

## MATERIALS LICENSE

Amendment No. 09

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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 1, Parts 30, 31, 32, 33, 34, 35, 36, 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), and to import such byproduct and source material. 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. St. Louis County<br>Department of Community Health<br>and Medical Care                              | In accordance with application dated<br>June 16, 1982,<br>3. License number 24-11263-01 is amended in<br>its entirety to read as follows: |  |
| 2. Environmental Health Laboratories<br>801 South Brentwood Boulevard<br>Clayton, Missouri 63105       | 4. Expiration date December 31, 1987  |  |
|  | 5. Docket or<br>Reference No. 030-05125   |  |
| 6. Byproduct, source, and/or<br>special nuclear material   | 7. Chemical and/or physical<br>form   | 8. Maximum amount that licensee<br>may possess at any one time<br>under this license |
| A. Any byproduct material with<br>Atomic No. 1 through 83,<br>inclusive                                | A. Any  | A. 5 millicuries total   |
| B. Nickel-63   | B. Foil Sources<br>(Tracor Detector Cell<br>Model 114800-3201)  | B. No single cell to<br>exceed 15 millicuries  |
| C. Hydrogen-3  | C. Scandium Tritide Foil<br>Source (Varian Detector<br>Cell Model 96-000094-00)   | C. No single cell to<br>exceed 1 curie   |
| D. Americium-241   | D. Any  | D. 15 microcuries  |
| 9. Authorized Use:   |   |  |
| A. and D. Preparation of and use as analytical samples or standards and for instrument<br>calibration. |   |  |
| B. For use in Tracor Gas Chromatograph(s) for sample analysis.   |   |  |
| C. For use in Varian Gas Chromatograph(s) for sample analysis.   |   |  |

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License number:

24-11263-01

Docket or Reference number:

030-05125

Continued from Page 1

Amendment No. 09

CONDITIONS

10. Licensed material shall be used only at 801 South Brentwood Boulevard, Clayton, Missouri.
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, Linda Blackburn, B.A., M.T., Jacqueline Dohm, B.S., John Niederhorm, B.A. or Wayne E. Black, Ph.D.
13. A. Each chromatograph detector cell containing Nickel-63 shall be tested for leakage and/or contamination at intervals not to exceed six (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to the transfer, a detector cell 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 Nickel-63 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 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 five (5) days of the test with the U. S. Nuclear Regulatory Commission, Region III, Office of Inspection and Enforcement, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, 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 using an approved leak test kit or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
14. 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.

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

|                             |             |    |   |       |
|-----------------------------|-------------|----|---|-------|
| PAGE                        | 3           | OF | 4 | PAGES |
| License number:             | 24-11263-01 |    |   |       |
| Docket or Reference number: | 030-05125   |    |   |       |
| Amendment No. 09            |             |    |   |       |

Continued from Page 2

15. Detector cells containing licensed material shall not be opened by the licensee.
16. Maintenance, repair, cleaning, replacement and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Commission or an Agreement State to perform such services.
17. Exhaust from detector cells containing licensed material shall be vented through a laboratory fume hood or other suitable means designed, to reduce potential exposure to personnel to the lowest practicable level.
18. Except as otherwise specified in this license, the licensee shall have available and follow the instructions contained in the manufacturer's instruction manual for the chromatography device.
19. Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.
20. The licensee shall conduct a physical inventory every six (6) months to account for all foils and sealed sources received and possessed under the license. The records of the inventories shall be maintained for two (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 foils and sealed sources, and the date of the inventory.
21. Licensed material shall not be used in or on human beings or in products distributed to the public.
22. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided:
  - A. Radioactive waste to be disposed in this manner shall be held for decay a minimum of ten (10) half-lives.
  - B. Prior to disposal as normal waste, radioactive waste shall be monitored to determine that its radioactivity cannot be distinguished from background with typical low-level laboratory survey instruments. All radiation labels will be removed or obliterated.
  - C. Generator columns shall be segregated so that they may be monitored separately to ensure decay to background levels prior to disposal.

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License number

24-11263-01

Docket or Reference number

030-05125

Continued from Page 3

Amendment No. 09

23. 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 June 16, 1982, letters dated November 29, 1982, December 6, 1982, and December 16, 1982. 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

DEC 28 1982

Date \_\_\_\_\_

By \_\_\_\_\_

*George M. McCann*  
Materials Licensing Section  
Region III

CONTROL NO. 7 9147