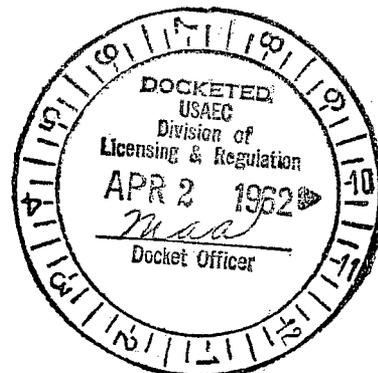




DOCKET NO. 40-17
THE DOW CHEMICAL COMPANY

MIDLAND MICHIGAN
March 30, 1962
LAR File Copy



The Atomic Energy Commission
Mr. Donald A. Nussbaumer, Chief
Source & Special Nuclear Materials Branch
Division of Licensing and Regulation
Washington 25, D.C.

Gentlemen:

Please refer to your letter of March 23, 1962 (40-17) signed by Mr. Donald A. Nussbaumer. This covered our application for renewal of Source Material License No. STB-527. We have obtained from our engineers the following information in answer to the two requests in your letter.

Your first question concerns our statement in Item 11(c) which indicates that local exhaust is employed for welding operations where required to minimize airborne thorium and daughters and the statement in comment No. 2 that exhaust installations are not necessary under our conditions of operation. We do not feel that these are conflicting statements in that a change in type of welding or welding procedures could present a situation where local exhaust ventilation would be necessary to maintain an adequately low level of airborne thorium and daughters in the breathing zone of the operator.

We would like to justify our position on this question. On August 14, 1959, our Mr. John A. Peloubet visited your offices and discussed our welding survey data with your Mr. Nussbaumer. The information was conveyed to you for your Radiation Safety files in Mr. Peloubet's letter of August 28, 1959 to Mr. Lester R. Rogers. A copy of this correspondence is attached for ready reference. It should be noted that this letter was written before the issuance of the January 1, 1961 edition of 10 CFR 20. This edition clarified the calculation of weight of thorium based on amounts in terms of curies. The values quoted are therefore altered upwards such that the current airborne limit of 3×10^{-11} $\mu\text{c}/\text{ml}$ is equivalent to $270 \mu\text{g}/\text{m}^3$.

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Outside - of - Scope

Mr. Donald A. Nussbaumer -2-

March 30, 1962

Outside of Scope

March 30, 1962

The magnesium-thorium alloy sheet, plate and extrusions produced with the thorium obtained under license STB-527 are used primarily in missile construction for both structural and electronic components. These materials are valued in excess of a million dollars per year. In view of the obvious need for this production we trust that you will issue a three year renewal license at an early date.

Please increase item 8 on our AEC-2 form column (d) to 10,000 pounds of oxide or fluoride instead of 2,000 pounds as stated. Section 8 (e) would then be changed from 102,000 pounds to 110,000 pounds.

As in the past, we wish to cooperate fully with the U. S. Atomic Energy Commission in making available to the Commission and to private industry information that will promote the safe handling of magnesium-thorium alloys. Please feel free to call upon our technical personnel to aid in resolving problems related to this subject.

Very truly yours,



W. Otis Heath, Statistician

encl.