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decisions could be taken in the light of the then existing information. Abandoning the CF-105 would of course be a rude shock to the aircraft industry, but it would not mean its complete cessation. DeHavilland would not be affected nor would the transport and marine aircraft sections at Canadair.

16. During the long discussion the following points emerged:

(a) It was doubtful if the BOMARC missile or components could be manufactured in Canada. However, the launchers might be.

Why? Avro made a proposal for just that in 1957.

(b) Layoffs involved in abandoning the CF-105 would amount to well over 25,000 and there was some doubt as to whether these workers could obtain alternative employment. This would have an extremely adverse effect on the economy which now needed every push it could get. This was the most serious aspect of the proposal.

Britain tried to buy them in 1956, and were looking again as of winter 1958

(c) It was argued, on the other hand that, surely, in an economy as potentially vigorous as Canada's, employees would soon be absorbed in other jobs. There was no more expensive way of keeping people at work than by the CF-105 programme.

(d) If the CF-105 were not abandoned, it would mean an increase in the defence budget of $400 million a year for several years. Even without this the deficit in 1959-60 would be as much as in the current year. If it were at all responsible, the government would have no alternative but to increase taxes should the 105 be put into production. Adding it to the present overall rate of deficit would mean the wrecking of Canada's credit and the stimulation of inflation.

Avro was planning, as of Feb. 1957 at least, to equip the CF-105 with an anti-ICBM missile based on NIKE Zeus.

(e) The CF-105 would be of no use against ballistic missiles. It would, however, be effective against air-breathing, unmanned bombers. There was no chance of having an anti-missile missile by 1960 or 1961. The Sparrow, with which the CF-105 was to be equipped, could not be fitted with an atomic warhead.

Not according to Douglas, maker of the Sparrow 2.

ridiculous, Avro was already studying several missile options and had been since 1956 at least.

(f) Although it would be most helpful if the facilities presently used on the CF-105 programme could be converted for the development of missiles, this was highly unlikely. The best possibility for the future was a production programme of partnership with the U.S. The U.S. authorities had indicated they would be willing to allocate a significant share of future missile development to Canada, but this would not occur for some time and would mean considerable discussions with them. The U.S. had not yet reached a decision on the type of anti-missile missile they would require.

Wait a year, THEN buy US aircraft. Which they did.

(g) The United Kingdom would not buy the CF-105 and it was most unlikely that any other N.A.T.O. country would either. The U.K. was practically out of the interceptor field and was concentrating on missiles, many of which were being acquired from the U.S. Indeed, the whole trend in Europe was towards missiles, but the air defence problem there was different to that in North America.

(h) One means of helping the aircraft industry would be to manufacture transport aircraft, under licence for Trans-Canada Air Lines and possibly other domestic users.

(i) The evidence available indicated that the U.S.S.R. did not intend to match the U.S. with a long range air force similar to the Strategic Air Command, or come anywhere near it. Recently, the U.S. thought the Russian bomber force was bigger than we did. Now this was not the case. The intelligence authorities were coming to the view that the U.S.S.R. would not launch an attack until it was clearly superior in ballistic missiles to the U.S.

Dulles intel, NOT agreed by Britain, RCAF, or USAF.

(j) The U.S. was planning to equip its air defence forces half with missiles and half with aircraft. Should not Canada plan to do roughly the same thing? If the CF-105 were discontinued Canada would be completely dependent on the U.S. for equipment for the R.C.A.F.

(k) The CF-100 would soon be obsolete and there was no demand for it here or from abroad. No help for the industry, therefore, could be expected by way of more orders for it.

NATO had been asking for an impreoved CF-100 when Pearkes took office.

(l) On military or financial grounds it seemed clear that there was no reason to continue the programme. Indeed, many members of the Conservative Party had said in the past that it was quite unwise for a country of Canada's size to attempt to develop an aircraft of this kind in the first place. Instead, they had advocated the manufacture of military aircraft under license. However, to abandon the CF-105 now and undertake to produce the U.S. F-106C, which was physically quite possible, would be a serious political mistake.

LIE

17. The Cabinet deferred decision on th recommendations of the Cabinet Defence Committee regarding air defence requirements, including the future of the CF-105 programme.

R.B. Bryce,
Secretary to the Cabinet.

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binet minutes, August 25th, 1958

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ir defence requirements; recommendations of Cabinet Defence Committee

14. The Minister of National Defence said hat the Cabinet Defence Committee had reviewed the ir defence requirements for rounding out the air efence weapons system against the manned bomber. he committee had agreed to recommend that two BOMARC ases be created in the Ottawa and North Bay area, and wo additional heavy radars installed in Northern Ontario nd Quebec with associated gap-filler radars. It was lso proposed that negotiations be started with the .S. for the cost-sharing and production-sharing of the OMARC bases and equipment and the heavy radars and elated equipment. The committee had referred to the abinet for consideration proposals to cancel the F-105 programme and to investigate additional missile nstallations and a possible alternative interceptor o the CF-105.

NOT TRUE

Last October the Cabinet had approved ontinuation for another twelve months of the CF-105 evelopment programme, which included the ordering f 29 pre-production aircraft, improvements in tooling, cceleration of the development of the Iroquois engine, nd the continuation of the necessary related programmes. n a project such as this there were two main phases; evelopment and pre-production and, then, production or operational service. These overlapped. The first as now well advanced and a decision was therefore rgently required as to whether or not to go into roduction.

The R.C.A.F. now had nine all-weather quadrons and the present programme called for their e-equipment with the CF-105, requiring a production rder of 169 in number. These, together with aircraft ecovered from the development and pre-production rder for 37, would provide sufficient aircraft for ine squadrons. The total cost would be $2 billion pread from 1959-60 to 1963-64.

Why did this drop to 69 later?

AHA! Foulkes and he the culprits.

A study of the implications of continuing this programme, its impact on the whole defence programme and the necessity of considering future requirements, such as defence against intercontinental ballistic missiles, had necessitated a review of the air defence programme. The Chiefs of Staff had undertaken such a review. The main points that were considered were the following:

The assessment of the threat to North America had changed. In the 1960's, the main threat would probably be from ballistic missiles with the manned bomber decreasing in importance after 1962-63. However, a combination of the two might be the threat until Soviet manned bombers were depleted. The rapid strides in technology were such that to provide a suitable manned fighter to cope with heavy jet bombers was extremely expensive. Furthermore, ground-to-air missiles had now reached the point where they were at least as effective as a manned fighter, and cheaper. The original requirements in 1953 for between 500 and 600 aircraft of the CF-105 fighter had been drastically reduced. Subsequently, thought had been given to reducing it still further now that the BOMARC missile would probably be introduced into the Canadian air defence system. Finally, the cost of the CF-105 programme as a whole was now of such a magnitude that the Chiefs of Staff felt that, to meet the modest requirement of manned aircraft presently considered advisable, it would be more economical to procure a fully developed interceptor of comparable performance in the U.S.

FOULKES opinion, NOT the CSC

NOT true!

The Minister proposed that the recommendations of the Cabinet Defence Committee on the BOMARC bases, the heavy radars, the gap fillers, and on negotiating with the U.S. regarding cost-sharing and production-sharing be approved, and that consideration be given to abandoning the CF-105 and to authorizing the Chiefs of Staff to investigate an alternative for it and to consider any additional missile installations that might be required. He himself recommended cancelling the CF-105 programme in its entirety and deferring for a year any decision to order interceptor aircraft from the U.S.

An explanatory memorandum had been circulated, (Minister's memorandum, Aug. 22, 1958 - Cab. Doc.247-58).

Shows he knew interceptors still required.

15. Mr. Pearkes explained that the C programme consisted of four major projects; the ai development of which was being undertaken by AVRO in Toronto; the Iroquois engine at Orenda Engines Ltd., also in Toronto; the fire control system (on which Westinghouse in Hamilton was co-operat with a U.S. company, and the weapon (SPARROW) o Canadair in Montreal was co-operating with a ompany. There were, of course, several sub-contracto many parts of Ontario and Quebec. He outlined s limitations of the aircraft, some details of the costs volved, and some of the difficulties that had been enc untered since the programme's inception. Not long ago he had been disposed to recommend that it go ahead and aircraft be ordered for squadron service. However, the change in the nature of the threat and the very great cost of development and production had brought him to make the recommendation he had. He was fully aware of its seriousness but he had made it after very careful study of all the factors involved.

He went on to describe the semi-automatic ground environment (S.A.G.E.) system and the steps that had to be taken to introduce it, whether or not the government decided to proceed with the CF-105. He also described the U.S. intentions on BOMARC and how they related to Canada. In addition to installing two such missile sites in central Canada, it might also be desirable to install one base in the Vancouver area and one in the Maritimes. There were considerable advantages in adopting BOMARC. It was cheaper than the CF-105, in terms of men and money, and just as effective. The missile could be fitted with an atomic warhead and the U.S. would probably supply heads on the same basis ("key-to-the-cupboard"), as they made atomic weapons available to the U.K.

Had t for U

As regards aircraft, the U.S. authorities had made it quite clear that they did not intend to buy any CF-105s. Their own F-106C was comparable in performance to the CF-105, it would be available for squadron service several months earlier, and it cost less than half as much. The U.S. was also developing the F-108, a huge aircraft with a range of approximately 1,000 miles.

More l advice

His recommendation to abandon the CF-105 and investigate other aircraft and missile possibilities meant that the government would have a year to decide whether it should re-equip air defence fighter forces wholly with the BOMARC, or an alternative aircraft, or a combination of both. Within that time there should be a better understanding of Soviet intentions as to whether they were likely to introduce more or better bombers, or go completely into missiles.

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