

FEB 2 1966

DML:LR
70-687

Union Carbide Corporation
Mining and Metals Division
P. O. Box 324
Tuxedo, New York 10987

Attention: Mr. J. C. Kennorth
Health Physics Supervisor

Gentlemen:

Enclosed is Special Nuclear Material License No. SM-639, as renewed. Please note the attached leak test conditions. Also note that this license does not authorize the insertion of the material held under this license into any nuclear reactor. Such insertion should be authorized pursuant to the authority to operate the reactor.

As you know, the Commission entered into an agreement with the State of New York whereby the State assumed regulatory authority over byproduct material, source material, and special nuclear material in quantities not sufficient to form a critical mass. Accordingly, this license authorizes possession and use of the special nuclear material requested in your renewal application since Union Carbide is authorized to possess at its Tuxedo Research Center a total quantity of special nuclear material in excess of a critical mass, as defined in 10 CFR 150. The source material and byproduct material previously authorized by License No. SM-639 have been deleted in view of the Commission's agreement with the State of New York. The enclosed Part 150 explains the areas of regulatory authority retained by the Commission and those transferred to the State.

We are aware that you hold a State of New York Radioactive Materials License covering certain activities at your Research Center. You should review your State license to assure that any material or procedures formerly, but not now authorized in AEC License No. SM-639 are covered by your State license.

If you have any questions regarding the license, please contact us.

Very truly yours,

Robert L. Layfield
 Source of Special Nuclear Materials Branch
 Division of Materials Licensing

Enclosures:

1. SM-639, as renewed
2. 10 CFR 150

cc: Mr. Robert D. Vessels
 Secretary, Committee on Licensing
 State of New York
 Atomic Energy Coordinating Council
 P. O. Box 7036
 Albany 1, New York

DISTRIBUTION:

- Suppl. w/encl.
- Doc. Room w/encl.
- Compliance, Region I w/encl.
- State Health (lic. only)
- H. J. McAlduff, OROO (w/encl.)
- D. George, NMM w/encl.
- N. Doulos, ML w/encl.
- R. Mason, SLR w/encl.
- Br. RF w/encl.
- Div. RF w/o encl.

OFFICE >	DML	NMM SLR	DML			
SURNAME >	LR LRouse:sr	R Mason	RLayfield			
DATE >	1-14-66	1-19-66	1/28/66			

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 Regulations," 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.

<p style="text-align: center;">Licensee</p> <p>1. Name Union Carbide Corporation</p> <p>2. Address Mining and Metals Division Tuxedo, New York 10987</p>	<p>3. License No. SNM-639, as renewed</p> <p>4. Expiration Date January 31, 1969</p> <p>5. Docket No. 70-687</p>
<p>6. Special Nuclear Material</p> <p style="text-align: center;">As specified on Page 2</p>	<p>7. Maximum quantity of special nuclear material which licensee may possess at any one time under this license</p> <p style="text-align: center;">As specified on Page 2</p>
<p>8. Authorized use For use in accordance with the procedures described in the licensee's application dated July 11, 1962, and supplements dated September 21, October 10, 1962; and September 14, 1965.</p>	
<p>9. Quantity of special nuclear material allocated to licensee pursuant to Section 70.31(b) of said part</p> <p style="text-align: center;">. . . .</p>	

CONDITIONS

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

SPECIAL NUCLEAR
 MATERIAL LICENSE
 Supplementary Sheet

License Number SNM-639, as
 renewed

Item 6

Item 7

License material

Possession limit

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <p>A. U-233
 B. U-235
 C. Pu-239
 D. Pu encapsulated as Pu-Be
 neutron sources.
 E. The special nuclear material contained in four (4) spent fuel elements
 from the licensee's research reactor.</p> | <p>A. 10 grams
 B. 250 grams
 C. 10 grams
 D. 160 grams</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|

13. 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.
14. The licensee is hereby exempted from the requirements of Sections 20.203(e)(2) and 20.203(f)(2), 10 CFR 20, for areas and containers within the laboratory provided that all entrances to the laboratory are conspicuously posted in accordance with Section 20.203(e)(2) and with the words, "Any area or container within this laboratory may contain radioactive material."
15. The licensee shall determine the concentrations of alpha radioactivity in the air effluent from the Hot Lab facility whenever operations are performed with unencapsulated special nuclear materials.

LR
 1-14-66

RLL 1/28/66
 COPY

For the U. S. Atomic Energy Commission

Date _____

by Robert L. Layfield

LICENSE CONDITIONS FOR
LEAK TESTING PLUTONIUM-BERYLLIUM
NEUTRON SOURCES

- A. Each Pu-Be neutron source shall be tested for leakage and/or contamination 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 removable alpha contamination on the test sample. The test sample shall be taken from the neutron 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 microcuries or more of removable alpha contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated or to be returned to the manufacturer. A report shall be filed within five (5) days of the test with the Director, Division of State and Licensee Relations, U. S. Atomic Energy Commission, Washington, D.C. 20545, describing the equipment involved, the test results and the corrective action taken. A copy of such report shall be sent the Director of the nearest AEC Regional Compliance Office, listed in Appendix D of Title 10, Code of Federal Regulations, Part 20.