

**U. S. NUCLEAR REGULATORY COMMISSION  
MATERIALS LICENSE**

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Amendment No. 18

**CORRECTED COPY**

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 1, Parts 30, 31, 32, 33, 34, 35, 36, 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); and to import such byproduct and source material. 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<br>1. Department of the Army<br>U. S. Army Electronics Command<br>2. Fort Monmouth, New Jersey 07703  |  | In accordance with application dated<br>September 4, 1975 and letter dated<br>February 9, 1976,<br>3. License number 29-01022-06 is amended<br>in its entirety to read as follows:<br>4. Expiration date September 30, 1981<br>5. Docket or<br>Reference No.  |
| 6. Byproduct, source, and/or<br>special nuclear material<br>A. Any byproduct<br>material with an<br>atomic number from<br>3 through 83<br>B. Americium 241<br>C. Americium 241<br>D. Cesium 137<br>E. Cobalt 60<br>F. Hydrogen 3<br>G. Hydrogen 3<br>H. Hydrogen 3<br>I. Polonium 210<br>J. Polonium 210 | 7. Chemical and/or physical<br>form<br>A. Any<br>B. Any<br>C. Sealed Sources<br>D. Sealed Sources<br>E. Sealed Sources<br>F. Accelerator targets<br>G. Accelerator target<br>replenisher car-<br>tridges<br>H. Sealed light sources<br>I. Any<br>J. Sealed Sources | 8. Maximum amount that licensee<br>may possess at any one time<br>under this license<br>A. 1 curie of each<br>radionuclide<br>B. 10 millicuries<br>C. 5 curies total<br>D. 835 curies total (no<br>single source to<br>exceed 220 curies)<br>E. 440 curies (no single<br>source to exceed 200<br>curies)<br>F. 200 curies (no single<br>target to exceed 20<br>curies)<br>G. 300 curies<br>H. 75.5 curies<br>I. 10 millicuries<br>J. 20 curies (two sources<br>of 10 curies each) |

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6. Byproduct, source, and/or  
special nuclear material

K. Promethium 147

L. Strontium 90

7. Chemical and/or physical form

K. Sealed light sources

L. Sealed Sources

8. Maximum amount that licensee  
may possess at any one time  
under this license

K. 1.2 curies (no single  
source to exceed 300  
millicuries)

L. 1700.4 millicuries (no  
single source to exceed  
40 millicuries)

9. Authorized use

A. through L. Research and development and testing programs, including calibration  
and operational checks of instruments, and as instructional aids.

CONDITIONS

10. Licensed material shall be used only at Fort Monmouth, New Jersey as defined in the  
licensee's September 4, 1975 application and at other locations in accordance with  
the following:

| <u>Location</u>  | <u>Material and Form</u>  | <u>Activity</u>                            |
|--|---|--|
| A. Gateway National Park,<br>New Jersey; Lakehurst<br>Naval Air Station, New<br>Jersey; Tobyhanna Army<br>Depot, Tobyhanna,<br>Pennsylvania; Fort<br>Huachuca, Arizona; Fort<br>Hood, Texas; and the<br>Nevada Test Site | Cesium 137 as sealed sources                                      | No single source to ex-<br>ceed 220 curies |
| B. Gateway National Park,<br>New Jersey  | Hydrogen 3 as accelerator<br>targets and target re-<br>plenishers | 110 curies total                           |

11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of  
Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers;  
Inspections" and Part 20, "Standards for Protection Against Radiation."

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12. Licensed material shall be used by, or under the supervision of, individuals designated by the U. S. Army Electronics Command, Ionizing Radiation Control Committee.
- 13.A(1) Each sealed source acquired from another person and containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for contamination and/or leakage prior to use. 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 received from another person shall not be put into use until tested.
- (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- (3) Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.
- B. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired, decontaminated and retested.
- C. Each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months.
- D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.

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- E. If the test required by Subsection A. or C. of this condition reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the test with the U.S. Nuclear Regulatory Commission, Region I, Office of Inspection and Enforcement, 631 Park Avenue, King of Prussia, Pennsylvania 19406, describing the equipment involved, the test results, and the corrective action taken.
14. Each sealed source containing licensed material to be used outside of a shielded exposure device shall bear a durable, legible, and visible tag permanently attached to the source. The tag shall be at least one (1) inch square, shall bear the conventional radiation symbol prescribed in Section 20.203(a), 10 CFR 20, and a minimum of the following instructions: DANGER - RADIOACTIVE MATERIAL - DO NOT HANDLE - NOTIFY MILITARY AUTHORITIES IF FOUND. Repair or replacement of tags shall be accomplished by persons specifically licensed by the Commission or an Agreement State to perform this service.
15. The licensee may transport licensed material or deliver licensed material to a carrier for transport, in accordance with the provisions of Section 71.5, Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material For Transport".
16. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated September 4, 1975 and letter, with enclosures, dated February 9, 1976.

Date JUN 03 1976

For the U. S. Nuclear Regulatory Commission

by Radioisotopes Licensing Branch

Division of Materials and Fuel Cycle  
Facility Licensing  
Washington, D. C. 20555

*JMB*  
*6/2/76*  
*Bell / JMB*