

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 28

**MATERIALS LICENSE**

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, 36, 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.

*0303620*

*31877*

Licensee

In accordance with letter dated  
**January 20, 2010,**

- 1. Dow Corning Corporation
- 2. 2200 West Salzburg Road  
Auburn, MI 48611

3. License number 21-08362-08 is amended in its entirety to read as follows:

4. Expiration date May 31, 2012

5. Docket No. 030-04858  
Reference No.

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. Carbon-14	A. Any	A. 3 curies
B. Hydrogen-3	B. Any	B. 200 millicuries
C. Chromium-51	C. Any	C. 200 millicuries
D. Phosphorus-32	D. Any	D. 50 millicuries
E. Iodine-125	E. Prepackaged kits	E. 10 millicuries
F. Sulfur-35	F. Any	F. 50 millicuries
G. Any byproduct material listed in Subitems A. and B. above	G. Solid and/or liquid waste	G. See Item 9.G. below

9. **Authorized Use:**

- A. through E. To be used in biological tracer studies in plants, animals and micro-organisms and for research and development as defined in 10 CFR Part 30, Section 30.4.
- E. and F. To be used in biological tracer studies in plants and micro-organisms and for research and development as defined in 10 CFR Part 30, Section 30.4.
- G. Possession incident to waste disposal.

CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities located at 2200 West Salzburg Road, Auburn, Michigan.

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11.
  - A. Radiation Safety Officer: Jeremy Durham.
  - B. Assistant Radiation Safety Officer: Paul S. Larson.
12. Licensed material shall only be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, **Debra A. McNett**, Chairperson. The licensee shall maintain records of individuals designated as users for 3 years after the individual's last use of licensed material.
13. Licensed material shall not be used in or on human beings.
14. Experimental animals administered licensed materials or their products shall not be used for human consumption.
15. The licensee is authorized to hold radioactive material with a physical half-life of less than 120 days for decay-in-storage before disposal in ordinary trash provided:
  - A. Before disposal as ordinary trash, byproduct material shall be surveyed at the container surface with the appropriate meter set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.
  - B. Before disposal as ordinary trash, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated, unless incinerated.
16. This license does not authorize commercial distribution of licensed material pursuant to 10 CFR 32.72 or 10 CFR 32.74; to persons generally licensed pursuant to 10 CFR Part 31 or equivalent regulations of any Agreement State; or to persons exempt from licensing pursuant to 10 CFR 30.14 through 30.20 inclusive, or equivalent regulations of any Agreement State.
17.
  - 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 specified by the certificate of registration referred to in 10 CFR 32.210.
  - B. Notwithstanding Paragraph A of this Condition, sealed sources and detector cells 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 leak test has been made within 6 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.

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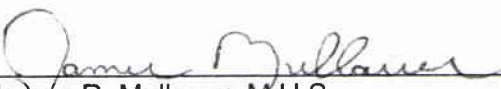
- E. Sealed sources need not be leak tested if:
- (i) they contain only hydrogen-3; or
  - (ii) they contain only a radioactive gas; or
  - (iii) the half-life of the isotope is 30 days or less; or
  - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more 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 transferred 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.
- F. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- G. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically licensed by the Commission or an Agreement State to Perform such services.
18. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license.
19. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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20. 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 U.S. 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. Applications dated December 10, 2001, and March 13, 2003; and
- B. Letters dated April 23, 2008, **January 20, 2010, and February 9, 2010.**

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date FEB 12 2010By   
James R. Mullauer, M.H.S.  
Materials Licensing Branch  
Region III