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September 20, 1950

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Brigadier General James McCormack, Jr.
Secretary, Joint AEC-DD RW Panel
United States Atomic Energy Commission
Washington 25, D. C.

Dear Jim:

Thank you for the copy of the report of the RW study group which I have read with interest. I am afraid I am not in agreement with the general conclusions to the effect that RW is not very promising and that, therefore, the program should be reduced in scope, if not abandoned altogether.

In the light of recent developments (which possibly the RW study group were not fully aware of), it seems to me the RW program should now receive greater emphasis. All through the discussions of the past two years of the problem, two general objections have usually been raised. On the one hand, it has been felt that it would be difficult to develop suitable munitions, bombs for example that could carry a megacurie or more, which would disperse the radioactive materials rather uniformly over large areas, a square mile or so. It seems to me that the highly successful tests at Dugway have already eliminated any objections in this direction.

The other major objection to an RW program has been much more to the point, namely, that there appeared to be no prospects of availability of radioactive materials in sufficiently large quantities in the immediate years ahead to warrant much attention to this type of warfare. However, the situation in this regard, as you well know, now may be greatly changed in the near future. Apart from the stepping up of the reactor program which should make available considerable quantities of fissionable products and free neutrons, the possibilities of developing and building vast accelerator plants for producing truly prodigious amounts of free neutrons and therefore radioactive materials is now definitely in sight. Recent developments indicate, for example, that accelerator plants with a production capacity of ten grams of neutrons per day can be constructed at a cost of about 1/2 billion dollars and such facilities would mean the availability of the order of 1000 megacuries of radioactive materials for RW purposes. These vast amounts could be produced in this way without using up fissionable materials, thereby removing a secondary objection of using up precious bomb materials for RW purposes. Furthermore, of course, the accelerator plants need only be operated for the needs of RW at the time of the need; although the plants could be kept in standby for RW, of course, undoubtedly they could be kept in operation at other times for the production of free neutrons for other purposes.

In the light of these new developments, it seems to me it would be highly desirable to have another meeting of the RW Panel. Unfortunately, October 20th is hardly a convenient time for Dr. Latimer and myself, as we both are planning

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Brigadier General James McCormack, Jr.

September 20, 1950

to be in the east the first ~~two~~ weeks of next month. I could hardly stay in the east until the 20th and, needless to say, I would like to avoid another trip again so soon.

Latimer and I are attending the meeting of the National Academy of Sciences in Schenectady on October 9th and we wonder if it might not be possible to have an RW Panel meeting at that time, perhaps just before or just after that date.

With warmest personal regards,

Cordially,

Ernest O. Lawrence

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