

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, 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 letter dated June 18, 1985	
1. Department of Commerce NOAA/MASC, Mail Code RAS/MC4		3. License number 05-11997-01 is amended in its entirety to read as follows:	
2. 325 Broadway Boulder, Colorado 80303		4. Expiration date January 31, 1990	
		5. Docket or Reference No. 030-03746	
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	A. Not to exceed 200 microcuries per source	
B. Nickel-63	B. Sealed sources	B. Not to exceed 10 millicuries per source	
C. Cesium-137	C. Sealed sources	C. Not to exceed 1 millicurie per source	
D. Thorium-228	D. Sealed sources	D. Not to exceed 1 microcurie per source	
E. Americium-241	E. Sealed sources	E. Not to exceed 200 microcuries per source	
F. Nickel-63	F. Foils or plated sources in Hewlett- Packard Models 18713A and 19235; and Perkin Elmer Model 009-0282 detector cells	F. Not to exceed 15 millicuries per source	

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G. Nickel-63

G. Foils or plated
sources in New
England Nuclear
Model NER-004 or
Packard Instrument
Co. Model 714
detector cells

G. Not to exceed
10 millicuries
per source

H. Nickel-63

H. Foils or plated
sources in Tracor
Inc. Model 115500
detector cells

H. Not to exceed
20 millicuries
per source

9. Authorized use:

A. through E. For use in calibration and testing.

F. through H. For use in gas chromatographs for sample analysis.

CONDITIONS

10. Licensed material shall be used only at Department of Commerce, NOAA/MASC, 325 South Broadway, Boulder, Colorado, and 3100 Marine Street, Boulder, Colorado, except:

Licensed material specified in Items 6.F., 6.G., and 6.H. may be used at the Mountain Research Station Site C-1, located on Niwot Ridge, Colorado; Amundsen-Scott Station, Antarctica (South Pole); Mauna Loa GMCC Observatory, Hilo, Hawaii; NOAA-GMCC Field Station, Barrow, Alaska; and NOAA-GMCC Field Station, Pago Pago, American Samoa.

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, Winston Scott, Richard Searle, Thayne Thompson, Fred Fehnsenfield, Paul Goldan, Jim Roberts, Eric Williams, Bill Kuster, James Waddell, Mark Mihalic, Elmer Robinson, Donald Nelson, or Steven Fahrenstiel.

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13. A. (1) 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. In the absence of a certificate from a transferor indicating that a test has been made within 6 months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
- (2) 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 prior to any use or transfer to another person unless they have been leak tested within 6 months prior to the date of use or transfer.
- B. 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 from the surfaces of the device in which the sealed source is permanently 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.
- C. If the test reveals the presence of 0.005 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 5 days of the test with the U. S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Dr., Suite 1000, Arlington, Texas 76011, 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 application dated September 20, 1984, for analysis by University of Colorado Health Physics Laboratory. 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.

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15. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), Title 10, Code of Federal Regulations, 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. Detector cells containing licensed material and the removal or replacement of licensed material in detector cells may be performed by the licensee in accordance with the procedures described in the attachment to the licensee's application dated September 20, 1984.
17.
 - A. Each chromatograph detector containing nickel-63 shall be tested for leakage and/or contamination at intervals not to exceed 6 months, except licensed material (listed in Items 6.F., 6.G., and 6.H.) used at the South Pole and American Samoa shall be tested at intervals not to exceed 1 year. In the absence of a certificate from a transferor indicating that a test has been made within 6 months prior to the transfer, a detector received from another person shall not be put into use until tested.
 - B. 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 surfaces of the device in which the foil is 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.
 - C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the foil 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 test with the U. S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Dr., Suite 1000, Arlington, Texas 76011, describing the equipment involved, the test results, and the corrective action taken.
 - D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
 - E. The licensee is authorized to collect leak test samples. Analysis is to be performed by the University of Colorado Health Physics Laboratory.

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18. The licensee shall not use licensed material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.
19. The licensee shall conduct a physical inventory every 6 months to account for all sealed sources, plated sources or foils received and possessed under the license except the byproduct material (listed in Items 6.F., 6.G., and 6.H.) used at the South Pole, and American Samoa shall be inventoried yearly. The records of the inventories shall be maintained for 2 years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material location of sealed sources, plated sources or foils, and the date of the inventory.
20. The licensee may transport licensed material or deliver licensed material to a carrier for transport in accordance with the provisions of Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
21. 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 memorandum dated January 16, 1984, subject: Niwot Ridge Research Site; application dated September 20, 1984; and letters dated July 30, 1984, and June 18, 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

Original Signed By
Jack E. Whitten

By

Nuclear Materials Safety Section
Region IV
Arlington, Texas 76011

Date JUL 25 1985

Official Record Copy

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