

MATERIALS LICENSE

Amendment No. 05

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		
1. University of Wisconsin-Madison Safety Department	In accordance with letter dated May 30, 1985	
2. 317 N. Randall Avenue Madison, WI 53715	3. License number 34 ⁴⁸ -09843-28 is amended in its entirety to read as follows:	
	4. Expiration date June 30, 1990	
	5. Docket or Reference No. 030-07109, 48-00361-16, 48-09843-24, -27, -29, -30, -34	
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. Cesium-137	A. Sealed source (J.L. Shepherd Model 6810)	A. 1 source of 2500 curies
B. Cesium-137	B. Sealed sources (J.L. Shepherd)	B. 2 sources of 140 curies each
C. Cobalt-60	C. Sealed source (custom design by J.B. Willard described in May 17, 1960 letter)	C. 1,100 curies
D. Cesium-137	D. Sealed source (U.S. Nuclear Dwg. B-0239 dated June 2, 1966)	D. 700 curies
E. Cesium-137	E. Sealed sources (RAMCO-50-ORML)	E. Two sources not to exceed 1,000 curies
F. Cesium-137	F. Sealed source (J.L. Shepherd and Associates Model 6810)	F. 2500 curies
G. Cesium-137	G. Oak Ridge National Laboratory sealed sources per Dwg. Sk342-B)	G. 4200 curies in twelve sources of 350 curies each
H. Cesium-137	H. Sealed source (Isomedix, Inc. Model ISO-1000 or ORNL Model RAMCO-50)	H. 1450 curies

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SUPPLEMENTARY SHEET

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9. Authorized Use

- A. For use in a J.L. Shepherd Mark I Series Irradiator for irradiation of animals and other material.
- B. For storage only in a J.L. Shepherd Model 78 Series Irradiator.
- C. To be used in a custom designed, self-shielded irradiator for irradiation of materials, exclusive of explosives or flammables.
- D. To be used in U.S. Nuclear Corporation Model GR-4A irradiator for irradiation studies, excluding the irradiation of explosives or flammables.
- E. For use in Radiation Machinery Corporation Model Gammator-50B self-contained irradiator for demonstrations and laboratory experiments.
- F. For use in a J.L. Shepherd Mark I, Model 30 irradiator for the irradiation of materials exclusive of explosive or flammable material.
- G. For use in a J.L. Shepherd and Associates Model 109 irradiator for the irradiation of materials, excluding explosives or flammables.
- H. To be used in an AECL Gamma Cell 1000 Model B irradiator for the irradiation of blood.

CONDITIONS

- 10. Licensed material shall be used only at the licensee's facilities as described in attachments 9.A. through 9.G. of letter dated May 30, 1985 at the campus of the University of Wisconsin-Madison, Madison, Wisconsin.
- 11. Licensed material shall be used only at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
- 12.
 - A. Licensed material shall be used by, or under the supervision of, individuals who have successfully completed the licensee's training program described in letter dated May 30, 1985 and who have been designated by the licensee's Radiation Safety Committee.
 - B. The Radiation Protection Officer for the activities authorized by this license is Sue Engelhardt.
- 13.
 - A. Each sealed source containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.

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- B. The test shall be capable of detecting the presence of 0.05 microcurie of contamination on the test sample. The test samples shall be taken 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 0.05 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source 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 five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, describing the equipment involved, the test results, and the corrective action taken.
- D. The licensee is authorized to collect leak test samples in accordance with the procedures described in the licensee's letter dated May 30, 1985 for analysis by the licensee. Alternatively, leak test samples may be collected and/or analyzed by other persons specifically authorized by the Commission or an Agreement State to perform such services.
14. Sealed sources containing licensed material shall not be opened or removed from the irradiators by the licensee.
15. Written instructions for each irradiator shall be followed and a copy of these instructions shall be made available to each individual using or having responsibility for use of licensed material. Any changes in these instructions shall have the prior approval of the Material Licensing Branch, Division of Fuel Cycle and Material Safety, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555.
16. This license does not authorize repairs or alterations of the irradiator involving removal of shielding or access to the licensed material except as provided otherwise by specific condition of this license. Removal, replacement and disposal of sealed sources shall be performed on the device manufacturer or by other persons specifically authorized by the Commission or an Agreement State to perform such activities.
17. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in letters dated May 17, 1960 and May 30, 1985. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

For the U.S. Nuclear Regulatory Commission

Date June 7, 1985

Original Signed
By William J. Adam
Materials Licensing Section, Region III

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