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July 24, 1953

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Honorable Lewis L. Strauss
Chairman
U. S. Atomic Energy Commission
1901 Constitution Avenue
Washington 25, D. C.

Dear Lewis:

As you know, Monsanto has been active in atomic energy development since its inception. After our wartime work with General Groves and our operation of the Oak Ridge Laboratory, our work has been essentially along two lines: the operation of Mound Laboratory for the Commission and the study at our own expense of the feasibility of private construction and operation of a reactor for the production of power and fissionable materials.

It seems that we are now coming to the end of our rope.

You are, of course, familiar with the present circumstances at Mound where operations will soon be drawing to a close because of the substitution of another, more effective, mechanism. Although we understand that the Commission is studying possible new assignments for Mound, we are unaware of the use, if any, to which these facilities will be put.

Recently we learned that our atomic power study partner, Union Electric, does not wish to share with us the expense of further study of reactors. To date we have jointly spent about half a million dollars. We had contemplated that to actively push the program, we would spend around \$600,000 in the year 1954.

Union Electric is now considering going in with the so-called Chicago group of power people to build the generating equipment only as an adjunct to a reactor. They have been given assurance by Tom Murray that the AEC, with Lickover in charge, is to build a stationary power plant which will also be the prototype of an aircraft carrier reactor. In this way Union Electric and the power people feel that they can keep their foot in the door. It is my understanding that the heat will be sold to this power group at a low enough price to make it attractive to convert it into electrical energy which can then be sold back to the Commission. The contractual relations of

MOUND DECLASSIFICATION REVIEW	
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2ND REVIEW DATE: 6/13/2000	3. CONTAINS NO DOE CLASSIFIED INFO
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this scheme will be such that the power group can go on the outside and finance the generating plant.

We also understand that the so-called "dual-purpose" scheme is now in disfavor in Washington because it is said that industry would be getting a subsidy from the government if we sold plutonium to them. Personally, I fail to understand this thinking since the price at which we contemplated selling plutonium is the same as, or better than, the one you are now giving to the Canadians for plutonium. Be that as it may, you can see that we are pretty much left in a quandary.

The power group have cordially invited us into their group, but we do not feel that this is where our main interest lies. We are interested in the further development of reactors. We believe that they can be built much more cheaply than they are today and that they can be not only a means of producing electric power but that in the future they can also be used in the chemical processing industries. At this time our technical studies do not indicate the immediate feasibility of building a reactor to produce power only at a competitive price, but we expect that this will be possible as the technical information increases. It appears to us that a system which is well adapted today for the production of plutonium and power together may, with experience and some needed reduction in capital costs, also turn out well as a producer of competitive power either with uranium or with thorium fuel elements.

I will not go into the technical reasons for these conclusions. They are summarized in part in letters to Larry Hafstad dated June 20, 1952, and January 2, 1953, together with informal conversations with Hafstad and his staff. We understand that on most points they are in substantial agreement with us.

Since it seems doubtful that the law will be changed in the immediate future, we find it more difficult to justify the continued expense of our funds on research when we have so little assurance that we will be able to exploit our findings. We realize that at best our work in this field must be a considerable gamble, but some indication of what the Commission's attitude is likely to be would be most helpful to us in determining the extent to which we can justify further expenditures in this field.

It has been suggested that the Commission might want to use the Mound Laboratory as a station for further study of commercial power reactors. There are many technical problems yet to be solved, and we would welcome the operation of these facilities along chemical engineering and metallurgical lines to solve these problems.

Honorable Lewis L. Strauss

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My questions to you are: (a) Assuming that the law is changed, do you feel that there may be an opportunity in the near future for private industry to build a dual-purpose reactor and to produce plutonium for sale to the government at a competitive price? and (b) To what useful purpose can we convert Mound Laboratory for the further technical improvement of the whole program?

With best regards,

Sincerely,

Charles Allen Thomas

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