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Future Organization of Engineering of the FM

After the conclusion of our meetings with CIT representatives during which was discussed your tentative proposal to transfer engineering of the FM to CIT, you remarked to me that this is a problem which might well be reopened after the Trinity test.

On thinking about the matter, I find myself as little in sympathy with a transfer of engineering to CIT after Trinity as I was with an immediate transfer, the reasons being as follows:

a. Lauritsen's CIT organization is almost as much a "war baby" as is Project Y. The governing body of CIT, as I understand, was not any too happy even about starting Project Camel, since this interfered with a reconversion of CIT to a peace-time program. Their objections to this work, therefore, are bound to become very strong towards the end of the war and may result in a liquidation of the Camel Project about the same time or even earlier than the curtailment of Project Y. To find then an industrial organization which would be willing to step-in will be extremely difficult and hence the continuity of the project as a whole may suffer.

b. The procurement set-up and methods of Lauritsen's organization have been tailored to war-time conditions and their own research needs and will become very difficult to maintain as the war draws to a close.

c. Lauritsen's organization was built up primarily to engineer and procure in large quantities relatively simple items making up a rocket. Our past experience with CIT has shown that this organization is not overly strong when it comes to procuring and inspecting a great variety of precision built items. The situation would become still worse were CIT to take over the engineering and procurement of those items, like Archies, in which they are not involved now.

d. According to CIT representatives' statement their engineering staff on the upper levels is so small that they could not maintain an effective engineering group at Site Y and at the same time supervise the junior staff at CIT. In my opinion, however, any arrangement by which engineers operate far away from the development and research staffs will not work well. In fact, the CIT organization is a self-contained unit, guided and directed by research staff. Past experience has already indicated that this staff much prefers to take over a

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problem in its entirety, including all research and tests, rather than engineer in accordance with ideas and specifications by Site Y. The suggested formal transfer of engineering responsibility to CIT will only enhance such attitude. There is no doubt in my mind that the consequence will be further worsened relations between the two organizations. I see then no other alternative but to liquidate currently large segments of Project Y (included now in O and X Divisions) and pass their responsibilities to CIT. Considering the relative experience and relative research strength of the two organizations, I do not believe that such a solution will further the project as a whole even temporarily and in view of what has been noted in paragraphs (a) and (b) above, it will not insure better continuity during the transition to peace-time either.

The main reason for writing this memorandum is to call your attention to the advantages of another plan which you mentioned briefly to me some time ago. This plan calls for a gradual transfer of some of the responsibilities of Project Y to industry and rather than to involve CIT still deeper in our work, but almost immediately thereafter start another reorganization, bringing in the industry, I favor getting the participation of industry immediately after Trinity and reducing the obligations of CIT.

In the NDRC organization in which I worked before coming to Site Y it was customary to enlist the aid of an industrial concern at a time when the research phase of a project was drawing to a close and gradually to transfer to such a concern all responsibility for engineering, pilot plant and final production, while continuing research on the subject. The same plan, I believe, has been followed at Berkeley, Chicago and New York, on the manufacturing phases of our over-all project. Thus far Site Y could not adopt the same plan and has made use of strictly temporary and devious methods of engineering and procurement, inevitable in the past but unsuitable for the future.

I believe that in order to insure continuity of the entire project during the readjustment period at the close of the war and later, it is absolutely essential to start enlisting the collaboration of industry now. If an industrial organization takes over the engineering and the procurement of non-explosive items, (as the first step following Trinity, while the war is still going on) the functioning of the project will not only be immediately facilitated but also will be maintained later, with only a relatively small staff operating at Site Y. This may be insured if at Site Y the following operations continue during the later transition period:

a. Fundamental research (if this is still wanted).

b. Manufacture of the special tamper components.

c. Explosives manufacture (only if the facilities of Inyokern cannot be utilized for the purpose).

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If such Inyokern facilities can be utilized [illegible] and development are to be temporarily suspended, pending the creation of a peace-time organization, then production of [illegible] could be continued, if necessary during the transition period and not yet fully transferred to industry, with only an extremely limited staff at Site Y, needed to operate the new [illegible] buildings, some shop facilities, etc.

Because of inevitable delays in getting industry to participate actively in the work of Site Y, now is certainly not too early a time for the basic decision and negotiations leading to the establishment of such a plan. It seems to me that a very logical first step would be the bringing to Y of an engineering group which would familiarize itself with the problems, then participate in the work of our engineers and later take over from them the engineering. In the meanwhile this group would be the intermediary for the setting up in its parent organization of procurement, manufacturing and later of everything else that is eventually to be transferred from the Site Y program.

In this manner, I believe, it will be possible from the beginning to establish correct relations and to obtain an organization that would not dissolve towards the end of the war but could function with only unessential changes during the subsequent period.

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