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# EASTMAN KODAK COMPANY

ROCHESTER 4, N.Y.

TELEPHONE  
CONGRESS 2500

PLEASE ADDRESS REPLY TO  
KODAK PARK WORKS

October 29, 1957

Mr. Paul C. Aebersold, Director  
Isotopes Extension  
Division of Civilian Application  
United States Atomic Energy Commission  
Oak Ridge, Tennessee

Dear Mr. Aebersold:

The Kodak Park Works of Eastman Kodak Company has many potential uses for luminous paint activated by radioactive materials. Radium activated paints have been used here extensively. As you know, (please refer to my letter of April 5, 1957) we have been interested in using radioactive materials with less potential hazard than exist with radium. All that can be said in favor of radium is that its use is uncontrolled and, therefore, easy in terms of "red tape" or paper work. We now feel that tritium activated phosphors offer the best and safest substitute. At this time we have a U.S. Atomic Energy Commission byproduct material license for Eastman Kodak Company for the use of tritium containing luminous buttons (sealed sources) at Kodak Park Works. (See license application June 10, 1957 and ammendment August 19, 1957 license number 31-461-10.) Many of our uses are such that various time pieces, dials, instrument faces and identifying marks or labels must be painted with the luminous material.

New England Nuclear Corporation (575 Albany Street, Boston 18, Mass.) has developed a tritium activated self-luminous paint they call Safeglow. At our request they have had animal experiments done by the Food Research Laboratories to determine the toxicity of this paint and to get information concerning its metabolism and biological half-life. Preliminary results indicate that the tritiated component enters the body water pool and is excreted at the normal rate for water with a biological half-life of between 13 to 15 days. Therefore, it appears to us that this tritium activated paint will offer considerable advantage over radium activated paints.

We would like to have your division's advice on the following matters:

1. The need for or kind of sealing that you might consider necessary for such objects as clock face dials, counter dials, instrument faces, etc.
2. Labeling requirements for such painted objects.
3. The best way to approach the licensing problem for Kodak Park Works and our scattered processing stations throughout the country both in terms of

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painted objects, and in the case of the processing stations, locator buttons. (With respect to the Kodak Processing stations throughout the country, will separate licenses be required for each to allow use of tritium activated locator buttons?)

4. At the moment we would intend to send objects to be painted to New England Nuclear Corporation for painting. In an application for license for such a procedure, how should we indicate quantities of tritium?

5. What licensing and protective requirement would you envision as necessary to enable us to consider purchasing and applying tritiated paint at Kodak Park and subsequently distributing within our company?

We appreciate very much your help in this regard.

Yours very truly,

*William L. Sutton, M.D.*

William L. Sutton, M. D.  
Laboratory of Industrial Medicine  
Secretary Radiation Protection Committee

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