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24 November 1950

1. This office is in agreement with paragraph one of the JMIC Summary of 10 November 1950.
2. This office is believed to be in agreement with the intent of paragraph 2, but offers the following suggestions:
  - a. While no direct evidence is available on the quantity production of Soviet artillery VT fuses, it is felt that evidence exists as to Soviet plans.
  - b. To an uninformed reader, the second sentence may indicate, by implication, that the Soviets are capable of producing fuses for low acceleration, but will never be capable of making artillery fuses.
  - c. The following wording for paragraph two is suggested as having similar significance: "No direct evidence is available on the quantity production of Soviet artillery VT fuses. However, it is believed the Soviets are now capable of producing operational quantities of proximity fuses for low acceleration missiles because of the less exacting engineering requirements."
3. This office cannot agree with paragraph three; and, since this paragraph introduces a very basic conclusion, this office is not in a position to concur with the proposed Scientific Intelligence Report CIA/SI 110-50.

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It is our belief that paragraph three permits the assumption of no operational quantities of an artillery VT fuse in Soviet hands prior to mid-1952.

This office believes that such an assumption would be probably incorrect and certainly dangerous in view of the following:

- a. The existence of an acceptable design by no later than early 1950 is agreed.
- b. The major problems of design and methods (ruggedized filament structure and subminiaturized tubes; acid-ampule power supply with long shelf-life; compact energy-storage capacitor with thin paper dielectric; and assembly potting methods to utilize spin to reduce effects of set-back) are common knowledge and proven production techniques in Europe.
- c. In view of a large amount of circumstantial evidence, security relating to both information and samples available to the USSR is believed to be ineffective at Bofors, Philips and Cerlikon. Negotiations on artillery-type VT fuzes are conducted in Europe as just another munitions item for general sale.
- d. In the Soviet Bloc, reported facilities expansions and accelerated production programs, for materials and components having potential application in such devices, are indicated to an extent not warranted by estimates for civilian goods and military ground and airborne electronics equipment.
- e. From the Soviet point of view, a required operational quantity is not necessarily tens or hundreds of millions. It is the opinion

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of this office that an available quantity of tens or hundreds of thousands would satisfy such a definition in initial stages; and that the Soviet Bloc electronics industry is now capable of meeting such requirements, if priority is assigned to this project.

f. As a general comment, it is noted that the indicated date of mid-1952 provides a two-year interval from the time of most recent information. This office believes that quantity production of artillery-type VT fuzes can be accomplished in a far shorter period.

4. It is the opinion of this office that the Soviet Bloc technological and manufacturing capabilities in electronics are of sufficient competence and magnitude to provide operational quantities of artillery-type VT fuzes; provided, first, that acceptable designs and techniques are available, and, second, that high priority is assigned the project within the Soviet planning. Since these two qualifications must be accepted as most probable, it would be dangerous to assume that the Soviets would be without operational quantities at any time from now on.

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