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8 COMES, SERIES A

Major J. O. Ackerman
G. B. Kistiakowsky

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5 March 1945

Approved Program for X-3 Group

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LANL Classification Group

FINAL DETERMINATION
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The program for S Site has been presented to Mr. Oppenheimer and others concerned with scheduling of the immediate urgent program, and I wish to inform you of the decisions reached at the meeting on 3 March.

I. IMMEDIATE PRODUCTION PROGRAM

You should make all efforts to get lens charges into large scale production. For the next three weeks, 3" and 6" charges have the highest priority at S Site provided enough 9" charges are made to satisfy RaLa demands (probably 4 charges by 7 April). As between the 3" and 6" charges, 3" charges, if necessary, should be given slight preference.

Equally urgent are charges ordered for Group G-10 (Critchfield).

If bottle-necks develop due to shortage of personnel, inadequate trimming facilities, etc. everything else should suffer first before the two types of items mentioned above are allowed to suffer.

G Division has received instructions to prepare a comprehensive program of its needs until 15 April. They undertake also to provide you with adequate supply of tamper spheres in advance of actual production so that you should be able to plan production logically. Naturally no completely final program is possible now and you must be prepared to cast some items in relatively small quantities, which will not be found on the program which you will receive shortly. Group X-1 will also provide you with a program so that you will be in a position to plan your overall production.

It was agreed today between Marley and myself on the basis of technical evidence that drilling of booster holes in most of the castings (exception being lenses, naturally) will be unnecessary. However, it will be essential, using the available templates, to mark the correct position of boosters so that user groups can attach them to charges. This should relieve considerably the shortage of trimming tools.

II. TRENDS IN PRODUCTION

Starting 20 March new molds for 6" and 9" lens charges will reach S Site. The 9" molds should be put to increased production of 9" charges, reaching a minimum of 2 charges per week. The 6"

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molds should gradually replace the 3" molds and the obsolete 6" molds which will be used in the interim, the trend of production being such that early in April 3" charges may be tapered off to a number around ~~10~~ 10 charges per week with a corresponding increase in bigger charges.

More precise plans in regard to the above mentioned items will be evident to you from the G and X Divisions firing schedules and mold delivery dates, all of which you will receive shortly.

Full scale charges: It is not expected that production of full scale charges can be started before 15 April. In the meantime all efforts must be bent towards perfecting technique of their casting with the expectation that from 15 April limited production of full scale lens charges will get under way. It is estimated now that one charge per week will be adequate for the beginning but that by 15 May the production will have to be raised somewhat. More exact information you will receive shortly.

III. DEVELOPMENT

The following problems should be given complete priority over everything else being done by the Development Groups. This means that if there is danger of not meeting completion dates, all personnel working on other problems should be shifted, even though other problems may be ^{come} completely dormant.

(a) Transfer of lens casting in 6" and 3" scale from development into production lines.

(b) Transfer of 9" lens charges from development into production lines which should be completed by 20 March.

(c) Development ^{Full scale} of lens casting methods which should be completed by 15 April.

(d) Development of non-lens ^{Full scale} casting methods which should be completed by 15 April. Because of the short time allowed for transfer of these activities into production, I rule out from the class of urgent problems all those methods of casting which, in order to put them into production, require either the design and construction of different molds from those now being built, or require the acquisition and installation of machine tools not now on order. Concretely I rule out both the overcasting and the slab casting techniques from this class. The only acceptable modifications in molds would be those requiring but a few days of machine shop work. Similarly the only other modifications in casting procedures are such that require machinery and installation which is available or can be readily constructed in local shops.

The following lesser problems are also classified as high priority:

(e) Inspection of line production lenses.

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- (f) Dimensional changes in castings.
- (g) Quality control of Composition B.
- (h) Analysis of explosives.
- (i) Control of large scale castings including large lenses.
- (j) Special high priority casting jobs for field groups.

The following problems have been recommended by you and others in Group X-3 for immediate development. This has been approved by Mr. Oppenheimer on 3 March with an explicit proviso that if the above mentioned problems need personnel for completion on schedule the problems below must be suspended.

- (k) Baratol III
 - (l) Thermal conductivity of H.E.
 - (m) Development of superior casting methods for large castings. Such methods are not expected to be put into production in the immediate future (i.e. before 1 July), and hence may utilize more radical changes in molds and machinery. However, it is to be understood that no demands on design and procurement groups for this work will receive priority and will be satisfied until circumstances permit.

(n) Sintering and cementing slow H.E. What has been said under the preceding letter about design and procurement applies to this problem also. Also in regard to fast lens components, these will be provided for this problem only insofar as there are facilities and manpower available by S Site after satisfaction of priority work.

Since this Project ceases to be an urgent one for immediate translation into production, there should be redistribution of work between the staff of X-3 and the staff of X-4 which will be working on the problem. It is requested that such redistribution be agreed upon as soon as possible.

G. B. Kistiakowsky

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Copies to: Ackerman (5)
Allison
Bacher

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