

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

No.: NR-0155-S-110-S

DATE: March 7, 2006

PAGE 1 OF 2

SOURCE TYPE: Radioluminous Lamp

MODEL: 11733736

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:

Hydrogen-3

MAXIMUM ACTIVITY:

1.0 Curie (37 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 11733736 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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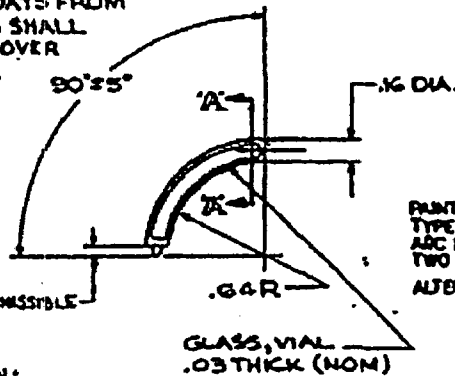
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ATTACHMENT 1 OF 2

REQUIREMENTS:

2. THERE SHALL BE NO EVIDENCE OF PHYSICAL FAILURE SUCH AS FRACTURING OR LIGHT LOSS DUE TO EXPOSING THE LAMP TO -60°F AND +160°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 .006 MICROCURIE.
4. VIAL TO BE FILLED WITH TRITIUM (H³) OF 34% 36% PURTY. TOTAL 10 CUNES MAXIMUM.
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 600 MICROLAMBERTS' MINIMUM. INTERNAL PRESSURE 2.50 ATMOSPHERES (NOMINAL) AT +70°F.
8. COLOR OF PHOSPHOR: GREEN SPECTRAL PEAK 5250Å ± 50Å, 1/2 PEAK WIDTH 700Å ± 50Å.

NO.	DESCRIPTION	DATE	INITIALS
XI	REPLACES REV. 10 WITH CHANGE, PER FRANK COBBO	7-1-56	[Signature]
A	NOR PA15041, 770107	800310	[Signature]
B	NOR PA12815, 79-11-08 (TCP FOJ2501, 80-02-20)	800806	[Signature]
C	NOR PA1000/800350 (ED PA1000/800311)	86078	[Signature]
D	NOR MRJ3003/800422	880222	[Signature]
E	NOR D2.R2007/920901	92106	[Signature]



PAINT, EPOXY, MIL-C-22750.
TYPE 1, COLOR 17875 (180 DEGREES
ARC FOR FULL LENGTH OF VIAL) APPLY
TWO COATS (MIN OF FED-STD-593).
ALTERNATIVE COATING: DRAWING NO. 11785530.

SOURCE USED ON:
M64 SIGHTUNIT
M64A1 SIGHTUNIT

APPLICABLE DOCUMENTS
SQAP 11733736

SPECIFICATION CONTROL DRAWING
PART No. 11733736

SUGGESTED SOURCE(S) OF SUPPLY	
VENDOR	VENDOR PART NO.
SELF POWERED LIGHTING LTD CODE IDENT NO. 23218 8 WESTCHESTER PLAZA ELMSFORD, N.Y. 10523	NOT AVAILABLE
SAUNDERS-ROE DEVELOPMENTS LTD. MILLINGTON ROAD HAYES MIDDLESEX UB3 4NB ENGLAND	NOT AVAILABLE
BRANCHURST CO. LTD. P.O. BOX 70 HIGH WYCOMBE BUCKINGHAMSHIRE HP12-3PS ENGLAND	NOT AVAILABLE
M.B. MICROTREC AG FREIBURGERSTRASSE 624 CH-3172-NIEDERWANGEN SWITZERLAND	NOT AVAILABLE

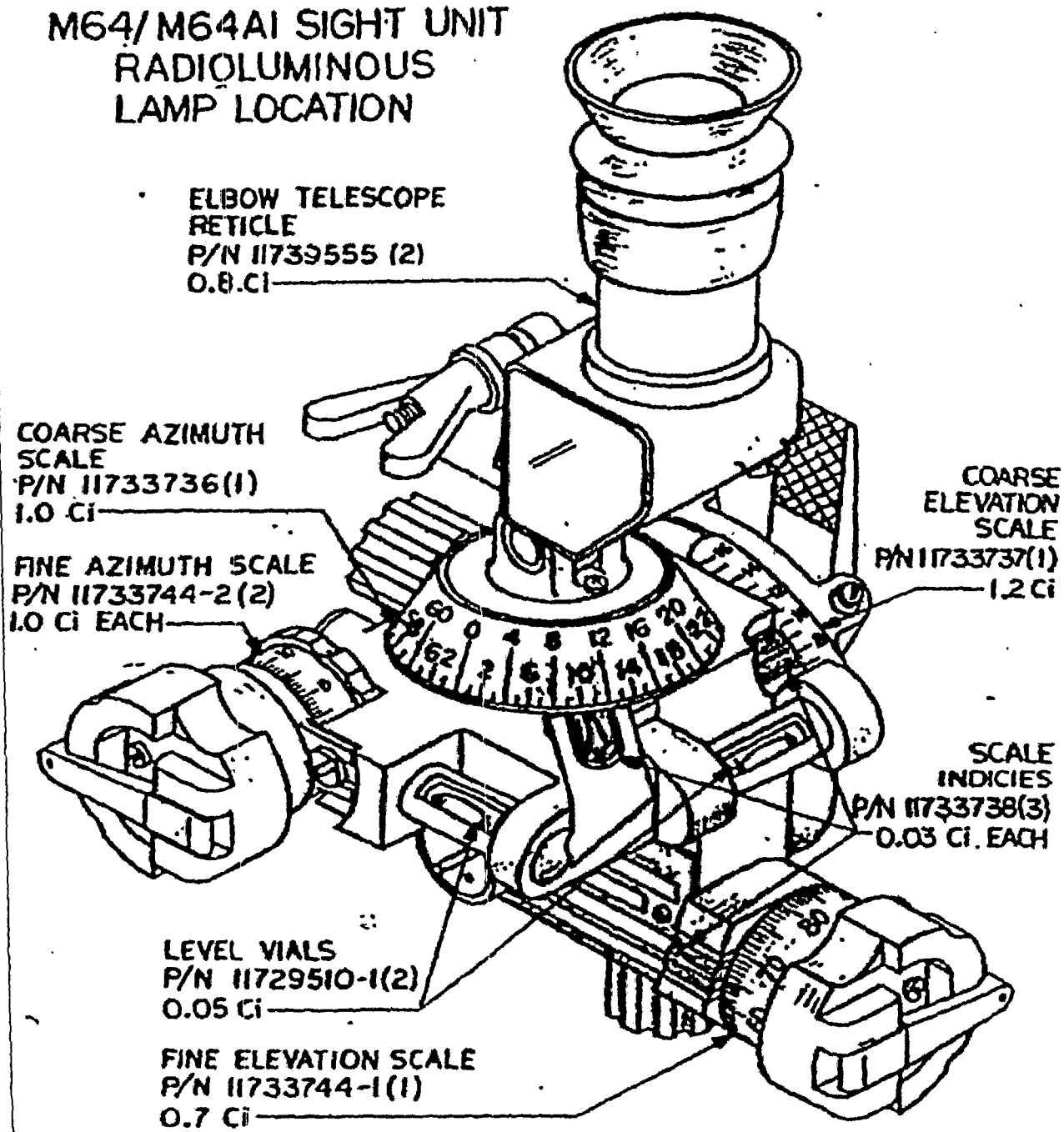
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18200	11733736	[Signature]	[Signature]

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ATTACHMENT 2 OF 2

M64/M64AI SIGHT UNIT
RADIOLUMINOUS
LAMP LOCATION



TOTAL TRITIUM PER SIGHT UNIT 6.69 CURIES