

THE FORGOTTEN BOMARC STORY:

Martin government should apply lessons of Bomarc to Bush's NMD

By Derek Manchester and Lynn Trainor

Last May in an informative article in the *Monitor*, Lesley Hughes revealed how the U.S. government put pressure on the Canadian government, to accept nuclear warheads for Bomarc missiles that were already stationed on Canadian territory, a step the U.S. viewed as more realistically fulfilling Canada's commitment to the defense of North America.

As a follow-up to that article, *Monitor* readers may be interested to know that, at that time, a group of eight physicists at the University of Alberta produced a scientific assessment of the Bomarc's capability, with particular reference to the claims that the nuclear-tipped Bomarc was capable of "cooking" nuclear bombs, a process aimed at rendering a bomb inactive, before it could be released over a target, during presumed intercontinental bomber attacks by the Soviet Union; the conclusion of the Alberta eight was that the proposed nuclear war-heads "would be worse than useless for the protection of Canada."

We raise this history of the Bomarc episode at this time, and recall some of our experiences with it, because of its relevance to the not too dissimilar situation which confronts the present Canadian Government in its consideration of possible participation in the latest version of the United State's NMD. (National Missile Defence) proposal. What is common to the two situations (Bomarc and NMD), is scientific input negating the prospects for success in both instances. In the Bomarc case, political "realities" overrode scientific considerations in a matter relating to the national security of Canada; there is no information yet on the outcome of the NMD proposal for Canada, but there are political implications. For the Bomarc, the Alberta Eight Report (which we will refer to as RUA8, for convenience) pointed out that the Bomarc could not possibly accomplish its mission in the manner being proposed, and that it was highly probable that a thermo-nuclear weapon would be detonated at the point of interception by the Bomarc of the incoming bomber (given the Bomarc's operational range, this would be within 400 miles, of North Bay, Ontario, or LaMacaza, Quebec).

This interpretation was tacitly recognized by Robert McNamara, U.S. Secretary of State at the time, who stated before a U.S. Congressional Committee that the U.S. was down-playing the protective role of the Bomarc, in favour of deterrence strategies.

For the NMD proposal, the body questioning the wisdom of deploying this much larger missile system, has been the American Physical Society (A.P.S.), the prestigious organization representing the community of physicists in the United States. An A.P.S. committee found that the Boost-phase Intercept Systems of NMD ("the bullet to hit a bullet") being promoted by the current U.S. administration, would, in their words, "... not be feasible against potential threats"; their report is available at <http://www.aps.org>.

Nuclear arming of the Bomarc in 1963, was done at the price of compromising the Canadian stance on non-nuclear proliferation. To understand this better it is useful to recall that

Prime Minister John Diefenbaker had agreed earlier, under U.S. pressure, to locate Bomarc's in Canada. He and his Minister for External Affairs, Howard Green, were, however, reluctant to arm the Bomarc's with nuclear war-heads, since this was inconsistent with Canada's stated nuclear policy of not becoming involved in the nuclear arms race. It should be noted that at that time, Canada was a prominent contributor, in world terms, to nuclear power development, and it had the expertise to undertake the development of nuclear weapons, but Canadian policy precluded this move. In effect, the Diefenbaker/Green stance was high minded in the context of the times.

The U.S., however, was anxious to see nuclear weapons installed in Canada; in their view that was required in order to have a comprehensive North American defense system in place, organized to counter the threat of a nuclear weapons attack from the Soviet Union. In a sequence of events ably chronicled by Lesley Hughes in her article, Lester Pearson, the leader of the Liberal Parliamentary Opposition, announced his willingness to agree to the installation of nuclear war-heads on the Bomarc's, if his party were to form the government, and the ensuing political uproar was followed by an election in which Diefenbaker's government was defeated.

Following the election, the Pearson administration moved quickly to fulfill its mandate to accept the nuclear arming of the Bomarc's, but chose to do this with what, in hindsight, amounted to a display of due process - it placed the nuclear arming question on the agenda of the Special Committee on Defense, a Parliamentary committee (with all-party representation). As the committee's deliberations on this question got under way, Andy Brewin, the N.D.P. member, suggested that it should hear testimony from the Alberta eight, about their critical report (RUA8). As a result, Professors Don Scott, Jack Sample and Lynn Trainor were invited to Ottawa, as representatives for the Alberta eight group. The appearance of these three physicists before the Special Committee, took place on August 1st. 1963; also appearing as witnesses on the same occasion, were two representatives from the Canadian Defense Research Board (DRB) Dr. J.E. Keyston, Vice-Chairman of DRB and Dr. G.S. Field, Chief Scientist at DRB.

At this point it is useful to provide some background, relating to these two sets of witnesses appearing before the Special Committee on Defence. The report of the eight physicists from the University of Alberta was distributed, during the 1963 Federal Election, to the leaders of the three parties: Liberal, Progressive Conservative and N.D.P., as well as to candidates seeking election in Alberta. Preparation of the report by the eight was undertaken because of what they regarded as misleading information about the Bomarc's capabilities appearing in the press, from so-called "informed sources". The Defense Research Board had been for some time, established as a fourth arm of Canada's Defense Establishment, with a standing comparable to the other three arms (as they were constituted at that time) : the Army, Navy, and Air Force. DRB was responsible for giving scientific advice to the Government of Canada on military matters.

In their appearance before the Special Committee, the Alberta scientists presented their assessment that the Bomarc would be unsuccessful in achieving the objectives claimed for it, using blackboard illustrations, for example, to convey their reasoning linked to various physical parameters of the Bomarc's proposed role. Prior to their appearance in front of the Special Committee, the DRB representatives had issued a press release contradicting the statements contained in the original (RUA8) report, and in doing so, played down the importance of the

proposed “cooking” process in relation to the strategic value of having nuclear armed interceptors acting as deterrents for an enemy considering a manned bomber attack on North America. This, in itself represented a considerable change in posture, because the cooking process had received a big play in the press, during the lead up to the federal election of the previous May.

In front of the Special Committee, Dr. Field, particularly, spent a considerable amount of his time criticizing the lack of qualifications of the Alberta group in the areas of explosives and weaponry (a point which they were willing enough to concede), and very little effort at seriously countering the technical features of arguments made by the Alberta eight. Dr. Field added the comment that DRB had considerable experience with explosives, but neglected to point out that this experience was limited to chemical explosives.

In fact, both of these groups appearing in front of the Special Defense Committee, were operating in semi-darkness at best, because for both, a lot of relevant information was classified as secret, and, it seemed, from the vagueness with which the DRB representatives responded to some questions, that they were relying on assurances supplied by their U.S. contacts, that “cooking”, for example, “worked” - never mind the details. On the other hand, the Alberta group admitted that their model of a thermonuclear weapon was very simple, but that nonetheless, any thermonuclear weapon would involve certain basic physical conditions and parameters, and that because of these, there was a considerable risk of thermonuclear explosions occurring at or near the point of interception of the bomber by the missile - it just wasn’t going to be as neat as the “cooking” scenario implied. It seems very likely, that there had never been any actual tests of the “cooking” process and that the whole maneuver was a crude and rather desperate gesture.

Confronted by the appearance before it of these two sets of diametrically opposed witnesses; one seriously trying to explain how they arrived at their position, the other basing their presentation on contempt for the naivety of the Alberta group’s approach, many members of the Special Committee found the experience to be very confusing, and said so. The drama of this encounter was not lost on the members of the Parliamentary press corps.

Tim Creery, reporting for the Southam News services, filed a report which was carried in newspapers across the country, and headlined in the Calgary Herald, for instance, with “Scientists faced ‘wall of arrogance’”. There were separate reports on the proceedings of the Special Committee, by Val Sears in the *Toronto Star*, by Charles Lynch in *The Calgary Herald* and by Bruce Macdonald in the *Globe and Mail*; these covering various aspects of the confrontation and the uncertainty experienced by committee members, who felt that they were being asked to evaluate a matter for which the official source of information was not performing very convincingly.

What came clearly out of this affair was that a Canadian federal election was won on the basis of misinformation supplied to facilitate the placing of nuclear weapons in Canada. The reliance of the Canadian Government on its official source of scientific and technical information for its military, was replaced by what U.S. military and political sources wanted, engineered

through the agency of the DRB.

A few weeks after the August 1st. meeting , Marcel Lambert MP (PC-Edmonton West), the Vice-Chairman of the Special Committee, expressed his feelings concerning the futility of the Committee's role "..... the testimony of the physicists was 'academic' for by the time they appeared, the government had already decided to accept nuclear weapons."(*Edmonton Journal*, Sept. 11, 1963); it does appear that the Committee's proceedings on this question, amounted to a display of due process. The proceedings of the August 1st. meeting are a matter of public record (see "Special Committee on Defense, Chairman: Maurice Sauvé, Minutes of Proceedings and Evidence, No. 10, House of Commons, August 1, 1963, Queen's Printer, Ottawa.).

It was a regrettable episode in which the expertise of independent Canadian scientists, outside DRB, was not sought in advance or consulted later, except in a confrontation in front of the Special Committee on Defence. It is worth noting, in the current debate about National Missile Defence of North America, that many Canadian physicists are also active members of the A.P.S., indicating that in this and other ways, they have international standing in their field. They, along with others in this country, could act as consultants with a Canadian perspective, on policy questions of this type, for it is evident from the Bomarc experience, that a government needs scientific and technological advice from sources which are not "in-house"; i.e. are outside organizational structures closely linked to government.

In the years since the Bomarc episode there has been no successful initiative to establish facilities for delivering such advice (i.e. on policy relating to major issues such as participation in missile defence) in this country - the lesson has still not been learned.

One possible mechanism for providing objective evaluations of such policy questions, is to set up an Office of Technology Assessment, along the lines currently functioning (with a high degree of independence) in many European countries.

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