

## MATERIALS LICENSE

Amendment No. 11

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 May 29, 1985
1. University of Hawaii at Manoa Hawaii Institute of Tropical Agriculture & Human Resources		3. License number 53-00017-09 is amended in its entirety to read as follows:
2. 3050 Maile Way - Gilmore Hall Honolulu, Hawaii 96822		4. Expiration date October 31, 1990
		5. Docket or Reference No. 030-07113
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. Cobalt 60	A. Sealed sources (BNL MK I standard strip sources and/or sources as per BNL Drawing ME 188-135-3C)	A. 45,000 curies total
9. Authorized use		
A. To be used in a modified Brookhaven National Laboratory designed Mark IV research food irradiator to determine biological and chemical effects of gamma-irradiation for purposes of food preservation, insect sterilization, mutant induction in plants, soil sterilization, cell response to gamma-radiation, and simulation of radiation effects in space.		

## CONDITIONS

10. Licensed material shall be used only at the Hawaii Research Irradiator in the Food Technology Building, University of Hawaii, 1920 Edmondson Road, Honolulu, Hawaii.
11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation".
12. Licensed material shall be used by, or under the supervision of, James H. Moy or Edison W. Putnam.
13. Written instructions as outlined in the Standard Operational procedures for the Hawaii Research Irradiator dated May 20, 1985 as amended by letter dated July 19, 1985, 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 NRC Region V, 1450 Maria Lane, Suite 210, Walnut Creek, California 94510.

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**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License number  
53-00017-09

Docket or Reference number  
030-07113

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**CONDITIONS**

(continued)

14. 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 application dated May 29, 1985 and letters dated July 19, 1985 and October 22, 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 OCT 30 1985

By Beth A. Riedlinger  
Health Physicist (Licensing)  
Nuclear Materials Safety Section  
Region V