

MONSANTO CHEMICAL COMPANY

ORGANIC CHEMICALS DIVISION
ST. LOUIS 77, MISSOURI

October 3, 1963

Mr. R. Cunningham, Chief
Isotopes Branch
Division of Licensing and Regulation
United States Atomic Energy Commission
Washington 25, D. C.

Dear Mr. Cunningham:

During the recent inspection of our laboratory by Mr. Gen W. Roy, Region III, Division of Compliance, USAEC, we discussed a technical violation in our AEC License No. 24-1113-9 and Mr. Roy asked that I write you to request a correction of the matter. Items 7 and 9 of this license authorize the use of two 250 millicurie tritium sources, one mounted in a Wilkens Instrument and Research, Inc. electron capture detector and the other to be used in a Barber-Colman ionization detector as part of a Model 61-C gas chromatograph. The latter source was purchased and is being used in strict compliance with the license.

In the case of the electron capture detector, we actually purchased a Perkin-Elmer Model 154-0709 detector for use in a Perkin-Elmer Model 154 gas chromatograph. We were informed that the electron capture cell, containing the 250 millicurie tritium source in both the Wilkens and Perkin-Elmer detectors, is in reality constructed for these two firms by Dr. James Lovelock, the discoverer of the electron capture principle. Dr. Lovelock, who is now at Baylor University, and Dr. Albert Zlatkis, of the University of Houston, have formed a company for the manufacture of such electron capture cells. Therefore, we felt that no actual violation was being made by purchasing the electron capture detector from the Perkin-Elmer Corporation instead of from Wilkens Instruments and Research, Inc.

We have not as yet put the Perkin-Elmer electron capture detector into regular service, but after a brief preliminary test it was put in locked storage. I wish to request by this letter that our license be changed to authorize the use of this Perkin-Elmer detector instead of the Wilkens detector.

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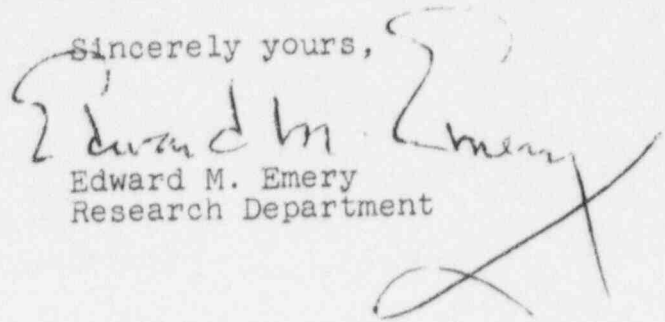
October 3, 1965

Our present license also authorizes the use of a Strontium 90 source to be used in a Barter Colman ionization detector. We have not as yet purchased such a detector and our present plans indicate that we probably will not.

However, we would like eventually to purchase a micro cross-section detector for use in a new F&M Scientific Corporation Model 810 gas chromatograph which we are to receive in December of this year. This detector would be the F&M Model 810A-14N micro cross-section detector, and would contain a 250 millicurie tritium source similar to that used in the electron capture and argon ionization detectors. At Mr. Roy's suggestion, I am requesting by this letter that the coverage of our license be extended to authorize the use of this particular micro cross-section detector.

Thank you for your attention to these matters.

Sincerely yours,


Edward M. Emery
Research Department

dm
Air Mail

cc: Roy C. Hageman - Region III
 USAEC
 Oak Brook, Ill.
Gen W. Roy - " " "
H. L. Hubbard - Res-1
W. E. Koerner - Res-2