

## TESTING THE ADVANCED CRUISE MISSILE

*"Defence Notes" background on the decision of the government to permit testing on Canadian territory of the newest American air-launched cruise missile.*

### How does the new Advanced Cruise Missile (ACM) compare to the older air-launched cruise missile (ALCM)?

■ The ALCM was first deployed on B-52 bombers in 1981. Built by Boeing, it flies at subsonic speeds, and has a range of about 2,500 kilometres. Its effectiveness derives from its ability to fly at very low altitudes while providing a very small target to defending radars. The US Air Force planned to build about 4,000 ALCMs, but in 1983 curtailed production at around 1,500 after deciding to shift resources to the ACM then under production.

In 1983, General Dynamics was awarded the contract for the ACM which will be deployed, in the first instance, on B-52 and B-1B bombers. In contrast to the ALCM, the new missile is designed to incorporate critical new technologies, especially:

- a "regenerative" engine designed for greater fuel efficiency, thereby increasing the range of the missile and possibly decreasing the size;
- advanced composite materials, such as those used on parts of the space shuttle, designed to resist high temperatures and further reduce the ability of radars to detect and track the missile;
- new guidance systems which will increase the accuracy of the missile while detecting and evading defences.

In sum, the ACM is designed to fly higher than the ALCM, to allow the bomber from which it is launched to stand-off further from air defence interceptors, to penetrate deeper into the Soviet Union, and to hit targets with greater accuracy. The Canadian government has stated that the ACM will use the same nuclear warhead as the ALCM. Cruise missiles tested in Canada are not armed.

### What is the Canada-US Testing and Evaluation Programme?

■ On 10 February 1983 the Canadian and US governments ex-

changed notes confirming the Canada-US Testing and Evaluation Programme (CANUSTEP) agreement – frequently referred to as the "umbrella agreement." The thrust of the Agreement was to provide a framework within which specific weapons systems might be tested in Canada. An accompanying statement noted: "Systems to be tested under the agreement could include artillery equipment, helicopters, surveillance and identification systems, advanced non-nuclear munitions, and the guidance system for unarmed cruise missiles." Article 8 of the Agreement states that: "In no case shall nuclear, biological or chemical warfare materials be brought into Canada under this agreement. Cruise missiles shall be unarmed."

Although public attention has focussed almost entirely on the testing of cruise missiles, other systems have been tested under the umbrella agreement. According to DND, in 1988 these included night attack equipment for the USAF at CFB Cold Lake, sonobuoys off the Canadian West Coast, and vertical take-off-and-landing aircraft. The complete list of all tests under the agreement is not currently available, because the list is formulated by the Pentagon and subject to US security regulations. Article 17 of CANUSTEP requires "consultation and coordination" between the two parties prior to the release of information to the public.

The CANUSTEP Agreement allows the US to take the initiative in proposing weapons systems to be tested. The Agreement states that the proposals are for consideration by the Minister of National Defence or his representative, but it is evident that Canadian practice has been for the requests to be considered and approved by Cabinet. Canada may refuse any request, and both sides have the right to cancel, postpone or suspend tests. Agreement between DND and the Pentagon on the de-

tails of any specific proposal to test – a "project arrangement" – is required before actual tests can be carried out.

The Agreement states (article 14) that the Department of National Defence may review the data "expected to be acquired" from the tests and "may request" that data actually acquired be provided by the United States. Article 16 notes that tests involving US classified information will be carried out under US security control. It is apparent, therefore, that the Agreement does not obligate the US to provide such information. (This last provision may be of particular significance in testing the Advanced Cruise Missile – a "black," or completely secret, programme in the Pentagon budget.)

### Why does the US want to test cruise missiles in Canada?

■ Shortly after the umbrella agreement was signed in 1983, a project agreement to test the air-launched cruise missile was negotiated. The purpose of the test programme was to allow testing of the ALCM over Canadian terrain similar to that which the missile would encounter in the Soviet Union. Specifically, by launching the ALCM near the Mackenzie Delta it was possible to create a route of realistic length. The smooth terrain and ice conditions provide valuable tests for the guidance system and the radar altimeter.

To date the test programme of the Advanced Cruise Missile has been marked by failure. As a consequence it is now two years behind scheduled deployment with the prospect of further delays. In October 1988 the US Congress withheld production funding for the ACM, requiring as a precondition for future funding six successful tests before 31 March 1989. A third successful test was announced in February 1988. There have been no public announcements of successful tests since that date.

The project agreement permits up to seven tests per year. How-

ever, only about twelve tests have actually taken place to date. The ACM tests will be included in the annual quota.

### What was the public response to the 1983 decision to test?

■ The 1983 agreement was signed at the height of the public debate throughout Western Europe and Canada about the NATO decision to deploy intermediate-range nuclear forces (the ground-launched cruise missile and Pershing II ballistic missile) in Europe. In explaining its decision to test the ALCM, the Trudeau government placed great emphasis on the alleged link to NATO deployments in Europe even though the ALCM was part of the US strategic deterrent, under the control of the Strategic Air Command, and not subject to NATO discussions or approval.

In May 1983, then Prime Minister Trudeau wrote an open letter to the Canadian people in which he noted that "this whole question continues to weigh heavily on the consciences of those in government and the general public." Trudeau emphasized the Soviet nuclear build-up which particularly threatened Western Europe, and, "not without anguish," asserted the need for "solidarity with the other Western democracies, in a world which has turned a deaf ear to our suggested strategy of suffocation."

Since 1983 questions posed by various polling organizations suggest that Canadians remain divided on the merits of cooperation in the testing of cruise missiles. In May 1985 a Gallup poll found 45 percent in favour and 45 percent opposed. In March 1988 another Gallup poll found 54 percent opposed to testing and 38 percent in favour. Both the Liberal and New Democratic Parties have declared that they would end the cruise testing agreement.

– DAVID COX