

This portion of the Aide Memoire given to the Minister of National Defence, Pearkes, relates the responses of the Chiefs of Staff to requests from the government to provide alternatives, and their rationale, to the Arrow. It is important to remember that these recommendations were formulated on established criteria, including that Canada had to equip with Bomarc and Sage, and could not afford to pay for Bomarc, Sage and the Arrow. The document pointing this out is referenced here as being generated by the Finance Dept. The other condemning features include the study by the Dept. of Defence Production in cooperation with the Dept. of National Defence, reinforcing those criteria.

Foulkes Aide Mem 1-jpg

25 Aug 58

AIDE MEMOIRE FOR THE MINISTER

SECRET

ADVANTAGES AND DISADVANTAGES OF CONTINUING PRODUCTION OF THE CF105

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ADVANTAGES

Political

- (a) Will avoid an awkward announcement of closing down the A.V. Roe and Orenda engine plants, which will also involve many subsidiary plants. However it will be realized that even if the CF105 is allowed to proceed, these plants will all have to close down by 1962.
- (b) Will avoid an explanation of the waste of \$400 million in continuing this development for the last five years. While the responsibility can be placed on the previous government, it should be borne in mind that this government made the decision last October to continue the programme for one year without too close an examination of the future requirements, based mainly on preventing lay-offs in the A.V. Roe and associated industries.
- (c) Will avoid a serious political criticism that this government is giving only lip service to the development of scientific and technical development in Canada and that because of financial considerations the government is now turning its back on further scientific and technical developments in the fields of defence, aviation, missilery and defence electronics. Any such action may be interpreted as a serious set-back to scientific and technical development and Canadian industrial potential.

2. Defence Production

There appears to be considerable defence production advantage in maintaining this development and production, particularly in the defence electronic and missilery fields. While perhaps there is sufficient other aviation production in Canada to allow A.V. Roe to close, this is not the case in the defence electronic industry, which is just beginning in this specialized field. A shut-down of the newly created electronic and missilery development installations may seriously hamper any participation in the development of the defence against the ICBM, which may be a requirement within the next two years.

3. Labour

O'Hurley

Defence Production points out that the abandonment of this project would mean unemployment in the Toronto area of 25,000 men. There is no alternative production that could be put into A.V. Roe and the Orenda engine plants. Even if a substitute aircraft for the CF105 were selected, it would not meet the immediate situation as it would take twelve to eighteen months to obtain licences, make arrangements for royalties, tooling, etc., for any other aircraft to replace the A.V. Roe aircraft.

4. Military

The production of the CF105's would meet the minimum foreseeable military requirements for interceptor aircraft but it is not expected that any other interceptor aircraft will be produced in Canada, and our whole reliance is expected to be placed on ground-to-air missiles in the future.

1. Military

The military disadvantages are pointed out in the Cabinet paper already circulated (para. 9):

- (a) The changing threat, where it is estimated that the manned bomber will not be the major threat in the period of the life of this aircraft.
- (b) The rapid advances in technology, where the missiles such as Bomarc will provide a cheaper and more effective type of defence against the manned bomber.
- (c) The diminishing requirements for the manned bomber.

The following further points should also be considered:

The need to keep flexibility in our military structure so that there would be sufficient room to do research and development with the United States on defence against the ICBM.

2. Financial

(a) A further disadvantage is financial. This is outlined in para. 9 (a) of the Cabinet paper and in the appendices. It is quite clear that this aircraft will require almost \$500 million to complete development and then it will likely cost between \$10 and \$12 million a copy for production. It should be emphasized that these costs cannot be guaranteed, and in the recent study carried out by the Departments of Defence Production and National Defence it was stated:

"No assurances can be given that further increases will not occur. These increases depend on many factors; such as, wage increases, application of overhead, and the volume of business which may be expected from all source contractors."

This price included the preparation of runways in forward deployment bases, their ground handling equipment, simulators, lifelift spare engines, and most other parts, test equipment. A stockpile of weapons, the radar, runway extension and hardening at several bases, and much more. It is even believed that development costs to then were rolled into this figure. It was certainly LIGHT YEARS from a PRODUCTION cost.

This clearly shows that Foulkes is responsible for the content of this document, and it shows what his personal view of the Arrow program was. CAS Campbell and AM Stemon and CINC NORAD and USAF Gen. White, and so many others didn't subscribe to this view at all.

The facts show the Arrow 2, never mind the Arrow 3, 4, and PS-2 ramjet-boosted and titanium skinned versions, would remain the top performing Combat Air Patrol aircraft on earth today.

Why not? Avro had many programs incl. several for missiles.

Layoffs yes, but a lot of work changing the production line(s) and stuff too. The key people would remain, while the rest could be called back or replaced.

Sold this concept by key USAF and US gov't people, and through the F-108 program, which was merely competitive with the Arrow.

about 240 million cancellation, w pre-production being useful for service.

4/10/58