

WALTHAM COMPASS CORPORATION

*Manufacturer of Precision Instruments*

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August 5, 1969

U. S. Atomic Energy Commission  
Division of Materials Licensing  
Washington, D. C. 20545

Attention: Mr. Robert E. Brinkman  
Isotopes Branch

Dear Sirs:

We hold U. S. Atomic Energy Commission Byproduct Material License No. 20-12943-01 dated October 29, 1968 as amended by Amendment No. 01 dated April 17, 1969.

The end item manufactured, dealt in, sold and delivered by us under the stated license as amended is a compass, button, 3/4 inch diameter, treated with promethium 147, ceramic bound, by 3M Company.

It now appears that the U. S. Marine Corps is desirous of procuring a compass, wrist, having a diameter of 1-1/4 inches, treated with promethium 147, ceramic bound, as manufactured by 3M Company. It further appears that there is a possibility that 3M Company may agree to sell our firm promethium 147, ceramic bound, of its manufacture to the end that we may apply the same to the card and crystal of the compass, wrist, of our manufacture, as aforesaid.

Accordingly, we respectfully request further amendment to our byproduct material license to the extent following:

- a) That our promethium 147 possession limits be increased from 8 curies to 12 curies so as to make it possible for us to manufacture the 3/4 inch diameter compass for Defense Supply Agency, Defense Personnel Support Center, Philadelphia, Pa. and the 1-1/4 inch diameter wrist compass for the Marine Corps at one and the same time.

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b) That the quantity of promethium 147 per compass (card and crystal) be increased from 0.5 millicuries to 2.0 millicuries due to the fact that the compass, wrist, 1-1/4 inch diameter in order to be properly treated and yield the luminescence desired will require the application of 2.0 millicuries of promethium 147 to each such compass.

c) That we be authorized, in addition to the assembly of radioluminescent promethium 147, ceramic bound compasses, to apply promethium 147 radioluminescent paint to compass cards and compass crystals, with the understanding that the promethium 147 to be so applied will be purchased in a biologically inert form in microspheres available from 3M Company.

In order to persuade your Commission to grant the requested amendments to our byproduct material license, we wish to assure you that the safety measures described in our original application for such license will be adhered to and that in addition:

1. Mr. Murray M. Bolton, Jr., Radiation Production Chemist at Massachusetts Institute of Technology, Cambridge, Massachusetts, will remain as our consultant and will survey the work area at least once each month and will perform any and all additional tests, including bioassays deemed necessary by your Commission.

2. It is proposed that the application of promethium 147 will be by a screening technique. This is the same technique that has successfully been used by us and our employees for compasses containing radium 226. In order to prevent any cross contamination of promethium 147 and radium one fume hood and a work table will be separately set up exclusively for work involving promethium 147.

It appears that the various branches of the Armed Forces are committed to avoid the use of radium 226 and to convert to promethium 147, ceramic bound, in accordance with Military Specification MIL-C-6235C(DM) and if we are to supply the compass, wrist, 1-1/4 inch diameter, to the Military, promethium 147 treated instead of radium 226 treated, as heretofore, we will require prior approval by your Commission and amendment to our license accordingly.

Needless to remark, we will not supply any product treated with promethium 147 to any government agency, person, firm or corporation not previously licensed by or through the U. S. Atomic Energy Commission to receive delivery of and possess the same.

August 5, 1969

Any consideration that you may see fit to extend to this application to amend our byproduct material license will be appreciated.

Should anything further be required of us in connection with the subject matter of this communication, please feel free to request the same.

Very truly yours,

WALTHAM COMPASS CORPORATION



Benjamin D. Pollack  
Clerk

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