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ADC HISTORICAL STUDY NO. 22

RETURN TO  
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**AIR DEFENSE  
AND  
NATIONAL POLICY  
1946-1950**

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47

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## FOREWORD

For nearly 25 years, from late 1939 to 1964, some agency in the U. S. air establishment has held responsibility for the air defense of the United States. The likelihood that war meant serious destruction from the air was hinted at in World War I and emphasized in the Italian bombing of Ethiopia and the use of aerial warfare in the Spanish Civil War.

With the opening of World War II and the destruction of Poland, prudence dictated that something be done to protect the United States from aerial attack, even though the broad oceans still made such attack unlikely, though possible. The amount of financial nourishment provided the air defense system has varied with the public assessment of the threat as reflected by Congress and the executive branch of the government. It is significant, however, that at no time since 1939 has the requirement for air defense been completely abandoned.

TABLE OF CONTENTS

CHAPTER ONE

World War II.....Page 1

CHAPTER TWO

Picking Up the Pieces, 1946-57.....Page 9

CHAPTER THREE

Air Defense: Small Economy Size, 1948-50.....Page 39

TABLE OF CONTENTS

CHAPTER ONE

World War II.....Page 1

CHAPTER TWO

Picking Up the Pieces, 1946-57.....Page 9

CHAPTER THREE

Air Defense: Small Economy Size, 1948-50.....Page 39

## CHAPTER ONE

### WORLD WAR II

While thoughtful theorists like Captain Claire Chennault had studied air defense techniques, such as the integration of ground-based aircraft warning systems and fighter aircraft, in the thirties, no official cognizance was taken of air defense as a military entity until the end of the decade. On 20 December 1939, somewhat less than four months after World War II began, the War Department made public announcement of the creation of an Air Defense

Command to "further the development of means and methods<sup>1</sup> for defense against air attack." The Air Defense Command was actually organized 15 March 1940 under the command of<sup>2</sup> Brig. Gen. James E. Chaney.

The initial ADC, located at Mitchel Field, N. Y., was a small planning organization which commanded no troops, other than those assigned to the immediate headquarters, controlled no installations and owned no aircraft. It did, however, study the British experience during the Battle of Britain, make plans for establishment of an active air defense system in the United States and trained senior officers in the theory and practice of air defense. The ADC theories were tested in connection with Army maneuvers in New York in August 1940 -- a partial network of ground observers, two SCR-270 radars and a number of pursuit aircraft were available -- and it was agreed the system showed possibilities. A similar test in the northeastern United States

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1. Unpublished manuscript, P. Alan Bliss, Air Defense of the Continental United States, 1935-1945, I, p. 78 (hereinafter cited as Bliss).

2. TAG to CG. 1st AF, "Creation of Air Defense Command," 26 Feb 1940 [HRF]: Bliss, I, p. 78.



in January 1941 indicated that the P-40 pursuit could easily cope with the B-18 bomber if given adequate warning.<sup>3</sup>

But the Air Defense Command that was announced in 1939 and organized in 1940 was short-lived, being disbanded on 2 June 1941. Responsibility for the planning, as well as the operation, of air defense was assumed by the I Interceptor Command of the First Air Force. Decentralization of air defense responsibilities on a geographic basis was completed later in the summer of 1941 when the Second (northwest), Third (southeast) and Fourth (southwest) Air Forces<sup>4</sup> also created Interceptor Commands that involved themselves in air defense. The First Air Force was responsible for defense of the northeast. Since it was decided not to establish a nationwide command (at least not one with operational control over the Aircraft Warning Service and the associated aircraft) to supervise air defense, the work of the early ADC was done. It had laid the groundwork and had successfully demonstrated that active air defense was feasible and possible. It was time for operational organizations to procure the necessary people and hardware and build the operating air defense system outlined by ADC.

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3. Bliss, I, pp. 84-86 and 95-99.

4. GHQ AF to TAG, "Inactivation of Headquarters and

Between their assumption of air defense responsibility in the summer of 1941 and Pearl Harbor, each of the four Interceptor Commands was active in the recruitment and training of civilian ground observers, the establishment of filter centers and information centers that consolidated the reports forwarded by ground observers, the selection of sites for radar installations and the training of aircrews in air defense techniques. The Aircraft Warning Systems of the four Interceptor Commands were in various states of readiness at the time of Pearl Harbor, although the warning network was far from complete. Only eight SCR-270 and SCR-271 radars were in operation at the time the Japanese attack -- one in Maine, one in New Jersey<sup>5</sup> and six in California.

After Pearl Harbor and the creation of the Western Defense Command and Eastern Defense Command for protection of the Pacific and Atlantic coasts, respectively, the II and III Interceptor Commands were relieved of responsibility for air defense. The area of responsibility of the I Interceptor Command was extended to include the entire Atlantic coast and

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[Cont'd] Headquarters Detachment, Air Defense Command," 2 Jun 1941 [HRF]; Bliss, I, pp. 24 and 116.

5. Bliss, I, pp. 196-200.

that of the IV Interceptor Command was stretched the entire length of the Pacific coast. The air defense organizations were responsive to orders from the Defense Commands. The War Department put both coasts into defense category "C" (minor attack probable), so considerable effort was put into the creation of a chain of radar stations approximately 70 miles apart along both coasts as well as refinement of other elements of the Aircraft Warning System.<sup>6</sup>

By the middle of 1943 a total of 95 radar stations had been built, 65 on the west coast and 30 on the east coast. Probably not more than 75 were in operation at any one time. Ground observers, filter centers and information centers, of course, were in operation around the clock. By the middle of 1943, however, the tide of the war had turned in favor of the Allies. There had been a successful naval battle at Midway and the ground forces had rolled back the Japanese and Germans at Guadalcanal and in North Africa. The odds against an air attack on the continental United States had increased greatly. On 20 April 1943, therefore, the defense category of the coastlines dropped from "C" to "B" (possible minor attack). The disintegration of the air

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6. Bliss, II, pp. 1-2, 9 and 231.

defense system within the United States began. On 10 September 1943, the First and Fourth Air Forces were relieved of assignment to the Eastern and Western Defense Commands, respectively, and returned to the control of Army Air Forces. This action was recognition of the fact that training had assumed priority over air defense. As far as First and Fourth Air Forces were concerned, responsibility for air defense was transferred along with the Air Forces. The Defense Commands apparently believed they had retained the air defense mission, leading to some confusion as to where basic responsibility actually rested during the remainder of the war. On 30 October 1943 the defense category of the coastlines was lowered from "B" to "A" (possibility of isolated raids). The release of ground observers and the closing of filter centers and information centers was accelerated. Fighter units concentrated on training, with the understanding that they were to be made available for air defense if necessary.<sup>7</sup>

The beginning of the end came in May 1944 when all civilian volunteers were released with a letter of thanks

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7. Bliss, II, p. 9 and 52; "A Decade of Continental Air Defense, 1946-1956," ADC, Jul 1956, p. 8; TAG to Defense Commands, "Defense of the Continental United States," 11 Dec 1945 [HRF].

from the Secretary of War. By August 1944 only nine radars on the east coast and eight on the west coast were being used for search purposes, and these only eight hours a day. Others were operating, but only for the training of night fighter units. By the end of World War II all radar sites within the United States had either been torn down or reduced to caretaker status.<sup>8</sup>

A new organization took control of the collapsing air defense structure when Continental Air Force was established 12 December 1944. Air defense, at least the portion controlled by Army Air Forces, was included in the mission of CAF, although as a practical matter CAF did not become involved in air defense until it assumed jurisdiction over the four continental Air Forces on 14 April 1945. Also, as a practical matter, CAF did very little about air defense except supervise the destruction of the system so laboriously constructed from 1940 to 1943. Continental Air Force was much more deeply involved in planning the re-<sup>9</sup>deployment of Air Force strength from Europe to the Far East.

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8. Bliss, II, p. 9 and 52; "A Decade of Continental Air Defense, 1946-1956," ADC, Jul 1956, p. 8.

9. AAF to CAF, "Directive," 14 Dec 1944 [Doc 1 in Hist of CAF, 14 Dec 1944 to 21 Mar 1946]; Bliss, II, pp. 32 and 100.

## CHAPTER TWO

### PICKING UP THE PIECES -- 1946-1947

Since the air defense system had ceased to exist by the end of World War II, it was obvious that any post-war system would have to begin almost from the beginning. There were some search radars in storage and there were great numbers of fighter aircraft, but there was no plan, no organization. CAF dabbled with this problem briefly, taking the position that a bold new approach to air defense was necessary. In July 1945, CAF contended that the air defense of the future should concern itself with defense against guided missiles. Radar capable of detecting missiles

a range of 1000 miles, altitudes up to 200 miles and speeds in excess of 1000 miles per hour would be required, CAF believed. AAF, in a sense, sighed and agreed that the detection equipment outlined by CAF would be highly desirable, but that the state of the radar art was at the point where equipment offering such performance could not be expected until the far distant future, if ever. Meanwhile, AAF wanted CAF to plan an Aircraft Control and Warning (AC&W) system that would make use of radar likely to be available in the immediate post-war period.<sup>10</sup>

The resultant CAF plan, completed in January 1946, was different from that which obtained during World War II. Instead of providing a radar screen along the coastlines, CAF recommended that vital population and industrial areas be provided with air defense (radar and interceptors), these "island" defenses to be the basis for a more ambitious defense system which might be built in the future. In recognition of the uncertain personnel situation immediately after the war, CAF saw the radar sites being manned

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10. CAF to AAF, "Defensive Communications and Electronics in the Postwar Period," 21 Jul 1945 [HRF]; 1st Ind (CAF to AAF, "Defensive Communications and Electronics in the Postwar Period," 21 Jul 1945), AAF to CAF, 30 Aug 1945 [HRF].

by a mixed bag of Regular, Air National Guard and Air Reserve units, some being operated full time, some part-time, some on a standby status.

This CAF effort was primarily an academic exercise, however, because by the time the plan was completed, AAF had decided to reorganize its field forces along functional lines. In reorganizing, AAF drew upon wartime experience which indicated that the most effective means of utilizing combat strength was to divide it into strategic forces (long-range bombing), tactical forces (ground support) and air defense forces. Applied to the post-war situation, this involved creation of a Strategic Air Command (SAC), Tactical Air Command (TAC) and Air Defense Command (ADC). This reorganization took effect 21 March 1946. For a while it was thought CAF would become ADC, but when the reorganization was finally effected, CAF became the basis for SAC instead. ADC was given the remnants of the First and Fourth Air Forces and the headquarters of First Air Force was cannibalized to form Headquarters, ADC.

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11. CAF to AAF, "Radar Defense Report for Continental United States," 28 Jan 1946 [HRR].

12. WD FM 100-20, "Command and Employment of Air Power," 21 Jul 1943; USAF Historical Study No. 126, "The Development of Continental Air Defense to 1 September 1954," p. 3.



The Air Defense Command established in 1946 did not result from any public cry for protection. World War II had just been won and all potential enemies had been crushed. Besides, the United States had a monopoly on the atomic bomb. The public couldn't have cared less about air defense. But Army Air Force planners were aware that intercontinental bombers such as the B-29 and B-36 were in existence and that improved types would undoubtedly follow. It was unthinkable that the United States should be left wide open to air attack. Under their general responsibility to provide military protection to the country the AAF concluded that air defense, whether the public realized it or not, was necessary. Actually, not everybody was sure the air defense mission belonged to the AAF in view of the cloudy situation which had prevailed since the First and Fourth Air Forces had been withdrawn from the Defense Commands in September 1943. Had the Defense Commands (which answered to Army Ground Forces) retained the air defense mission or had the First and Fourth Air Forces taken it with them? No clear answer had been provided to this question by early 1946. Therefore, the mission statement for ADC, dated

12 March 1946, was labeled "interim." At any rate, the as-  
 yet-unformed ADC was told that it would:

organize and administer the integrated air defense system of the Continental United States;...exercise direct control to operate either independently or in cooperation with Naval forces against hostile surface and undersurface vessels and in protection of coastwise shipping;...train units and personnel in the operation of the most advanced methods and means designed to nullify hostile aerial weapons;...maintain units and personnel for the maintenance of the air defense mission in any part of the world.

Despite the fact that the statement was filled with undefined words and generalities that meant various things to various people, it was with this charter figuratively nailed to the wall that Air Defense Command was organized at Mitchel Field, New York, on 27 March 1946. First commander was Lt. Gen. George E. Stratemeyer, late of Army Air Forces, China Theater. His familiarity in dealing with the fractured relationships among Chinese, British and Americans in the unhappy China-Burma-India area was to stand him in good stead in his new assignment. The day ADC was activated it controlled two night fighter squadrons. The 414th at Bolling Field was a completely paper organization.

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13. AAF to ADC, "Interim Mission," 12 Mar 1946 [Doc 7 in Air Defense of the United States, ADC, Jun 1951].

1 425th at March Field in California was manned with one officer and two airmen. ADC owned two bases -- Mitchel in New York and Hamilton in California. Not a single search radar was in operation. Total ADC personnel totalled 7,218 -- ADC headquarters and the headquarters groups of First and Fourth Air Forces. Any banana republic could have launched an air attack on the United States in March 1946 without hindrance from ADC.<sup>14</sup>

Later in the spring of 1946, on 20 May, General Carl Spaatz, Commanding General, Army Air Forces, explained to Congress what he had done and why he had done it:<sup>15</sup>

In view of the possibility of air attack in any future war...we feel that the air defense of the United States cannot be left to chance. There must be a commander responsible for it. We must be properly organized so there cannot possibly be an air surprise, such as occurred at Pearl Harbor. We hope and expect we will have enough appropriation to provide equipment and personnel to maintain radar stations open 24 hours a day instead of just during the normal working hours of the day. The Air Defense Command is established for this purpose.

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14. ADC GO 16, 22 Apr 1946; ADC GO 22, 16 May 1946.

15. House Hearings on the Military Establishment Appropriation Bill for Fiscal 1947, p. 414.

At the same time, General Spaatz added that he had no intention of assigning any appreciable portion of regular Air Force strength to ADC. This command, he told Congress, would be composed "principally" of National Guard and Air Reserve units. He went on to recommend establishment of an Air National Guard of 84 squadrons and an Air Reserve which would include 22,500 pilots. As to the regular force, General Spaatz wanted 70 groups. Apparently Congress, representing the public, had no objection to AAF actions and proposals as regards air defense. General Spaatz was not  
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questioned on this portion of his testimony.

Meanwhile, as though the March statement of mission provided ADC were not ambiguous enough, the War Department further muddied the waters in April 1946 by furnishing Army Ground Forces with a mission statement that said AGF would "prepare and execute planned operations for the defense of the United States...in conjunction with designated air and  
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naval commanders." Army Air Forces objected to this statement on the grounds that two commands could not very well do the same thing at the same time. The War Department was

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16. Ibid., pp. 407-08.

17. TAG to AGF, "Defense Missions of Army Ground Forces," 8 Apr 1946 [HRF].

impressed with the AAF argument, however, and in May 1946 formalized the confusing arrangement in a document which recognized that both AAF and AGF had a vested interest in air<sup>18</sup> defense.

Army Ground Forces attempted to be helpful in this situation by explaining in June 1946 that it interpreted air defense to mean "defense by air" which, translated, meant that AGF intended to retain control of antiaircraft artillery. AAF, having in mind the British practice which assigned antiaircraft artillery to the Fighter Command, responded to the AGF contention by offering the opinion that the principle of unity of command applied in this instance. Therefore, said AAF, everything usable in air defense, including AAA, should be brought under a single commander. The War Department, however, refused to be budged from its earlier position, settling the controversy by announcing that the provisions of the May directive still stood. Army Ground Forces retained AAA and an air defense mission. Thus was national policy on control of AAA decided. The public was unaware that an internecine struggle over control of<sup>19</sup> the total air defense mission had been conducted.

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18. WD Circular 138, 14 May 1946.

19. Gen. Jacob L. Devers (CG AGF) to Gen. Carl Spaatz,

Despite the fact that his military resources were virtually non-existent, General Stratemeyer assumed that he was responsible for the air defense of the United States. He was well aware that he could not defend against a surprise air attack if he had to depend on the week-end warriors of the Air National Guard and the Air Reserve. At best, these organizations would not be available immediately and they were far from being at their best. The Air National Guard was not organized until 25 April 1946 and it would be years before the ANG was manned, equipped and adequately trained in air defense techniques. The Air Reserve was still haggling over which fields it was going to use for training.

Therefore, since he was likely to have only token forces he could call his own, General Stratemeyer recommended, less than a month after taking office, that he be given the power to command any available air defense forces (Air Forces, Ground Forces or Navy) in event of emergency.

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[Cont'd] "Responsibilities for Air Defense," 14 Jun 1946 [HRF]; Spaatz to Devers, "Responsibility for Air Defense," 11 Jul 1946 [HRF]; WDGS Summary Sheet, "Responsibilities for Air Defense," 18 Sep 1946 [HRF].

20. ADC to AAF, "Problems Confronting ADC in Dealing with Civilian Air Components," 16 Apr 1946 (App. IX in Hist of ADC, Mar 1946-Jun 1947).

\*, however, did not think it necessary that ADC have more than "operational control" over forces outside the AAF in an air defense emergency. Besides, AAF apparently didn't want to fight the battle with the other services that the "command" proposal would surely foment. It was the opinion of AAF that invasion -- aerial or otherwise -- would cause the JCS to appoint a theater commander to supervise defense. And AAF did not think the ADC commander would be the officer appointed. It was suggested that ADC coordinate its defense efforts with those of other services. As to the degree of ADC control over the fighter forces of the Strategic Air Command and Tactical Air Command, AAF was studying the problem.<sup>21</sup>

Thus rebuffed in its April proposal, ADC settled into the job of organizing and granting Federal recognition to ANG units, organizing and training Air Reserve units and drafting agreements with the Ground Forces and Navy as to cooperation in time of air defense emergency. Considerable

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21. ADC to President, Air Forces Board, "Command Jurisdiction Over Land, Sea and Air Forces," 15 Apr 1946 [HRF]; AAF to ADC, "Investment of Command Responsibilities for Land, Sea and Air Forces in Event of an Air Invasion," 10 Jun 1946 (App III in Hist of ADC, "Evolution of the Mission, March 1946-March 1947").

thought was given as to just where ADC fit into the air defense picture. By August 1946 ADC was again ready to approach AAF on the matter of the ADC mission. At that time, General Stratemyer proposed, among other things, that he do the best he could, with available resources, to maintain an air defense "in being" along the most critical approaches to the United States, that he inform AAF of the additional resources required to provide a really effective air defense system and that he begin re-organizing the civilian ground observer establishment that<sup>22</sup> had been disbanded in May 1944.

The Assistant Chief of Air Staff for Operations, Lt. Gen. Earle E. Partridge, felt that the ADC proposals were reasonable, but, in the existing situation, unrealistic. For example, General Partridge did not believe that ADC should be allowed to organize ground observers, because such action would have "far-reaching political implications." In other words, AAF should avoid giving the public, so soon after World War II, the impression that air attack was anticipated. And here was revealed the remarkable ambivalence of national policy as regards air defense during

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22. ADC to AAF, "Mission of the Air Defense Command," 5 Aug 1946 (App IV in Hist of ADC, March 1946-June 1947).



s period. Air defense was regarded as necessary, in theory, while also being regarded, in terms of distribution of resources, as not necessary. General Partridge also pointed out that creation of an air defense in being was hardly practical, since it was unlikely that ADC could be given sufficient men and equipment to provide more than a thin peripheral early warning screen and a negligible amount of interception control.

But the Partridge viewpoint was not expressed in the AAF reply to ADC, possibly because it was not shared in other quarters within AAF. The reply merely stated that the ADC proposals had been favorably considered and that ADC should submit a plan showing how it intended to deploy an air defense in being. ADC was cautioned, however, that none of the actions implied in the ADC proposals should be actually taken without specific approval of AAF. While the tone of the AAF reply was favorable, the Plans organization in ADC thought it could read between the lines something which indicated that AAF had not seriously studied the ADC proposal and that what looked like approbation was more apparent than real. ADC got no more men, no more airplanes

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23. Memo, AC/AS-3, AAF to DC/AS, AAF, "Mission of the ADC," 24 Aug 1946 [HRF].

and no more early warning radar as a result of the AAF re-  
 action. All it got was encouragement in plan writing.<sup>24</sup>

The AAF request of September 1946 actually resulted in two ADC plans, one submitted in October and one in November. The Air Defense Plan (Short Term) of 19 October 1946 was modest to an extreme. Although at the time of writing ADC controlled three fighter squadrons (only one of which had any airplanes -- a handful of P-61 night fighters), General Stratemeyer thought he knew where, in an emergency, he could lay hands on 18 fighter squadrons of, at best, about 50 per cent efficiency, nine aircraft control and warning squadrons and one antiaircraft artillery group. With this strength he felt he could provide a moderately effective defense for one strategic area. He did not specify which strategic area.<sup>25</sup>

There was no direct AAF reply to the first ADC plan, but on 24 October 1946 AAF revealed to ADC where it stood

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24. 1st Ind (ADC to AAF, "Mission of the Air Defense Command," 5 Aug 1946), AAF to ADC, 19 Sep 1946 (App IV in Hist of ADC, Mar 1946-Jun 1947); Memo, A-5 (Plans), ADC to C/S, ADC, "Mission of the Air Defense Command," 26 Sep 1946 [HRF].

25. ADC to AAF, "Establishment of an Active Air Defense of the United States," 19 Oct 1946 [Doc 23 in AMC Case Hist of the AC&W System].

in relation to the 70-Group Air Force which was the post-war objective of the AAF and which AAF thought the public, through Congress, would approve. Under the 70-Group plan, ADC was to be allocated one group (three squadrons to a group) of day fighters and three groups of all-weather fighters, or a total of 12 squadrons. ADC was also informed that AAF had decided to replace P-61 night fighters with P-82 fighters (the hybrid "Double Mustang" created by joining two P-51's with a center wing section) until an aircraft especially designed for all-weather use could be developed and built.<sup>26</sup>

This was not at all what ADC had in mind. The ADC plan of 22 November 1946 said that five strategic areas (Boston-New York-Philadelphia-Washington, San Francisco, Chicago-Detroit, Los Angeles and Seattle-Pasco) could be defended with 36 squadrons of interceptors, 24 AC&W squadrons and 70 battalions of antiaircraft guns. If AAF should approve the ADC plan by the end of 1946, ADC predicted that it should be ready to defend New York-Philadelphia-Washington by April 1948, San Francisco by July 1948, Chicago by October 1948, Los Angeles by January 1949, Detroit by March 1949, Seattle-Pasco by May 1949 and Boston by July 1949. Although the War Department had decided to leave antiaircraft

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26. AAF to ADC, "Current AAF Plans and Programs,"  
24 Oct 1946 [HRF].

artillery with the Ground Forces, ADC was still hopeful  
that a large share of it could be made available to ADC. <sup>27</sup>

Army Air Forces did not approve the November plan by the end of 1946. In fact, AAF had not even answered the ADC letter by the end of 1946. General Stratemeyer may perhaps be forgiven for wondering if anybody in Washington was listening to what he was saying.

Whatever the view from ADC, Washington was listening. The problem was that AAF could not agree on what should be done about air defense. Both parties to the discussion claimed to be expressing the public will. General Partridge of AAF Operations, addressing himself to the matter of an early warning radar network, recommended against immediate creation of such a network since it would require use of obsolete World War II radars and might raise a public outcry against "a scandalous waste of public funds." Therefore, General Partridge recommended taking a calculated risk by postponing creation of a radar network "for a few years" until advanced radar equipment was available. Maj. Gen. O. P. Weyland of AAF Plans did not see the situation in quite that light. While General Weyland agreed that air defense

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27. ADC to AAF, "Establishment of an Air Defense in Being," 22 Nov 1946 [HRF].

perhaps five years of grace before a fully operational radar network would be required, he contended that these five years should be spent in getting ready, making use of whatever equipment was available in order to provide the air defense organization with training that could be put to good use when advanced radar, and advanced interceptor aircraft, became available. "In the eyes of the public," argued General Weyland, "the chief mission of the Air Forces is the air defense of our country. We have consistently used this argument in substantiation of our requirement for an Air Force 'in being'....The American people would not tolerate uninterrupted attacks without warning against their cities by atomic-bomb laden aircraft or guided missiles, even if the attacks were of a sporadic nature." 28

That the public was becoming aware that the Air Defense Command was not what it might seem was indicated in the 2 February 1947 column of Hanson W. Baldwin, military analyst of the New York Times. Mr. Baldwin explained that ADC, through no fault of its own, would have to depend on

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28. Memo, AAF AC/AS-3 (Operations) to AAF AC/AS-4 (Materiel), "Proposed Air Defense Policy," 13 Mar 1947 [Doc 37 in AMC Case Hist of the AC&W System]; Memo, AAF AC/AS-5 (Plans) to AAF AC/AS-3 (Operations), "Proposed Air Defense Policy," 27 Mar 1947 [Doc 42 in AMC Case Hist of the AC&W System].

the ANG and Air Reserve for combat strength because of a postwar military policy which called for a small professional force backed by semi-trained part-time forces. He came to the conclusion that this situation meant that effective air defense did not exist in the United States because it was palpably impossible for reserve forces to be instantly available in event of emergency. <sup>29</sup> —

The public, in the shape of its representatives in Congress, had two opportunities to come to grips with the air defense problem in early 1947. One occasion was the hearings on the military budget for Fiscal 1948. The other came during hearings on the National Security Act of 1947, the bill which established an independent Air Force. Congressmen discovered, however, that it was difficult to find a handle to hold, since military testimony, reflecting differences of opinion within the Pentagon, was confusing and occasionally contradictory.

Lt. Gen. Charles P. Hall, a Ground Force officer who was Director of Operations and Training in the War Department General Staff, made the basic War Department presentation on the appropriation bill on 17 February 1947.

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29. New York Times, 2 Feb 1947.

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29. New York Times, 2 Feb 1947.

"The combat air forces," he told the subcommittee, "are made up of three commands, Strategic Air Command, Tactical Air Command and Air Defense Command. The Air Defense Command is made up of six air forces that are in support of the six armies located in the United States. As the name implies, the Air Defense Command is composed of fighters to include night fighters for defense purposes -- the P-61 and P-51." <sup>30</sup> This was hardly an adequate description in that it suggested that the primary purpose of ADC was the protection of the six continental armies and suggested that appreciable numbers of aircraft were available to ADC. It must have astonished fighter pilots who read General Hall's testimony to discover that the P-51 was considered a night fighter. But no Congressman rose to challenge General Hall's statement and it was allowed to stand as the official position of the War Department.

When General Spaatz came forward to testify on 6 March 1947, however, he was questioned about air defense. Congressman George H. Mahon of Texas wanted to know if General Spaatz thought the continental United States would

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30. Hearings before the Subcommittee of the House Committee on Appropriations on the Military Establishment Appropriation Bill for 1948, 17 Feb 1947, (p. 17).



be hit in a war that began at least 10 years in the future. "I believe," General Spaatz replied, "that in the event of another war hostile shots will most certainly be fired on the United States. I believe that air attacks, either in the form of heavy bombers or guided missiles or other weapons will hit the United States and do terrific damage."<sup>31</sup>

This response prompted Congressman Albert J. Engel of Michigan to ask what military agency would be charged with protecting the country against such an attack. General Spaatz chose an oblique answer. "Well, the only way to prevent them (missiles and bombs) from falling is to get them at the place they start from, and that is primarily, our mission. But it will require combined operations of land, sea and air forces to secure the outlying bases for ourselves from which to launch air attacks, or prevent such outlying bases from falling into the hands of an enemy and being used against us."<sup>32</sup>

This testimony was certainly no vote of confidence in the type of air defense ADC thought it was obligated to provide for the country. It was, instead, a throwback to the mid-thirties when the "big-bomber" school of thought

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31. Ibid. p. 629.

32. Ibid.

in the Air Corps felt that a good offense would obviate the need for any kind of defense.

General Spaatz' testimony, however, represented only one viewpoint, even though his should have carried considerable weight in light of the fact that he was Commanding General, Army Air Forces. Still a third point of view on air defense presented by Lt. Gen. Ira C. Eaker, General Spaatz' deputy. Also testifying on 6 March 1947, General Eaker described ADC in this manner:

This organization (ADC) is charged with provision of the air defense organization for the continental United States. It mans the communications system, the electronic detection devices and the fighter defenses. Since the Air Reserve and Air National Guard are the primary elements of this system, the Air Defense Command has the peacetime function of supervising the Air Force phase of Air Reserve, Air National Guard and ROTC training and organization. It also controls and mans the complete air warning system. We learned from experience in the last war that it is necessary to have such a command in peacetime which stays home and in emergency undertakes at once the air defense of the country. We did not have such a command when the last war started and as a result it had to be organized under a period of great emergency and national strain. By having this organization prevalent in peacetime, much of the confusion will be eliminated in a future emergency and the defensive task will be accomplished with much greater economy and efficiency.

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33. Ibid., pp. 633-35.

General Eaker's picture of ADC was somewhat closer to the picture ADC had of itself although the statement that the ANG and Air Reserve were the "primary elements" of the system did not coincide with ADC visions of an in-being air defense.

The fourth point of view on air defense was presented by General Weyland during the course of a discussion (also on 6 March 1947) on Air Force requirements for military equipment. "It is obvious," General Weyland testified, "that at the start of a war we will be the recipient of an all-out surprise attack. From the air, such an attack will be against the industry and economy of the continental United States. Forces for defense against such a blow must be maintained in a state of immediate readiness." General Weyland also revealed that while Air Force plans called for maintenance of a 70-Group peacetime Air Force, the Fiscal 1948 budget submitted by President Truman would support only 55 "peace-strength" groups plus 15 skeletonized groups.

If any member of the subcommittee had shown a deep interest in air defense, he would undoubtedly have been confused. What, really, did the War Department mean when

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34. Ibid., pp. 642-43.

35. Ibid.

if mentioned air defense? Did it mean a group of fighter planes protecting ground forces (General Hall)? Did it mean offense against the source of attack (General Spaatz)? Did it mean an electronic early warning network supported primarily by ANG and Air Reserve interceptors (General Eaker)? Or did it mean an in-being regular force standing ready for instant response to air attack (General Weyland)? No attempt was made to reconcile this conflicting testimony during the hearings on the budget for Fiscal 1948.

Following Air Force testimony on the budget, hearings on the National Security Act of 1947 were begun by the House Committee on Expenditures in the Executive Departments. Since Congress was curious as to what the Air Force proposed to do if it was granted independence, air defense also figured in testimony on this bill. One of the major witnesses was Robert P. Patterson, Secretary of War. In response to questioning by Representative J. Edgar Chenoweth of Colorado, Mr. Patterson revealed that he, James Forrestal (Secretary of the Navy) and President Truman had collaborated, in January 1947, in the writing of a proposed Executive Order describing the functions of the three armed services following passage of the National Security Act. Among the proposed functions of the United States Air Force were "provision of

the means of coordination of air defense among all  
services."<sup>36</sup>

This was a weakly worded statement calculated to satisfy nobody, but which reflected the existing lack of conviction as to how air defense should be organized and controlled.

Lt. Gen. Lauris Norstad, an Air Force officer who was Director of Plans and Organization, War Department General Staff, attempted to clarify the situation by testifying that the War Department agreed with a conclusion of the Summary Report of the U. S. Strategic Bombing Survey, dated 1 July 1946, which said that "this establishment (independent Air Force) should be given primary responsibility for passive and active defense against long-range attacks on our cities, industries and other sustaining resources."<sup>37</sup> This, of course, would not come about under the terms of the proposed Executive Order quoted by Mr. Patterson. Congress, although it asked no specific questions about air defense during the hearings on unification, was

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36. Hearings before the House Committee on Expenditures in the Executive Departments (80th Congress, 1st Session, April-July 1947), pp. 80 and 90-91.

37. Ibid., p. 199.

satisfied that the Air Force should have independent existence and passed the National Security Act of 1947 on 16 July 1947. The United States Air Force came into being on 18 September 1947.

In the face of so many differing opinions as to the nature and practice of air defense, it is not surprising that ADC was still operating under the "interim" mission of March 1946 a year later. The interim mission told ADC to organize and administer the integrated air defense system of the United States and exercise direct control of all active means of air defense. Although this statement was subject to varying interpretations, ADC would have been satisfied to have it written into a permanent directive. But, one way or another, ADC felt that it needed a permanent charter to permit it to deal effectively with other AAF commands and other services. This, however, AAF found impossible to accomplish in late 1946 and early 1947. The problem was that ADC wanted sole responsibility for defense against hostile air attack and direct command of the force necessary to meet that responsibility, while AAF, cognizant of the aspirations of the other services in this field and alert to the cold and shifting political winds that blow constantly at the seat of government, was satisfied to keep

a foot in the air defense door while jockeying for position within the national defense establishment. General Spaatz, in March 1947, after giving testimony on the 1948 budget and before testifying on the unification bill, decided that the matter of a permanent mission for ADC was stuck on dead center. ADC was advised not to rock the boat until budget and unification problems had been settled.<sup>38</sup> What was national policy with respect to air defense? There were nearly as many answers as there were persons in authority.

Undaunted by the lack of solid support from any quarter, ADC proceeded with the development of a long-range air defense plan. This plan, issued in April 1947, gave 1955 as a target date for realization and was predicated on AAF acceptance of the "in being" plan of November 1946 which called for 36 fighter squadrons in place and operational by the middle of 1949. The long-range plan of April 1947 carried on from that point. Only the defense of the five critical areas mentioned in the November plan was considered in the April plan, but the area around each was widened considerably. In light of budget and political circumstances in the spring of 1947, ADC's long-range plan was completely

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38. Pers Ltr, Spaatz to Stratemyer, no subj, 14 Mar 1947 [HRF].

realistic. By 1955, the plan said. ADC should have 102 squadrons of interceptors, 249 squadrons of interceptor missiles, 325 battalions of antiaircraft artillery and an early warning network of 114 AC&W squadrons. Operation of this monstrous establishment was calculated to require the assignment of 700,000 men. Four thousand aircraft would be required.<sup>39</sup>

ADC received no immediate response to its outlandish April plan and there seemed to be no interest in air defense at any level of authority above ADC during the summer of 1947. But after the creation of USAF in September 1947, the logjam began to break. On 9 November 1947, Thomas K. Finletter, Chairman of President Truman's Air Policy Commission (appointed 18 July 1947), told the New York Times that "in these times air defense assumes a special importance in the creation of national policy."<sup>40</sup> Secretary of Defense James Forrestal took the hint thrown out by Mr. Finletter and three days later made a public announcement that planning for a nationwide radar early warning system was underway. He added that such a system did not exist and that no plan for such a system had previously existed.<sup>41</sup> Apparently

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39. ADC to AAF, "Air Defense Plan (Long Term)," 8 Apr 1947 [HRF].

40. New York Times, 10 Nov 1947.

41. Ibid., 13 Nov 1947.



nobody had bothered to tell Mr. Forrestal that ADC had been piling plan on top of air defense plan for 18 months. To complete the impression that national policy with respect to air defense was about to change, Senator Henry Cabot Lodge of Massachusetts told the Senate Foreign Relations Committee on 13 November that the United States did not have, and should have, an organization equipped to deal with massive air attack.<sup>42</sup> Senator Lodge ignored the existence of ADC, although this was probably not an oversight, because ADC at that time was not prepared to deal with any sort of air attack, massive or otherwise. In similar vein, the New York Times on 3 December 1947 editorialized on testimony given before the Finletter Commission. "Practically without exception," said the Times, "witnesses, military and civilian, have hammered with all the force at their command at the fact that the nation's security rests on adequate air defense."<sup>43</sup> The Times concluded that "push-button" warfare was far in the future. What was needed was defense against the "here and now."<sup>44</sup>

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42. Ibid., 14 Nov 1947.

43. Ibid., 3 Dec 1947.

44. Ibid.

In compliance with Mr. Forrestal's announcement, USAF drew up a plan for a radar early warning network which called for placement of 374 radars within the United States, to feed information into 14 control centers. This network, to be complete by 30 June 1953, was calculated to cost (including 37 radar stations in Alaska) \$388,000,000. It was planned that the radar stations around the periphery of the United States would operate 24 hours a day, those in the interior being on a part-time basis. It was anticipated that the National Guard would assist in manning the system. The plan, which drew heavily on earlier ADC planning, was completed on 18 November 1947 and approved by General Spaatz on 21 November.<sup>45</sup>

Another straw in the wind was the report of the President's Air Policy Commission (Finletter Committee). Ominously titled "Survival in the Air Age," the report was dated 1 January 1948, although it was completed in late 1947 and much of the testimony before the Commission was

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45. Memo. Brig. Gen. F.L. Ankenbrandt, Chief, Air Communications Group, USAF to C/S, USAF, "Air Control and Warning Plan for Alaska and the Continental United States," 18 Nov 1947 [HRF]; Presentation on AC&W System for Alaska and the United States, Brig. Gen. F.L. Ankenbrandt, 19 Nov 1947 [HRF]; Conference minutes, Meeting on AC&W Plan for Alaska and the United States, Hq USAF, 21 Nov 1947 [HRF].

made public before the formal report was issued. The Finletter Committee strongly recommended the creation of an in-being Air Force. "The conclusions of the Commission," said the report, "thus fix as the target date by which we should have an air arm in being capable of dealing with a possible atomic attack on this country at January 1953.... The force we need by the end of 1952 must possess the complicated defensive equipment of modern electronics and modern defensive fighter planes and ground defensive weapons. A radar early warning system must be part of our defense."<sup>46</sup>

Despite strong indications that the public was becoming aware of the sad state of our air defenses and that, therefore, national policy was likely to change, the mission statement ADC received from USAF in December 1947 did not reflect this change. According to this statement, which replaced the "interim" mission statement of March 1946, air defense was to be a cooperative venture. In time of emergency, ADC was to have operational control over all SAC and TAC aircraft which possessed an air defense capability. The Air National Guard potential in the air defense field was to be added as soon as it became available. ADC was adjured

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46. "Survival in the Air Age," Report of the President's Air Policy Commission, 1 Jan 1948, pp. 19-20.

inaugurate close and constant collaboration with SAC and TAC in order to make sure that everybody understood his air defense function in time of emergency. Only token in-being forces were to be furnished ADC -- nine squadrons in a 55-group force, 12 squadrons in a 70-group force. At the end of 1947, ADC controlled seven manned and equipped fighter squadrons on four bases -- Dow and Mitchel on the east coast and Hamilton and McChord on the west coast. The barest beginning had been made toward creation of a radar early warning network. ADC established the 505th AC&W Group at McChord in May 1947 for the primary purpose of dismantling and storing radars which remained from World War II. At the same time, however, the 505th put into operation search radars at Arlington, Washington, and at Half Moon Bay, near San Francisco. Both radars operated only on a part-time basis and mainly for the purpose of providing ground-controlled interception (GCI) training for interceptor squadrons based nearby.

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47. USAF to ADC, "Air Defense," 17 Dec 1947 [Doc 17 in The Air Defense of the United States, ADC, Jun 1951: USAF to ADC, "Coordination of Air Defense Command, Strategic Air Command and Tactical Air Command Operations Under Emergency Conditions," 17 Dec 1947 [HRF]; ADC Strength Report, 31 Dec 1947 [HRF]; A Decade of Continental Air Defense, 1946-1956, ADC, Jul 1956, p. 8.

CHAPTER THREE

AIR DEFENSE -- SMALL ECONOMY SIZE -- 1948-1950

The Air Force plan for a radar screen across the air approaches to the United States was given the impressive nickname of SUPREMACY in late 1947 and the Bureau of the Budget was consulted as to the best method of gaining Congressional approval for it. The Bureau of the Budget recommended that enabling legislation be presented to Congress before any money was asked for. Consequently, the Air Force prepared a draft of such legislation in January 1948 and asked for Army and Navy concurrence. Army concurrence was received promptly, but the Navy felt the

atter needed thorough study and refused to provide what the Air Force thought should have been routine approval.<sup>48</sup>

While the Navy studied the Air Force proposal, events in other parts of the world indicated that the aura of good feeling which came with victory in World War II was beginning to fade. On 24 February 1948 a Communist coup in Czechoslovakia added that country to the group of Russian satellites in Eastern Europe. On 5 March, General Lucius Clay, American commander in Berlin, noted a new tenseness in his dealings with his Russian counterparts and expressed the opinion that some hostile move on the part of the Russians might come with dramatic suddenness. On 8 March, observers on the scene predicted that Chiang Kai-shek would lose China to the Communists. On 12 March the British government, sensing the change in the international political climate, expressed the need to discuss Atlantic security with the United States.<sup>49</sup>

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48. Memo, Gen. Hoyt Vandenberg, C/S, USAF to Stuart Symington, Sec/AF, "Comments on Mr. Forrestal's Memo to the JCS, dated 1 July 1948," 30 Jul 1948 [Doc 12 in AMC Case Hist of the AC&W System].

49. Warner R. Schilling, Paul Y. Hammond and Glenn H. Snyder, Strategy, Politics and Defense Budgets (New York, 1962, pp. 40-41).

In this atmosphere of increased international tension, Secretary of Defense Forrestal met with the Joint Chiefs of Staff at Key West on 11-14 March to clarify the roles and missions of the various armed services. With regard to air defense, however, there was slight clarification. While the Air Force was made responsible for defending the United States against air attack, the Army was given a similar mission, both missions to be accomplished in accordance with doctrines approved by the JCS. This meant, in short, that the Army would retain control of the anti-<sup>50</sup> aircraft artillery to be used in air defense.

This same feeling of tension led to anxiety over the safety of the Atomic Energy Commission's plant at Hanford, Washington. Therefore, General Spaatz, on 27 March 1948, ordered ADC to put the radar station at Arlington, Washington, on a 24-hours-a-day schedule and activate four other radar stations in the area which were also to operate on a 24-hour basis. He also directed SAC to move the 27th Fighter Group (P-51 aircraft) from Kearney, Nebraska, to McChord where it would come under ADC control. ADC contributed its own 325th All-Weather Fighter Wing at Hamilton

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50. AF Bulletin No. 1, "Functions of the Armed Services and the Joint Chiefs of Staff," 21 May 1948 [HRF].

the force alerted for the defense of Hanford. The results, when assessed in mid-April, were disheartening, if enlightening. Actually, very little defense was provided for Hanford. The P-51 aircraft of the 27th Group were useless in the bad weather experienced in the Seattle area. Besides, the SAC aircrews were not trained in ground-controlled interception techniques and cooperation with radar units was poor. The 325th Wing was marooned at Hamilton, because only three radar observers were available to man the Wing's P-61 aircraft. Finally, the technicians who manned the ground radars were generally inexperienced trainees who had not mastered the intricate art of directing an interceptor to a precise point in the air. In spite of this patent failure in the northwest, ADC was directed, 23 April 1948, to extend this makeshift system to the northeastern United States and the Albuquerque area.<sup>51</sup>

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51. Memo, Brig. Gen. E.J. Timberlake, Chief, Ops Div, USAF to Gen. S.E. Anderson, AS/AS-A4 (Materiel). "Action to Augment the Air Defense Systems in Alaska and in the Northwestern United States," 30 Mar 1948 [HRF]; ADC to 4AF "Air Defense System," 31 Mar 1948 [HRF]; ADC to USAF, "Status of Continental Air Defense," 15 Apr 1948 [HRF]; USAF to ADC, "Air Defense of the Continental United States," 23 Apr 1948 [HRF]; 4AF to ADC, "Report of Maneuvers," 27 May 1948 [HRF].



Regardless of the sense of urgency the Air Force felt about Plan SUPREMACY, the Navy did not complete its study of the draft legislation, although requested changes were minor, until 28 April 1948. The approved draft was then submitted to the Bureau of the Budget. There it lay until 24 May, when the Bureau of the Budget submitted to the Secretary of Defense a series of questions and comments concerning the radar screen. These were answered by the end of the month, but meanwhile, on 27 May, Senator Chan Gurney of South Dakota introduced a bill to authorize SUPREMACY. Bureau of the Budget approval had not been obtained at the time the bill was introduced. Unfortunately, 1948 was an election year and Congress adjourned in June, before any hearings could be held on Senator Gurney's bill.<sup>52</sup>

Plan SUPREMACY died with the 80th Congress, but planning for the radar early warning network continued. While waiting for the 81st Congress to convene in January 1949, Secretary of Defense Forrestal believed there was time for the JCS to examine the Air Force proposal and decide whether this proposal was really feasible since it recommended

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<sup>52</sup>. Memo, Vandenberg to Symington, "Comments on Mr. Forrestal's Memo to the JCS, dated 1 July 1948," 30 Jul 1948 [Doc 121 in AMC Case Hist of the AC&W System].

Use of modified World War II radar, what priority it should assume when judged in light of other proposed military programs that would compete for limited defense funds and what it would cost. Secretary Forrestal made his request<sup>53</sup> on 1 July 1948 and wanted an answer by 1 October 1948.

The Air Force, of course, was aware of Mr. Forrestal's concern in the matter and decided that the Secretary of Defense might be more willing to support a somewhat more austere "interim" radar network than the full Plan SUPREMACY, even though he had approved the earlier Gurney bill as introduced in the Senate. Preparation of a new plan was undertaken by Maj. Gen. Gordon Saville, head of the air defense group in USAF, and presented to Mr. Forrestal on 9 September 1948. General Saville outlined a radar network deploying 61 radars -- five in operation, 19 World War II sets currently in storage but usable, plus 12 AN/CPS-6B and 25 AN/FPS-3 radars to be produced in 1949 and 1950. This proposal, General Saville warned Mr. Forrestal, would provide a network that was far from ideal and merely represented

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53. Memo, Sec/Def to JCS, no subj, 1 Jul 1948 [Doc 110 in AMC Case Hist of the AC&W System]; Memo, Vandenberg to Symington, "Comments on Mr. Forrestal's Memo to the JCS, dated 1 July 1948," 30 Jul 1948 [Doc 121 in AMC Case Hist of the AC&W System].

what could be accomplished by 1952 with minimum funds. General Saville estimated that implementation of the "interim" plan would require 70 million dollars in construction funds, 45 million of which would be needed in Fiscal 1949.<sup>54</sup>

Both Mr. Forrestal and the JCS felt that the "interim" plan was worthy of support and in October 1948 the Secretary of Defense released \$706,000 from his contingency fund to permit advance planning and site surveys pending Congressional action in 1949. In a corollary action effective 1 December 1948, ADC and TAC were dissolved as major commands and their resources and responsibilities were inherited by a new Continental Air Command (ConAC), commanded by General Stratemeyer. ConAC was also given nine squadrons of fighters formerly assigned to SAC. The ConAC solution to the TAC and ADC problems was unique in that it created a double-duty fighter force of fairly respectable proportions. Those squadrons with air defense as a primary mission had ground support as a secondary mission and those with ground support as a primary mission

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54. Presentation to Sec/Def by Maj. Gen. Gordon Saville, Air Defense Div, USAF, "Interim Program for AC&W System in the Continental United States and Alaska," 9 Sep 1948 [HRF].

had air defense as a secondary mission. The immediate effect was to increase the air defense fighter force from seven squadrons on four bases to 16 squadrons on six bases.<sup>55</sup>

Thus, painfully and laboriously, the token air defense in being for which General Stratemeyer had been crusading for more than two years was beginning to take shape at the end of 1948. Granted it was not much in terms of the potential threat, but the need had been established and that was worth something.

The House resolution authorizing the construction of the "interim" radar network was introduced 9 February 1949. Between the time the concept was presented to Mr. Forrestal on 9 September 1948 and the necessary legislation was drawn, the interim system had grown by 14 radars to a total of 75. The estimated construction cost thereby increased from \$70 million to \$85 million. Principal Air Force witness in hearings which began on 10 February was General Saville.

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55. Memo, Dir/P&O, DCS O, USAF to Dir Installations, DCS/M, USAF, "Interim Program for Employment of AC&W Radar," 7 Oct 1948 [Doc 129 in AMC Case Hist of the AC&W System]; Memo, Sec/AF to Sec/Def. "Interim Program for AC&W Systems in the Continental United States and Alaska," 20 Oct 1948 [HRF]; USAF to ADC, "Interim Program for Aircraft Control and Warning Systems," 22 Nov 1948 [HRF]; Executive Order 10,007, 15 Oct 1948; Hist of ConAC, 1949, pp. 1-12; ConAC GO No. 3, 1 Dec 1948.

None of the questioning of General Saville could be regarded as hostile, indicating that at least the House Committee on Armed Services regarded the project as desirable. There was some surprise that the proposed radar network would not guarantee absolute protection, but when General Saville explained why absolute protection could never be guaranteed the questioners appeared to be satisfied. It was brought out in testimony that new equipment was likely to cost \$26 million and that World War II equipment to be used in the interim system was valued at \$46 million. In answer to a question which suggested that the existing air defense system was "not in very good shape," General Saville responded that "words would be [inadequate]<sup>56</sup> to describe how poor it is. It is almost negligible." The subcommittee agreed with General Saville that creation of the proposed radar warning and control system was necessary and reported favorably on H. R. 2546. The full House and the Senate had no objection and the authorization bill<sup>57</sup> became law on 30 March 1949.

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56. Hearings of the Subcommittee of the House Armed Services Committee on H.R. 2546, 10 Feb 1949, p. 338.

57. Public Law 30, 81st Congress.

But an authorization bill was only that and no funds were available until Congress passed an appropriation. And this was not done immediately. Meanwhile, the Air Force decided to put to use what radar equipment and facilities were immediately available to create a semblance of an in-being air defense system. This, appropriately enough, became known as the LASHUP system, since it created the picture of an obsolescent radar set lashed to the top of a pole with a length of frayed rope. The 75-radar program under consideration by Congress thereupon came to be known as the Permanent System.

LASHUP began in the northeastern United States with deployment of 18 radars in that area by the spring of 1949. That the LASHUP system in the northeast was somewhat less than adequate was revealed in an exercise held in June. Only five height finders were available for use in conjunction with the 18 search radars and interception of simulated hostile bombers was extremely difficult. As to the search radars, performance varied from excellent to useless. The exercise proved that an in-being air defense system, of sorts, had been established in the northeast, but that it was a  
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fairly slender reed in terms of total defense.

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58. ConAC to USAF, "Request for Certificate of

While ADC struggled with LASHUP, USAF worked to obtain the money needed for the permanent radar network. Of significance in this effort was the appointment, 3 March 1949, of Louis Johnson as Secretary of Defense, replacing James Forrestal. It soon became clear that the reduction of expenditures amounted to an obsession with Mr. Johnson. It became difficult enough to obtain funds for existing military programs. Money for new programs, such as air defense radar, was even harder to come by. The Air Force had planned to obtain the initial portion of the 85 million required for radar site construction from the Supplemental Appropriation for Fiscal 1949, the remainder from the regular appropriation for Fiscal 1950. This was not to be, however, as the Air Force discovered in April 1949 conferences with the Bureau of the Budget. Acting in accordance with fiscal policies laid down by Mr. Johnson and approved by President Truman, the Bureau of the Budget not only refused to authorize inclusion of radar funds in the 1949 budget but also recommended that part of the authorized \$85 million be deferred to the 1951 budget. USAF contested this

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[Cont'd] "Necessity to Establish a Radar Site at Connelville Municipal Airport, Connelville, Pa.," 26 Jan 1949 [HRF]; "A Decade of Continental Air Defense, 1946-56," ADC, Jul 1956, p. 11.

recommendation and obtained from the Joint Chiefs of Staff a statement that the radar program had a high priority and should not be deferred. This reclama had no effect on the budget makers, however, and the 1950 budget submitted to Congress earmarked no funds at all for the 75-radar program.

The Ground Observer Corps (GOC), an integral part of the World War II air defense system, made its first post-war appearance in September 1949 when civilian ground observers were used in the second exercise involving the IASHUP network in the northeast. General Stratemeyer had previously requested authority to contact civilian agencies in an attempt to organize a new GOC but the request had been denied by USAF on grounds that formation of a GOC might lead the public to an unwarranted suspicion that war was imminent. A 1949 request by Lt. Gen. Ennis C. Whitehead, who had

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59. Memo, Dir/Installations, DCS/M, USAF to Comptroller, USAF, "AC&W System," 15 Apr 1949 [Doc 154 in AMC Case Hist of the AC&W System]; Memo, DCS/P&O, USAF to DCS/O, USAF, "Re-examination of the Approved AC&W Program," 29 Apr 1949 [HRF]; Memo for Record, Lt. Col. W.C. O'Dell, Ofc of DCS/P&O, USAF, no subj, 2 May 1949 [Doc 157 in AMC Case Hist of the AC&W System]; Memo, DCS/P&O, USAF to DCS/O, USAF, "Proposed AC&W System," 17 May 1949 [Doc 158 in AMC Case Hist of the AC&W System]; Memo, Comptroller, USAF to DCS/M, USAF, "Additional Authorization for the Radar Screen," 1 Jun 1949 [Doc 161 in AMC Case Hist of the AC&W System].



succeeded General Stratemeyer in command of ConAC in April, was granted, however. The Office of Civilian Defense cooperated in furnishing the volunteers who supplemented the information provided by the 17 radars available for the September test. This exercise indicated that civilian aircraft watchers were still useful in a radar surveillance system and in December 1949 ConAC asked USAF for permission to establish a permanent GOC.<sup>60</sup>

A series of unsettling international disturbances in early 1948 served to focus attention on the sad state of the air defense of the United States and served to change national policy to the extent that creation of a radar warning and control network was felt necessary. After this flurry of interest, however, action lagged. Although the initial plan for a permanent radar network had been drawn in late 1947, Congress had still not provided financial support for it by the fall of 1949. But on 29 September 1949 President Truman announced that the Soviet Union had produced an atomic explosion in August. Public interest in air defense quickened. For example, while

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60. Hist of ConAC, 1949, Chap. III, pp. 77-82; ConAC to USA, "Implementation of GOC -- Aircraft Warning Service," 15 Dec 1949 [HRF].

Representatives Jackson and Mitchell and Senator Magnuson of Washington had been expressing mild concern over the defenses of the Northwest in August, the commander of the 25th Air Division reported in October that strong civilian pressure for improved air defenses was being felt all along the west coast. General Omar Bradley, Chairman of the Joint Chiefs of Staff, also felt these pressures. On 12 October 1949 he told the New York Times that completion of the radar fence was an essential military requirement. Without it, he added, an atomic attack on the industrial heart of the nation was entirely possible.<sup>61</sup>

Congress also felt this pressure and on 29 October passed the appropriation bill which permitted the Air Force to proceed with the radar program. The original bill had included nothing for the permanent radar system, but the bill as passed contained five million dollars for that purpose. In addition, the Air Force was authorized to transfer \$50 million from other projects to the radar program.

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61. Memo, Maj. Gen. Thomas D. White, Dir./Legislation & Liaison, USAF to Sec/AF, no subj, 22 Aug 1949 [HRF]; New York Times, 13 Oct 1949; Pers ltr, Lt. Gen. Ennis Whitehead, CG, ConAC to Maj. Gen. W.F. McKee, Asst Vice C/S, USAF, no subj, 28 Oct 1949 [HRF].

The Air Force did not relish the idea of raiding other projects to finance the permanent radar system, but felt that the radar network was so important that it finally decided to take \$33 million from the fund for operations and maintenance and \$17 million from the funds for construction of aircraft in order to finance the radar system.<sup>62</sup>

With construction of the radar network apparently assured, it was possible to turn more attention to the matter of the weapons to be used in conjunction with the radars. It was fairly obvious by late 1949 that the regular air defense force -- ConAC had 20 squadrons of interceptors-- assigned to air defense -- was insufficient for this purpose. Was the Air National Guard adequate and available? This suddenly became an important question since the post-war reorganization of the ANG was about two-thirds complete. In an emergency, USAF estimated, 70 per cent of the interceptor force would be provided by the ANG. In time of peace, however, the ANG was under the control of the individual states. How, then, did such a force fit into the concept of an in-being air defense system, ready for combat at any moment?

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62. Public Law 434, 81st Congress, 29 Oct 1949;  
Memo, Symington to Vandenberg, no subj, 31 Oct 1949 [HRF];  
Memo, McKee to Symington, no subj, 9 Nov 1949 [HRF].

ConAC's first reaction was that the ANG was useless for air defense because it was not immediately available and because the Air Force did not have sufficient control over it to supervise training. ConAC recommended, in November 1949, that the ANG squadrons with an air defense mission be given an air transport or ground support mission. ConAC assumed, at the same time, that the void in air de-  
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fense would be filled with regular Air Force units.

The Air National Guard was so deeply enmeshed in the political fabric of the nation, however, that the solution proposed by ConAC was just not practical. The ANG was proud of its important mission in the defense of the country and any attempt to relegate the ANG to air transport duties was sure to rouse the ire of a good many state governors and raise a political storm that might take years to calm. This situation was pointed out to ConAC and ConAC agreed, at the end of 1949, that the best that could be done was to convince the individual states that it was in their own interest to submit to a greater degree of Air

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63. Memo, Vice C/S, USAF to DCS/O, USAF. "Mission of the Air National Guard," 16 Nov 1949 [HRF]; ConAC to USAF, "Mission of the Air National Guard," 22 Nov 1949 [HRF].

Force control in order to improve the readiness of those  
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 ANG units with an air defense mission. This was not a  
 very satisfying answer to the question of what to do with  
 a major portion of the air defense weapons force that was  
 not at all likely to be ready at a moment's notice.

An indication that at least a skeleton in-being air  
 defense system was being created was given in mid-November  
 1949 when the newly organized Eastern Air Defense Force  
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 asked permission to use nine LASHUP radars and nine inter-  
 ceptor squadrons to undertake active air defense of the  
 coastal area from Bangor, Maine, to Norfolk, Virginia,  
 during daylight hours, beginning 1 December 1949. ConAC  
 agreed with the EADF request in principle, but recommended  
 a more gradual approach. ConAC recommended, instead, that  
 the system operate on a six-hour day, five-day week be-  
 ginning 12 January 1950. Then, on 15 March, ConAC believed  
 it would be feasible to go to a dawn-to-dusk operation five

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64. Memo, Lt. Col. T.G. Lanphier, AF Reserve Div,  
 USAF to Harold C. Stuart, Asst Sec/AF, "Mission of the Air  
 National Guard," 29 Nov 1949 [HRF]; ConAC to USAF, "Em-  
 ployment of ANG Fighter Aircraft in Air Defense Missions,"  
 22 Dec 1949 [HRF].

\* Activated 1 September 1949, along with Western  
 Air Defense Force. EADF was responsible for air defense of  
 the area east of the 103rd meridian, WADF for the area west  
 of that line.

ays a week. Finally, on 1 July 1950, ConAC believed seven-days-a-week operation would be possible. Another indication that an in-being air defense system was on the way was a USAF directive of 2 December 1949 to the Army Corps of Engineers to proceed with construction of the first 24 sites of the permanent radar network.<sup>65</sup>

ConAC spent the first six months of 1950 in building the modest air defense system authorized earlier. The LASHUP radar network was completed, the organization of a Ground Observer Corps continued and work on the first 24 sites of the permanent radar network was begun. Discussion of the role of the Air National Guard in air defense continued.

Because interceptor aircraft could not be used for their intended purpose until the ground radar network was operating, primary emphasis during this period was placed on the radar problem. Certain segments of the population were not convinced that the establishment of a radar network was proceeding rapidly enough. Representative Thor C. Tollefson of Washington rose in the House on 12 January 1950 to point out that Boeing was being forced to shift

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65. 1st Ind (EADF to ConAC, "Initiation of Active Air Defense for Vital Eastern Coastal Zone, 16 Nov 1949), ConAC to EADF, 2 Dec 1949 [HRF].

aircraft production from Seattle to Wichita because of inadequate air defense in the northwestern United States. Representative Tollefson said the people of the Pacific Northwest were thoroughly aroused over the situation and demanded action. The only action possible at this time was to put the LASHUP radars of the 25th Air Division (responsible for the defense of this region) on an around-the-clock operational basis. This was done in February 1950. On 8 April 1950, USAF authorized ConAC to use armed interceptors in defense of the East Coast and Atomic Energy Commission installations.<sup>66</sup>

Even in the absence of enabling legislation, USAF, on 3 February 1950, authorized ADC to proceed with the organization of a permanent Ground Observer Corps. ConAC thereupon prepared a detailed plan which it proposed to put into effect in July 1950. This plan proposed establishing 8,000 ground observer posts and 26 filter centers, mainly in peripheral areas where air defense was to be concentrated.<sup>67</sup>

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66. Congressional Record, House, 12 Jan 1950, p. 357; Hist of ADC, Jan-Jun 1951, p. 410.

67. 1st Ind (ConAC to USAF, "Implementation of Ground Observer Corps-Aircraft Warning Service," 15 Dec 1949), USAF to ConAC, 3 Feb 1950 and 2nd Ind, ConAC to USAF, 27 Feb 1950 [HRF].

As to the Air National Guard, ConAC grew increasingly disabused with the plan for using portions of the ANG as an air defense force. ConAC attempts to indoctrinate the ANG with air defense attitudes had not struck a responsive chord. The seeming recalcitrance of ANG only reinforced the ConAC belief that the ANG should be given a mission other than air defense. In early 1950, ConAC was at the point where it was not even sure that giving the Air Force an increasing degree of operational control over the ANG would solve the problem.

On 25 June 1950, North Korea invaded South Korea and a major military confrontation between the United States and the Soviet Union became a possibility. General Whitehead's first reaction, 15 July 1950, was to seek a solution of the ANG problem by asking for immediate federalization of 20 squadrons of the ANG. USAF was not ready to take such a drastic step, though, pointing out that ConAC was being authorized to improve the geographic distribution of its

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68. ConAC to Ninth AF, "Air National Guard and Air Defense," 6 Jan 1950 [HRF]; EADF to ConAC, "Employment of Air National Guard Fighter Units in Active Air Defense," 16 Jan 1950 [HRF]; 1st Ind (EADF to ConAC, "Employment of Air National Guard Fighter Units in Active Air Defense," 16 Jan 1950), ConAC to USAF, 30 Jan 1950 [HRF].



fighter forces by dispersing the 23 existing squadrons to 14 bases. USAF added that a proposed increase of 12 interceptor squadrons in Fiscal 1951 would provide protection for all areas in the United States which required protection.<sup>69</sup>

The public, as represented by Congress, was much more interested in the progress of the permanent radar network, especially the initial 24 sites for which the Air Force had established a completion date of 31 December 1950. Shortly after the beginning of hostilities in Korea the Chairman of the House Armed Services Committee, Representative Carl Vinson of Georgia, announced that he wanted periodic briefings on the progress of the radar network and that he was appointing a subcommittee, with himself as chairman, to monitor such progress. This subcommittee held its first meeting on 8 August 1950 and heard Air Force and Corps of Engineers representatives testify that with an additional \$2.5 million dollars it might be possible to complete the first 24 stations by 1 November 1950, although seven would be only at the point of beneficial occupancy at that time. The subcommittee was also informed that ConAC would

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69. ConAC to USAF, "Air Defense Augmentation," 15 Jul 1950 [HR]: 1st Ind (ConAC to USAF, "Air Defense Augmentation," 15 Jul 1950), USAF to ConAC, 1 Aug 1950 [HRF].

ot have sufficient manpower at that time to man 24 new stations in addition to the LASHUP network. Twenty-four LASHUP sites would have to be abandoned in order to man the 24 permanent stations. The subcommittee was not satisfied with the progress reported. It was insufficient, Mr. Vinson concluded, in light of the world situation.<sup>70</sup>

A partisan note crept into the discussion of the radar network on 15 August 1950 when Representative James Fulton, Pennsylvania Republican, complained on the floor of the House that the Air Force was taking only a short-range view of air defense, planning for the defense of particular cities and areas when it should be collaborating with our allies in development of a "far-out" system of radar early warning that would place a defense umbrella over the entire country. Congressman Melvin Price, Illinois Democrat and a member of the Vinson radar subcommittee, rose to the defense of the Administration and the Air Force. To "allay the fears" of his House colleague, Mr. Price explained that a radar screen (LASHUP) was in place and

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70. Memo, Comptroller, USAF to DCS/M, USAF, "Expediting Completion of the Radar Fence," 27 Jul 1950 [Doc 274 in AMC Case Hist of the AC&W System]; Memo, DCS/M, USAF to C/S, USAF, "Meeting with Mr. Vinson's Subcommittee on the AC&W Program," 9 Aug 1950 [HRF]; New York Times, 9 Aug 1950.

operating and that it was inadequate only because it made use of World War II equipment. Mr. Price added that improved radar was on the way and that he could assure Mr. Fulton, the House and the American people that proper attention was being given to their defense.<sup>71</sup>

At the same time, General Spaatz, retired former Air Force Chief of Staff, revealed that he had revised his views as to the importance of an active air defense. In the immediate post-war years, General Spaatz had repeatedly testified that a good offense was the best defense.<sup>72</sup> In a Newsweek interview published 21 August 1950, however, General Spaatz noted that five years had made a great difference and positive action was required to establish a defensive radar network, a significant force of interceptor aircraft and advanced ground-to-air missiles.

In view of the dissatisfaction expressed by Congressman Vinson and his subcommittee, the Air Force worked to improve the completion dates, not only for the 24 sites in the initial program, but also for the 61 additional sites in the 85-station (including 10 control centers) permanent

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71. Congressional Record, 15 Aug 1950, p. 12526.

72. Newsweek, 21 Aug 1950.

radar network. Overtime, double shifts and other devices were suggested to the Corps of Engineers. All this, however, required additional funds. The new Secretary of the Air Force, Thomas K. Finletter, informed Secretary of Defense Johnson on 1 September 1950 that he proposed to get the necessary funds by asking, in addition to the \$31 million requested in the regular Fiscal 1951 appropriation, for \$40 million in the First Supplemental 1951 appropriation and \$9 million in the Second Supplemental. This request ran directly counter to the financial policies previously enforced by Mr. Johnson, but in view of the obvious interest of Chairman Vinson of the House Armed Services Committee and Chairman Lyndon B. Johnson of the newly created Senate "Watchdog" committee the Finletter request was approved.<sup>73</sup>

The Air Force faced Mr. Vinson and his subcommittee again on 3 October 1950. This time John A. McCone, Undersecretary of the Air Force, did the testifying as to what

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73. Memo. Dir/Comm, USAF to C/S, USAF, "Acceleration of Construction Program for First 24 AC&W Sites of ConAC," 16 Aug 1950 [Doc 303 in AMC Case Hist of the AC&W System]; Memo, Thomas K. Finletter, Sec/AF to Louis Johnson, Sec/Def, no subj., 1 Sep 1950 [HRF]; ConAC to USAF, "Supplement 2 to 1951 Budget," 5 Sep 1950 [HRF]; AMC to OCAMA, "Permanent AC&W Program (Project Speed)," 13 Sep 1950 [Doc 326 in AMC Case Hist of the AC&W System].

the Air Force had done to expedite the completion of the permanent radar network. Mr. McCone promised Mr. Vinson that the first 24 sites would be completed, equipped and manned by 1 March 1951 and that the entire network of 85 stations would be complete by 1 July 1951. Mr. Vinson was highly satisfied with this report.<sup>74</sup>

Mr. McCone's testimony caused some consternation at lower levels of the Air Force, however, since it was considered unlikely that the complete radar network would be complete by 1 July 1951. It was possible that the Air Force would have beneficial occupancy of all sites by that time, but did this mean "complete" in the sense Mr. Vinson understood it to mean? After considerable discussion within USAF it was decided that Mr. McCone had not misled Mr. Vinson.<sup>75</sup>

Whether or not Mr. Vinson was misled, the Air Force found it impossible to live up to the promises made in

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74. McCone testimony before Special Subcommittee of the House Armed Services Committee, 3 Oct 1950 [Doc 363 in AMC Case Hist of the AC&W System]; New York Times, 4 Oct 1950.

75. Memo, Asst DCS/M, USAF to C/S, USAF, "Mr. McCone's Testimony Regarding the Radar Fence," 20 Oct 1950 [HRF]; Memo, Comptroller, USAF to Asst Vice C/S, USAF, "Mr. McCone's Testimony Regarding the Radar Fence," 30 Oct 1950 [HRF].

October. An inkling that all was not going according to schedule came in late November 1950 when Mr. McCone visited McChord to inspect what was expected to be the first of the permanent radar sites to go into operation. The Air Force Undersecretary discovered that no firm operational date could be forecast for this station because of a shortage of spare parts. This situation was likely to affect all sites in the permanent radar network. Following this revelation, Mr. McCone found it necessary to inform Mr. Vinson, 6 December 1950, that it would be impossible to either complete the first 24 sites by 1 March 1951 or the entire system by 1 July 1951. Mr. McCone explained that the earlier promise had been based on the transfer of old radars to the new sites, but that in view of the world situation the Air Force had decided to use only new equipment at the permanent sites. Therefore, completion of the system would be delayed from one to four months. The full subcommittee was briefed on the changed situation on 15 December 1950. At that time it was predicted that the full system would be operationally ready by 1 November 1951. The reaction of Mr. Vinson and other members of the subcommittee was not recorded.<sup>76</sup>

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76. Memo, McCone to Vandenberg, no subj, 30 Nov 1950 [HRF]; Ltr, McCone to Vinson, no subj, 6 Dec 1950 [Doc 385 in

Since intense Congressional interest in the radar network seemed to indicate public support for the complete air defense system, ConAC proceeded with its attempt to organize a Ground Observer Corps. Despite the presumed impetus provided by hostilities in Korea, few civilians seemed ready to desert home and fireside for the lonely and unpaid vigil of the ground observer. As of late September 1950, EADF reported that only 14 per cent of the required ground observer posts and only 25 per cent of the required filter centers had been organized. A November exercise in the northeastern area bounded on the south by North Carolina and on the west by Minnesota and Iowa revealed that the GOC was so lightly manned and poorly trained that it was able to provide continuous aircraft tracks to the AC&W system in only a few areas. EADF concluded, at the end of 1950, that a massive recruiting and training effort<sup>77</sup> would be necessary before the GOC became a definite asset.

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[Cont'd] AMC Case Hist of the AC&W System]; Report, Programs Analysis Div, USAF, "Status of Radar Screen," 19 Dec 1950 [Doc 392 in AMC Case Hist of the AC&W System].

77. EADF to ConAC, "Organizational Failures of the Ground Observer Corps," 22 Sep 1950 [HRF]; EADF, "Report of GOC Exercise, 4-5 November 1950," 27 Dec 1950 [HRF].

Following USAF denial of ConAC's 15 July 1950 request to federalize the Air National Guard, ConAC continued its efforts to make of the ANG a usable auxiliary weapons force but progress was slow. Because of the pressing need for interceptor squadrons to work with the building radar network, ConAC again, in December 1950, asked for federalization of the ANG. This time USAF was willing and by this one stroke of the pen the air defense fighter force was more than doubled in early 1951 -- from 21 squadrons to 44.<sup>78</sup>

At the end of 1950, therefore, while only a very modest air defense system was in existence -- 44 LASHUP radars, 21 squadrons of fighters (very few of which were equipped for night operations) and the beginnings of a Ground Observer Corps -- the public and Congress were apparently convinced of the existence of a threat to be defended against and a much more adequate air defense system was under construction. The permanent radar network of 85

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78. ConAC to USAF, "Use of ANG Fighter Units for Air Defense," 27 Sep 1950 [HRF]; ConAC to USAF, "Use of ANG Units in the Air Defense of the United States," 6 Dec 1950 [Doc 92 in Hist of ADC, Jan-Jun 1951]; Memo for Record, Col. Kenneth P. Bergquist, Chairman, ANG Planning Committee (ConAC) "Planning Committee Meeting, 7 December 1950," 7 Dec 1950 [Doc 27 in ADC Historical Study No. 5, Emergency Air Defense Forces, 1946-54, 30 Jun 1954].



stations was being hurried to completion. The federalization of 23 squadrons of ANG fighters had been authorized and ConAC had been told to plan for an interceptor force that would ultimately include 61 squadrons on 52 bases. An intensive recruiting campaign had been launched in an attempt to bring the Ground Observer Corps up to authorized strength.<sup>79</sup>

Because of the added strength being provided the air defense system, it was also decided in late 1950 to re-establish the Air Defense Command as a major air command in January 1951. Kansas City and St. Louis were considered as headquarters sites for the revitalized ADC, but Colorado Springs was chosen, primarily because departure of the Fifteenth Air Force had left Ent Air Force Base standing empty.<sup>80</sup>

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79. Memo, Whitehead to Maj. Gen. Charles T. Myers, V/C, ConAC, "Briefing on Air Defense," 30 Oct 1950 [HRF].

80. ConAC to USAF, "Separation of the Headquarters, Air Defense Command from Headquarters, Continental Air Command," 24 Oct 1950 [HRF]; 1st Ind (ConAC to USAF, "Separation of the Headquarters, Air Defense Command, from Headquarters, Continental Air Command," 24 Oct 1950), USAF to ConAC, 17 Nov 1950 [HRF].