

Ottawa, Ontario,
10 April 1958.

DRBS 0300-3
(D ENG R)

TL. 104-58/04

DSS(N)

AVRO VTOL Fighter

Your NSC 7801-103(DSS) dated 3 April refers.

The subsonic Avrocar development is proceeding under USAF and US Army support. In addition paper studies of a weapon system based on a high speed version of the aircraft are being funded by the USAF. It is understood that the USAF also has funds earmarked for the development of the supersonic version. However, present intentions are to await the outcome of the Avrocar program and a demonstration of the feasibility of the several novel features incorporated in the design before proceeding with the supersonic development. The Avrocar prototypes are scheduled to fly in 1960.

The Company has indicated that with simultaneous instead of sequential development of the subsonic and supersonic versions, the latter could be ready to enter squadron service around 1964. This scheme is not at present funded, but the RCAF is believed to be considering supporting the simultaneous development proposal. The Company estimates the development costs for the supersonic program at \$17M.

On the basis of statistical evidence from other aircraft development programs in Canada and abroad, both the cost and time estimates are considered to be highly optimistic. Apart from this the "high risk" nature of the project must be recognized. With an entirely novel airframe and propulsion system there is no guarantee that the project will be successful. It should also be recognized that there are several other approaches to the achieving of VTOL, some of which may turn out to be superior to the Avro approach. The US Navy for example is understood to be supporting a VTOL fighter development at the Bell Aircraft Company.

The RCN requirement is to replace the Banshees by 1961. As you know, CARDE is undertaking a study of air defence systems for the RCN, and has already made a preliminary survey of possible systems in which VTOL aircraft were considered. The tentative conclusion, in which we concur, is that VTOL aircraft will not be available in time to be of interest. It also appears that the gain in system effectiveness due to using VTOL aircraft may not be very great. The latter conclusion is of course subject to revision as VTOL technology advances.

Original Signed by

A. W. R. GILCHRIST

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for Chairman, Defence Research Board.

AWRG/b

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