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Form AEC-401

9/68

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-639
1. Name	Union Carbide Corporation	4. Expiration Date June 30, 1974
2. Address	Sterling Forest Research Center Tuxedo, New York 10987	5. Docket No. 70-687
6. Special Nuclear Material See Item 12	7. Maximum quantity of special nuclear material which licensee may possess at any one time under this license See Item 13	

8. Authorized use

For use in accordance with the statements, representations and conditions specified in the licensee's application dated April 28, 1969, and supplement dated May 21, 1969.

CONDITIONS

9. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
10. This license does not authorize the insertion or removal of these materials into or from any nuclear reactor.
11. The licensee shall comply with the attached leak test condition for plutonium as sealed sources.

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SPECIAL NUCLEAR

MATERIAL LICENSE

License Number SNM-639

Supplementary Sheet

12. Special Nuclear Material

- A. U-233
- B. Uranium enriched in the U-235 isotope.
- C. Plutonium

D. U-235

13. Maximum Quantity of Special Nuclear Material Which Licensee May Possess At Any One Time Under This License

- A. 10 grams U-233 as encapsulated sources.
- B. 250 grams U-235.
- C. 2 milligrams Pu-238; 10 grams Pu-239, and 2 milligrams Pu-241 as encapsulated sources; 160 grams Pu as encapsulated Pu-Be neutron sources.
- D. The special nuclear material contained in four (4) spent fuel elements from the licensee's reactor including up to 784 grams U-235.

14. The licensee is hereby exempted from the requirements of Section 70.24, 10 CFR 70 insofar as this section applies to the material held under this license.

RR 6/12/69

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Date _____

JUN 12 1969

For the U. S. Atomic Energy Commission

Original signed by

Robert L. Layfield

by Robert L. Layfield

Division of Materials Licensing
Washington, D. C. 20545

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.