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Directorate of History
National Defence Headquarters
Ottawa, Canada
K1A 0K2

July 1986

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REPORT NO. 93

HISTORICAL SECTION

ARMY HEADQUARTERS

Jun 61

The Canadian Army, 1950-55
Part I: Canadian Defence Policy

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APPENDIX "B" - Extract from the Minutes of the 584th Meeting of the Chiefs of Staff Committee, 1 Nov 55.

APPENDIX "C" - Tables showing defence appropriations and distribution of the defence dollar for the years 1949-50 to 1954-55.

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The Canadian Army, 1950-55
Part I: Canadian Defence Policy

SCOPE OF REPORT AND MAIN SOURCES OF INFORMATION

1. This Report presents a general survey of Canadian defence policy between the years 1950-55. Defence policy is considered to be the sum of the courses of action decided upon by the Government on those overall defence matters which are the concern of all three services and the Defence Research Board. These courses of action are outlined in this Report and the chief factors which led to the adoption of specific policies are analysed.

2. Among the principal source materials available were the following: the Minutes of the Chiefs of Staff Committee for the period under review; the annual Reports of the Department of National Defence; periodic reports issued under the authority of the Minister of National Defence; the official record of House of Commons debates; and various classified military reports such as those of the A.H.Q. Historical Section.

THE INTERNATIONAL SITUATION
PRIOR TO THE KOREAN WAR

3. With the outbreak of the Korean War in June 1950, Canada's defence policy may be said to have entered a new phase. Yet although one immediate result of the Communist aggression in Korea was an acceleration of Canada's defence programme and an expansion of the Canadian armed forces, it was not until November 1950, when Chinese Communist armies crossed the Yalu River and attacked United Nations troops, that the international situation appeared really menacing enough to foreshadow an imminent major conflict.¹ Furthermore, the expansion of the defence forces which was part of the Canadian reaction to the Korean crisis can be represented as being only the continuation of a process which had already been going on for some years. It is appropriate, therefore, to make a brief examination of the international situation on the eve of the invasion of South Korea and to review in a very general way the stages by which international tensions had developed.

4. After the Second World War, Canadian disarmament had reached its farthest limit in the fiscal year 1947-48, when the expenditures of the Department of National Defence fell to \$195,561,641.² Undoubtedly this reduction in the defence budget reflected a relatively peaceful international outlook and the government's appreciation that a crisis was unlikely in the immediate future.

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5. Still, the international scene was not without its ominous portents. Ever since the defeat of Germany in 1945, relations between the Soviet Union and the Western world had been increasingly unsatisfactory. At the close of the Second World War, large areas of Eastern Europe had remained under Russian occupation, and the Soviet Union had, on the whole, failed to make that nice distinction between liberated Allied territory and occupied enemy territory which the Western Allies had been so careful to draw. Communist-dominated governments had been set up in Poland, Bulgaria, Rumania, Hungary, Yugoslavia and Albania; Soviet troops remained stationed in all except the last two of these countries; and Greece, and to a lesser extent Italy, had been saved from falling into the Communist sphere of influence only by Western firmness. Germany and Austria, moreover, remained divided; the Soviet Union had retained in being much larger regular armed forces than had the Western Allies; and the relations between Russia and the western democracies were chronically tense. Canadians, for their part, had had an early indication of the shape of things to come with the publication in 1946 of a Royal Commission's startling report on Soviet espionage activities in this country.³ This troubled international situation inevitably had an influence on Canada's defence policy, and although at the end of 1947 war still seemed unlikely, it must be noted that the Canadian authorities never showed any sign of reducing the country's forces to their 1939 level of insignificance.

6. In February 1948, however, the international situation took a decided turn for the worse when a coup d'état in Czechoslovakia brought a Communist government into power there.⁴ Perhaps the democracies had been unusually sensitive to events in that country since the days of Munich, or perhaps the subversion of Czechoslovakia merely appeared as the culmination of a series of threatening Soviet moves, more dangerous than its predecessors because occurring closer to the heart of Western Europe. In any case, public opinion in the West now responded more sharply than to previous Communist challenges. Certainly there was now a strong impression that the tragic history of the pre-war years was repeating itself, that there had been indirect aggression, and that Soviet imperialism had won an important victory. The alarm thus aroused was heightened a month later when the Soviet Union attempted to force the Western Powers out of Berlin, which had been jointly occupied since the summer of 1945. Traffic and communications between the city and the western zones of Germany were cut off, and for months the economic life of West Berlin was sustained only by a mass emergency airlift organized by the western countries. There appeared to be a distinct danger of war, and although the long crisis ended in May of 1949 when the Soviet authorities allowed normal traffic with Berlin to be resumed, the western democracies had received a severe shock.⁵ From this time on, the latent hostility existing between the Communist and democratic blocs was openly acknowledged; the diversity of their political aims was admitted; the sentiments which -- in the West at least -- had animated the wartime alliance were reluctantly abandoned; and the "Cold War" became an international fact.

7. While the Communists were extending their influence over additional territory in Europe, they were also making steady progress in the Far East. In China the pro-Western Nationalist government of Generalissimo Chiang-Kai-Shek continued to lose ground to the Chinese Communists. Chiang-Kai-Shek's authority and the territory over which he had effective control were progressively reduced until in December 1949 the remnant of his forces was compelled to evacuate the mainland and seek refuge on the island of Formosa.⁶ The Nationalists' power was thereafter limited to Formosa and the offshore islands.

8. The international scene, however, was not one of unrelieved darkness. One happy result of the increased tension was an inevitable closing of the ranks of the western democracies. On 26 February 1948, the United Kingdom, the United States, and France gave what was termed "an unparalleled example of prompt action by the three Powers in a matter which, according to the strict rules of diplomacy, could not concern them". They issued a joint statement on the change of government in Czechoslovakia, describing it as "the establishment of a disguised dictatorship of a single party under the cloak of a Government of National Union".⁷ Further, on 17 March 1948 the United Kingdom, France, Belgium, the Netherlands and Luxembourg* signed at Brussels a "Treaty of Economic, Social and Cultural Collaboration and Collective Defence", thus establishing the alliance which came to be known as the Western Union. Under article IV of this treaty the signatories undertook that, if any of them should be "the object of an armed attack in Europe", the others would afford it "all the military and other aid and assistance in their power."⁸

9. The sequel to this defensive consolidation of Western Europe -- natural, and yet in the light of past history, surprising -- was the extension of the principle across the Atlantic. Both the United States and Canada had been genuinely alarmed by recent events in Europe and Asia. In addition, the lessons of the recent past showed all too clearly how hopeless was the attempt to remain aloof from the rest of the world. The Government of Canada, in striking contrast to the course it had pursued before 1939, now took some considerable initiative in implementing a policy of collective security. During 1948 it became evident that the Canadian Government favoured the idea of joining, and making commitments to, a defensive grouping of the western democracies. On 29 April of that year the Secretary of State for External Affairs, Mr. Louis S. St. Laurent, said in a formal statement on foreign policy in the House of Commons that the best guarantee for peace appeared to be "the organization of collective defence".⁹ These tendencies met little serious criticism in Parliament or the country.

*It may be noted that in October 1947 Belgium, The Netherlands, and Luxembourg, the so-called "BENELUX" countries, had drawn together in a customs union.

10. More important for the future was the fact that the United States had abandoned its traditional policy of isolationism. The new American willingness to make peacetime commitments extending beyond the Western hemisphere was the decisive factor which enabled the North Atlantic Treaty to be signed on 4 April 1949 at Washington by the United States, the United Kingdom, France, Canada, Belgium, The Netherlands, Luxembourg, Italy, Denmark, Iceland, Norway and Portugal. By this treaty the signatory powers undertook to "maintain and develop their individual and collective capacity to resist armed attack" (Article 3) and agreed "that an armed attack against one or more of them in Europe or North America* shall be considered an attack against them all" (Article 5).¹⁰ Under the terms of this agreement a North Atlantic Treaty Organization was established which proceeded to organize in Western Europe, with the active participation of the United States, the United Kingdom, and Canada, an integrated military force designed to resist further Communist aggression.

11. While the military organization of NATO was still only in embryo form, the general international situation was further embittered and the western powers further alarmed when on 25 June 1950 the Communist government of North Korea launched an attack on the Republic of South Korea. This was the beginning of a conflict in which Canada was to play an active part and which was to have a material effect upon her defence policies.

GENERAL AIMS OF CANADIAN DEFENCE POLICY
BEFORE THE KOREAN WAR

12. At the beginning of the Cold War the declared aims of Canadian defence policy were threefold. On 24 June 1948, the Minister of National Defence had summarized them in the House of Commons as follows:

...the fact is that by themselves our forces could never deter the Russians, nor in a general conflict could they deliver a knock-out blow. What we want are forces which can defend Canada and enable us to play such part as parliament and the people may support in any efforts for common defence with other countries.

Against this background it is now possible to set down Canada's present defence aims and objectives. They are: (1) to provide the force estimated to be necessary to defend Canada against any sudden direct attack that could be or is likely to be directed against it in the near future; (2) to provide the operational and administrative staffs, equipment, training personnel and reserve organization which would be capable of expansion as rapidly as necessary to meet any need; and (3) to work out with other free nations plans for joint defence based on self-help and mutual aid as part of a combined effort to preserve peace and to restrain aggression.¹¹

*This limiting of the area in which an attack would entail an allied reaction ensured that NATO members would not be committed to military action in defence of the colonial interests of any of the signatory powers.

13. In evolving these aims and assessing their relative importance, the factors which had to be considered included the geographic position of Canada, the military capabilities of aggressors, the disposition of friendly nations, the general international climate, and the progress or anticipated progress of various weapon developments.¹² At this time, moreover, it was the generally accepted view that any attack on North America would necessarily be diversionary in nature and that, even if the Soviet Union should be able to mount such limited diversionary attacks upon the United States, atomic weapons were unlikely to be used against many targets in Canada.¹³ Nevertheless, as late as 11 November 1949 the Minister of National Defence, expressing the consensus of military opinion at the time, could tell the House of Commons that, "any war [in which Canada would be involved] would be a world war involving all western peoples."¹⁴

14. In short, the official Canadian opinion as to the probable nature of a future war was that it would be fought primarily in Europe and that the major opponents would include both the Soviet Union and the United States. It was, therefore, only reasonable to suppose that Canada's role in such a conflict would not be too dissimilar from the part she had played in the Second World War. The great bulk of any Canadian contribution to an Allied military effort, in terms of either manpower or production, would be mobilized after the outbreak of hostilities, and the principal roles of the regular forces, initially at least, would be the territorial defence of Canada against diversionary attacks and the organizing and training of the forces called out on mobilization.

15. The result of this thinking was plainly reflected in the defence programmes of the time. During this period the specific defence projects which had been considered the most important were: the organization of the defence forces, officer training, the training of reserve forces, defence research, and the organization of Canadian industry with a view to defence.¹⁵ Since an attack on this country was considered feasible only by air or sea, the emphasis was naturally on those air force and naval equipments which were primarily defensive in nature. The stress placed on the aerial defence of Canada is illustrated by the fact that in 1948 the appropriations for the Royal Canadian Air Force and Fleet Air Arm were larger than those for either the Navy or the Army.¹⁶

16. Air defence was strengthened by the building of radar stations, the improvement of communications, and the acquisition of interceptor aircraft. The fighting portion of the Active Army was based upon a relatively small mobile brigade group, known as the Mobile Striking Force, which was intended to be airborne and air-transportable and whose principal role in time of war would be the elimination of enemy lodgements on Canadian territory.* Defence

*Airborne troops land by parachute or glider; air-transportable troops, equipped on a lighter scale than regular infantry, are carried and landed by aircraft.

was also emphasized in the naval programme where it was hoped to ensure the protection of Canadian shipping and Canadian coastal waters by various anti-submarine and anti-mine measures.¹⁷

17. Although the protection of Canadian territory was thus given the first priority, it was also intended that on a longer-term basis Canadian defence forces should serve as a nucleus for the development of Canada's maximum war potential. This, in turn, meant that a cadre of staff, administrative and training personnel had to be kept available. Prior to the Korean War there were some 45,000 personnel in the active forces, another 45,000 in the reserve forces, and 24,000 civilians employed by the Department of National Defence, principally in dockyards and shops. Thus, of a total of 114,000, there were 69,000 full-time employees, making the Department of National Defence the largest in the Government service.¹⁸

18. The deterioration of the international situation in 1948 brought about a sharp increase in Canada's defence spending, the cash appropriations for that year being \$275 million of which \$268,731,347 was actually spent.¹⁹ During 1948-49, \$22,000,000 was spent on aircraft; orders were placed for a transport ice-breaker, three anti-submarine vessels, four minesweepers and a gate vessel, costing in all \$48,000,000; \$10,000,000 was spent for vehicle replacement; and \$19,000,000 was expended for electronic communications equipment.²⁰

CANADIAN VIEWS ON THE MILITARY ORGANIZATION OF NATO

19. Measures such as these were designed to satisfy some of the country's immediate defence requirements, but now that the menace of Communist aggression was calling forth a collective defensive effort on the part of most of the western powers, much heavier defence expenditures could be expected in the future. Canada, which from the beginning had been a firm supporter of the principle of collective security, participated step by step in the planning and establishment of the North Atlantic Treaty Organization. The Canadian Chiefs of Staff, after a full discussion of the North Atlantic Military Organization, recorded their agreement on the following general conclusions:

In maintaining and developing individual and collective capacity to resist armed attack and to provide the strongest deterrent to any country which might wage aggressive war, the North Atlantic Military Organization must be basically strong. The Military Organization must be designed in such a way that:

- (i) it will have the full support of every member nation;
- (ii) its organization in peace will be such that it can become immediately effective in the event of war; and

- (iii) it will have the complete backing of the U.S.A., which country will be the main supplier of manpower and armaments.

To obtain the full support of every member nation and at the same time to ensure that the organization can take over, on behalf of all members of the North Atlantic Pact, the supreme direction in war, the Military Organization must be such that

EVERY NATION WHICH PROVIDES TROOPS OR FACILITIES MUST HAVE A VOICE IN THE PLANNING WHICH INVOLVES THE EMPLOYMENT OR USE OF ITS TROOPS AND FACILITIES.²¹
[upper case in original].

20. The problem of the collective defence of each NATO member was complicated by the relative geographic dispersal of the western group, but there was a strong hope that adequate western re-armament might act as a deterrent to aggression. Nevertheless the dictates of national self-interest made it apparent that the main features of any military plan devised by the member nations would have to cater, first to the immediate defence of any country which was attacked, and secondly to the subsequent development of an overall combined offensive strategy. The Canadian Chiefs of Staff concluded that:

The North Atlantic Military Organization must have as its main objective the development of a plan which, if war breaks out and the countries of the North Atlantic Pact are attacked, will eventually bring about the defeat of those forces which have violated the territorial integrity of any member country.

Such a military plan requires:

- (i) plans for the immediate defence of each country; and
- (ii) an overall plan, the successful development of which will result in the defeat of the enemy.

In order to carry out such a plan, forces necessary for the territorial defence of the countries of the North Atlantic Pact must be reduced to the minimum in order to provide the maximum forces to implement the overall strategic plan.

To provide the maximum forces for the implementation of the overall grand strategy and at the same time to provide adequate defence forces, it is essential to co-ordinate defence plans of the individual countries in order to make the greatest use of those forces allocated for defence.

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Those countries whose defence problems are of a similar nature, because of national interests or geographical location, must integrate their respective defence plans on a regional basis.

Military planning under the North Atlantic Pact must be developed

PRIMARILY ON THE BASIS OF REGIONAL DEFENCE WITH THE OBJECT OF UTILIZING THE MINIMUM FORGES FOR DEFENCE PURPOSES AND MAKING AVAILABLE THE MAXIMUM FORCES FOR THE DEVELOPMENT OF THE OVERALL STRATEGIC PLAN.²²
[upper case in original]

For Canada, of course, this meant that the defence of North America would have to be considered as a whole and that a regional defence plan would have to be worked out with the United States.

21. These basic strategical considerations form the framework for virtually all Canadian defence policy in the period we are here considering. Apart from Canada's participation in the Korean War, the regional defence of North America and Canada's contribution to NATO were this country's two major military commitments. They were, moreover, both commitments of a continuing nature, requiring longer-range planning and a more careful weighing of the factors involved than was called for in the case of Canada's support of the United Nations' forces in Korea. Even more important, both the regional defence of North America and the requirements of the Integrated Force for Europe were matters which affected Canada's security immediately and vitally. The history of Canadian defence policy between 1950 and 1955 is, therefore, largely the story of these two commitments which, although complementary, were nevertheless frequently in conflict and thus constantly required balancing and resolution. Any changes in Canadian defence policy in this period were caused either by alterations in the estimated time scales for the adequate fulfilment of these two objectives or by re-appreciations of the methods by which the two principal requirements could be satisfied.

22. It is, perhaps, interesting to note in passing that the Canadian Chiefs of Staff strongly urged that the military organization of the North Atlantic Treaty should be located in Washington. Their reasoning, as recorded in the record of their discussions, ran as follows:

Success in achieving the objectives of the North Atlantic Treaty will depend directly on United States support; U.S. support will, in turn, depend on the interest of the American population in the North Atlantic organization. This interest must be ensured by bringing the North Atlantic Military Organization into the United States, where public opinion will be duty-bound to support it.

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As the North Atlantic Military Organization will be required to develop an overall strategic plan and will also be required to assist in the development of the regional defence plans, the organization must not be set up at the headquarters of any regional defence organization, where it would be difficult to maintain a detached view from the immediate regional defence problems.

Any arrangements whereby the military organization of existing regional defence groups, such as Western Union, augmented by representatives of other countries, would be used to fulfil the function of the North Atlantic organization, is wholly unacceptable.

In the view of the Canadian Chiefs of Staff, THE MILITARY ORGANIZATION OF THE NORTH ATLANTIC TREATY MUST BE LOCATED IN WASHINGTON.²³
[upper case in original]

THE CANADIAN DEFENCE ORGANIZATION

23. Throughout the period under review Canada's overall defence policy may conveniently be considered as being exercised at three levels, which were the national, the Regional Defence, and the NATO level. In many ways the first of these was, of course, the most important, for apart from the continual day-to-day administration of the nation's defence effort, the Canadian Government was responsible for a purely national defence policy which embraced and co-ordinated all the defence commitments which Canada might make to her allies. A brief explanation is therefore required of the governmental and Service organizations which formulated policy at the national level.

24. In 1922 the Department of National Defence Act had centralized the control of all Canadian defence forces in one department under one Minister of National Defence. A Defence Council, originally composed of the Minister of National Defence, the Deputy Minister, the Chiefs of Staff, and (as associate members) the Adjutant General, the Quartermaster General, the Master General of the Ordnance, and the Judge Advocate General, began to function in 1924.²⁴ In September 1940 the Defence Council was reorganized to include, under the chairmanship of the Minister of National Defence, the Associate Minister and Ministers for Naval Services and Air Services as vice-chairmen, as well as the Deputy Ministers of the three services as members. Throughout the war the Defence Council proved an effective instrument of inter-service coordination, although high military policy was normally decided by the War Committee of the Cabinet.²⁵

25. The War Committee of the Cabinet was established on 5 December, 1939 by combining the Canadian Defence Committee (Defence Committee of the Cabinet) which had been formed in 1936 and the Emergency Council (Committee on General Policy) which had been instituted on 30 August, 1939. The War Committee of the Cabinet, presided over by the Prime Minister and containing as members the three service ministers and other senior members of the Government, was not a "War Cabinet" and remained nominally subordinate to the Cabinet itself, but, because of the prestige of its members and the circumstances of the war, it became the effective wartime Government of Canada. The War Committee held its last meeting on 11 April 1945, to be replaced in August of the same year by the Cabinet Defence Committee. Since January 1947 the Cabinet Defence Committee has normally been presided over by the Prime Minister with the Minister of National Defence as vice-chairman. During the period under review the committee membership included the Secretary of State for External Affairs, the Ministers of Finance, Justice, National Health and Welfare, and Trade and Commerce, and the Associate Minister of National Defence.²⁶ Also in regular attendance at Cabinet Defence Committee meetings were those officials who normally attended Chiefs of Staff Committee meetings -- the three Chiefs of Staff and the Chairman of the Defence Research Board, the Deputy Minister of National Defence, the Under-Secretary of State for External Affairs, the Deputy Minister of Finance, the Associate Deputy Minister of Trade and Commerce having to do with defence procurement matters, and the Secretary to the Cabinet.

26. Then as now, the Cabinet Defence Committee dealt with all matters of Canadian defence policy which were not exclusively the concern of the Department of National Defence. The Minister of National Defence was responsible for the control and management of the three Services, the Defence Research Board, and all matters relating to national defence (except civil defence which, during the period under review, passed to the Department of National Health and Welfare), and for the construction and operation of all defence establishments and works. A Deputy Minister was responsible for departmental administration, including finance, logistics, personnel, and administration. The Chiefs of Staff Committee, which consisted of the Chiefs of Staff of the three Services, the Chairman of the Defence Research Board, and a Secretary, "advised the Minister of National Defence and the Cabinet Defence Committee on matters of defence policy and prepared strategic appreciations and military plans as required. It was responsible for co-ordinating the efforts of the Armed Services in fulfilment of a single defence policy and for overall policy direction of joint Service organizations, establishments, and operations." When matters involving other than purely military considerations were under discussion, the Chiefs of Staff Committee meetings were normally attended by the Deputy Minister of National Defence, the Secretary to the Cabinet, the Under-Secretary of State for External Affairs and other appropriate civil officials.

27. A joint committee system provided the necessary link between the Chiefs of Staff Committee and the individual Services. After the war the Defence Council, which was now composed of the Minister of National Defence as chairman, the parliamentary assistant to the Minister, the three Chiefs of Staff, the Chairman of the Defence Research Board, and the Associate Deputy Ministers, met only irregularly to discuss administrative matters. The Defence Council gradually took on the complexion of an administrative committee, concerned with deciding such inter-service problems as tri-service schools, integration, common cloth for uniforms, and pay and allowances. The Chiefs of Staff Committee (with the Minister in the chair) decided operational matters. During the period under review many of the former inter-service functions of the Defence Council were performed by the Chiefs of Staff Committee. In each of the services, the chief of staff, the vice-chief of staff and the heads of branches comprise a body (the Army Council, the Naval Board, and the Air Council) for the formulation of service policy and for the co-ordination of the branches and department of the service.

28. In June 1951, the Deputy Minister's Office, the civilian administrative organization which assists the Minister in the exercise of his responsibilities, and the function of which is primarily to advise the Minister on administrative and financial matters, was reorganized and enlarged to accommodate the expansion of the three Services. The position of Associate Deputy Minister (Special Duties) was retained, and a new post of Associate Deputy Minister (Overseas) was created to handle problems arising from the greatly increased activity of the armed forces serving in the United Kingdom and Europe. This official and his staff were located in London, England.

29. The Assistant Deputy Minister (Finance) continued his function of maintaining a common financial policy for all three Services and of reviewing expenditures to ensure financial control and maximum economy, while the Assistant Deputy Minister (Administration and Personnel) was responsible for personnel and administrative matters. In addition to these positions, an Assistant Deputy Minister (Requirements) was appointed to review the procurement of equipment, its scale of issue, the introduction of new designs, proposals for new construction, alterations to existing accommodation and related matters. Before the expansion of the three Services, these duties had formerly been included in those of the Assistant Deputy Minister (Finance).

30. Each of the branches of the Deputy Minister's Office - Finance, Requirements, Personnel and Administration - enlarged its organization on a functional basis to facilitate the performance of its duties. The Financial branch included sections for departmental estimates, service establishments, pay and allowances, and auditing as well as the general overall problem of finance; the Requirements branch was constituted of three sections: general requirements, equipment requirements, and engineering and construction; and the Personnel and Administration branch included sections for civilian personnel, central registry, office services, civil organization, and the departmental library. To advise the

Deputy Minister on real estate problems a new position of Real Estate Adviser was established, and in 1953 this position became that of a fourth Assistant Deputy Minister. Another new position created at this time was that of Chief Secretary. This official was responsible for the Committee Secretariat, which services part of the departmental inter-service committee structure in addition to inter-departmental committees, and for the Parliamentary Returns section which was responsible for answering Parliamentary inquiries as well as for the preparation of the Annual Report and White Paper.²⁷

31. Early in 1953 when the appointment of an Associate Minister of National Defence was announced to the House of Commons, the Prime Minister explained the policy underlying this appointment as follows:

...a number of countries at the present time have, in addition to an overall minister of national defence, a minister for each of the three Services, the navy, the army and the air force. That is the situation, I understand, in the United Kingdom, in the United States, in France and in Australia...* We have, however, considered it preferable in Canada to stress unification of the services for purposes of administration under the control of a single minister, a single department and a single deputy minister. We believe that our system has demonstrable advantages for this country, and that the appointment of separate ministers for each of the three Services would be a retrograde step... In consequence of the course we adopted we have, I believe, gone as far to bring unification and co-ordination to the armed forces as have any of the free countries. While that is so, additional ways of developing unification and co-ordination still further are the subject of constant consideration.²⁸

THE GOVERNMENT'S APPROACH TO TRI-SERVICE PROBLEMS

32. Although on numerous occasions after the Second World War Government spokesmen did not hesitate to imply that the eventual unification of the armed forces might be desirable,²⁹ the immediate policy of the Canadian Government favoured a much less drastic and more gradual course. Yet the closer co-ordination of the Canadian defence effort and of at least the administration of the Canadian armed forces was an aim for which the Government had long striven,³⁰

*It might be noted, however, that under the British system the First Lord of the Admiralty, the Secretary of State for War, and the Secretary of State for Air, unlike the Minister of Defence, are not members of the Cabinet.

and during the period 1950-55 some progress was made in the achievement of this objective. Among the benefits which the Government had hoped would accrue from its policy were the following:

- (1) the adoption of a unified defence programme to meet agreed strategic needs;
- (2) a single defence budget under which funds and resources could be allocated in accordance with the programme;
- (3) the elimination of duplicatory and even competing services;
- (4) consistent and equitable personnel policies;
- (5) greater emphasis on defence research and closer co-ordination with other Government departments and with industry.³¹

33. The first definite move in this direction had been taken late in 1946 when a single Minister of National Defence had been appointed to be responsible in parliament for the entire Department of National Defence.³² Then, in 1947, in a further step towards the closer drawing together of top-ranking officials concerned with defence, the National Defence College had been established at Kingston for instructing senior members of all three Services and the civil service in defence and security matters of an advanced nature. The following year, too, both the Royal Military College at Kingston and the Naval and Air Force Cadet College at Royal Roads, B.C., became Joint Services Colleges.³³ In addition, various joint training exercises were held during the period under review, sometimes in co-operation with American forces;³⁴ the Directorate of Inter-Service Development worked towards standardization of operational clothing and equipment within the three Services and with the armed forces of the United States and the United Kingdom;³⁵ the Canadian Joint Air Training Centre at Rivers, Manitoba, concerned itself with the joint employment of air and ground forces; and a Training Film Bureau, a Bureau of Current Affairs, a Canadian Armed Forces Identification Bureau, and a Directorate of Public Relations were organized on a tri-Service basis.

34. In the summer of 1952, the Joint Planning Committee recommended that Joint Service Committees for Eastern and Western Canada should be established. These committees, which would consist of the Flag Officer Eastern (Western) Coast, the G.O.C. Eastern (Western) Command and the Air Officer Commanding Air Defence Command, would provide Canadian Service commanders concerned with the defence planning for Eastern and Western Canada with the opportunity of meeting and discussing inter-related defence and administrative problems and would co-ordinate Canadian operational plans for the defence of these areas with American plans for the defence of adjacent areas. When they came into being, these committees were known as the Joint Service Committee Atlantic and the Joint Service Committee Pacific, but they did not possess any executive authority.³⁶

35. When, in February 1951, Lieut.-General C. Foulkes was appointed to the new post of Chairman of the Chiefs of Staff Committee, this was hailed as another move towards the Government's avowed goal of maximum Service integration! Speaking in the House of Commons at the time Lieut.-General Foulkes assumed his new duties, the Minister of National Defence outlined the responsibilities of the appointment as being: "to act as chairman of the Chiefs of Staff Committee, which consists of the chiefs of staff and such other persons as the minister may designate; to co-ordinate training and operations of the Canadian forces; to perform such other duties as may be assigned to him by the minister."³⁷ Moreover, General Foulkes was the Canadian Military Representative in the North Atlantic Treaty Organization and was responsible for co-ordinating all military NATO matters and for acting as Military Adviser to Canadian NATO delegations!

36. Appropriately enough, one of the first tasks of the new Chairman Chiefs of Staff was to examine and recommend to the Minister, through the Rank Structure Committee, a comparable rank structure for the three Services, relating to the increase in ceilings which had just been granted. In particular, this involved the consideration of the responsibilities and functions of the senior ranks and an examination of the problems of comparable careers in the three Services.³⁸

37. A basis for standardization of personnel policies for the three Services had been effected when early in 1950 a new National Defence Act was introduced in the House of Commons and received the Royal Assent on 30 June. Sections 1, 211, 248, 249 and 250 of the Act came into force upon that date, and additional sections were made effective by three proclamations by the Governor in Council on 1 August 1950, 7 August 1950, and 1 February 1951. The remaining sections were proclaimed on 1 September 1951. This single act dealt with all matters relative to defence and provided a common disciplinary code for all three Services. Its enactment meant that Canadian defence matters were, for the first time, handled entirely by the Canadian Parliament and dealt with in a single comprehensive statute applicable to all three Services. It also epitomized the process of unification, integration and co-ordination that had been taking place in the Department of National Defence since 1946.³⁹

38. The new Act comprised three main divisions, one dealing with organization, one with the code of service discipline, and one with general law respecting defence. The section on organization was notably brief, leaving a great deal to the discretion of the Minister. Provision was made for the appointment, during an emergency, of not more than three additional or three Associate Ministers of National Defence. Previously both the Army and the R.C.A.F. were respectively regulated in matters of discipline by the Army Act and the Air Force Act of the United Kingdom, these acts having been legally incorporated into the Canadian Militia Act and R.C.A.F. Act. Now, with the new National Defence Act, British legislation no longer applied.

39. The Canadian Forces Act, 1950, amended the National Defence Act and also included special provisions concerning persons serving in the Special Force in respect to pensions and veterans benefits. In addition to this Act, The Defence Services Pension Act, formerly known as the Militia Pension Act, was substantially amended during 1950, and regulations dealing with disciplinary⁴⁰ proceedings under The National Defence Act were also prepared.

40. As we have already seen, many of the Government's objectives in regards to gradual Service unification were in fact achieved by the end of 1955. There was a single defence budget; defence research had expanded very considerably; duplicative services had to some extent been eliminated; and with the passing of the National Defence Act and the Canadian Forces Act in 1950, equitable personnel policies had been established for the three Services. Furthermore, although the first of the Government's declared aims, "the adoption of a unified defence programme to meet agreed strategic needs", was in actual practice the hardest to implement, some progress had been made even here. And if there proved to be little real agreement about basic strategic needs, it was nevertheless possible, by compromise under the committee system, to arrive at a unified defence programme. During the period 1950-55 many decisions were taken which were unpalatable to one or other of the individual Services. This, as we shall see, was the case in matters of officer production, the control of anti-aircraft guided missiles, the role of the Mobile Striking Force, the future of naval aviation, and the continued development of distinctively Canadian aircraft. To some extent all these represented compromises within the Chiefs of Staff Committee. Yet in the fundamental matter of agreed strategic needs, the Canadian Services during this period came gradually to see that their individual policies and beliefs, instead of drawing closer and closer together, were in fact becoming increasingly divergent. The basic point of disagreement concerned Continental Air Defence and the huge expenditures which the Air Force demanded for the implementation of its programme. Through the budget, the Continental Air Defence Programme made its effects felt throughout the entire structure of all three Services, but of almost equal importance was the fact that the R.C.A.F.'s concept of air defence directly influenced civil defence, army organization and establishments, and the role of the Mobile Striking Force. At least during the period under review, these divergent views were never reconciled and the "unified defence programme" was based far less on agreement than upon the necessity of working within budgetary limitations.

THE INITIAL CANADIAN REACTION TO COMMUNIST AGGRESSION IN KOREA

41. Prior to the outbreak of the Korean War, however, all this lay in the future. The early part of 1950, like the latter part of 1949, saw only an evolution in Canadian defence policy along the lines which had already been determined by the Canadian commitments to NATO. Regional defence discussions were held with United States authorities, and the planning of the Canadian contribution to an Integrated Force continued. Co-ordination of inter-Service plans was made easier during this period by the establishment of a joint staff and secretariat to serve the Chiefs of Staff Committee.⁴¹

42. Perhaps the major policy decision to be taken during the early part of 1950 was that which permitted the Royal Canadian Navy to continue the operation of naval aviation. This was not done without strong objections from the Royal Canadian Air Force, but, after considerable discussion, the Chiefs of Staff Committee (with the Chief of Air Staff dissenting) recommended to the Cabinet Defence Committee that naval aviation be continued. In this the Chiefs of Staff were influenced by several considerations. The Royal Canadian Navy was then actually operating an aircraft carrier; it possessed an aviation shore establishment and trained personnel; and moreover, the R.C.N. was in a position to obtain a number of Avenger aircraft from the United States at comparatively low cost. Nevertheless a rider was added to the Chiefs of Staff's recommendation to the effect that this decision should be reviewed before any major rearmament of the carrier was considered.⁴²

43. However, such considerations as these were soon to be relegated to the background as the entire outlook for national defence changed radically with the outbreak of the Korean War. The assumption, which had seemed reasonable only a short time before, that the only war in which Canada would be involved would be a total war, was now seen to be invalid. Canadian defence policy had therefore to adapt itself to the one eventuality against which no plans had been made.

44. In actual fact this was done without too much difficulty, and before the war in Korea was many weeks old Canadian defence forces were being employed in active operations. On 5 July 1950, the Royal Canadian Navy sent three destroyers to Korean waters to support the United Nations forces; on 29 July, No. 426 R.C.A.F. Transport Squadron was transferred to Tacoma, Washington, to provide assistance in the airlift to the Far East;⁴³ and the Canadian Army began to plan for the employment of Canadian ground forces in the Korean theatre. On 7 August it was announced that the Government had taken a decision to raise an additional brigade group, to be known as the Canadian Army Special Force, for service in Korea.⁴⁴

45. In the course of discussion in the House of Commons during the passing of the Canadian Forces Act, which provided for placing Canadian special forces on active service, the Prime Minister, Mr. St. Laurent, clearly outlined the terms of reference for such forces. He said in part:

The intention of the government is that if any other service should be required of this special force, which of course is not being created solely because of the Korean incident, if any police action, for instance, that has a warlike character should be required of it, elsewhere than Korea, the government of course would have to make its decision, but it would immediately call parliament, make that decision known and leave it to parliament to approve or disapprove of it. I think that is the only way the Canadian

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people would feel they were getting the protection they expected from their representatives... The purpose of this bill is to make it possible to put Canadian forces on active service for the implementation of international obligations resulting from the charter of the United Nations, when such obligations have been recognized by us here in parliament as morally requiring fulfilment. It is also to enable us to put Canadian forces on active service for the implementation of obligations arising under the North Atlantic treaty, because they are obligations that have been incurred with the consent of the Canadian people through their representatives here.⁴⁵

46. Yet in spite of the natural alarm caused by outright Communist aggression, Washington, London, and Ottawa did not at first really believe that the Soviet Union was any more ready to precipitate a general war in 1950 than at any time in the past. Other considerations than the imminence of total conflict were the chief concern of Canadian military and political leaders. One problem arose from the need of employing relatively large numbers of American ground troops in this distant Asian theatre in order to hold and repel the North Korean invaders. This in turn had two unfortunate results: it retarded the development of western military potential in Europe and greatly weakened the forces available for the regional defence of North America. So long, however, as the aggressor forces in Korea consisted only of the North Koreans, Western leaders had few misgivings as to the eventual outcome of the conflict, and although the international situation had, of course, gravely deteriorated, they did not believe a general war to be an immediate probability. In the middle of July 1950 the Canadian Chiefs of Staff discussed the military implications of the international situation. The minutes of the meeting record that:

General Foulkes tabled views and information on possible future progress of the war in Korea, and gave the estimate that six United Nations divisions would be required to drive the well-equipped and trained North Koreans from South Korea.

He portrayed in detail the very serious shortages of manned, equipped and trained ground formations in being within the U.N. member countries, and pointed out the factors which denied redeployment or reduction of ground formations as now disposed outside of member countries in the troubled and danger spots; e.g., Germany, Japan and Malaya. He estimated that the additional divisions necessary to drive back the North Koreans could be found only in continental U.S.A. in time to begin the U.N. offensive phase of the Korean War during September. Such

withdrawal of ground forces from the United States would practically denude the country; and it would require many months even with partial or full mobilization, to man, equip and train reserve and new divisions. He therefore drew two main conclusions:

- (a) whether or not reaction to the U.S.S.R. move in Korea was accurately forecast by the U.S.S.R., the latter would recognize the complications and would undoubtedly exploit them. The U.S.S.R. had the initiative at this time; and
- (b) the United Nations military position would reach its lowest point about September, 1950; i.e., after U.S. ground forces have been very largely withdrawn from continental U.S.A. and committed to the U.N. offensive in Korea; and hence would be in a position of maximum vulnerability, and thus of danger, for several months after September, 1950.⁴⁶

47. Yet in none of this was there ground for believing that the Soviet Union was willing to become directly engaged in fighting. The military potentialities of the situation were unpleasant and it could be expected that the Soviet Union would reap what profit she could from this fact, short of waging war. Still, the Canadian Chiefs of Staff were agreed that the pressing nature of the Korean problem should not be allowed to obscure the more important matter of general military preparedness on a longer term basis.⁴⁷

48. Nevertheless, although a major war was not believed imminent, the general worsening of world conditions obviously made it important to accelerate Canada's defence programmes still more drastically. At this time the Royal Canadian Navy decided, among other measures, to increase the state of readiness of Canadian seaward defences, bringing additional ships up to war complement and expediting the rearmament programme on nine Tribal class destroyers. The Canadian Army took steps to bring the units of the Mobile Striking Force up to full establishment strength and to increase anti-aircraft defences. Recruiting for the Special Force to be sent to Korea began in August and the objective of 10,000 men was soon reached.⁴⁸ The majority of the 10,000 additional soldiers who had been recruited were organized into the 25th Canadian Infantry Brigade Group, which also included some 1300 officers and men of the Active Force. The remainder of the new recruits were trained as reinforcements. The Royal Canadian Air Force decided to acquire additional fighter aircraft, to increase production of the F86 interceptor, to enlarge the establishments of its maritime and transport squadrons, and to proceed with the construction of additional radar sites. The Defence Research Board notified the Government that it would require more scientific staff for an accelerated research and development programme.⁴⁹

In a sense this decision was a reversal of the aims of Canadian defence policy, for henceforth, instead of concentrating primarily on the provision of a deterrent force and only secondarily preparing for a major war, the latter aim now took precedence. A great acceleration of Canadian defence preparations resulted and a new sense of urgency became apparent in the attainment of defence goals. In the long run, the sharp reaction of NATO members, and especially of the United States, to the Communist challenge would result in an improved western defence organization, but until measures to implement defence programmes had time to be effective there would be a period of grave risk.

52. Largely as a result of these developments, Canada, in common with other NATO members, agreed to speed up and increase her defence efforts.⁵⁴ At the Brussels Conference held in December 1950, the North Atlantic Council and the defence ministers of the NATO nations completed arrangements to establish the Integrated Force in Europe; appointed General Dwight D. Eisenhower as Supreme Commander Allied Powers in Europe; and pressed forward with plans to re-arm Western Germany.⁵⁵

53. To implement Canada's pledge to NATO, the Chiefs of Staff Committee recommended to the Cabinet that legislation be enacted for national registration and that plans be completed for the effective use of manpower in total war; that preparations for placing industry on a wartime footing should be accelerated; that the full Canadian commitments under the NATO Medium Term Plans be met; and that the existing ceilings for the armed forces be removed. Specifically, the Royal Canadian Navy requested several additional destroyer escorts over those already approved, the refitting of some craft in strategic reserve, the provision of patrol craft for the seaward defence of harbours, and the raising of the Royal Canadian Navy's strength to 23,000, and of naval reserve strength to 12,000. The Canadian Army recommended the speeding up of the conversion programme from United Kingdom to United States equipment, the manufacturing in Canada of American types of armament and ammunition, and the adoption of the American type 90 mm. anti-aircraft gun to replace the 3.7-inch. The Royal Canadian Air Force requested authority to obtain 350 additional F86 interceptors and permission to form schools for basic flying training, advanced flying training and air navigation. The Defence Research Board recommended an expansion of research and development facilities and the completion and progressive implementation of plans for the mobilization of scientific and technical manpower in war. In addition, recommendations were also made to lengthen the training period of the reserve forces and to stimulate their recruiting and re-engagement.⁵⁶

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THE EFFECT ON CANADIAN DEFENCE POLICY OF CHINESE
COMMUNIST INTERVENTION IN KOREA

49. In the summer of 1950 the revised Canadian defence programme was still in the main aimed at preparing Canada for possible involvement in a general war, the risk of which had indeed increased perceptibly, but which was still thought unlikely to occur in the immediate future. However, late in 1950 the international situation took another very serious turn for the worse with the entry on 1 November of large numbers of Chinese "volunteer" soldiers into the Korean War.⁵⁰ Now for the first time the United Nations forces were opposed by the military strength of a great power, but even more important than this, and destined to have a greater effect on Canada's defence policy, was the view soon to be adopted by both British and American senior military advisers that the Soviet Union now seemed prepared to risk a general war.⁵¹ At a meeting at the close of the year the Canadian Chiefs of Staff took a very grave view of the situation. The Chief of the General Staff reported that:

...in the opinion of the United States, the Communists, as indicated by their actions in Korea, now seemed prepared to risk precipitating a general war. The United Kingdom War Office and the Pentagon were agreed that, whereas 1954 had previously been considered the danger period, this could now be accepted as lying within the next eighteen months.⁵²

50. This, of course, was a view of the international situation which was bound to have the most serious repercussions on military planning. Whereas in the past Canada had been intent upon producing defensive forces which, it was hoped, would be a deterrent to war, it now became necessary to plan against a possible outbreak of total war itself. This eventuality naturally gave rise to problems concerning the allocation of manpower and the preparatory legislation which would be necessary to effect this, as well as raising the question of what methods would best prepare industry for a transition to wartime activities.

51. After further discussion, the Chiefs of Staff agreed that since they

...could find no evidence to refute the U.K. and U.S. view as to the likelihood of war breaking out within the next eighteen months, therefore the hope of achieving an integrated defence force in Europe for the purpose of deterring a general war might be unattainable in the shortened time available. Canada's planning and action should therefore be based on preparations against the condition of a total war while continuing to support the provision of deterrent forces.⁵³

54. The Minister of National Defence announced Canada's new defence programme in the House of Commons on 5 February 1951. Planned to expand over a three-year period and to cost approximately five billion dollars, the programme called for the provision of nearly 100 ships in the Navy, 40 regular and auxiliary squadrons in the Air Force, and the equivalent of over a division in the Army, as well as the administrative and training establishments and equipment which would be necessary to meet the initial demand of mobilization.⁵⁷

THE CANADIAN MILITARY CONTRIBUTION TO NATO

55. Although the focal point of the increased tension between the Communist bloc and the West had proved to be Korea, there was general agreement among NATO members that Europe remained the decisive theatre. On 26 January 1951, only a few days before the Minister's announcement of Canada's new defence programme, General Eisenhower, the Supreme Commander Allied Powers in Europe, had attended a special meeting of the Canadian Chiefs of Staff Committee in Ottawa, where he had stressed the urgent need of sending military aid to Europe. He had argued that in order to resist Communist aggression, European morale would have to be raised quickly, and that since the time of greatest crisis lay in the immediate future, military contributions sent to Europe at once would have considerably more effect than would the same contribution in a year's time.⁵⁸

56. Canada was quick to respond to this appeal, the more so, no doubt, because the Canadian Army had already decided to replace much of its equipment with newer United States types. The Canadian Government's policy was that offers for the provision of military equipment or training facilities to NATO countries should be made through the NATO organization rather than on a bi-lateral basis.⁵⁹ Through NATO Canada had already supplied to the Netherlands enough United Kingdom-type armament and ammunition to equip a division, and now, on the advice of the Standing Group, Canada delivered a similar amount of armament and ammunition to Belgium in March 1951.⁶⁰ Luxembourg received enough Canadian 25-pounder guns to equip an artillery regiment; Canada agreed to supply equipment and ammunition for a third division to Italy; and arrangements were made to transfer 3.7-inch anti-aircraft guns to various European countries as they were replaced in Canada by the American 90-mm. gun. In addition, Canada began manufacturing radar and wireless sets for supply to NATO members.⁶¹ Until some time in 1953 most of the equipment which Canada transferred to other NATO countries came from Service stocks, but from 1953 on an increasing proportion was supplied from current Canadian production.⁶² (It is, perhaps, of interest to note in this connection that the Canadian Army's policy on the stockpiling of equipment was that it would stockpile those items which were immediately required on mobilization and any equipment whose "lead time", or the time between ordering and delivery, was in excess of twelve months.)⁶³ The Royal Canadian Air Force worked out a plan for the training of NATO aircrew in Canada,⁶⁴ and in 1951 this country increased its Air Force training facilities so that an annual total of 1400 airmen could be trained for other NATO

countries.⁶⁵ During 1954 Canada completed the transfer of 370 F86 Sabre aircraft to the United Kingdom, paying about 70% of the total cost while the United States contributed the engine and certain other equipment.⁶⁶ A further 54 F86-E Sabre aircraft were allocated to Greece and Turkey. By the spring of 1955 the Canadian Mutual Aid Programme to the non-North American members of NATO had cost an estimated total of \$1,100,400,000.⁶⁷

57. Canada, however, was prepared to contribute personnel as well as equipment to the Integrated Force in Europe. In May 1951 a Canadian officer was assigned permanently to Supreme Headquarters Allied Powers in Europe (SHAPE),⁶⁸ and in the same month it was announced that the Canadian Army's contribution to the Integrated Force in Europe should consist of an infantry brigade group which was scheduled to reach Germany late in the year.⁶⁹ This brigade group was to have a strength of approximately 6000 men, but an additional 4000 would have to be raised and trained in Canada as replacements.⁷⁰

58. Since the overall economic situation in Canada was better than it had been in 1939 and the incidence of employment higher, it was anticipated that some difficulty might be experienced in recruiting large numbers of additional personnel for the armed forces. Even in 1950, indeed, the Minister of National Defence had expressed concern at the high percentage of applicants for enlistment into the Services who were being rejected and had advocated a downward adjustment of entry standards. At that time General Foulkes had suggested that it would be possible to recruit at least a brigade from volunteer "soldiers of fortune", if on their enlistment the men were given a firm understanding that they would be despatched overseas for active service. He had recommended, however, that the term of engagement should be limited to 18 months since the Army did not wish to retain "soldier of fortune" type of personnel as regular soldiers.⁷¹ As we have seen, the 10,000 men required for the Korean Special Force had been forthcoming, but now, with the recruitment of another brigade group, the problem recurred. In actual fact, however, the Army was able to achieve a net increase of 14,292 personnel during the fiscal year 1951-52.⁷²

59. The Canadian Army's commitment to NATO called for one infantry brigade group to be stationed in Europe by the end of 1951, and for two infantry divisions to be provided in case of war, the first to arrive by D plus 90 and the second by D plus 180. In the summer of 1951, however, the Standing Group* requested that Canada provide both these divisions by D plus 30. Considering the shipping facilities which were likely to be available on the outbreak of war, this request did not appear acceptable to Lieut.-General Simonds, the Chief of the General Staff, who suggested that it would be more realistic to send a division to Europe prior to D Day and then to send a second division by D plus 30. He also

*The executive, nominated by the Chiefs of Staff of the United States, the United Kingdom, and France, of the Military Committee of the Chiefs of Staff composed of all NATO members.

pointed out that, in view of the Canadian economy and the manpower situation in this country, it might be preferable to send two armoured divisions instead of two infantry divisions.⁷³ In the event the Government did not adopt these suggestions of the Chief of the General Staff. The Canadian Army's contribution to the Integrated Force in peacetime remained a brigade group, and the divisional commitment for war continued to be for infantry formations. However, during the latter part of 1953 the 1st Canadian Infantry Division was formed to meet Canada's NATO commitments. Two-thirds of this division remained in this country, while the remaining third, of brigade group strength, became the Army's contribution to the Integrated Force in Europe.⁷⁴

60. Long before this development, however, one of the most important matters which Canada had to decide, in conjunction, of course, with the NATO military leadership, was how the Canadian portion of the Integrated Force in Europe should be grouped. The proportion of Canadian forces being so small, considerations of logistical economy made it necessary for the Canadian forces to be placed under the command of either British or United States commanders, but there were sharp differences of opinion within the Chiefs of Staff Committee as to which of these two alternatives was preferable. At a meeting of the Chiefs of Staff Committee on 14 August 1951, consideration was given to a paper written by General Foulkes, the Chairman, on the subject of the grouping of the Canadian contributions to the Integrated Force in Europe.

61. In this paper, the Chairman Chiefs of Staff stated that:

...it was impractical to maintain separate Canadian lines of communication. Maintenance and supply were the most important factors in the question under discussion.

Under the existing policy of re-equipping with American equipment it was most difficult to visualize a Canadian Brigade being maintained by a British L of C on a per diem rate. During the last war when the Canadian Army was completely on U.K. types (except for clothing) it was necessary to maintain a fairly large group of Canadian Ordnance in the U.K. depots to ensure the Canadian troops were maintained.

While it was true that in the past we had used the U.K. command system, training methods and tactics, it had long since been realized that sooner or later we must be capable of fighting with U.S. forces, if Canada should be attacked. We have constantly urged the adoption of a unified system of command and training. This would probably be produced by SHAPE. There was a great deal to be said for Canadians learning more about U.S. methods and perhaps urging the Americans to adopt certain U.K. methods which we consider better than the former.⁷⁵

62. The Chairman's paper went on to remind the Committee that the original concept -- which had already been presented to the Cabinet Defence Committee -- was for a Canadian Brigade Group or Regimental Combat Team to be stationed in Germany under United States Command. The United States was to maintain this formation as though it were an American one, providing all the facilities required, including American rations, use of P.X. ("Post Exchange": American armed forces canteens and shopping centres), training ammunition, and complete maintenance on a per diem rate. The concept was that no Canadian maintenance group would be required, but that certain distinctively Canadian articles such as uniforms would be placed in the American pipeline. Dealing next with the view, which had been expressed by General Simonds, that Canada should seek to counteract American preponderance in NATO, the Chairman Chiefs of Staff indicated

...that the concept of balance of power within NATO was not agreed with. The Canadian position within NATO must be judged on the merits of each case and not on any idea of acting either for or against the U.S. The main reason for U.S. domination in NATO was because it was the one country who could afford at this time to assist the others by reason of her internal strength and prosperity. It should therefore behoove the one country who does not need U.S. help (Canada) to always strive in any way she can to merge and reconcile the difference of points of view that may arise from time to time within a particular group of nations, but considering and deciding our course of action on each problem as it arose, on its own merits. If there was a divergence of opinion between two major factions, we should do our best to bring together the two points of view. On the basis of experience it had been found that the best way to assist the other NATO countries, especially the smaller nations, was by maintaining our entirely independent position and not aligning ourselves with either of the greater powers.

If the factors raised by the Chief of the General Staff were considered to outweigh the disadvantages of trying to maintain a Canadian Brigade on U.S. equipment in the British Zone, it was recommended that consideration be given to reversing the decision to adopt U.S. equipment and revert to U.K. types.⁷⁶

63. These views, however, were not shared by General Simonds who went on record as strongly favouring the grouping of Canadian armed forces in Europe under United Kingdom rather than United States command. Basically his argument was in two parts, of which the first was concerned entirely with political factors. He pointed out that

...he strongly favoured the grouping of Canadian armed forces allocated to the Integrated Force in Europe under a U.K. rather than a U.S. command. While this recommendation applied principally to the Army it seemed that it would be advantageous in many respects if both the Army and the RCAF contribution to NATO in Europe were similarly grouped. The latter was not imperative, however, as present Army plans to cope with the early stages of any future hostilities did not call for close RCAF tactical support for the small Canadian land forces which would be initially deployed. The Paris Plan, it was recalled, indicated that the RCAF fighter contributions would be for high level air defence.

It was considered essential to foster and maintain within the Western democratic alliance a "balance of power" which could effectively restrain to some degree arbitrary unilateral action. The practical application of this concept in NATO at the present time would be to counter-balance the disproportionate and preponderant power of the U.S. This did not imply any unfriendliness to the United States but was simply facing the facts of the existing situation, viz., that the U.S. with relatively limited experience in world affairs and because her policies were at times subject to unpredictable and emotional influences could conceivably, without some balancing restraint, carry the democratic nations into a Third World War.

From several points of view it was evident that the best interests of Canada and the North Atlantic Treaty Organization would be served by Canada helping to counter-balance U.S. power rather than by augmenting that power. Canada was in a unique position in that many of the smaller NATO countries continued to take their lead from her. If the Canadian national contributions, however numerically small at present, went towards augmenting the power of the U.S. it was highly possible that the smaller NATO countries would follow suit. Thus Canada might lead a movement which would wreck all possibility of eventually establishing a balance.⁷⁷

64. Apart from these purely political considerations the Chief of the General Staff also argued that for military reasons it would be better to place the Canadian Brigade Group in Europe under British command. He went on to say:

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There was no doubt too that the officers and men of the Canadian Army had the fullest confidence in the professional capacity and skill of the British Commanders and would prefer to be grouped with the U.K. forces. The Canadian Army had trained and fought during the last war on tactics and staff and command procedures which were practically identical with those of the British Army. The Canadian organization was similar to that of the British which even some senior U.S. officers admitted was more efficient and economical than their own. In addition the British were fully cognizant of the importance of observing the national identity of Canadian forces while the Americans, because of the relatively small Canadian contribution, might tend to substantially subordinate the Canadian forces in the overwhelming mass of U.S. strength.

Although the 27th Brigade was presently being supplied with U.S. type equipment, if an emergency should develop within the next 18 months and Canada were called upon to provide two divisions (as planned) within the first 12 months of war, these divisions would have to proceed overseas with U.K. type equipment. In addition, the existing mobilization plan was based upon the grouping of Canadian army forces under U.K. command and included detailed studies and tentative arrangements with the War Office regarding administration and supply. In any event a re-grouping of the integrated forces in Europe was now under consideration on a high level which would bring closer together the lines of communication maintaining the U.S. and U.K. forces. This development would facilitate the problem of maintaining Canadian forces whether they were supplied with U.K. or U.S. equipment or a combination of both, regardless of the command under which they were grouped. The administrative element was about the same in both cases whether British or American lines of communications were used. It was felt that it would be no more expensive to be grouped with the U.K. as compared with the U.S. despite the possible use of American equipment. The use of U.K. or U.S. lines of communication would undoubtedly involve less expense for Canada and absorb less Canadian manpower in the back area than would the maintenance of purely Canadian L of C.

If the Canadian Brigade were established with an American command in the U.S. Zone of Germany it most likely would be located either in the Kassel area, in direct contact with the Russian Zone or south of Munich, again in an area adjacent to the Russian forces. If located in the British Zone, the Canadians would most likely be positioned on the east bank of the Rhine just north of the Ruhr, available in an emergency to man a lay-back position on the west bank of the Rhine. In this position the Canadian forces would be grouped not only with U.K. units but also with those of Belgium and Holland. It seemed that the association of Canadian troops with Dutch and Belgian forces would be militarily advantageous to NATO, particularly from a training and morale standpoint. In the British Zone too the Canadians would have better access to training areas and better training facilities than in either of the positions that would be occupied in the U.S. Zone.⁷⁸

65. Mr. A.D.P. Heeney, the Under-Secretary of State for External Affairs, stated that he saw the force of General Simonds' argument for maintaining a balance of power in NATO. However, at the next meeting of the Chiefs of Staff Committee, the R.C.A.F. claimed that there were strong logistical reasons why it should operate with the United States Air Force, and the Chief of the Air Staff also pointed out that the R.C.A.F. had already achieved a considerable degree of integration with the United States Air Force in the defence of North America.⁷⁹ General Foulkes maintained that the responsibility for command in battle and the responsibility for maintenance should be held by the same commander. He asserted that, if political and psychological considerations made it important for Canadian forces in Europe to be placed under United Kingdom command, the Chiefs of Staff Committee would have to seek a reversal of the previous decision to equip the Canadian Army with United States equipment. Both because of the relatively small size of the Canadian portion of the Integrated Force in Europe and because of financial and manpower implications, it would not be possible for Canada to maintain separate lines of communication in Europe. He further pointed out that Canada would be better able satisfactorily to adjust the percentage of her forces in Europe with those in North America if the Canadians in Europe were under United States command, since otherwise the United Kingdom might put pressure on Canada to increase her forces in Europe at the expense of the number of troops retained in North America.

66. The Chief of the General Staff, on the other hand, argued that, while the contribution of the brigade group was militarily insignificant, it was of considerable political and morale value and that therefore these considerations should be paramount in deciding under what command the Canadian brigade should be grouped. He further claimed that the maintenance of Canadian forces equipped with United States type equipment would be feasible on United Kingdom lines of communication.⁸⁰

67. In this case the solution finally reached was that the Canadian Infantry Brigade Group was placed under British command, was equipped with United Kingdom-type equipment, and was supplied over British lines of communication. The twelve R.C.A.F. squadrons which were eventually Canada's air force commitment in Europe, however, were integrated with the United States Air Force.

68. In addition to the Canadian Brigade Group for Europe, Canada had also accepted a commitment to supply an Air Division to NATO, and during 1951 the R.C.A.F. began to despatch squadrons to England as part of the Integrated Force. By mid-1952 two R.C.A.F. squadrons were stationed at North Luffenham in England and the Government announced its intention of raising a total of twelve squadrons of F86-E interceptors which would be formed into the Air Division in Europe as the necessary facilities became available.⁸¹ The 1st Canadian Air Division reached its required strength with the arrival in Europe in the spring and summer of 1953 of No. 3 and No. 4 Wings, each of three squadrons.⁸²

69. By 1952 the Royal Canadian Navy, as its contribution to NATO, had a total of 24 ships available for submarine defence and the protection of coastal waters and approaches.⁸³ By 1955 the R.C.N. had 43 ships which would, in case of war, be available for the defence of the Canada-United States area and for the protection of convoys under the control of SACLANT (Supreme Allied Commander, Atlantic).⁸⁴

70. However, Canadian forces had been stationed in Europe for less than a year before another important question arose concerning their administration. In September 1952, the Chief of the Air Staff recommended at a Chiefs of Staff Committee meeting that the dependents of Canadian servicemen be moved to Europe at public expense, subject to certain conditions of which the availability of accommodation was the most important. The Chief of the Air Staff claimed that the separation of families in peacetime was causing a morale problem, that it had a derogatory effect on recruiting, and that it adversely affected the efficiency of the Air Division in Europe. Yet, in spite of the fact that both the British and the American components of the Integrated Force were accompanied by their families, General Simonds was opposed to any move of Canadian dependents to Europe at public expense. He argued that the presence of servicemen's families would interfere with the operation of the Canadian brigade and would create difficulties of evacuation in times of war.⁸⁵

71. During the course of 1953 the arguments of the Chief of Air Staff concerning the poor morale of Canadian servicemen in Germany began to be repeated in the Canadian press and in at least one national magazine, although the 27th Canadian Infantry Brigade rather than the Air Division was usually the target of the criticism.⁸⁶ Adverse comments were made in the press concerning the failure to provide "a complete program involving the establishment of Canadian communities near the troop camps",⁸⁷ married quarters, and Canadian schools. In any case, the Air Force view ultimately prevailed, and with the annual rotation of personnel late in 1953, the dependents of Canadian servicemen were moved to

Europe at public expense. When the 1st Canadian Infantry Brigade replaced the 27th Canadian Infantry Brigade, 1879 dependents were transported to Europe.⁸⁸ It may also be significant that, when the Maple Leaf Services was incorporated under Part II of the Dominion Companies Act to operate the canteens, clubs, theatres, athletic and shopping facilities which had formerly been conducted as regimental institutes, branches of the new organization were opened in Germany (in January 1955) even before operations were commenced in Canada.⁸⁹ In 1955, too, construction began on 1402 permanent married quarters for personnel of the brigade group in Germany.⁹⁰

THE CRISIS IS PASSED

72. The period of the Korean War appears to have been divided, in Canada at least, into three distinct phases. In the first phase, which lasted between the time of the invasion in June 1950 and the Chinese intervention the following November, Canada increased her defence effort and reacted sharply to the Communist threat. Yet, although Canada contributed readily to the United Nations' force, Canadian military planners were still most concerned with the possible outbreak of a future general war, an eventuality which the Korean crisis had indeed made more probable but which was not yet considered imminent. With the Chinese intervention in November, a much more serious situation developed and long-term plans had for a time to take second priority in favour of preparations against a major war which, it was felt, might begin at any moment.

73. Meanwhile in Korea, the United Nations forces, after severe initial reverses, rallied and drove the Chinese back generally beyond the 38th parallel, the original border between North and South Korea. Here, more because of political than military reasons, the situation solidified into a stalemate. It now transpired that neither Communist China, the Soviet Union, nor any of the larger powers among the Western Allies desired to widen the area of conflict. Truce talks were actually initiated as early as 10 July 1951, but for over two years these did not result in an armistice.⁹¹ Nevertheless, the crisis which had seemed so dangerous at the close of 1950 gradually passed, until by the summer of 1952 the United Kingdom at least was taking a more optimistic view of the international situation in the Far East. British officials were also coming to believe that the risk of a general war in the near future had appreciably lessened. Mr. Selwyn Lloyd, the United Kingdom Minister of State, told the Canadian Chiefs of Staff at a special meeting on 20 June 1952, that the Chinese Communists were anxious to arrive at an armistice, if a formula could be devised which would enable them to save face.⁹²

74. By the autumn of that year there seems to have been a general feeling, at least in government circles in the United Kingdom and Canada, that the immediate danger of full-scale war was over. Yet, although the Department of External Affairs found itself in substantial agreement with the British opinion that the United States might be overstating the risk of war and understating

the existing capabilities of atomic weapons,⁹³ the Canadian Chiefs of Staff were not completely in accord with such an appreciation. They were as yet unable to assess with sufficient accuracy the effect of tactical nuclear weapons on the land battle, and so were unwilling to assume that the possession of small quantities of these weapons by the West was sufficient to offset the Soviet preponderance in conventional forces. They believed moreover, that, although the Soviet Union was unlikely deliberately to embark on a major war in 1953, a miscalculation by either side or the acceptance of risks in a local operation could lead to war. Insofar as military requirements were concerned, therefore, they believed that the risk of aggression had not diminished.⁹⁴

75. On 27 July 1953, when an armistice at last suspended hostilities in Korea, the troops of the United Nations were still on what was substantially the pre-war boundary of the Republic of South Korea.⁹⁵ Yet, in spite of very general dissatisfaction with the inconclusive outcome of the war,⁹⁶ it would be a mistake to conclude that no more had been achieved in the previous three years than a return to the status quo. The defensive measures of the West had received a new and necessary impetus, the effect of which had been fully felt in this country. The total manpower of the Canadian Services had more than doubled since the outbreak of the war, from 47,185 in 1949-50 to 104,427 in 1952-53.⁹⁷ Between July 1950 and July 1953, 3,621 members of the R.C.N. had served in the Far East; 22,066 members of the Army; and 803 members of the R.C.A.F.⁹⁸ Most important of all, the NATO powers had demonstrated their solidarity, and under the spur of imminent war, the West as a whole had immeasurably strengthened its defences. This in turn led to a definite easing of international tensions, so that, while there still remained the risk of a general war breaking out as the result of miscalculation or accident, the threat of direct planned aggression had very noticeably diminished.

76. These results, however, had not been achieved cheaply. Indeed, as early as the beginning of 1951 the Canadian imbalance of trade with United States had been causing the Canadian Government some concern. The United States Congress had given authority for \$25,000,000 worth of defence orders to be placed in Canada, but by the end of January 1951, only \$17,000,000 worth had been so placed. Yet during 1950 Canada had placed a total of \$159 million worth of defence orders with the United States.⁹⁹ With an armistice in the offing in Korea, with the threat of an immediate general war reduced, and with some considerable progress in the creation of an effective Western defence already achieved, the Canadian Government now decided to curtail its defence expenditures. On 15 January 1952, the Minister of National Defence explained to the Chiefs of Staff that, unless taxes were to be raised, it would be necessary to reduce the defence estimates by some \$400 million.¹⁰⁰ Such a curtailment, however, did not prevent the defence budget for 1952-53 reaching the record peacetime high of \$1,882,418,467.¹⁰¹ Throughout the next three years Canadian defence policy remained relatively constant and defence expenditures remained high. In the fiscal year 1953-54 the total of Department of National Defence expenditures was \$1,805,914,922; and in 1954-55, \$1,665,968,960.¹⁰²

THE CONTROL OF DEVELOPMENT EXPENDITURES

77. One of the results of the Government's decision to economize on National Defence expenditures was that the Chiefs of Staff had accepted a ceiling of \$19,100,000 for the Services' development programmes for the fiscal year 1953-54. Nevertheless the total for the development programmes actually put forward by the Services in that year amounted to some \$25,000,000. The Chairman of the Defence Research Board was therefore instructed by the Minister to allocate the sum of \$19,100,000 to the three Services for development during the ensuing year.¹⁰³

78. The reason why this task was given to Dr. Solandt was that the Defence Research Board had gradually come to assume the responsibility for certain aspects of Service development. In 1946 it had been decided that the responsibility for development which was peculiar to any one Service should remain with the Defence Department concerned but that the Director General of Defence Research should be responsible for all research and for all inter-Service development.¹⁰⁴ When the three Service departments were amalgamated under one Minister of National Defence, however, development funds came to be included in the estimates of the Defence Research Board, although D.R.B. did not in fact have any direct control over the expenditure of these funds. A Committee of the Defence Research Board, known as the Committee on Development, was established in the spring of 1950, having as its members the Chairman D.R.B., the Deputy Minister of National Defence, the Chief of Naval Technical Services, the Quartermaster General of the Army, the Air Member for Technical Services, and such other members as the Defence Research Board might from time to time appoint.¹⁰⁵ All proposals of this committee concerning policy or the allocation of funds were to be referred to the Chiefs of Staff Committee for comment before being reported to the Defence Research Board. Early in 1951 the Chiefs of Staff Committee agreed that D.R.B. should assume the responsibility for the development votes of the armed Services but that the Chairman of the Defence Research Board would not therefore dictate the lines of Service development.¹⁰⁶

79. Thus when the Chairman of the Defence Research Board was asked to allocate the available funds, he found himself in a somewhat invidious position and was quick to point out that the system in regard to development obviously could not be expected to work in any situation where the individual Services could not reach agreement. As a solution, he suggested that the Minister be requested to increase the development estimates by \$2,400,000 since, on the basis of the 1952-53 estimates, this money would have been included in procurement votes.¹⁰⁷ The final development requests of the services had been: R.C.N. \$3,500,000; Army, \$6,900,000; and R.C.A.F. \$16,600,000. The Chairman of the Defence Research Board suggested that, if the Minister agreed to the inclusion of the additional \$2,400,000, the revised development estimates should be: R.C.N. \$3,000,000; Army, \$6,400,000; and R.C.A.F. \$12,100,000.

80. In May 1953, Dr. Solandt again raised the question of the control of development expenditures at a Chiefs of Staff Committee meeting and stated that a set ceiling for Service development programmes was unsatisfactory since a Service should have the right to decide what portion of its budget it desired to spend on development. He announced that, after discussion with the Minister, it had been agreed to remove the \$19,100,000 ceiling on the Services' development expenditures, on the understanding that the money which a Service proposed to spend on development came from within its appropriation.¹⁰⁸

81. Neither the Army nor the Navy was at this time committed to a really extensive development programme. The Canadian Army was interested in tool-room models of the .280 rifle which, at the request of the United Kingdom, were to be tested in Canada under winter conditions, and development work was also proceeding on a standardized 7,62 millimetre round of ammunition and on a new tank machine-gun;¹⁰⁹ arctic equipments of various kinds was being developed, including the CPRC 26 radio set, northland vehicles, and mobile shelters; and standardization programmes with the United States, the United Kingdom and NATO were continuing.¹¹⁰ The Navy for its part was interested in hull and propeller models for new vessels and in developing steels which would withstand higher temperatures.¹¹¹ The Air Force, however, was vitally interested both in improving the design of the CF-100 and, even more important, in the development of a new supersonic all-weather jet aircraft (the CF-105), as well as in development work on long-range and medium-range wartime reconnaissance aircraft, the Orenda engine, a standardization programme for aviation fuels and lubricants, photographic methods, new personal and emergency equipment for flyers, and various navigation devices.¹¹²

82. In the fall of 1953 the Chief of the Air Staff told the Chiefs of Staff Committee that:

...A.V. Roe Canada Limited had completed its preliminary design study on the CF-105 supersonic all-weather interceptor aircraft. The RCAF was satisfied that this was the aircraft most likely to fill the RCAF requirement to fit into the present air defence system and to meet the enemy bomber threat in the period commencing 1957. It was important to reach a decision as to whether or not Canada should continue the development of the CF-105, as the A.V. Roe Canada Limited development team would be idle unless further funds were allocated.¹¹³

The Chief of the General Staff commented, however, that:

...the aircraft industry appeared to have great difficulty in estimating the cost of development projects for the Government. It was noted that the most recent estimate of expenditures for developing the advanced fighter in the 1953-54 fiscal year was considerably in excess of the original estimate. This type of discrepancy was serious and should be carefully watched.¹¹⁴

83. Air Marshal Slemon replied that the wisdom of Canada's decision to produce the CF-100 fighter had been borne out and that Canada was at that time at least two years ahead of any other country in the field of all-weather fighters. In developing the CF-105, he claimed, Canada would not be duplicating any other nation's work but would be actually keeping ahead of development programmes in other countries.115

84. The minutes of the meeting record that the Chairman Chiefs of Staff then inquired:

...whether it was not possible to carry out research and development of new aircraft in conjunction with some other nation. The pooling of ideas and sharing of costs in such projects could possibly cut down expenditures and hasten the development of new types of aircraft.

When considering production of an advanced fighter for the RCAF, it would be an advantage to study the whole matter of fighter aircraft procurement. There would possibly be an advantage in concentrating on one fighter role for the RCAF, thus limiting production to one type of fighter. It might be possible at some future date to replace the RCAF's fighter contribution to NATO by all-weather fighters. This could conceivably ease the RCAF's rotation problem.116

85. However, Dr. Solandt, the Chairman of the Defence Research Board, pointed out that there was already a complete interchange of information between Canada and the United Kingdom in the field of research and development, and it was not felt that the pooling of material resources would constitute any great saving in money. In addition, such pooling of resources could result in the dispersal of development teams presently employed by the industry. The Deputy Minister said that he could see no objection to the development of the CF-105 so long as funds for this project were voted on a year-to-year basis rather than approval being sought then for the total cost of development.117

86. At a meeting in November 1953, although only after some considerable discussion, the Chiefs of Staff agreed to the recommendation of the Chief of the Air Staff that there was a requirement for a new all-weather interceptor to counter jet bombers from 1957 on. Although the Chief of the General Staff argued that the very considerable sums of money which would be spent on the development of the new interceptor, the CF-105, would be better expended for research and development on guided missile systems, the Chiefs of Staff nevertheless agreed to seek Cabinet Defence Committee authority to develop the CF-105, on the basis of funds for the current year's operation, but not to seek approval for the whole project.118

87. This policy for the development of the CF-105 was continued throughout the period here under review, but not without growing opposition from the Army. In November 1955, the Chief of the General Staff expressed the view that:

[The RCAF's Air Defence Programme] with the implications of developing and building the number of aircraft required, the building of additional air-fields across Canada, the extension of radar networks and communication systems, was unjustified when one considered the small kill that might be expected in the event of a concentrated raid which could come in on a very narrow front over any part of Canada. He felt that the plan outlined by the Chief of the Air Staff would permit only a small number of aircraft to be brought to bear against a concentrated enemy attack.

It appeared that the suggested program, with all its implications, would consume all the funds that might be available for defence in future years and would have a drastic effect on the other two services. He felt that Canada should work more closely with the United States on the basis that it was continental defence that we were striving for and we should use the same type of equipment as the United States rather than spending tremendous sums on developing an aircraft of our own which would be used in comparatively small numbers.

It had been stated that the proposed CF-105, although more expensive than the American F-102B, was expected to be much superior in performance and would be twice as effective as the American aeroplane. If this were so, the RCAF would be producing in 18 squadrons an effective force equal to double that number in American squadrons. In view of this, perhaps Canada's share in the joint undertaking should be reviewed and instead of planning for 18 squadrons we should plan for much less.

In view of the Chief of the Air Staff's statement that the Canadian program was part of the joint Canada - United States program, he considered that before the expensive program of developing and producing CF-105s was undertaken, more detail should be made available as to how the aircraft would fit into the overall continental air defence plan. 119

88. The Chief of the Air Staff replied that the plan was a joint plan and did not necessarily mean that only Canadian squadrons would be stationed in Canada. The concept of the defence was that the attrition rate on an enemy raiding force would steadily increase as the bombers neared their target. The role of fighter squadrons based in Canada was to commence the attrition, not to complete it.

89. At this time the view of the Chief of Air Staff prevailed and development funds continued to be voted for the CF-105.

CONTINENTAL AIR DEFENCE

90. In 1950 active air defence was based upon a combination of interceptor aircraft and gun defences, and to be fully effective fighter aircraft required the services of extensive radar warning systems. At the beginning of 1951 Canada possessed a defensive radar system consisting of nine stations, but, with the increased likelihood of a general war, it became obvious that this would have to be extended. More warning had to be given to vital areas in the United States and to certain Canadian areas, while radar had to be provided for United States Air Force bases in Canada, such as those at Goose Bay and Stephenville.¹²⁰ At a Special Meeting of the Chiefs of Staff Committee on 9 January 1951, the R.C.A.F. proposed to install 27 new radar stations and indicated that a total of 31 might be required at a later date. It was suggested that the first 19 stations should be paid for equally by the United States and Canada on a cost-sharing basis. The Canadian share of this would amount to some \$40,000,000 with a recurring annual cost of \$11,000,000. The cost of the remaining eight stations would be borne entirely by the United States. It was proposed that the United States should man and operate those radars which covered their bases in Newfoundland and Labrador and eight other stations which would give warning to vital areas in the United States.¹²¹ These arrangements were accepted and the construction of the radar line, which came to be known as the Pinetree Chain, was given a high priority. (See Appendix "A"). It did not, however, become operational until 1954.¹²²

91. More than early warning was, of course, required for an effective air defence. Possibly in no other field were technical and scientific advances occurring so rapidly as in that of offensive aerial weapons. The development of high-altitude, high-speed jet bombers, of guided missiles of both air-to-surface and surface-to-surface types, and -- most serious of all -- the increasing availability and destructive power of nuclear and thermonuclear weapons were already posing grave problems to a defensive system. In February 1952, the Chiefs of Staff, after reviewing Canada's air defence, had decided that the Defence Research Board should continue its study of the limitations and capabilities of air defence weapons with a view to making specific recommendations as soon as possible.¹²³

92. By the spring of 1952 the Chief of the Air Staff was arguing that, in the light of recent guided missile research developments, the purchase of anti-aircraft guns and equipment should be very carefully examined. The Chief of the General Staff, however, revealed that the Army had already purchased sufficient additional new-type 90 mm. guns to bring the total available up to 400 and that only 75 T-33 Fire Control Equipments had still to be obtained.¹²⁴ Later in the same year, the Chief of the Air Staff again questioned whether money should be spent on an air defence system (anti-aircraft guns) which would not provide the best defence by 1956,¹²⁵ but no decision was then reached on a modification of Army policy.

93. By the middle of 1953 the aerial threat to North America was being viewed with an increasing gravity both by the Canadian and American governments and by military planners, and an increasing emphasis was therefore being given to continental defence.¹²⁶ The Governments of Canada and the United States broadened their working partnership for the defence of North America with planning on a joint basis, and co-operation continued at all diplomatic, military and scientific levels. In view of developments in the fields of atomic and thermonuclear weapons and long-range bombers, the entire continental air defence system was subjected to a careful appraisal at the highest levels for planning and developmental purposes.

94. The aerial threat, however, continued to increase and in October 1953 a Canada-United States team of military and scientific advisers recommended that additional early warning capacity should be provided by a supplementary system, to be located generally to the north of the settled areas in Canada. The report of this team was considered by the Chiefs of Staff of both countries later that month, and in Ottawa the Chairman Chiefs of Staff reported to the Canadian Chiefs of Staff Committee on the results of the discussions held in Washington. According to the minutes of the meeting:

He stated that the US and Canada are in general agreement on re-assessment of the risk of war with the USSR. The views of the US Chiefs of Staff on the report of the Canada-US Military Study Group were as follows:

"To achieve in a rapid and orderly manner and to maintain in collaboration with Canada a readiness and capability to give reasonable assurance of:

- (a) contributing to deterring Russian aggression,
- (b) preventing diversionary attack that might threaten our national survival,
- (c) minimizing the efforts of any Soviet attack so as to permit us successful prosecution of a war,
- (d) guarding against Soviet-inspired subversive activities,
- (e) preventing the threat of atomic destruction and discouraging freedom of action which would weaken the national morale

"They will recommend that the following program should be completed with all possible speed:

- (a) the southern Canadian early warning system and seaward extensions thereof,
- (b) the extension to seaward of contiguous radar coverage in selected areas,
- (c) methods of aircraft identification,
- (d) the completion of defence plans,
- (e) the development of a device for the detection of fissionable material."

They consider that an early warning system providing a minimum of at least two hours is an immediate necessity. The southern Canadian detector line and the Alaska and northeast air control and warning systems should be completed as early as possible. Seaward extensions should be provided beginning with the Atlantic extension.

The US Joint Chiefs of Staff do not intend either to over-emphasize or under-emphasize the threat but are fully aware of their responsibilities to build up reasonably effective defences which will provide the best defensive posture consistent with funds invested. They naturally seek to determine the extent to which Canada may wish to take leadership in parts of the system and to contribute to its expense.¹²⁷

95. The Chairman Chiefs of Staff further reported that it had been agreed at the Washington meeting that joint action for the present should be confined to the early warning project in southern Canada and the implementation of the flank coverage. The United States Chiefs of Staff had indicated that they were about to give consideration to the extension of the early warning chain off the Atlantic Coast and that they would welcome Canadian views as to what portion or portions of the programme Canada would be prepared to consider. General Foulkes then raised the question of whether the programme should be carried out on a cost-sharing basis or whether it would be more appropriate for one country to assume responsibility for the implementation of a particular portion of the programme. In either case there would be no question but that the air defence scheme would operate as a joint project. The military aim should be to have the necessary equipment installed and fully operational by mid-1956. The Representative of the Chief of the Air Staff stated that it would probably take two years to complete the project from receipt of authority to start, but that a beginning could not be made until a final decision was reached on the type of equipment to be used.

He pointed out to the Chiefs of Staff that the minimum operational requirement for this early warning line should be:

- (a) a high degree of detection capability against all forms of penetration by hostile aircraft; and
- (b) capability of discrimination between incoming and outgoing aircraft.¹²⁸

96. The minutes of the meeting go on to record that the Committee, having given further consideration to this project and to the views expressed by the United States Chiefs of Staff, reached the following opinion:

- (a) that the new assessment of Russian capabilities by 1956-57 create a requirement to have in operation a reasonable early warning system by 1956, and consider that an early warning line along the 55th parallel as recommended by the Study Group is a reasonable project which could, if energetically pursued, be put into operation by 1956;
- (b) to achieve this objective, action on the preliminary measures should be undertaken at once without waiting for the final report of the Study Group. These measures to include a detailed survey of the early warning line and the finalization for the equipments. When the survey is completed and the finalization of the selection and specifications for the equipment completed, it will be possible to arrive at a firm estimate of the cost.
- (c) the Chiefs of Staff recommend:
 - (i) that approval in principle be given to the establishment of an early warning line along the 55th parallel,
 - (ii) that approval be given to instruct the Canadian Section of the Study Group to finalize the selection and specifications for the equipments, and
 - (iii) that approval be given for Canadian authorities in consultation with the US to carry out a detailed survey of the line and sites.¹²⁹

97. At a meeting in Washington in November 1953, United States authorities were informed that the Canadian government was prepared to proceed immediately with the necessary surveys and siting for the proposed additional early warning system along the 55th parallel to be known as the Mid-Canada Line.¹³⁰ This new radar chain was based on the use of equipment originally developed by a research team at McGill University in conjunction with the Defence Research Board. Locating it most advantageously involved the examination of a great number of possible sites, a task which was rendered the more difficult since much of the terrain was inaccessible except by tractor-train or helicopter and since in many areas temperatures were extreme for several months of the year. When completed, the new line was intended to be supplementary to the Pinetree Chain, and, since it would be largely automatic, to employ fewer men and somewhat less expensive equipment. Construction of the Mid-Canada Line began in January 1955, and during the fiscal year 1955-56, expenditures on this project amounted to some \$47,000,000.¹³¹ In 1955, too, yet a third radar line, the Distant Early Warning or DEW Line, was begun by the United States in the Arctic area between the Bering Straits and Greenland. The construction of this line, which was conceived and planned in conjunction with Canadian authorities, was to utilize extensive Canadian civilian resources and was to receive some help from R.C.A.F. and R.C.N. sources.¹³²

98. While these successive radar chains were, one after the other, being built in the northern wilderness, primarily as warning devices against the approach of hostile aircraft, the advent of the hydrogen bomb and the continued development of guided missiles, for both offensive and defensive purposes, threatened in the future radically to alter the whole problem of continental air defence. Early in 1954, the Chief of the General Staff recommended the formation of an Army Guided Missile Unit so that tactical and technical investigation and training on guided missiles could begin as soon as possible. The Chief of the Air Staff, on the other hand, let it be known that in his opinion the R.C.A.F. should be the authority for determining what types of guided missiles should be adopted in the Canadian air defence system and how and when they should be introduced. This matter was considered at some length, but no definite decision was reached.¹³³

99. In February 1955, and over the objections of the Chief of the General Staff, the Chiefs of Staff Committee recommended to the Cabinet Defence Committee that the CF-105 procurement and proving programme should be accelerated. This decision was taken after the Chief of the Air Staff had argued that the hostile air threat to Canada might be considered as consisting of four stages: the threat from conventional aircraft; from supersonic bombers; from Navajo-type guided missiles; and from ballistic missiles. The Committee agreed that Canada could not be left without air defence during the period when the threat would largely be from supersonic bombers and Navajo-type guided missiles.¹³⁴

100. At this time, too, the discussion of another matter connected with continental defence revealed disagreements within the Chiefs of Staff Committee. In March 1955, during a discussion of a Joint Planning Committee paper entitled "Defence Against Enemy Lodgements in Canada", Lieut.-General Simonds expressed his opinion that, with the construction of early warning lines and other facilities in the Canadian north, the threat of enemy lodgements might have increased. In time of war, he said, the removal of such lodgements would have priority over any other task. He therefore considered it reasonable that Canada should have three battalions equipped and trained to handle such an emergency. In addition, the Chief of the General Staff considered that there would have to be sufficient air support, including the necessary airlift for the tactical loading of Army troops, to deal with two separate and simultaneous lodgements of the scale envisaged. The Chairman Chiefs of Staff, however, remarked that it was unlikely that enemy carrying capacity would be utilized to land small parties in the Canadian north when much more disruption could be caused by attacks on large centres with thermo-nuclear weapons. Indeed, he went so far as to suggest that, once a war had started, there would be no target in the north vital to the defence of Canada and that therefore it was unrealistic to maintain a Mobile Striking Force of three battalions as a possible safeguard against enemy lodgements of company size, particularly as the R.C.A.F. was capable of simultaneously lifting and supporting only a force of two companies. The Acting Chief of the Air Staff in effect supported this view by giving it as the R.C.A.F. opinion that the threat was not sufficient to warrant the allocation of additional air force facilities other than those already earmarked for the purpose.¹³⁵

101. The controversy over the requirement for anti-aircraft gun defence had been dormant for some time, and, indeed, was not finally resolved until a Chiefs of Staff Committee meeting in May of 1955 when it was agreed that no requirement existed for the retention of anti-aircraft units of the Canadian Army, either regular or militia, for the air defence of Canada, except for one battery to be retained at Goose Bay subject to review in one year. It was also decided that Headquarters Anti-Aircraft Command should be disbanded; that 3.7 inch anti-aircraft equipment and ammunition should be disposed of through the Canadian Mutual Aid Programme; and that the Chief of the General Staff should proceed with the reorganization and relocation of anti-aircraft units of the Canadian Army, regular and militia, to meet the requirements of the field force.¹³⁶

102. At a Chiefs of Staff Committee meeting towards the close of 1955 the Chief of the Air Staff summarized the then-existing situation regarding continental air defence and presented the R.C.A.F.'s views concerning requirements for the future. These requirements entailed an increase of over 15,000 personnel for the R.C.A.F., a capital expenditure in the neighborhood of \$850,900,000 and a recurring annual expenditure of some \$122,500,000. There was a need, the Chief of the Air Staff claimed, for the development of additional air bases across Canada, for the extension of radar coverage, and for the formation of additional fighter squadrons and Air Defence Headquarters.¹³⁷ The paper which the Chief of the Air Staff presented in support of these claims is included at Appendix "B".

OFFICER PRODUCTION

103. With the rapid and unforeseen expansion of the Canadian armed forces subsequent to the Korean War, it had soon become apparent that the provision of sufficient officers was going to pose a not inconsiderable problem. Probably the Navy felt most strongly about the officer shortage, but the Army, and to a very much lesser extent the Air Force, faced the same difficulty. In 1951 the systems of officer production differed from Service to Service. The R.C.N. accepted as officers those who had completed four years at the Service Colleges* or had graduated from the University Naval Training Divisions. The R.C.A.F. granted short-service commissions to senior matriculants who graduated from flying training schools, but granted permanent commissions only to those who had completed a four-year course at university or the Services Colleges. Prior to the period of expansion, the Army had insisted that all whom it accepted as regular officers should have the same high academic qualifications as required by the Navy or of those granted permanent commissions in the Air Force, but with the increase in manpower ceilings, the Army discovered a requirement for a large number of regimental officers who might be expected to serve out their term and retire in ranks not higher than those of major or lieutenant-colonel.¹³⁸ This requirement was met in part by the granting of short-service commissions to junior matriculants who passed out of a special officer cadet school. Although the R.C.N. did not wish to grant short service commissions except to naval aviators, the officer shortage was such that, beginning in 1951, it granted three-year appointments to ex-officers or reserve officers of all ranks and branches.¹³⁹

104. A portion of the officer shortage was met by commissioning from the ranks, but this was merely the continuation of previous policy designed to secure the services, in commissioned rank, of a small but qualitatively important number of outstanding other ranks. During 1951 the Navy selected ten men from the "lower deck" to attend a Canadian Services College or university in order to qualify for a commission. In the same period the Army granted commissioned rank to 65 men who had formerly held commissions, to 220 junior matriculants who had attended officer training courses, and to 73 specialized warrant officers. The R.C.A.F. commissioned 145 airmen and airwomen in the non-flying list branches and 223 airmen were selected for aircrew training as flight cadets.¹⁴⁰

*Both the Royal Military College and Royal Roads accepted candidates between the ages of 16 and 20 who had passed their junior matriculation examination and had, in addition, certain senior matriculation credits. The course at the Colleges was of four years duration, of which the final two years had to be taken at the Royal Military College.

105. These measures, however, did not solve the problem, nor did they bring the three Services any closer to an agreed policy for officer production. Inter-Service agreement was hard to come by, largely because the Air Force was willing to commission on a short-term basis large numbers of officers who had no university or equivalent training but was completely satisfied with, and unwilling to change, its long-term officer programme. The R.C.A.F. would have liked to see an increase in the number of graduates at the existing academic level from the Services Colleges, but otherwise was opposed to any change. The Army, on the other hand, required considerably more graduates from the Services Colleges and was prepared to accept a lowering of academic standards to increase the output. The Navy was in much the same position as the Army in this regard, and in September 1951, the Chief of the Naval Staff proposed that the Services Colleges should lower their graduation standards and that the R.C.N. should utilize the facilities at Royal Roads while the Army and the R.C.A.F. solely occupied an expanded R.M.C. The Army agreed with this proposal, but the Chief of the Air Staff argued that, if academic standards were lowered, the Air Force's requirements for those holding permanent commissions could not be met.¹⁴¹ The positions of the three Services were therefore deadlocked. The R.C.A.F. opposed any change in the status quo; the Army suggested that junior matriculation should be accepted by the Services Colleges and that the training should be for only three years; the Royal Canadian Navy, for its part, preferred a separate naval college in which it could train its officers in both their academic and professional subjects.¹⁴²

106. Further discussions failed to bring any substantial reduction in the area of disagreement. When on 1 November 1951 each of the three Services presented its own plan for officer production, there was no agreement on the entrance requirements to the Services Colleges, on the length of the courses, or the standard on graduation. The Chairman Chiefs of Staff expressed himself as being extremely reluctant to forward these separate plans to the Minister,¹⁴³ because he felt that there was little likelihood of the Government, which had already questioned the necessity of operating both Royal Roads and the Royal Military College, now accepting three colleges, one for each Service. In General Foulkes' opinion the Government would either refer the matter back to the Chiefs of Staff Committee or would appoint an independent body to work out a solution -- a step, he suggested, which might lead to recommendations being made which would not be satisfactory to the Chiefs of Staff.

107. The actual upshot of all this was that throughout the ensuing year the three Services continued to find their officer candidates from the Canadian Services Colleges, the ranks, and from the University officer training plans. In addition, the Army granted 75 active force, short service commissions to reserve force officers who had been qualified under the Command Contingent C.O.T.C. system which allowed members of the Army reserve force to qualify as officers in the reserve.¹⁴⁴ These Army officers were for the most part posted as non-technical officers to the active force brigade in Europe. A system was also resorted to whereby selected university students in their final year were granted

commissions and subsidized for that year by the Service to which they belonged. In the Navy, 29 University Naval Training Division cadets and nine medical students were commissioned under this plan; in the Army 103 university under-graduates were commissioned through the subsidization plan in 1951-52, of whom 63 were C.O.T.C. cadets; and the R.C.A.F. commissioned 121 under-graduates during the period, of whom 21 had previously belonged to Reserve University Squadrons.¹⁴⁵ All three Services also granted short service commissions by direct entry to a number of junior matriculants and veteran ex-officers. The Navy obtained 219 officers in this manner; the Army 241; and the Air Force enrolled 1181 direct entry flight cadets for aircrew training and 191 for non-flying list branches, while permanent commissions were also granted to 864 veteran aircrew officers and 77 non-flying list veteran officers of whom 76 were women.¹⁴⁶

108. The officer shortage was directly responsible for another significant development during this period. The sudden requirement for a relatively large number of officer cadets for all services had highlighted the long-recognized need for a preparatory course which would enable more French-speaking candidates to attain the level in mathematics and science required for entry to the Service Colleges.¹⁴⁷ Education in the province of Quebec traditionally stressed the humanities, with the result that an insufficient number of French-speaking officer candidates possessed the necessary qualifications. There was, moreover, a belief that French-Canadian families were reluctant to see their sons leave their accustomed environment to enter, at an impressionable age, an English-speaking Service College where other cultural, ethical, and social values might obtain.¹⁴⁸

109. At a Special Meeting on 25 June 1952, therefore, the Canadian Chiefs of Staff discussed the formation of a preparatory school to be run by the Service at St. Jean, Quebec, and its ultimate development into a Service College. Since the spring of 1949, St. Jean had been the site of a Canadian Army Training School for French-speaking recruits.¹⁴⁹ The original concept for the new officer training establishment had been to set up the preparatory school under civilian auspices, and in the late spring of 1952, the Minister of National Defence and the Chief of the General Staff had visited Laval University to discuss this plan for the production of officers.¹⁵⁰ The suggestion was that Laval University might establish a two or three year course leading to a bachelor's degree in military science, but in the light of the reaction of the University authorities it was decided that the preparatory school would be established as a Service School. The intention was first to offer a one-year preparatory course and, if entries justified it, to expand by adding a two-year course similar to that given at Royal Roads. The Chiefs of Staff believed it important that the preparatory course should open in the autumn of 1952, and it was decided that the Army would be responsible for the administration of the school in the first year,¹⁵¹ on the understanding that the Air Force would assume this responsibility for the second year. Accordingly the Collège Militaire Royal de Saint-Jean was formally opened by the Governor-General in the fall of 1952, accepting junior matriculants and offering a one year preparatory course.¹⁵²

110. However, when a year later the Army approached the R.C.A.F. with a view to transferring its administrative responsibility, certain difficulties arose. At a Special Meeting of the Chiefs of Staff Committee held on 9 June 1953, the Chief of the Air Staff argued strongly that the Army should continue the administration of the College Militaire Royal de Saint-Jean. According to the minutes of the meeting:

There were two main reasons why the RCAF did not wish to assume this responsibility; the first was that the RCAF were primarily interested in the four-year graduates from the Services College to provide the necessary core of educationally qualified officers, as the short-service commission system provided adequately for the less technically educated officer element of the Air Force.

Further, the RCAF considered that the tri-service college system was sound, though its full benefits would not be apparent for some years. There appeared to be those who wished to abandon the tri-Service system in favour of each Service having its own college. This the RCAF wished to avoid and, therefore, considered that for each Service to administer one college was potentially a dangerous move in this direction, particularly if the RCAF took over the administration of St. Jean, as this might provide a ready made and convenient situation and would most certainly influence a trend in policy towards each Service having its own college.

If the RCAF were to assume administrative responsibility for St. Jean and in future the colleges were to be separated, the RCAF might be left with St. Jean which it did not want because the plant would not satisfy technically the four-year training requirements of the RCAF to the same degree that the Royal Military College satisfied them at present. If St. Jean were eventually allocated to the RCAF as its college, it would find itself with an institution with an established language proportion and a high proportion of political considerations involved. The college was poorly located on a site which the RCAF had never favoured and for which the opportunities of expansion were extremely limited. The chances of developing St. Jean to compare with the Royal Military College or Royal Roads were remote.

~~TOP SECRET~~

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The fact that the Army had asked the RCAF to take over St. Jean on grounds of sharing the administration load were not considered too impressive, as the RCAF had already contributed a quarter of the staff of the college, and if a more equal sharing of the cost of the tri-Service colleges was desired, it was suggested that the total costs be pooled and charge equally against the funds of the three Services. In any event, for the Army to administer two colleges, rather than one, [would] probably result in the greatest economy.

For the reasons outlined above and as St. Jean was an Army establishment of some tradition, it was felt that its continued administration by the Army presented the least danger to the continuance of the tri-Service policy and, therefore, the RCAF wished to maintain the status quo by having the Army continue to administer the St. Jean College.¹⁵³

111. The Army, however, found itself unable to accept the arguments of the R.C.A.F., and although the Chief of the General Staff was at pains to allay any fears the Air Force might have as to future R.C.A.F. participation in the Royal Military College, he definitely pressed for the Air Force to accept the responsibility of administering St. Jean. He pointed out that:

...although the RCAF had opposed St. Jean as the site for the College, they had never proposed an alternate. It was considered that this site could be developed into a very satisfactory location. However, if the RCAF were to take on the administration, they should have an opportunity to participate in the planning of buildings and other facilities from the outset.

It was pointed out that the four-year course at the Royal Military College was of equal concern to the Army as to the RCAF. However, further examination should be carried out to utilize the plant at all three colleges to full capacity. This was not being done at present and it was apparent from the applications received for next year's course that the numbers of vacancies which could be allotted would only cover a portion of those who had applied. A three-year course would provide adequate Service training for cadets and the balance of education could be given at the universities. The circumstances under which the Royal Military College and Royal Roads had been opened were not those of to-day and on the basis of a tri-Service system, or any other system, there was no cause for running an institution which competed with universities. It would be much preferable to consider providing a three-year course with the resultant raising of the cadet capacity and

ensuring that all those attending were committed to serve in the regular forces.

It was desired to make it quite clear at this time that the Army had never in the past, and would never in the future, attempt to oust the RCAF from the Royal Military College. Since the government had decided upon a tri-Service system, the Army had and would continue to give it a fair trial and would not recommend any change in the system until circumstances made this necessary.

Concerning the taking over of the administration of St. Jean by the RCAF, the Chief of the General Staff had only agreed that the Army would administer St. Jean for one year on the basis of a pledge that at the end of the year the administration would be turned over to the Air Force and it was felt that this pledge should be honoured.¹⁵⁴

112. The Chairman Chiefs of Staff pointed out that, as far as the present curriculum at the Services Colleges was concerned, Royal Roads also favoured the three-year course starting with junior matriculation. It was within the province of the Chiefs of Staff to decide the numbers of candidates to attend the colleges and how long their course would be, although until the cadets were graduated from the present four-year course, no change could be made. He suggested that discussions be held to place Royal Roads on a three-year basis including the erection of the necessary buildings, and that the course at the Royal Military College could then be adjusted.

113. Air Marshal Slemon said that he wished to clear up any misunderstanding that the R.C.A.F. wished to gain possession of the Royal Military College and gave an undertaking that at no time during his tour as Chief of the Air Staff would the Air Force attempt to obtain the Royal Military College from the Army. He recommended that the suggestion of the Chief of the General Staff and the Chairman to review the curricula of the Services Colleges and to investigate the possibility of a three-year course should be discussed in detail.

114. General Foulkes then asked the Chief of the General Staff whether he would agree to continue to accept the responsibility for the administration of St. Jean or whether he would allocate the responsibility for the Royal Military College to the R.C.A.F. The Chief of the General Staff replied that he could not accept the suggestion of the Chairman and that he felt that the administration of St. Jean should pass to the R.C.A.F. General Foulkes then asked the Chief of the Naval Staff whether he would be prepared to assume responsibility for administering St. Jean and permit the R.C.A.F. to administer Royal Roads. The Chief of the Naval Staff said that because of the naval facilities on Vancouver Island, it was more convenient for the Navy to continue its administration at Royal Roads.¹⁵⁵

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115. Here the matter was allowed to rest until another Special Meeting of the Chiefs of Staff Committee later in the month, at which the whole question of the administration of the Collège Militaire de Saint-Jean was again reopened. The minutes of this meeting record that:

The Chief of the Air Staff read a paper which he had intended to circulate to the Chiefs of Staff. This paper referred to the previous meeting and to certain records which had been made available by the Chief of the General Staff to the Chief of the Air Staff concerning the college at St. Jean as it had developed during the term of office of the former Chief of the Air Staff.

Some of these records disclosed certain aspects of the question about which the present Chief of the Air Staff had previously been unaware and made apparent to him certain significant reasons behind the Army's strong desire to have the RCAF take over the administration of St. Jean. From the records it was possible to appreciate the considerable apprehension which the Army entertains that the RCAF had been following a long term objective, if circumstances became opportune, of taking over the Royal Military College as an Air Force college.

This was not, in the opinion of the present Chief of the Air Staff and other responsible Air Force officers, their understanding of what had transpired and certainly did not correctly reflect RCAF intent. Despite any impression created by the record to the contrary and in the light of all available information, the Chief of the Air Staff remained convinced that any impression given by the RCAF with respect to taking over the Royal Military College had only been given against the background of the possible abandonment of the tri-Service college policy; which abandonment the RCAF strongly opposed. Any comment with respect to making the Royal Military College an Air Force college had stemmed solely from this background and only because the production capabilities of the other two colleges would, by themselves, not adequately satisfy RCAF officer requirements.

Nevertheless in the light of the records, the Army's apprehension was appreciated and the desire by the Army to have the Air Force administer St. Jean was interpreted as being mainly a protective measure against any move by the RCAF to take over the Royal Military College. Although now appreciative of the Army's apprehension, the RCAF were satisfied that it was founded on incorrect information. Consequently, with the object of removing misunderstanding, the Chief of the Air Staff desired to restate the RCAF position so long as he is Chief of the Air Staff to be as follows:

"The RCAF will continue to support strongly the policy of tri-Service colleges because this policy is sound, irrespective of the fact that its full benefits may not become fully apparent for some years. The RCAF will not initiate any move towards abandonment of the tri-Service college policy. The RCAF has no design on obtaining the RMC, Royal Roads or the College Militaire Royal de St. Jean as an exclusive Air Force college. Only if abandonment of the tri-Service college policy is forced upon the RCAF will it endeavour to secure for itself a college adequate for its own requirements."156

116. After making this statement, the Chief of Air Staff went on to say that he desired to re-iterate some of the views which he had previously stated at the Special Meeting on 9 June 1953. These views were recorded in the minutes of the meeting as follows:

- (a) The RCAF wishes to avoid any move which might now or in the future work towards abandonment of the tri-Service college system in favour of each Service having its own college. The RCAF considers that for each Service to administer one college is potentially a dangerous move in this direction, particularly if the RCAF takes over the administration of St. Jean as this would provide a ready-made and convenient situation for those who might desire to establish a college for each Service and, in fact, would almost certainly influence a trend in policy in that direction.

- (b) If the RCAF were to assume administrative responsibility for St. Jean and in future the colleges were to be separated, the RCAF might be left with St. Jean which it did not want because the plant would not satisfy technically the four-year training requirements of the RCAF to the same degree that the colleges as presently set up satisfied them. If St. Jean were eventually allocated to the RCAF as its college, it would find itself with an institution with an established language proportion and a high proportion of political considerations involved. The college was poorly located on a site which the RCAF had never favoured and for which the opportunities for expansion were extremely limited. The chances of developing St. Jean to compare favourably with the Royal Military College or Royal Roads were remote.
- (c) For the RCAF to take over St. Jean solely on the grounds of sharing the administrative load, was not a weighty factor in comparison with the other considerations involved. In fact, the RCAF already contributed one-quarter of the staff of the college, and if a more equal sharing of the cost of the tri-Service colleges was desired, it was suggested that the total costs be pooled and charged equally against the funds of the three Services. In any event, for the Army to administer two colleges, rather than one, probably results in the greatest economy.
- (d) St. Jean is an Army establishment of considerable tradition and for the Army to continue its administration of the college, which it is doing in excellent fashion, will present the least danger to continuance of the tri-Service policy. Because the above statement of RCAF policy should remove the chief objections of the Army with respect to its continued administration of St. Jean, and irrespective of any agreement which the Army feels has been made to the contrary, the RCAF strongly requests the agreement of all three Services to maintain the status quo by having the Army continue to administer St. Jean. The RCAF is willing to assume any other commitment

of a tri-Service nature which is of comparable administrative load, if the other Services feel that this consideration is of any real significance. The question as to which service administers St. Jean is distinct from, and should be treated separately from, such matters as entrance qualifications, syllabi and course lengths in the service colleges and these the RCAF were ready to examine whenever circumstances made it advisable.¹⁵⁷

117. The Chief of the Naval Staff suggested that, while he was in sympathy with the R.C.A.F. view, if the tri-Service system continued, the administration of the colleges could best be carried out by the Service having facilities in the immediate vicinity. Thus it was logical that the R.C.N. should administer Royal Roads and the Army the Royal Military College. If it were later decided to have separate Service Colleges, the R.C.N. would undoubtedly get Royal Roads and the Army the Royal Military College. Therefore it would seem that the R.C.A.F. would inherit St. Jean or some other college located in Quebec.

118. The Chief of the General Staff reiterated his remarks made at the meeting on 9 June 1953, that the Army had given, and would continue to give, the tri-Service system a fair trial and would not recommend any change in the system until circumstances made this necessary. However, he most strongly urged that, in the interest of inter-Service relationships, the Committee should adhere to the decision that the R.C.A.F. administer St. Jean. He pointed out that at no time in the year in which the Army had administered St. Jean, had any indication been given that it was not the intention of the R.C.A.F. to assume this responsibility.

119. The Chairman of the Defence Research Board supported the stand taken by the Chief of the Air Staff, and said that he could not recall that the R.C.A.F. had given any undertaking to assume responsibility for the administration of St. Jean. Nevertheless the Chief of the General Staff had every reason to expect the R.C.A.F. to do so, as he had been so assured by the Minister. General Foulkes said that while the R.C.A.F. might not have wished to take over St. Jean it was nevertheless perfectly clear that this had been made a R.C.A.F. responsibility. The Deputy Minister suggested that the arguments put forward by the Chief of the Air Staff were impossible to refute in logic and that the administration of St. Jean by the R.C.A.F. might be a step which would make it easier to abandon the tri-Service system were it ever decided to do so. In spite of this, however, it was finally agreed, after considerable further discussion, and in accordance with the opinion of the majority, that the R.C.A.F. would assume responsibility for the administration of the Collège Militaire Royal de St. Jean, and that the Army would therefore now take action to turn this responsibility over to the R.C.A.F.¹⁵⁸

120. In 1954 the Government authorized a plan which would, over a three-year period, expand the facilities and increase the capacities of the Canadian Services Colleges to cater for a total of 1019 cadets. Under this plan the Royal Military College would be able to accommodate 462 cadets, Royal Roads 155, and the College Militaire Royal 402.¹⁵⁹ By 31 March 1955 the total number of officers, including cadets, in the three regular forces was 17,283,¹⁶⁰ and the serious officer shortage of three years before had to a large extent been overcome. Yet it was still necessary to continue the operation of a number of enrolment and training plans. Apart from graduates from the Service Colleges and Canadian Officer Training Corps, commissions continued to be granted to former officers, officers from the reserve force, serving other ranks, and to junior matriculants who were recruited direct from civilian life and trained subsequently through an Officer Candidate Programme.

THE EFFECTS OF NUCLEAR DEVELOPMENT ON CANADIAN DEFENCE POLICY

121. As has already been implied, the period under review witnessed a gradual, but increasingly rapid, change in the probable nature of a future war. Indeed it seems likely that by the end of 1955 this was by far the most important single influence on Canadian defence policy. By that time, both Soviet and American nuclear and thermonuclear capabilities had progressed to the point where sooner or later they would obviously necessitate a reassessment of the basic concepts of conventional strategy.

122. As late as the end of 1952 the Canadian Chiefs of Staff had been of the opinion that strategical atomic weapons were primarily of long-term value and that their effect, therefore, would not be felt in the initial land battle but only at some period after the initial assault, and probably subsequent to D plus 90. If this were so, they concluded, the force requirements for the period D Day to D plus 90 would not be affected by the employment of strategical atomic weapons. Furthermore, in 1952 the best military opinion had believed that, since tactical atomic weapons had never been tested under combat conditions, it would be dangerous to pre-judge their effects, particularly with respect to the possible reduction of conventional forces. In any case it was not considered likely that there would be sufficient quantities of tactical atomic weapons available to the West until after 1954.¹⁶¹

123. By the end of 1955, however, this situation had changed radically. The United States had made very considerable progress in the production of nuclear and thermonuclear weapons; the Soviet Union had carried out hydrogen bomb tests and had indicated that stock-piling of nuclear weapons was underway; and the United Kingdom, which of course already possessed the atomic bomb, had also announced its decision to proceed with the development and production of thermonuclear weapons.¹⁶² Both Western and

Soviet delivery capabilities, too, had increased to the point where a nuclear exchange would seriously imperil the national survival of both parties. As an index to the magnitude of this threat, it may be mentioned that a careful American-Canadian study of the question had concluded that "the war-making capacity of this continent could not tolerate more than 50 successfully delivered thermonuclear bombs."¹⁶³

124. The problem therefore which faced any system of air defence purporting to be effective was that offensive potential had increased very much more rapidly than defensive capabilities. In the era of the thermonuclear exchange an air defence system was required which could achieve a rate of kill very close to 100%, and one moreover which, as offensive capabilities continued to increase, would have to approach more and more nearly to the absolute. There would be little point in destroying 25%, or 50%, or 75% or 90% of an enemy attacking force of 1000 bomber strength. If only 50 bombers got through, the results would be, for all practical defence purposes, almost as disastrous as though the entire enemy force had succeeded in penetrating to its objective.¹⁶⁴

125. Nor could the aerial battle, in any sense, be viewed in isolation from the roles of naval and ground forces. If the continent's war-making capacity were to be destroyed, the commitment of ground and naval forces might still be achieved, although with difficulty, but their action could no longer be decisive, nor could they be maintained, reinforced, or supplied. Thus the magnitude of the aerial threat and, by implication, the type of war which could result from the thermonuclear capabilities of the major powers, would necessarily affect the entire national defence effort. In the period under review, however, such changes were only foreshadowed; the extent of the problem was explored, but no integrated decision was reached. It is, for instance, of interest to note that the report in January 1954 of the Board of Officers which had been assembled to investigate the organization of the Canadian Army (Reserve Force) made no mention whatsoever of civil defence. The role of the Reserve Force was then described as being:

- (a) The Reserve Force will provide the nucleus of a partially trained and equipped force which may be quickly mobilized and brought up to strength in the case of emergency. It should contain components of all the various branches of the field forces likely to be found in the Canadian Army, and some of the more vital elements of base installations necessary for the supply of material and equipment and for the housing and movement of troops and supplies;
- (b) In the event of landings of hostile troops on Canadian soil, the units of the Reserve Force will provide assistance to the Active Force in containing and eliminating them.¹⁶⁵

126. However, one early and obviously necessary step had been taken when, in April 1950, the Government had approved the establishment of a small federal staff for the co-ordination of civil defence,¹⁶⁶ with the Minister of National Defence being the responsible minister.* The following spring the responsibility for civil defence was transferred from the Department of National Defence to the Department of Health and Welfare,¹⁶⁷ but, in spite of this, it was found that the armed forces and the Defence Research Board were inevitably still involved.

127. Speaking in the House of Commons shortly after the transfer of civil defence responsibility to his Department of Health and Welfare, Mr. Paul Martin emphasized the close co-operation which was needed between civil defence and the armed forces. He said in part:

The purpose of civil defence is to defend the population of Canada and the property of the Canadian people against enemy action in time of war, and to take measures to reduce loss of life, to afford medical and other assistance to the civil population, and to mitigate the property damage that may be caused by such enemy action... It includes planning for advance warning of attacks in liaison with the armed forces, for emergency food and welfare measures, and for protection of industrial plants and other essential facilities against sabotage... It will be clear, I think, that on one boundary of its functions civil defence is related to the operations and responsibilities of our defence forces. Both civil defence and the armed forces are designed to afford physical protection to the people and property of the nation. However, the function of civil defence stops short of the actual military operations that would be required to deal with any direct attack in force on Canadian territory. That is the function of the navy, army, and air force. Civil defence is, in a sense, defence behind the lines, rather than on the lines of action - if any place can be said to be "behind the lines" in a modern war. Civil defence and the armed forces must, however, in many cases work very closely together.¹⁶⁸

*Major-General F.F. Worthington had been appointed Civil Defence Co-ordinator on 1 October 1948.

128. This inter-relationship of civil defence with the whole national defence effort was also recognized when in November 1953, the Chiefs of Staff Committee agreed that the Chief of the General Staff should arrange for the General Officers Commanding Canada's Military Commands to present individual plans on how the Services could best aid civil defence authorities in their respective areas.¹⁶⁹ The official policy came to be that "while it [was] recognized that the Armed Forces must primarily fulfil their military duties, their preparations should enable all feasible assistance to be given to civil defence organizations, should such action become necessary."¹⁷⁰ The Defence Research Board also continued to concern itself with various aspects of civil defence, and in the spring of 1954 the Chairman of the Defence Research Board drew the attention of the Chiefs of Staff Committee to the fact that while during that year some \$2,000 million was being spent on active defence, only some \$6,000,000 was being spent on passive (civil) defence. He claimed that this scale of expenditure was based on the civil defence requirements as they had existed in 1946 and 1947 and that the expenditures on passive, as opposed to active, defence should be brought into a more realistic balance in view of the changed conditions.¹⁷¹

129. Ironically enough, the increased thermonuclear capabilities of the great powers were in themselves felt to be an increasingly powerful guarantee against planned aggression. And, although there was no doubt that all military thinking, plans, and preparations would have to be drastically revised in the future because of the changed nature of the threat, at least Canada, in common with the rest of the free world, could take some comfort from the fact that the prompt response to the Soviet challenge during the critical years following the invasion of Korea had been in a measure effective. The re-armament of the West had been at least partially achieved without that major war which it had been designed to prevent, and in his 1955-56 report the Minister of National Defence was able to state that "The apparent improvement in the present international situation is directly related to the growing ability of the free nations to speak from a position of strength."¹⁷²

130. This report has been prepared by Major
D.J. Goodspeed.

D. J. Goodspeed, Major

(G.W.L. Nicholson) Colonel
Director Historical Section

CANADA
DEPARTMENT OF
MINES AND TECHNICAL SURVEYS
SURVEYS AND MAPPING BRANCH

CANADA

SCALE 1:118,840,000 OR ONE INCH TO 230 MILES
MILES 0 100 200 300 400 500
KILOMETRES 0 100 200 300 400 500

Federal Capital... ● Provincial Capital... ●
Railways, Main... ————
Railways, recently built... - - - - -



APPENDIX "B"

Extract from Minutes of the 584th Meeting of the Chiefs of Staff Committee, 1 Nov 55.

There had been a marked increase in Russia's offensive capability against North America arising out of her possession of thermonuclear weapons and long-range intercontinental bombers. This capability might be expected to increase considerably in the years ahead. It was necessary, therefore, that appropriate adjustments be made in continental air defences in an effort to counter the increasing threat. To this end the Air Defence Commands of the United States and Canada had been actively participating in joint planning to meet immediate and long-term requirements.

The nature of the threat was so serious and the potential destruction so devastating that our military posture must be such as to provide a real deterrent to aggression. At the same time, should war eventuate, the defences must preserve the retaliatory power of the USAF Strategic Air Command and protect the vital centres of population and industry.

It was difficult to express in precise quantitative terms the degree of protection required, but from a study of the number of North American based Strategic Air Command Squadrons and the number of vital Canadian and United States cities and industrial areas, it seemed evident that the war-making capacity of this continent could not tolerate more than 50 successfully delivered thermonuclear bombs. If the enemy were able to launch an attack involving as many as one thousand bombers, it would mean that more than 950 of these would have to be destroyed enroute, in the perimeter regions beyond the built-up areas.

Recognition of the need to defend the Strategic Air Command bases, scattered as they are throughout the United States with many bases centered in the mid-West, has had the effect of greatly expanding the area to be defended. The location of these bases was such that the vital target area was now a continuous zone extending from the Atlantic to the Pacific and penetrating deep into the southern regions of the United States. This was one of the new factors to be reckoned with. Furthermore, the long-range capability of the latest Soviet jet bombers was so great that attacks on this Continent could come not only from the north,

but also from the east, the west and the south. Both Canada and the United States were therefore faced with the need to extend the radar environment and to look to an expansion and redeployment of forces.

The defence task was a formidable and costly one. The USSR was now accumulating thermo-nuclear bombs and long-range jet bombers. By 1958 she would have achieved a strong position in this regard, and further advances will be made in the years ahead. During the 1960's, inter-continental missiles may be introduced, and the defences of that period must be effective against the threat of the day, be it an aircraft threat, an intercontinental missile threat, or a combination of both.

An obvious requirement was the need to achieve a marked increase in the "probability" of effecting the destruction of an attacking bomb carrier. One of the most promising ways of achieving this appeared to be the introduction of guided missiles into the air defences system; both air launched and surface launched.

The development of our air defences was characterized by two prime considerations. Firstly, the immediate need for a substantial improvement in the protection afforded the vital target areas of the continent. Secondly, the need to ensure to the maximum possible extent that any expenditures of resources for defence in the immediate years ahead would continue to serve a useful purpose after the introduction of long-range missile defences. This latter was influencing the selection of new weapons to the extent that the operational characteristics for the long-range surface-to-air missiles specify a range capability similar to that of the interceptor aircraft and the missile should be able to take advantage of the then existing radar environment. These factors and others made it apparent that as long-range surface-to-air missiles are introduced into the Canadian air defences, maximum use can be made of the then existing perimeter air bases and their technical and domestic facilities.

The air defences of North America should provide the maximum possible protection for population, institutions and the ability to prosecute a war. This involved the protection of vital centres of population and key military bases, by a highly effective defence system suitably equipped and manned, deployed in depth to give necessary coverage and early warning. It implies forces "in being", at war stations in peace as well as in war - with such forces at a high standard of training and at continuous readiness.

In elaboration of this concept special emphasis should be given to the task of protecting key military bases. These are primarily Strategic Air Command bases of the USAF. The knowledge that we have the ability in North America to preserve and protect this retaliatory capacity was considered to be of the utmost importance to the preservation of peace and is of equal importance to the successful prosecution of war. It was as vital to Canada as to the United States. The task of defending these bases must rank equal in importance and priority with the task of protecting centres of population.

The most urgent requirements in Canada stemming from the concept of operations outlined above were:

- (a) The development of a base complex across the country from which the defending forces can intercept, identify and destroy enemy bombers or other weapon carriers well in advance of vital target areas;
- (b) The extension of contiguous radar cover and the provision of suitable automatic data handling facilities to permit the forces on this base complex to perform their missions.
- (c) The provision of the minimum number of interceptor squadrons to blunt an attack approaching vital target areas over Canadian territory.
- (d) The improvement of the CF-100 aircraft with air-to-air missile armament (Sparrow II).
- (e) The provision of an adequate Air Defence Command Organization to provide effective command and control of the forces deployed.

The foregoing were required as an immediate stepping stone to the future defences.

In addition to these immediate requirements, studies conducted jointly with Canadian and American air defence authorities indicated that in the period 1960-65 the air defences would have to be further strengthened, by improvements to the ground environment and radar cover, the introduction of the CF-105 or a similar aircraft as a replacement for the CF-100, and the provision of long-range surface-to-air guided missiles.

Current and proposed Canadian air bases, 15 in the first line of defence and three in the second line, and the requirement for additional squadrons and radars, evolved from the plans developed by the planning staffs of the United States and Canada. They represented an integration of the Canadian and American defences.

The bases had not in all cases been surveyed and should not be considered as final as to location. In selecting bases the following criteria had been considered:

- (a) bases must be sufficiently far north to permit interception to be achieved 150-200 miles north of the heavily populated areas of the country;
- (b) bases should be mutually supporting so that forces may be effectively concentrated against any enemy raid;
- (c) initially, bases selected must cater to the operational characteristic of the CF-100 but must be sufficiently far from substantially built-up areas to ensure that future supersonic fighters and/or guided missiles may be operated effectively from them. The problem in mind is the high noise level which will characterize supersonic aircraft and missile operations.
- (d) existing facilities either wholly or in part developed to Air Defence Command standards must be used wherever possible in the interest of economy.

Essentially the first line bases supported the screening forces whose task was to establish first contact with the enemy, determine his intentions as to route and effect maximum possible attrition on the attack as the first step in blunting it.

The minimum acceptable degree of deployment to perform these functions was considered to be one all-weather fighter squadron per base. This scale of equipping, while unable to effect a high rate of attrition against large scale concentrated raids, would be effective against small raids attempting to use the elements of surprise in achieving their objectives and would also have an appreciable effectiveness against a large scale raid provided it was scattered and not concentrated.

The second line defence bases at North Bay, Ottawa and Montreal were for support of the forces necessary to thicken up the defences against attacks aimed at vital Canadian targets and were of particular importance to Canada. One all-weather squadron per base was considered essential.

The number and location of bases and squadrons required to achieve a minimum acceptable kill was determined by analysis of such factors as likely enemy tactics, the speed, altitude and number of hostile aircraft, the distance in advance of the target at which the hostile bombs when released can reach the targets, the time and distance consumed by the defending aircraft in making an interception, and the effectiveness of its weapons. Joint United States - Canadian studies of these factors agreed that eighteen all-weather fighter squadrons was a minimum requirement for that part of the air defence system located in Canada.

The need to intercept to the north of our heavily populated areas together with the need for a base complex across Canada and the United States, would necessitate the extension of the contiguous radar cover up to and beyond the Mid-Canada Line. Studies have been conducted in collaboration with the continental Air Defence Command of the United States and it has been agreed that the outward extension of our contiguous radar cover above 20,000 feet was urgently required. For this purpose it was agreed that a total of 25 additional heavy radars should be provided. The United States had, it is believed, included all 26 radars in the programming for completion by 1959. The RCAF held the view that 13 heavy radars should be completed by 1958 with the additional 13 programmed for completion by 1961.

It must be realized that this radar cover is high cover from 20,000 feet upwards. Whereas this degree of cover may be acceptable for the perimeter regions, it cannot be regarded as complete, particularly for the more vital areas. Our defence system would, therefore, require, in addition, an increase in the number of gap filler radars in order to provide cover at low level, particularly in our inner defence regions. Outline plans have been drawn up in collaboration with the Americans which call for the siting of 123 unmanned gap filler radars in Canada.

The United States was well advanced in their plans for the introduction of Semi-Automatic Guidance Devices and Computer with particular emphasis being placed on Semi-Automatic Ground Environment (SAGE) at present. A semi-automatic system would be required in Canada.

Developments in the United States on SAGE and Base Air Defence Ground Environment (BADGE) are being studied by the RCAF and by DRB as also are the equivalent systems in the United Kingdom. The selection of a system for introduction in Canada would await operation evaluation.

The recent development of highly effective radar jammers might deny much of the vital radar data. It might become necessary to develop a secondary system of data collection which would be complementary to the existing system, and also to intensify development of anti-jamming devices. The extension of the existing system was considered justified on the basis that:

- (a) the facilities provided will ensure the continued exercising of the active defence air elements;
- (b) the communication facilities and the construction programme which together account for more than 75% of the capital investment, will be required in support of any secondary data collection system developed.

The widespread deployment of forces within the Air Defence Command would give rise to many problems in administration and operational control. Some decentralization of the command and control function from Air Defence Command Headquarters would be necessary, particularly in the light of the high speed with which operation must be conducted, and four Air Divisions with headquarters located in Vancouver, Edmonton, North Bay and Quebec City would be required. No. 5 Air Division Headquarters now exists in Vancouver. Such an organization will provide centralized control at Air Defence Command Headquarters with the ability to decentralize this control in the event of damage to a part of the system.

It was recognized that the provision of even these minimum requirements of the air defence system might be beyond the capabilities of Canada. As practically every element of air defence in Canada was a direct contribution to the air defence of the United States, there are good arguments in favour of sharing the cost, and there was reason to believe the United States authorities would continue to share this view. It should be borne in mind, however, that United States defences in Alaska and the north eastern seaboard contribute directly to Canada's air defence.

Inasmuch as the number of interceptor squadrons called for by the plan (18) was in fact less than the number for which provision had already been made (21), and in view of the attractiveness from Canada's viewpoint of having this particular type of operation in Canada, Canada should provide these squadrons and man the bases from which they operate as Canada's prime contribution to the air defence system. The United States might be expected to pay a large percentage of the cost for the extension of radar cover and also for the development in the future of a portion of the guided missile defences. Some portion of the cost of a semi-automatic data handling system in Canada might well be a logical charge also against the United States.

To give effect to the aforementioned increase, namely:

9 additional Regular Force fighter squadrons,
13 interceptor bases additional to the five now fully operational. This involves improvement of nine partially developed air bases plus four new bases.
13 additional heavy radar units now (half of the ultimate total of 26), plus 123 gap filler radars, and 3 additional Air Defence Headquarters,

would require the following increase in manpower and expenditures:

- (a) manpower - 15,170 personnel
- (b) capital expenditures - \$850,900,000
- (c) annual recurring cost - \$122,500,000

Savings in the above both in respect of men and money can be expected as a result of recently revised plans for the Auxiliary Squadrons.

The RCAF therefore, recommend that:

- (a) approval be granted to form nine additional all-weather fighter squadrons for the air defence of Canada;
- (b) approval be granted in principle, for the extension of the radar environment to the extent of 26 additional heavy radars and 123 gap fillers;
- (c) approval be granted in principle for the additional air bases and base development necessary to support 18 regular all-weather fighter squadrons on the basis of one squadron per base;
- (d) approval be granted for the re-organization of ADC Subordinate Headquarters as follows:
 - (i) immediate formation of an additional headquarters in the vicinity of Quebec City;
 - (ii) subsequent formation of headquarters in the Prairies and Western Ontario regions as the new units materialize.
- (e) negotiations be opened with the United States regarding cost sharing for the extensions of the Air Defence System.

DEPARTMENT OF NATIONAL DEFENCE

APPENDIX "C"

Table of DND Appropriations by Major Categories*
(Thousands of Dollars)

D.N.D. Budgetary Components	1948-49 Appropriations	1949-50 Appropriations	1950-51 Appropriations	1951-52 Appropriations	1952-53 Appropriations	1953-54 Appropriations	1954-55 Appropriations
Navy (Cash Disbursements)	47,313	73,316	111,536	236,051	268,225	332,356	337,281
Army (Cash Disbursements)	101,175	124,584	221,267	508,342	549,485	533,007	506,595
Air (Cash Disbursements)	90,948	147,614	229,693	727,632	871,832	1,018,019	989,500
D.R.B.	19,797	24,314	24,915	32,496	42,000	42,000	50,400
Mutual Aid, Infrastructure and NATO Budgets			195,417	165,966	351,500	344,600	312,000
Administration, Pensions, Etc.	16,351	17,233	21,382	43,849	49,217	59,615	60,727
DEDUCT							
Credits to Service							
Expenditures from:							
(a) Mutual Aid Transfers of Equipment in current production for the Forces						163,215	152,603
(b) NATO Aircrew Training				55,800	112,522	81,596	58,900
Charges to Special Accounts			19,886	49,037	17,885	83,757	137,000
TOTAL	275,584	387,061	784,324	1,609,499	2,001,852	2,001,029	1,908,000

*The 1949-50 appropriations have been included to show, by way of contrast, the sharp increase in defence expenditure resulting from the Korean War.

APPENDIX "C"

The following table shows the distribution of the defence dollar for the same year.

Distribution of the Defence Dollar

<u>Fiscal Year</u>	<u>Air Force</u>	<u>Army</u>	<u>Navy</u>	<u>Defence Research</u>	<u>Mutual Aid</u>	<u>All Other Costs *</u>
1949-50	38.8%	31.1%	19.0%	5.0%	-	4.1%
1950-51	41.2%	31.9%	19.8%	3.9%	-	3.2%
1951-52	41.8%	28.5%	14.7%	2.0%	10.3%	2.7%
1952-53	37.9%	26.6%	13.4%	2.2%	16.1%	3.8%
1953-54	41.7%	23.7%	14.8%	1.9%	15.3%	2.6%
1954-55	41.4%	23.6%	15.7%	2.5%	13.8%	3.0%

*Administration, Pensions, Grants, etc.

~~TOP SECRET~~

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