

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF A SEALED SOURCE
(AMENDED IN ITS ENTIRETY)

No.: NR-0155-S-112-S

DATE: March 7, 2006

PAGE 1 OF 2

SOURCE TYPE: Radioluminous Lamp

MODEL: 11733738

MANUFACTURER/DISTRIBUTOR: Department of the Army
U.S. Army TACOM Life Cycle
Management Command
AMSTA-CS-CZR
(Previously U.S. Army Tank-
Automotive & Armaments Command)
Rock Island, IL 61299-7630

ISOTOPE:

MAXIMUM ACTIVITY:

Hydrogen-3

0.03 Curie (1.11 GBq)

LEAK TEST FREQUENCY:

As specified in the user's materials
license

PRINCIPAL USE: (R) Gas Sources

For use in the Model M64 and M64A1 sight units

CUSTOM SOURCE: ☒ YES ☐ NO

CUSTOM USER: U.S. Department of Defense

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SOURCE TYPE: Radioluminous Lamp

DIAGRAM:

See Attachments 1 & 2.

REFERENCES:

The following supporting documents for the Model 11733738 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.

ISSUING AGENCY:

US Nuclear Regulatory Commission

Date: March 7, 2006

Reviewer: Tomas Herrera
Tomas Herrera

Date: March 7, 2006

Concurrence: John P. Jankovich
John P. Jankovich

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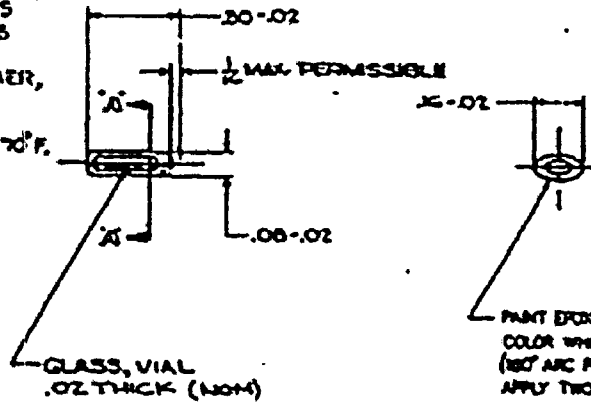
DATE: March 7, 2006

ATTACHMENT 1 OF 2

REQUIREMENTS:

2. THERE SHALL BE NO EVIDENCE OF PHYSICAL FAILURE SUCH AS FRACTURING OR LIGHT LOSS DUE TO EXPOSING THE LAMP TO -80°F AND +120°F FOR A PERIOD OF 8 HOURS AT EACH TEMPERATURE.
3. AFTER SUBMERGING THE LAMP IN ROOM TEMPERATURE WATER FOR 4 HOURS, RADIOACTIVE CONTENT OF THE WATER SHALL NOT EXCEED .0105 MICROCURIE.
4. VIAL TO BE FILLED WITH TITANIUM (4%) OF 99.16% Purity TITANIUM DIOXIDE CURE MAGMA.
5. PRIOR TO MAKING BRIGHTNESS MEASUREMENTS, LAMPS SHALL BE ALLOWED TO STABILIZE FOR A PERIOD OF 25 DAYS FROM MANUFACTURE.
6. 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 TIME OF ACCEPTANCE SHALL BE 325 MCD/LAMBERTS MINIMUM.
7. INTERNAL PRESSURE 2.50 ATMOSPHERES (NOMINAL) AT +70°F.
8. COLOR OF PHOSPHOR: GREEN.
9. SPECTRAL PEAK $5250\text{\AA} \pm 50\text{\AA}$,
 $\frac{1}{2}$ PEAK WIDTH $700\text{\AA} \pm 50\text{\AA}$.

NO.	DESCRIPTION	DATE	APPROVED
1	REPLACES KEY NO WITH CHANGE FOR PRA 1007	10/18/04	11/1/04
2	FORWARDING SELLING AND PRICING	11/18/04	11/1/04
A	NOR F413001/840320	10/18/04	11/1/04
B	NOR F413002/840320	10/18/04	11/1/04
C	NOR F413001/840320 TOP F413002/840320	10/18/04	11/1/04
D	NOR M813005/860422	10/18/04	11/1/04



SUGGESTED SOURCE(S) OF SUPPLY	
VENDOR	VENDOR PART NO
M.B. MICROTEC AG FRIEDRICHSTRASSE 624 CH-8172 WILDERHUSEN SWITZERLAND	NOT AVAILABLE
SELF POWERED LIGHTING LTD. DOODLE HILL NO 282183 8 WESTCHESTER PLAZA CLARK FORD, N.Y. 10713	NOT AVAILABLE
SAUNDERS-ROE DEVELOPMENTS LTD. MILLINGTON ROAD WATFORD MIDDLESEX UB8 4NB ENGLAND	NOT AVAILABLE
BRANDHURST CO. LTD. P.O. BOX 70 HIGH WYCOMBE BUCKINGHAMSHIRE HP12 3PS ENGLAND	NOT AVAILABLE

SOURCE USED ON:
M64 SIGHTUNIT
M64A1 SIGHTUNIT

APPLICABLE DOCUMENTS
J. O. P. 11733738

SECTION A-A

SEARCHED INDEXED SERIALIZED FILED
MAR 11 2006
FBI - NEW YORK
PART No. 11733738

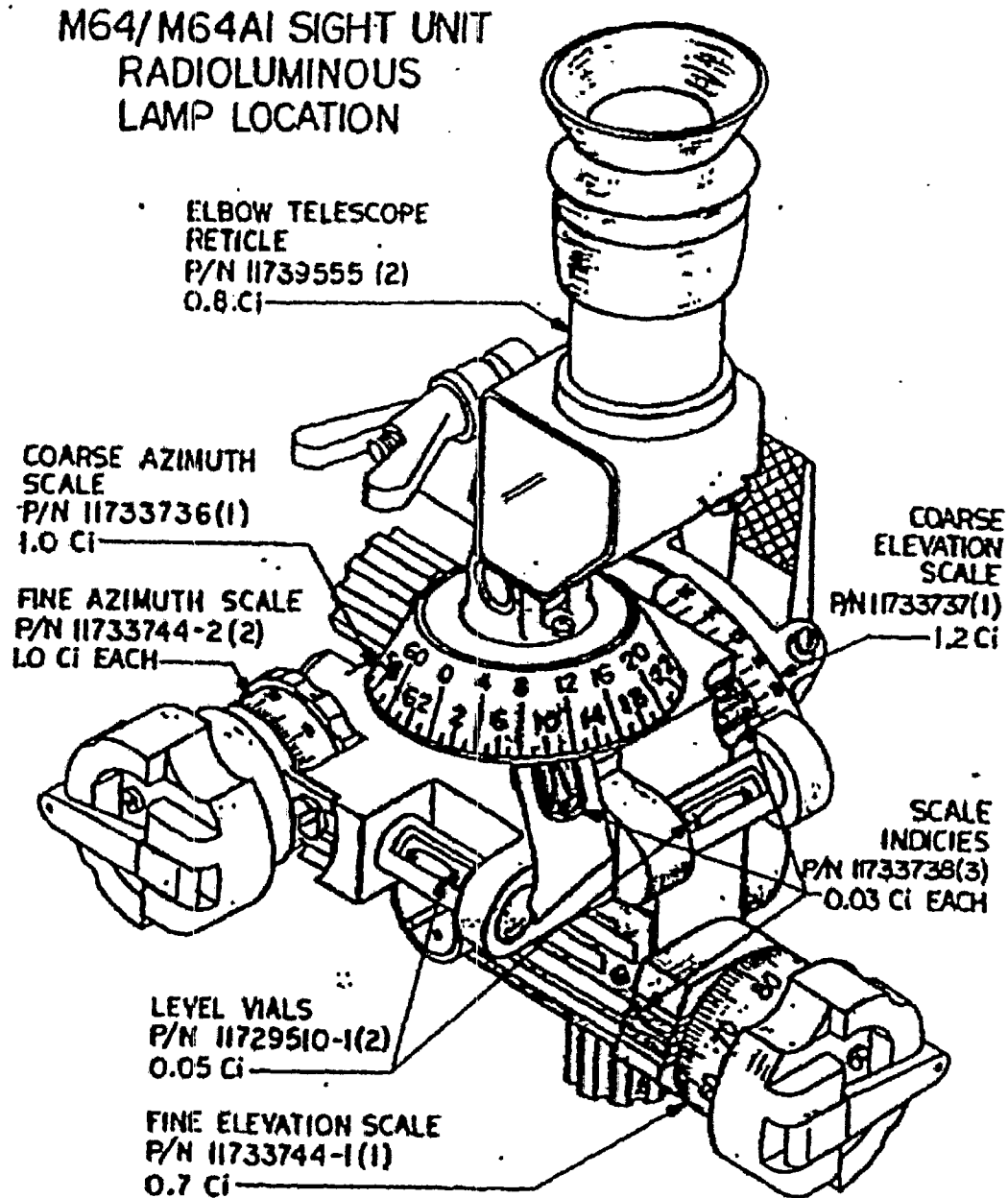
SEARCHED INDEXED SERIALIZED FILED MAR 11 2006 FBI - NEW YORK PART No. 11733738		U.S. ARMY TRANSMISSIONS DIVISION FORT MONMOUTH, PA. 17041	
LAMP, RADIOLUMINOUS		C 18200 11733738	
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ATTACHMENT 2 OF 2



TOTAL TRITIUM PER SIGHT UNIT 6.69 CURIES