NRC FORM 374
(10-89)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Amendment No. 07

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 39, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Department of the Army U. S. Army Communications-Electronics Command 2. AMSEL-SF Fort Monmouth, New Jersey 07703-5024	In accordance with letter dated March 19, 1991, 3. License number 29-01022-14 is amended in its entirety to read as follows:
	4. Expiration date August 31, 1992
	5. Docket or Reference No 030-29741

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Cobalt 60	A.	A.
B. Cobalt 60	B.	B.
C. Cobalt 60	C.	C.
D. Krypton 85	D.	D.
E. Strontium 90	E. Sealed sources (US Army Electronics Command, ECOM Dwg. No.SM-B-509057)	E. [illegible] curies per source and 60 curies total
F. Strontium 90	F. Sealed sources (ECOM Dwg. No. SM-B-509048)	F. Not to exceed 150 microcuries per source and 45 millicuries total
G. Strontium 90	G.	G.
H. Strontium 90	H. Sealed source (SM Dwg. No. 12-1921-0474-8)	H. Not to exceed 36 microcuries per source and 18 millicuries total

Information in this record was deleted in accordance with the Freedom of Information Act, exemptions 2
FOIA-2006-0238

Ex 2

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 29-01022-14

Docket or Reference number: 030-29741

Amendment No. 07

(6., 7., and 8. Continued)

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
I. Cesium 137	I.	I.
J. Cesium 137	J.	J.
K. Plutonium 239	K. Electroplated source (Eberline Instrument Corp. Model 594-1)	K. Not to exceed 23 micrograms (1.4 microcuries) per set and 0.0115 grams total
L. Plutonium 239	L. Resin on acrylic plastic disk (MIL-R-24265)	L. Not to exceed 819 micrograms (50.3 microcuries) per set and 0.246 grams total
M. Americium 241	M. Sealed sources (Amersham Radiochemical Center, Amersham Code 2084)	M. Not to exceed 10 millicuries per source and 50 millicuries total
N. Thorium 230	N. Electroplated source (Eberline Instrument Corp. Model No. CS-12)	N. Not to exceed 0.98 micrograms (20 nanocuries) per source and 1 milligram total
O. Thorium 232	O. Metal foil (Nuclear Research Corp. Model No. B-1093)	O. Not to exceed 2.7 grams (300 nanocuries) per source and 2.76 kilograms total
P. Plutonium 239	P. Electroplated source (Eberline Instrument Corp. Model No. CS-1)	P. Not to exceed 163 nanograms (10 nanocuries) per source and 1 gram total
Q. Thorium 232	Q. Solid (Thorium fluoride coating on optical system)	Q. Not to exceed 3 grams (0.330 microcuries) per optical system and 40 kilograms total

9. Authorized use

A. through P. Calibration and operational check of radiation detection instrumentation.
Q. Optical coating on thermal imaging devices.

Ex 2

(Continued)

CONDITIONS

10. Licensed material may be used only at the licensee's facilities at Fort Monmouth, New Jersey, and at Department of Defense installations anywhere in the United States as approved by the Radiation Safety Officer.

11. A. Licensed material shall be used by or under the supervision of individuals who have completed the training described in application dated May 7, 1986, with enclosures. Records of individuals who have satisfactorily completed the training program shall be maintained by the Radiation Safety Officer.

B. At least one individual qualified under Condition 11.A. shall be present whenever licensed material is being used.

C. The Radiation Safety Officer for this license is Barry J. Silber.

12. Sealed sources containing licensed material shall not be opened by the licensee.

13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed 3 years.

B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

C. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.

E. Sealed sources and detector cells need not be leak tested if:

(i) they contain only hydrogen 3; or

(ii) they contain only krypton 85; or

(iii) the half-life of the isotope is 30 days or less; or

(iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or

(v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 29-01022-14
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(13. Continued) CONDITIONS

F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. Records of leak test results shall be kept in units of microcuries and shall be maintained for inspection by the Commission. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source involved, the test results, and corrective action taken.

G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

14. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices specified in Items 7.A. through 7.M., received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory.

15. The licensee may transport licensed material in accordance with the provisions of 10 CFR 71, "Packaging and Transportation of Radioactive Material."

16. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated May 7, 1986
B. Letter dated October 21, 1987
C. Letter dated October 17, 1988
D. Letter dated November 18, 1988
E. Letter dated March 7, 1990
F. Letter dated April 5, 1990
G. Memorandum of Understanding dated June 22, 1990
H. Letter dated October 2, 1990
I. Letter dated January 8, 1991
J. Letter dated March 19, 1991

For the U.S. Nuclear Regulatory Commission

Date JUN 2 8 1991

By Original Signed By:
John D. Kinneman

Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406

JUN 2 8 1991

License No. 29-01022-14
Docket No. 030-29741
Control No. 114519

Department of the Army
U.S. Army Materiel Command
ATTN: AMCSF-P
5001 Eisenhower Avenue
Alexandria, Virginia 22333-0001

Dear Sir/Madam:

Please find enclosed an amendment to your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5093, so that we can provide appropriate corrections and answers.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

OFFICIAL RECORD COPY ML 29-01022-14/LTR - 0001.0.0
06/03/91

ML 10

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosures:
1. Amendment No. 07
2. Requirements for Materials Licensees

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DRSS:RI
Kinneman
06/06/91

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030-29741

DEPARTMENT OF THE ARMY
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND
AND FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO
ATTENTION OF

AMCSF-P/91-0031
AMSEL-SF-RER (385-NGB)

19 March 1991

P. Elder 22 Mar 91

MEMORANDUM THRU Commander, U.S. Army Material Command, ATTN: AMCSF-P, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001

FOR U.S. Nuclear Regulatory Commission, Materials Section B, 475 Allendale Road, King of Prussia, PA 19406

SUBJECT: Request for License Amendment

1. Reference:

a. U.S. Nuclear Regulatory Commission (NRC) Radioactive Materials License Number 29-01022-14, Docket Number: 030-29741, Expiration date: August 31, 1992.

2. Request the above NRC License be amended to allow for the possession of up to 3 grams (0.330 microcuries) of Thorium-232 (^{232}Th) per optical system, supplied in solid form and not to exceed 40 kilograms total.

3. Thorium Fluoride ($^{232}ThF_4$) coated optics are utilized in thermal imaging devices for optimal night viewing capabilities in defense/weapon systems.

4. Upon initial overview of the previous Environmental Assessment (EA) governing the use of ThF_4 optics, no radiological consequences leading to a significant environmental impact or health hazard is expected with the increase in possession limit.

5. Our POC is Mr. Gary Ziola, Milnet (AMSEL-SF@MONMOUTH-EMH3.ARMY.MIL): Message (CDR CECOM FT MONMOUTH NJ //AMSEL-SF-RER//); Facsimile on DSN 995-2667 or (201) 542-7161: or Voice on DSN 995-4427 or (201) 544-4427.

6. CECOM Bottom Line: THE SOLDIER.

BARRY J. SILBER
Acting Chief, Safety Office

FEE EXEMPT

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