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Office Memorandum • UNITED STATES GOVERNMENT

TO : The Files

DATE: 18 December 1956

FROM

[Redacted]

(PSE RETURN TO R!D)

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SUBJECT: Contract RD-122, Task Order 1 - AS-3

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item*

1. A visit was made to [Redacted] on 5 December 1956 to monitor progress in the AS-3 Semi-automatic [Redacted] Development. Present were:

[Redacted]

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2. The contractor had an operating breadboard transmitter consisting of a master-oscillator and power amplifier working into a dummy load of 300 ohms. It was claimed that the transmitter delivered a full 25 watts from 3 to 30 mc/s without band switching (see below). Crystal correlation tests had been made and it was stated that the requirements for crystal input capacity and maximum crystal current were within specifications. [Redacted] said that current efforts concerned a pi network design for antenna coupling and spring wound motors were being investigated for coder design.

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3. A demonstration of the MOPA reveals that the output fell off sharply above 24 mc/s with practically no output at 30 mc/s. [Redacted] said that the first breadboard with 3 bands was so satisfactory that they thought going to a single band was worth a try.

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4. A critical review of the contractors latest progress report was then discussed paragraph by paragraph in order to encourage the engineering personnel to be more comprehensive in their reporting and to acquaint [Redacted] a new electrical engineer assigned to the project, with some of the rigorous requirements of the Specifications. Points discussed covered:

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a) Failure to submit a revised work schedule to provide for equipment delivery to meet the delivery date specified by the contract.

b) Failure to report on a 3 band MOPA designed and tested.

c) Contractors reference to using crystal fundamentals to 15 mc/s which is prohibited by the Specifications.

d) Discussion of MOPA systems with grid-block keying and the high probability of excessive radiated power under key-up conditions.

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e) The great need for harmonic suppression. (The contractor had no plans for such circuitry and indicated a reluctance to consider a pi network in his report.) (Required by the Specifications).

f) Packaging. (Not to firm up packaging plans at this time but to concentrate on breadboard equipment design to meet the Specifications.)

g) The need for including technical data on design and tests in progress reports.

5. While the contractor's progress has been slow, it is felt that the work will gain momentum with a full time electronic engineer assigned to the project. [] is also called in on transistor requirements. The extent to which senior engineering representation is participating in the project could not be determined during this visit but should be reflected in the next progress report.

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