

SEP 29 1969

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70-1211

Isotopes, Inc.  
Nuclear Systems Division  
Eastern Blvd. at Martin Blvd. N.E.  
P. O. Box 4937  
Middle River, Maryland 21220

Attention: Mr. Peter J. Knapp  
Licensing and Accountability Representative

Gentlemen:

Enclosed is AEC Special Nuclear Material License No. SNM-1150. This new license has been issued pursuant to your application dated August 15, 1969, for amendment of License No. SNM-53. Please note that the license only authorizes your proposed activities at Timonium, Maryland.

Also enclosed is AEC Special Nuclear Material License No. SNM-53, as amended in its entirety. This license authorizes the storage only of the enriched uranium in the form of contamination in your nuclear facilities, D building, at Middle River, Maryland. Prior to the decontamination of these facilities at Middle River, an amendment to License No. SNM-53 will be required. An application for license amendment should contain the following information:

1. A survey report indicating the contamination levels of facilities and equipment contained therein.
2. A description of your proposed decontamination methods and procedures.
3. A description of your proposed radiation safety program to be followed during decontamination activities, including available radiation detection equipment and the qualifications of supervisory personnel in charge of the radiation safety program.

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- 4. A nuclear safety assessment of your proposed activities.
- 5. Method for handling and disposing of wastes.

Please let me know if you have any questions concerning the enclosed licenses or the above.

Sincerely,

Approved by  
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief  
Source and Special Nuclear  
Materials Branch  
Division of Materials Licensing

Enclosures:  
As stated

- DISTRIBUTION:
- PDR, w/encls. (2)
  - State Health (licenses only)
  - Docket file, w/encls. (2)
  - Branch Reading file, w/encls.
  - Division Reading file, w/o encls.
  - Harmon's Reading file, w/encls. (2)
  - Division of Compliance, HQ, w/encls. (4)
  - H. J. McAlduff, OROO, w/encls.
  - R. Weber, SMM, w/encls.
  - R. Wischow, NMS, w/encls.
  - C. Luke, DML, w/encls.
  - N. Doulos, DML, w/encls.
  - A. Cabell, DR:ADM, w/encls.

OFFICE ▶	DML	DML				
SURNAME ▶	DF Harmon/db	DAN Nussbaumer				
DATE ▶	9/16/69	9/16/69				

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Form AEC-401  
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UNITED STATES  
ATOMIC ENERGY COMMISSION

**SPECIAL NUCLEAR MATERIAL LICENSE**

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 70, "Special Nuclear Material", a license is hereby issued authorizing the licensee to receive and possess the special nuclear material designated below; to use such special nuclear material for the purpose(s) and at the place(s) designated below; and to transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 70.32(a) of said regulations, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect and to any conditions specified below.

Licensee		3. License No. SNM-53
1. Name	Isotopes, Incorporated	4. Expiration Date September 30, 1974
2. Address	Nuclear Systems Division Eastern Blvd. at Martin Blvd. N.E. P. O. Box 4937 Middle River, Maryland 21220	5. Docket No. 70-58

6. Special Nuclear Material Uranium enriched in the U-235 Isotope	7. Maximum quantity of special nuclear material which licensee may possess at any one time under this license 500 grams
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8. Authorized use This license authorizes the storage only of uranium enriched in the U-235 isotope in the form of contamination in the licensee's Nuclear Facilities, D Building, Middle River, Maryland 21220, in accordance with the licensee's application dated August 15, 1969.

CONDITIONS

9. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.  
See Item 8 above.

SEP 23 1969  
Date of issuance

*Handwritten:* 9/16/69  
Dw 9/16/69

For the U.S. ATOMIC ENERGY COMMISSION

Original Signed by  
Donald A. Nussbaumer

Donald A. Nussbaumer, Chief  
Division of Materials Licensing

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UNITED STATES  
ATOMIC ENERGY COMMISSION

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Licensee		3. License No. SNM-1150
1. Name	Isotopes, Incorporated	4. Expiration Date September 30, 1974
2. Address	110 West Timonium Road Timonium, Maryland 21093	5. Docket No. 70-1211

6. Special Nuclear Material  Plutonium and uranium enriched in the U-235 isotope	7. Maximum quantity of special nuclear material which licensee may possess at any one time under this license A. 171 grams plutonium B. 100 grams U-235
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8. Authorized use  
For use in accordance with the procedures described in the licensee's application dated August 15, 1969.

CONDITIONS

- 9. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
- 10. The licensee shall comply with the attached condition entitled, "License Condition For Leak Testing Sealed Plutonium Sources."
- 11. The licensee shall comply with the attached condition entitled, "License Condition For Plutonium Alpha Sources."

Date of issuance <u>SEP 23 1969</u> <sup>SA</sup> <sub>116/69</sub> <sub>19/16/69</sub>	For the U.S. ATOMIC ENERGY COMMISSION  Original Signed by <u>Donald A. Nussbaumer</u> Donald A. Nussbaumer, Chief Division of Materials Licensing
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LICENSE CONDITION FOR LEAK TESTING

SEALED PLUTONIUM SOURCES

- A. Each plutonium source shall be tested for leakage at intervals not to exceed six (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to the transfer, the sealed source shall not be put into use until tested.
- B. The test shall be capable of detecting the presence of 0.005 microcurie of alpha contamination on the test sample. The test sample shall be taken from the source or from appropriate accessible surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- C. If the test reveals the presence of 0.005 microcurie or more of removable alpha contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired by a person appropriately licensed to make such repairs or to be disposed of in accordance with the Commission regulations. Within five (5) days after determining that any source has leaked, the licensee shall file a report with the Director, Division of Materials Licensing, U. S. Atomic Energy Commission, Washington, D. C. 20545, describing the source, the test results, the extent of contamination, the apparent or suspected cause of source failure, and the corrective action taken. A copy of the report shall be sent to the Director of the nearest AEC Regional Compliance Office listed in Appendix D of Title 10, Code of Federal Regulations, Part 20.
- D. 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 (6) months prior to the date of use or transfer.

LICENSE CONDITION FOR  
PLUTONIUM ALPHA SOURCES

- A. The sources when not in use shall be stored in a closed container adequately designed and constructed to contain plutonium which might otherwise be released during storage.
- B. At least once every three months the licensee shall test the source for loss of plutonium in one of the following ways, using radiation detection instrumentation capable of detecting 0.005 microcurie of alpha contamination:
  - (1) By measurement of the source or alpha surveys of the storage container and areas in which the source is used; or
  - (2) By wiping thoroughly the external surfaces of the source mount, other than the radioactive surface of the source, with a piece of filter paper of high wet strength and low porosity moistened with a solution which will not attack the mount and, after the paper is allowed to dry, measuring the radioactivity on the paper.
- C. If any survey of measurement performed as required by B. (1) or B. (2) above discloses the loss of more than 0.005 microcurie of plutonium from the source, or if a source has been damaged or broken, the source shall be deemed to be losing plutonium. The licensee shall immediately withdraw it from use, and cause the source to be decontaminated and repaired, or disposed of in accordance with the Commission regulations. Within five (5) days after determining that any source has lost plutonium, the licensee shall file a report with the Director, Division of Materials Licensing, U. S. Atomic Energy Commission, Washington, D. C. 20545 describing the source, the test results, the extent of contamination and the corrective action taken. A copy of the report shall be sent to the Director of the nearest AEC Compliance Office listed in Appendix D of Title 10, Code of Federal Regulations, Part 20.
- D. Records of test results shall be kept in units of microcuries and maintained for inspection by the Commission.
- E. Notwithstanding the periodic test required by Paragraph B, any plutonium alpha source containing not more than 0.1 microcurie of plutonium is exempted from the above requirements.