



The Other Side of the Other Side: A Reply to the Article

by Palmiro Campagna

Author: *Storms of Controversy*

I have just read the article entitled "The Other Side of the Story", which appeared in the CANAV insert to the Fall issue of the CAHS Journal. The news is good in that an objective treatment of the Arrow story is now available which answers the questions posed. It is based on records and documents declassified within the last few years. The following are a few examples.

Excessive Costs?:

"The Arrow costs compare favourably with the somewhat less sophisticated aircraft in the USA ... " (RCAF memo, March 28, 1968 RG 24, Box 6430).

"If this (Arrow) were the only requirement for our air defence, we could perhaps make provision for it in our succeeding defence budgets ... " (Pearkes to Dulles in explaining how adding SAGE/Bomarc would stress the defense budget - TOP SECRET brief July 8, 1958 from RG 49, Vol. 427, File 159 - 44- B, Part 1).

"The Minister of Finance said that in considering matters of defence, he naturally put the safety of the country ahead of finance. Now, however, the military view was that the programme should be cancelled ... " (September 7, 1958 Cabinet Conclusions from RG 2, September 1958.)

The Minister has forwarded to me a copy of a letter he received from Mr. Fred. T. Smye of A.V. Roe Canada Limited which makes a proposal for a fixed cost estimate for the production of 100 CF 105 aircraft, at an approximate cost of 3.5 million." (Letter from Charles Foulkes, Chairman, Chiefs of Staff to Chief of the Air Staff, November 4, 1958 from RG 24, Box 24, and reproduced in *Storms of Controversy*. The book provided a considerable amount of detail on costs from varying sources which show that costs were decreasing and within expectations, and that the real problem was the addition of SAGE/Bomarc and the gap-filler radars.

**Did the Arrow even have a mission?
What was so wrong with countering the Soviet
Threat ... with alternate weapons such as the
superb F-101 Voodoo?**

"With the object of economy and to avoid unnecessary duplication, every effort has been made to determine whether future UK or US aircraft could meet our requirements. In the UK, the only aircraft for consideration is the Javelin whose performance falls far short of the requirement. In the USA, there is the Convair F-102 ... does not meet the range requirement. The RCAF, therefore, have had A.V. Roe Canada work out an engineering proposal for an aircraft to meet our specification." (The Honourable Brooke Claxton to Cabinet, November 30, 1953 - from RG 24/83/84/167, Box 6426.)

Major-General G. E. Price " ... did not foresee the day of the phasing out of the manned interceptors as he felt there would always be a need for judgement and mobility in a weapon system." (General Price to the RCAF after a two-day review of the entire project, October 31 and November 1, 1955, in which the USAF team concluded that the Arrow was superior to their F-101, that the Falcon should be the weapon of choice and that the Iroquois would improve the performance of their own aircraft. - from RG 24/83/84/167, Box 6426).

The mission would be " ... primarily in peacetime to expose violation of national airspace. In wartime, reconnaissance aircraft are targets the same as any other enemy aircraft ... an alternative supersonic two-place all-weather interceptor that generally meets the operational requirement is defined in OCH 1/1 - 63. This aircraft would have to be equal to or superior to the Arrow Weapons System." (RCAF review of the project late 1958 - RG 24, Box 6430.) The book further explores the need and missions of the aircraft as discussed in numerous reviews undertaken by the RCAF, USAF and the UK.

When the Arrow was terminated, was it really a disaster for Canada's aviation industry?

"It has been our experience in the past that the potentialities of the Canadian aircraft industry and its allied companies have not always been appreciated. Lack of an immediate and long-range programme will result in a deterioration of the industry's effective operating capacity. We believe the industry at the moment to be in serious jeopardy." (Air Industries and Transport association to the Prime Minister, December 1957. The response was to shut down what had become the largest player in the industry, A.V. Roe. (The Scientific and Industrial Resources of the Canadian Aircraft Industry, J. H. Parkin files, NRC Ottawa.)

"The arguments for continuing were that Canadian military requirements should be found in Canada, that cancelling the programme would throw upwards of 25,000 men out of work with serious effects on the economy, and that national prestige should be taken into account." (RG 24, Cabinet Conclusions, September 1958.)

A.V. Roe had developed into a talented team of people working on the cutting edge of high technology. Disbandment of this group, like the removal of a supporting wall, dealt a severe blow to the Canadian Aerospace

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Industry as predicted by AITA. While most found other jobs in Canada, some of the more brilliant individuals ended up in other countries.

Was AVRO capable of delivering a first-class weapons system in the first place?

"There is no doubt that the firm is capable with its present labour force and space of meeting the likely demands for the RCAF and, in fact, exceeding them considerably. Orenda ... Engines Limited ... is excellently equipped and there is no doubt whatever of its ability to match the aircraft programme in mind by Avro Aircraft Limited." (Evaluation of the Canadian CF - 105 as an all-weather fighter for the RAF, Report by the Joint Air Ministry/Ministry of Supply Evaluation Team, 1956. This report found in the NRC library took two years for declassification from the UK. It not only looks at technical characteristics but examines work methods, production flow, morale, etc.)

Storms of Controversy cites numerous other evaluations, including an independent report by CARDE, completed in 1958 but only issued in 1961 as a classified SECRET document. All corroborate the UK assessment as did the eventual flight trials.

Questions remain about the Arrow's airframe design, and its engine was still developmental.

"This aircraft is now in the test flying stage and flights to date indicate it will meet its design requirements. The engine for the aircraft, which is part of the Arrow programme, is also undergoing air tests. These tests indicate that it also will meet its design requirements." (RG 2, Cabinet Conclusions, August 1958.)

"Very few engineering problems are expected in the production or flight testing of the Arrow 2 airframe." (RG 24, Box 6433, Assistant for Arrow Weapon System Office, January 1, 1959.)

Both aircraft and engine test efforts were proceeding better than comparable programmes then or since.

Its proposed weapon system was still on the drawing board.

"The adoption of MA-1/Falcon/MB-1 fire control and weapons to the CF-105 programme has reduced the development time and will permit operational aircraft to be delivered for squadron use by September 1960 in place of the spring of 1961. The result of substituting MA-1/Falcon/MB-1 for Astra/Sparrow together with a close analysis of the programme has resulted in an overall saving of \$452,500,000 saving on the programme for 100 operational aircraft. (Chief of the Air Staff to Peakres, January 12, 1959 - 73/1223, Series 1, File 12, Directorate of History, DND.)

The CANAV article complains that pro-Avroite factions usually argue on the basis of emotion. This is understandable since the documentation discussed in *Storms of Controversy* have been unavailable for the last 30+ plus years. But it corroborates what the pro-Avroites have been saying all along, perhaps to the dismay of the anti-Avro factions who also argue on emotion and fail to cite the written record. The book has sold close to 9,000 copies

in under two years of print and also answers the question of who ordered the physical destruction of the completed aircraft, plus much, much more. The full title of the book is "Storms of Controversy: The Secret Avro Arrow Files Revealed" and is available from Stoddart.

Addendum

The following TOP SECRET file was declassified for me on December 22, 1994.

At the Meeting of Ministers between July 12 - 13, 1960, the following comment to the American delegation was made, regarding the need for F 101 aircraft: "Mr. Gates then referred to the aircraft deal again, sixty-six F 101s for one hundred and five million versus thirty-five transports for one hundred and fifty million.

He said that if you want to modernize your forces and contribute to continental defence, this is the decision to be made; that they were under considerable pressure from the aircraft industry and they could buy air transports from Boeing much more cheaply.

Mr. Green stated they were told two years ago that the manned bomber was on its way out and that is why they cancelled the Arrow. Now they have to go back and say that both are still needed.

Mr. Fleming referred to the fact that they tried to interest the Americans in buying the Arrow at the Paris Conference but had been turned down flat by Mr. McElroy.

Mr. Peakres confirmed that the flying rate would be about the same as the Americans and, therefore, there would be no reductions in spares from that cause. He said we did not cancel the CF 105 because there was no bomber threat but because there was a lesser threat and we got the Bomarc in lieu of more airplanes to look after this. Now he said perhaps the expectation of two years ago *that the bomber threat was lessening has not been fulfilled.*

At the same time, he said we expected Bomarc to cover the whole country. These had been reduced, and therefore some more protection to the western part must be made in those areas which were to be protected by Bomarc.

It wasn't fair, he said, for Canada to fill this western gap which had been created by the Americans all by themselves."

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turned on are fax on demand, an Air Cadets conference and Internet.

Leaving the best for the last: soon all valid BBS members will have Internet Email. The prospect of enabling them to connect to 20 million Internet users worldwide is mind-boggling. The pilot trial is running on the BBS now and will go live for our members shortly. This gives AHFC an international connection.

Interested? Log on by modem and call **905-845-0905.**

The Project

The Purpose

The purpose of the restoration and protective polishing of CF-100 18619 is to save a vital piece of Canadian aviation history. This work will be one way to raise the awareness of Canadians, both young and old, and will help to celebrate Canada's rich aviation and aerospace heritage. The AHFC has determined that No. 18619 is in danger of being damaged beyond repair. If we do not act quickly and decisively, this aircraft will become unsalvageable. There is a fringe benefit to the Project; some may become interested in aerospace and Canada's place in it. Some may join AHFC and participate actively in working toward the goals that our Foundation has set: research, preservation and education.

The Plan

It will be expensive to do what has to be done to preserve CF-100 18619. AHFC will have to raise \$5000 at least. Although this may not be the best time to solicit assistance from the government, it seems that some may be found if the endeavour is worthy. Our project fits this category. Corporate assistance will also be sought. These firms and companies have a tradition for helping. Eventually they benefit in some way or other. That's why they help. And while they are feeling the pinch, aviation groups and organizations will be contacted for whatever assistance they can provide. Last, but as the saying goes, but not least, the general public will be approached for assistance. It will be difficult, since the times are difficult. However, AHFC has been amazed and impressed by the generosity of the so-called working stiff. God bless them.

The Experts

The restoration and protective polishing will be undertaken by Mr. Rick Meloff, owner of California Custom Cleaning. It is a wholly Canadian company that specializes in the non-structural restoration and maintenance of commercial, corporate and privately owned aircraft, as well as aviation detail. The company's specialist technicians are fully trained in applying ASTM certified systems for achieving maximum results in exterior corrosion protection. In the case of aircraft in flying condition, the fuel saving is impressive.

Pollution, ultraviolet rays and harsh weather conditions all contribute to general wear and tear on the exterior surfaces of aircraft, especially when they are outside most, if not all the time. Over time, untreated surfaces will oxidize, leaving a course, chalky exterior. CCC begins with a high pressure prewash to remove all superficial dirt and stains. Next, a compounding system, specifically formulated for the aviation industry, is applied by experienced technicians.

The Polishing

This procedure is done at a high speed with spectacular results. Corrosion is inhibited, painted and aluminum surfaces last longer, the aircraft has a museum quality appearance and the finish is guaranteed. The high-speed

polishing equipment uses pneumatic barrel buffers, commonly used in commercial aviation applications. Polishing performed by industrial buffes will outlast and outperform manual efforts two to one. This is because the exterior surfaces become smoother and cleaner because the buffer allows the polish and sealant to penetrate the paint completely. The surface is micro-smooth. The results are maximized and the shine is prolonged. They must be seen to be believed.

The Compound

The actual compound used in the resporation is *rolite*. This polish was invented by Guenter Heidenberger from Germany and is produced by the Rolite Corporation of Milwaukee. Rolite is premium rated as an aviation polish not only for static aircraft but especially and primarily for active aircraft. It was used on the T6 *Texan* of the Canadian Warplane Heritage at Mt. Hope Airport. It has been used on many other aircraft such as Lear Jets, Cessnas and Challengers.

Mr. Paul Embury of SPEC Distribution Inc., sole distributor of Rolite in Canada, has generously agreed to donate the restorative polish to AHFC to be used on CF-100 18619. This very kind offer is most appreciated. If you want more information about this product, please feel free to contact Mr. Embury at 512-458-2304. By the way, Paul met Rick several years ago at a boat show in Toronto, you know, the big one. As a result, CCC was established in 1987 in Barrie. Rick has done his research and would never use anything else but products by Rolite. Their high quality and durability have earned Rolite a reputation virtually unrivalled in North America. Getting a speed shine is one thing; reconditioning a surface is another matter altogether. That's why AHFC has chosen Meloff and Rolite.

Additional information about Rolite may also be found in the January '95 issue of *Business and Commercial Aviation International* in which the journal reviewed Rick Meloff and his firm, CCC.

What You Can Do

You can help "The Project" immensely by sending a donation to the AHFC Clunk Fund, P.O. Box 246, Etobicoke Station D, Etobicoke ON M9A 4X2. All donations over \$10 will receive an income tax receipt - promptly and with thanks.

- Steve Edgar

(*Refit, contd. from front*)

The CF-100 did its job and did it well. It was a marvel of reliability. In fact, the airframe was designed to last 1200 hours. After tests conducted by the National Research Council, the CF-100 was given almost limitless airframe life! The conclusion by NCR was that the CF-100 airframe had actually been built to last over 20,000 hours. Unbelievable, but true.

Eventually, everything ends and a time comes to depart. After going through single/dual controls, various engine mods and model marks, various roles from trainers to fighters to interceptors, wingtips on and off, the last CF-100s were finally retired on February 10, 1981 after giving over 25 years of squadron service.

DND Heritage Stimulates AHFC - Again

by W. L. Turner

As members know, AHFC originated from memories of past Canadian aerospace achievements and especially memories of the DND *Arrow* program callously cancelled in 1959 by Canada's second most ignominious government. The *Arrow*, dream of the RCAF and, until recent times, unexcelled in world aerospace technology, is still being discussed in gatherings of heritage aerospace technologists.

The AHFC was formed to publicly promote the heritage of Canada's aerospace achievements, and the *Arrow* selected as the AHFC symbol for aerospace excellence past. Now, stimulated initially by DND interests and continuously by aerospace heritage enthusiasts, AHFC is growing with individual and corporate memberships.

And we are being stimulated again with the appointment of Capt. (Ret'd.) Don Pearson to the AHFC National Executive. D. G. L. Pearson is the DND Command Heritage Officer at Air Command Headquarters in Westwin (Winnipeg). Don is a professional engineer with an MBA and has a long distinguished career in DND Public Relations and heritage activities - especially in the management of processing DND artifacts and financial support programs.

On January 6, Don was in Toronto. By prior arrangement, President Nick Doran and I had an enjoyable luncheon visit with Don and toured Don through our small AHFC facility in north Etobicoke. Don brings to AHFC important contact associations and procedures when dealing with government agencies.

I've known Don from past aviation activities and readily endorse his membership. On behalf of AHFC members, Don - I happily say "Welcome aboard!"



A.H.F.C. BBS ONLINE UPDATE

by Bob Banting, SysOp

The Foundation's BBS has been online for the last six months. During this time, it has received over 2,200 calls. It has 219 files and 878 messages! Interestingly, it took the first four months to reach the magic number of 1000 calls. Then within two months, the BBS received an additional 1200 calls - well above expectations.

Here is what happens when callers contacts our BBS. They see on their screen an "Arrow quote"; then the AHFC name comes up, followed by the mission statement and the telephone number. While most of the calls are local, from within the 416 and 905 areas, calls were received from both coasts - Gander, NFD and Vancouver BC.

I am happy and proud to report that the number of users of our BBS is growing; it will soon, very soon, reach 500. The people who call in participate in a variety of interest groups or conferences. To give you a sense of this variety, here are some examples: BCATP, RCAF, "Plain" Jokes, Modeller's Hangout, Save the Clunk, to name a few. Our BBS has 25 conferences, a good number of very interesting text files, and numerous (GIF) files.

From my perspective, the success of the BBS is determined by the number of callers, age 25 and under, who by use of a computer are learning about Canadian Aviation and Aerospace History and the *Arrow* story for the first time. As a result, many of these young people are using information from the BBS for essays and other school projects.

I may be the SysOp but I have had a lot of help. Without Nick Doran, Steve Edgar, Jim Gallagher and many others, I would have been lost by now. The exciting part about the BBS is that it is going to get a lot better. New features ready to be

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