

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

150 401 Building

July 22, 1985

Ms. Diane Heim
Materials Licensing Section
Nuclear Regulatory Commission
101 Marietta Street, NW
Atlanta, Georgia 30323

Dear Ms. Heim:

Please amend our materials license No. 41-08165-07 to provide for the following three changes (a) the additional use of a new electron-capture detector in a new gas chromatograph, (b) the additional use of a used electron capture detector in a gas chromatograph that is scheduled to be transferred to our laboratory in the near future, and (c) the termination of detector usage in a retired gas chromatograph. Our license provides for the use of Tracor detector cells (Model No. 114800-3201-Ni-63), Hewlett Packard detector cells (Model No. 18803-60520), and Hewlett Packard detector cells (Model No. 19303).

We have purchased a Hewlett Packard Series 5890A gas chromatograph. The instrument is equipped with a Hewlett Packard electron capture detector, Model No. 19233, which contains a Ni-63 (15 mCi) plated source. We apologize for receiving delivery of this source without first receiving the proper license amendment. Jesse H. Coleman, TVA Health Physicist, discussed this matter with Mr. John Potter of the Nuclear Regulatory Commission's Atlanta office on June 25, 1985.

We anticipate the transfer to our laboratory of a Hewlett Packard Series 5730A gas chromatograph equipped with a Model 18713A detector cell. This chromatograph and plated source are presently utilized by the Water Systems Development Branch of TVA under License Number 41-09096-02 (Amendment No. 01) which is dated February 7, 1985.

We have retired the Tracor 560 gas chromatograph which contained the Model 114800-3201 detector cell. Prior to retirement, the detector cell was removed from the instrument and returned to the cell manufacturer. Tracor Instruments of Austin, Texas, has acknowledge receipt and proper disposal of the detector cell. Therefore, please amend byproduct materials license 41-08165-07 as follows:

Item 6.D--Add: Nickel 63

8509120101 850830
REG2 LIC30
41-08165-07 PDR

FEE EXEMPT

Rec'd 8/6/85
50681

Ms. Diane Heim

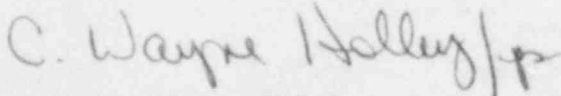
July 22, 1985

- Item 7.A--Delete: Foil in Tracor Model
114800-3200 or 111019
114800-3201 or 111019
114800-3203 or 115500
114800-3204 or 115500
detector cells
- Item 7.A--Add: Foil in Hewlett Packard Model 19233.
- Item 7.D--Add: Plated sources contained in Hewlett Packard Model 18713A
detector cells.
- Item 8.A--Delete: Not to exceed 20 millicuries per foil.
- Item 8.A--Add: Not to exceed 15 millicuries per foil.
- Item 8.D--Add: Not to exceed 15 millicuries per foil.
- Item 9.A--Delete: For use in Tracor Model 560 gas chromatographs for sample
analysis.
- Item 9.A--Add: For use in Hewlett Packard Series 5890A gas chromatograph
for sample analysis.
- Item 9.D--Add: For use in Hewlett Packard Series 5730A gas chromatograph
for sample analysis.

If you have any questions, please call Larry Hill at FTS 858-3709. Thank
you for your attention to this request.

Sincerely,

TENNESSEE VALLEY AUTHORITY



C. Wayne Holley, Chief
Laboratory Branch

Enclosure: License No. 41-08165-07, Amendment No. 4
License No. 41-09096-02, Amendment No. 1

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); 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	In accordance with letter dated December 20, 1984	
1. Tennessee Valley Authority Engineering Laboratory P. O. Box Drawer E Norris, Tennessee 37828	3. License number 41-09096-02 is amended in its entirety to read as follows:	
	4. Expiration date	January 31, 1990
	5. Docket or Reference No.	030-17150
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. Nickel 63	A. Plated sources contained in Hewlett-Packard Model 18713A detector cells	A. Not to exceed 15 milli- curies per source
9. Authorized use		
A. For use in gas chromatographs for sample analysis.		

CONDITIONS

10. Licensed material may be used at the licensee's facilities on Pine Road, Norris, Tennessee and at temporary job sites of the licensee anywhere in the United States.
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, Billy E. Johnson or Ronald Brown Maxwell.
13. Detector cells containing licensed material shall not be opened or the foil sources removed from the detector cell by the licensee.
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.

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MATERIALS LICENSE
SUPPLEMENTARY SHEETLicense number
41-09096-02Docket or Reference number
030-17150

Amendment No. 01

CONDITIONS

15. A. Each chromatograph detector containing Nickel 63 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 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 Region II, U. S. Nuclear Regulatory Commission, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30323, 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.
16. The licensee shall conduct a physical inventory every six (6) months to account for all plated 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 plated sources, and the date of the inventory.
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 application dated November 13, 1979; and letter dated December 20, 1984. 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

FEB 07 1988

Date _____

By _____
Material Licensing Branch
Division of Fuel Cycle and
Material Safety
Washington, D. C. 20555