

MATERIALS LICENSE

Amendment No. 07

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, 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.

Licensee		In accordance with application dated September 23, 1936, 3. License number 07-00455-37 is amended in its entirety to read as follows:	
1. E. I. du Pont de Nemours & Co., Inc.			
2. 1007 Market Street Wilmington, Delaware 19898		4. Expiration date June 30, 992	
		5. Docket or Reference No. 030-19346	
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. Any byproduct material with atomic numbers 1-83 except Strontium 90 and alpha emitters.	A. Any	A. 10 millicuries of each radionuclide with a total possession limit of 2 curies	
B. Hydrogen 3	B. Any	B. 5 curies	
C. Carbon 14	C. Any	C. 500 millicuries	
D. Sulfur 35	D. Any	D. 500 millicuries	
E. Phosphorus 32	E. Any	E. 500 millicuries	
F. Chromium 51	F. Any	F. 200 millicuries	
G. Iodine 125	G. Any	G. 200 millicuries	
H. Iodine 131	H. Any	H. 100 millicuries	
I. Chlorine 36	I. Any	I. 100 millicuries	
J. Calcium 45	J. Any	J. 100 millicuries	
K. Cesium 137	K. Any	K. 50 millicuries	
L. Nickel 63	L. Metal foil	L. Not to exceed 15 millicuries per source	

9. Authorized use

- A. through K. Research and development as defined in Section 30.4(q) of 10 CFR Part 30.
L. For use in gas chromatographs for sample analysis.

CONDITIONS

10. Licensed material shall be used only at the licensee's Glenolden Laboratory, 500 S. Ridgeway Avenue, Glenolden, Pennsylvania.
11. Licensed material shall be used by, or under the supervision of, individuals designated by the licensee's Radiation Safety Committee.

"OFFICIAL RECORD COPY"

8801220130 870634
REG1 LIC30
07-00455-37 PDR

ML10

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

07-00455-37

Docket or Reference number

030-19346

Amendment No. 07

(Continued)

CONDITIONS

12. A(1) Each sealed source or detector cell acquired from another person and containing licensed material, other than hydrogen 3, with a half-life greater than 30 days and in any form other than gas shall be tested for contamination and/or leakage before use. In the absence of a certificate from a transferor indicating that a test has been made within 6 months before the transfer, a sealed source or detector cell 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 or detector cell is exempt from such leak tests when the source or detector cell contains 100 microcuries or less of beta and/or gamma emitting materials 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 before any use or transfer to another person unless they have been leak tested within 6 months before the date of use or transfer.
- B. Each sealed source or detector cell fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source or detector cell. 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 or detector cell 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 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed 6 months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed 3 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 detector cell or from the surfaces of the device in which the sealed source or detector cell 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. Records may be disposed of following Commission inspection.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

07-00455-37

Docket or Reference number

030-19346

Amendment No. 07

(12. continued)

CONDITIONS

- 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 or detector cell 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 date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety and Safeguards Branch, 631 Park Avenue, King of Prussia, Pennsylvania 19406, describing the equipment involved, the test results, and the corrective action taken.
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. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), of 10 CFR Part 20, the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.
16. The licensee is authorized to hold radioactive material with a physical half-life of less than 100 days for decay-in-storage before disposal in ordinary trash provided:
 - A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.
 - B. Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number

07-00455-37

Docket or Reference number

030-19346

Amendment No. 07

(Continued)

CONDITIONS

17. 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 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. Application dated September 16, 1981
- B. Letter dated October 21, 1981
- C. Letter dated January 27, 1982
- D. Letter dated September 6, 1983
- E. Application dated September 23, 1986
- F. Letter dated April 14, 1987

04 JUN 1987

Date _____

For the U.S. Nuclear Regulatory Commission

Original Signed By:

Josephine M. Piccone

By _____

Nuclear Materials Safety and
Safeguards Branch, Region I
King of Prussia, Pennsylvania 19406