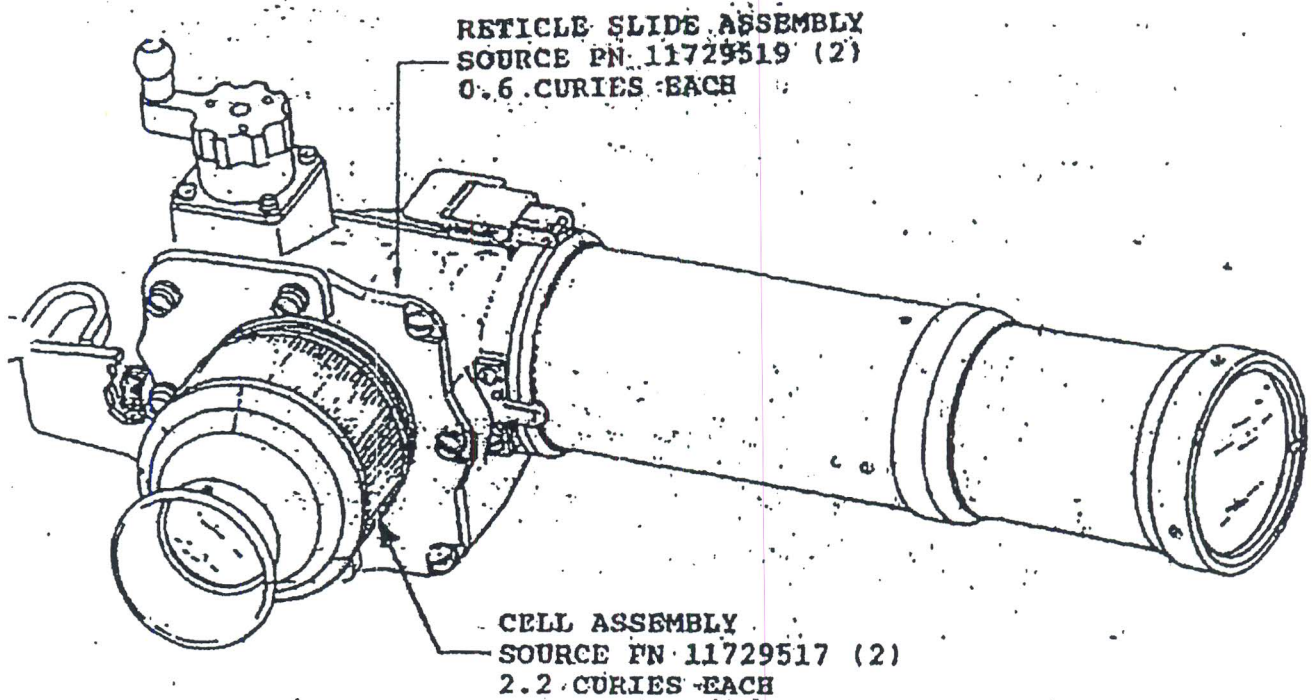
SOURCE USED ON:  
M114A1 ELBOW TELESCOPE

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ATTACHMENT 2 OF 2



Radioactive Components of the Mil4A1 Elbow Telescope  
Total Activity 5.6 Ci