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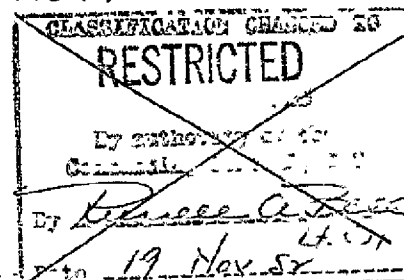
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NINTH AIR FORCE IN THE ETO

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16 OCT 1943 to 16 APR 1944

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By Authority of The Commanding General Army Air Forces	
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NINTH AIR FORCE IN THE ETO

16 October 1943 to 16 April 1944

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Prepared by
Assistant Chief of Air Staff, Intelligence
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May 1945

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FOREWORD

This narrative has been prepared by the Historical Division, AC/AS, Intelligence as a contribution to the history of the Army Air Forces in the current war. The study has been drawn largely from materials forwarded by the Historical Section, Ninth Air Force. Like other studies in the series, it is subject to revision as additional information becomes available.

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C O N T E N T S

I	THE GENESIS OF AN AMERICAN TACTICAL AIR FORCE IN THE UNITED KINGDOM	1
II	ESTABLISHMENT OF THE NINTH AIR FORCE IN BRITAIN	18
III	THE BUILD-UP OF COMMANDS	30
	IX Fighter Command	34
	IX Bomber Command	41
	IX Troop Carrier Command	54
	IX Engineer Command	58
	IX Air Defense Command	61
	Special units below command level	62
IV	THE IX AIR FORCE SERVICE COMMAND	66
V	TRAINING IN THE NINTH AIR FORCE	91
	Air Service Command	94
	Troop Carrier Command	98
	Fighter Command	101
	Bomber Command	107
	Engineer Command	112
	Large-scale field and mobility exercises	113
VI	NINTH AIR FORCE OPERATIONS, 16 OCTOBER to 16 APRIL . .	118
	GLOSSARY	171
	NOTES	172
	BIBLIOGRAPHICAL NOTE	197
	APPENDIX	
	1. Organization and Build-Up of the Ninth Air Force in ETO to 9 June 1944	198
	2. Memorandum concerning sources of units of Ninth Air Force	209
	INDEX	222

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ILLUSTRATIONS

	Following
Organization of U. S. Strategic Air Forces in the ETO, 12 February 1944	17
Ninth Air Force Unit Composition, 8 December 1943	26
Organization of the Ninth Air Force-- 8 December 1943, 29 February 1944, 9 June 1944	33
Organization, IX Air Service Command, 15 January 1944	81

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Ninth Air Force in the LEO
16 October 1943 to 16 April 1944

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Chapter I

THE GENESIS OF AN AMERICAN TACTICAL AIR FORCE
IN THE UNITED KINGDOM

The establishment of the Ninth Air Force as the tactical air arm of the United States Army Air Forces in the United Kingdom (USAAFUK) is a story whose beginnings go back to the earliest use of tactical aircraft. By a tactical air force is meant an organization composed of medium and light bombers and fighters which acts in a close and equal partnership with the ground forces engaged in combat. Either by direct participation in the battle, or by attempting to isolate the combat area from enemy reinforcements, it has become an indispensable partner of the ground forces in modern warfare.

FM-100-20 Command and Employment of Air Power gives a clear statement of the purposes of such a force:¹

The mission of the tactical air force consists of three phases of operations in the following order of priority:

- (1) First priority--To gain the necessary degree of air superiority. This will be accomplished by attacks against aircraft in the air and on the ground, and against those enemy installations which he requires for the application of air power.
- (2) Second priority--To prevent the movement of hostile troops and supplies into the theater of operations or within the theater.
- (3) Third priority--To participate in a combined effort of the air and ground forces, in the battle area, to gain objectives on the immediate front of the ground forces.

In some respects, this type of air force represents a return to some of the theories of World War I since in that conflict both American and British aviation were rigidly under the control of the ground forces,

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2

and acted in closest concert with them. In the Spanish Civil War of 1936-39, Franco had used planes in direct support of his ground forces during the march up the Etagus Valley, and the German Air Force had been so employed in Poland and France. In all three cases, air power had been completely dominated by the ideas, concepts, and commands of the ground force commander.

It remained for the British to develop the idea of equal cooperation between air and ground during the latter months of the African campaigns. In 1939, General Maxwell remarked in the course of a lecture at Oxford that "the commander with imagination . . . must be able to handle air forces with the same knowledge as forces on land . . . It is the combination of the two, never the action of one alone, that will bring success for a future war."²

These precepts were carried out with great skill by the British during the tragic retreats of 1942 when Rommel seemed about to end the war in Africa. Under the pressure of impending defeat, the air and ground forces achieved a degree of mobility, effectiveness, and above all, of cooperation hitherto unknown in modern war. The air operations staff now worked beside the army operations staff, and the air plan for cooperation with the ground troops was worked out by both staffs in daily meetings. The joint air-ground headquarters was divided into forward and rear echelons. The rear echelon maintained contact with command headquarters in Cairo, and acted as a connecting link between Cairo and the forward echelon which controlled the fighter and bomber groups. To assure for such groups a maximum

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mobility, their operations were controlled from three vehicles which could keep up with the most rapidly shifting front.³ The unit which coordinated air actions with ground forces was a joint Army-RAF agency known as the Air Support Control. It received information from both air and ground sources, acted as a clearing house on requests for air assistance, and issued the necessary orders to the air groups. Aircraft used in action with ground troops included fighters, fighter-bombers, medium and light bombers.⁴

During the critical fighting between 23 June and 22 July 1942, RAF medium and light bombardment dropped 2,900,000 pounds of bombs in 869 sorties against motor transport, airdromes, ports, and shipping. Sorties flown by medium and light bombers in cooperation with the Eighth Army were 1,949, and 3,800,000 pounds of bombs were dropped. Fighter-bombers carried 1,160,000 pounds of explosives in 1,418 sorties, and fighter planes strafed ground installations, motor transports, tanks, troop concentrations and acted as escorts to light and medium bombers for a total of 6,180 raids.⁵

Thus, out of the German threat to Egypt in 1942, air-ground cooperation was producing the most mobile and flexible employment of air power ever seen. In the opinion of Maj. Gen. Lewis H. Brereton, himself an expert in the employment of tactical air forces, this brilliant use of aircraft saved the British in Africa:⁶

Not only was complete air advantage maintained at all times, but the determined and successful attacks carried out continuously day and night against axis advancing forces and lines of communications permitted the British withdrawal with

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4

only minor losses. It was the action of the Royal Air Force alone that prevented the destruction of the Eighth Army.

These developments were watched with great interest by the U. S. Army Air Forces. Officially, the American doctrine that air units attached to troops should be under the ultimate command of the ground force commander still prevailed in the War Department. The Employment of Combat Aviation, an official publication used by the Air Corps Tactical School at Maxwell Field in 1939, stated that the "Air Force is being employed under the direct control of the Commander-in-Chief of the Field Forces";⁷ and ". . . our task air force has been directed to support the ground forces in accordance with the instructions of the ground force commanders."⁸

The progress of air power in the European war failed to modify War Department doctrines. FM Manual 1-75 Combat Orders, published 16 June 1942, definitely stated that "air force units assigned missions of supporting ground forces include all types . . . and are under the direct control of the ground force commander to whom assigned."⁹ As late as 18 January 1943, FM 1-5 Employment of Aviation of the Army repeated without the alteration of a period or comma the statement concerning the subordination of air units to ground control which had appeared in the edition of 1940.¹⁰

On the other hand, combat experience in the Middle East indicated that a different concept of air and ground operations was taking shape. As early as September 1941, Maj. Gen. George H. Brett had cabled General Arnold that "operations in Near East different from

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5

any as yet observed, and we should be obtaining benefit of the experience." Shortly afterwards he requested that three special observers be sent to the Middle East: one to be responsible for operational liaison, another for bomber operations, and a third for fighter operations.¹¹

Approximately 1 year later, in a lengthy report to General Arnold, General Brereton paid tribute to the air developments in this theater, and stated that many of the lessons learned would apply to operations anywhere.¹² He stressed especially the success of fighter-bombers operating in direct cooperation with the ground troops. The reason for this success was due, first, to the high degree of mobility maintained by all commands; and second, to the maintenance of successful communications. Next to efficient air-ground cooperation, an adequate communication system, he felt, was¹³ "the key to success."

When the North African Theater was opened by the American landings in November of 1942, ideas of air and ground cooperation passed from the field of theory to actual experiment. As was to be expected, the earliest efforts to coordinate the two branches were not especially successful. After watching some of our first attempts, Brig. Gen. P. H. Robinett wrote to General Marshall:¹⁴

The coordination of tank attacks with infantry and with air attacks has been perfect on the German side. On our own it is yet to be achieved. . . . From this front line seat it appears that there will be no coordination until all ground and air elements bearing on a single common objective are effectively placed in the hands of a single commander. . . . I am sorry to bother you with this tale, but it is the most important one confronting our land effort.

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6

Commenting on this letter, General Arnold wrote: "This is something that I have been pounding on now for over a year--apparently with little success. I have emphasized time and time again the urgent necessity for having perfect team play between the Air Support units and the Ground troops"¹⁵

In spite of initial difficulties, an American tactical air force began to take shape in North Africa, greatly influenced by British pioneering in air-ground cooperation. Air support commands were formed and assigned fighter, fighter-bomber and reconnaissance units; medium and light bombers were grouped in a tactical bomber force. During the air war phase of activities, the bombers operated directly under control of the Tactical Air Command, but when ground combat developed and the air activity entered what was called the "close-support" phase, a portion of the bomber force was shifted to work with the fighters under the operational control of the air support commands. At all times, close and intimate cooperation between air and ground forces was provided.¹⁶

Maj. Gen. Carl Spaatz was also greatly impressed with the new air tactics growing out of the western desert campaigns. On 19 February 1943 he called General Arnold's attention to a pamphlet prepared by Gen. Sir Bernard Montgomery and distributed at a recent assembly of high-ranking command and staff officers.¹⁷ According to General Montgomery the greatest asset of air power was its flexibility. This meant that the "whole weight of the available air power can be

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7

used in selected areas in turn; this concentrated use of the air striking force is a battle-winning factor of the first importance."¹⁸ It would be disastrous, he felt, to permit the air arm to dissipate its strength in "small packets placed under the command of army formation commanders, with each packet working on its own plan. The soldier must not expect, or wish to exercise direct command over air striking forces."¹⁹ From this it followed that an army commander must have an air headquarters with him which would exercise direct control over squadrons allotted for operations in support of his army. Thus through cooperation with the air headquarters, the army commander could obtain the support of the whole air striking force at the required place. "All that is required," concluded General Montgomery, "is that the two staffs, army and air, should work together at the same H.Q. in complete harmony, and with complete mutual understanding and confidence."²⁰

The following month General Spaatz reinforced this impressive tribute to the advantages of air-ground cooperation by pointing out to his chief that the conditions prevailing in the North African Theater were not special or unusual, but tended to approximate the conditions "under which our land forces will be confronted at least during the European phases of the war."²¹ In his opinion, our previous concepts of air-ground cooperation were completely inadequate.²² What was needed was more adequate protection for ground troops against dive bombing, better reconnaissance and photographic work, and increased use of the fighter-bomber and medium bomber

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against targets in the battle area. "All these forces, as enumerated above, must be available for support of the ground battle. They really become a tactical air force."²³

Thus General Arnold's ideas were confirmed by high-ranking British and American officers. On 15 April he cabled Maj. Gen. George E. Stratemeyer as follows: "Very important that you get full information concerning air-ground technique--procedure and principles of employment from Coningham, Spaatz, Montgomery and other commanders who have had experience. Send information and data back by plane."²⁴ In his reply to this cable, General Stratemeyer reported an interesting conversation he had had with Gen. Sir Harold Alexander:²⁵

Yesterday at lunch Alexander told me that he did not consider the Air Forces as long range artillery. He said that the Ground Commander who considers the Air Forces as such does not know how to use his Air Forces. When a problem comes up which affects the Ground Forces, General Alexander calls Coningham in and Coningham tells him what the air can do. Coningham is then told by Alexander what he wants done within the capability as announced by Coningham. To my mind, this is correct and our commanders can well follow this example.

When General Arnold received this letter, he sent it to Brig. Gen. Laurence Kuter with the remark that he wanted "to be sure that everything possible is being done to secure a definite policy on this matter issued from the War Department in accordance with the technique employed in North Africa."²⁶

Shortly after this, the War Department accepted the new concept of air-ground coordination as a part of its official air doctrine. Writing to General Spaatz later in the month, General Arnold gave him the welcome news:²⁷

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9

With particular respect to the Tactical Air Force, the ideas you have worked up and forwarded to me are being implemented by Kuter and happen at present to be going full ball throughout the Air Forces and the War Department. The War Department has officially set forth the doctrine that Air Forces and Ground Forces will work together coequally and coordinately, neither subordinated to the other. The Tactical Air Force as the Air Force to work on a coequal basis with the Ground Forces in the battle area, has been accepted by the War Department and is now being prepared in Field Service Regulation form.

As finally stated in FM 100-20 Command and Employment of Air Power, 21 July 1943, the revised doctrine embodied everything that the Army Air Forces had been advocating. It was definitely stated that "land power and air power are co-equal and interdependent forces; neither is an auxiliary of the other." The importance of tactical air power was recognized by the statement that "where ground forces are operating, normally there will be a tactical air force." Air and ground cooperation was insured by the injunction that "tactical air force operations and ground force operations . . . will be coordinated by means of timely planning conferences of pertinent commanders staffs and through the exchange of liaison officers."²⁸

Thus the lessons of the air war in North Africa were finally accepted. Modification of traditional War Department ideas of tactical air operations with ground forces now left the way open for the formation of new tactical organizations, and as a matter of fact, the Combined Bomber Offensive Plan, which had been formulated some months previously, contained a reference to the establishment of an American tactical air force in Britain.

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10

The Combined Bomber Offensive Plan was an outgrowth of the directive of the Casablanca Conference to "conduct a joint United States-British air offensive to accomplish the progressive destruction and dislocation of the German military and industrial and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is . . . so weakened as to permit initiation of final combined operations on the continent."²⁹ To carry out this order, a group of industrial leaders and other experts made a thorough survey of the German industrial system to ascertain the places where aerial attack would be the most damaging. The results of this survey were embodied in a document drawn up by British and American strategists and approved by Eaker and Portal in April 1943,³⁰ generally known as the Combined Bomber Offensive Plan. This called for an attack in strict priority upon a limited number of highly selected objectives. Attention was drawn to the fact that there was an alarming increase in the number of German fighter planes. To counteract this dangerous development, the heavy-bomber operations were to be supplemented by medium-bomber attacks on German-held airdromes, and by other actions generally preparatory to the invasion of the Continent. To carry this out, the Plan called for an increase of the Eighth Air Force to 2,700 heavy bombers by 1 April 1944, and a force of medium bombers totaling 800 planes. A footnote recommended the creation of a tactical air force of light-bombers, plus, reconnaissance, fighter, and troop-carrier elements to supplement the strategic air force in support of surface operations.³¹

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11

Meanwhile, the Eighth Air Force had been handicapped in its strategic operations for several months owing to the fact that it was frequently called upon to function as a huge personnel, materiel, and supply replacement pool for the Twelfth Air Force.³² However, toward the end of 1942, a policy of rebuilding the Eighth had been initiated and a considerable amount of equipment was sent over. On 30 January 1943 the War Department informed General Spaatz that it was planning to send 11 medium-bombardment groups for the Eighth by the end of the year.³³

It seems probable that the ideas in the Combined Bomber Offensive Plan, plus the policy of increasing the heavy- and medium-bombardment units of the Eighth Air Force, suggested the idea of a reorganization of that command to meet these new demands. At any rate, in late April of 1943, when the bomber offensive plan was being forwarded to the Combined Chiefs of Staff in Washington, Maj. Gen. Ira C. Eaker submitted with it his own Tentative Proposed Troop Basis for the Eighth Air Force. This virtually provided for a tactical air force within the fabric of the Eighth, for it specified a large air support command of 9 medium-bombardment groups, 11 light-bombardment groups, 5 dive-bombardment groups, and 9 troop-carrier groups.³⁴ For reasons that do not appear, General Arnold was not entirely satisfied with this proposal and decided to send Maj. Gen. Tollett Bradley and a committee of officers to England to study the situation and make recommendations.³⁵

The Bradley Committee spent most of the month of May 1943 in the United Kingdom, and also made a special survey of conditions in North

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12

Africa with the intention of using "the lessons in organization and operations in Africa . . . as action to be taken in the proposed organization of the VIII Air Force."³⁶ The final result of the committee's study was a highly important document known as the Bradley Plan. It called for the creation of a tactical air force to operate as a part of the Eighth Air Force. This tactical force, which was to be an expansion of the VIII Air Support Command, was to operate first from fixed bases in England, and then was to be moved to the Continent for the final phase of the war.³⁷ The Bradley Plan was submitted to General Baker on 28 May 1943 and after receiving his approval was sent next to Lt. Gen. Jacob G. Devers, who approved the plan with a few modifications.³⁸ By 11 July the project had reached Washington, and was forwarded on to the War Department by General Arnold with a request for approval.³⁹

At this point it is necessary to turn from the Bradley Plan to trace the threads of another development which was to be of great importance in the history of the tactical air force in the European Theater. When the Bradley Plan was first being considered, a suggestion had been made by General Eisenhower to General Marshall on 18 July that the administrative setup in the Mediterranean Theater could be greatly improved by the consolidation of the Ninth and Twelfth Air Forces.⁴⁰ This question was the subject of several cables from the War Department to Generals Eisenhower, Spaatz, and Brereton, the last-named then commanding the Ninth. Since the idea involved deactivating the Ninth, the question of a command for general Brereton

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13

came to the fore. A conference between Eisenhower, Spantz and Brereton on 22 July settled some of the problems connected with the proposed consolidation but still did not make provision for General Brereton's future activity. On 29 July, Eisenhower suggested to the War Department that if General Brereton could not be used in some capacity in the United States, he could be placed as deputy commander in Air Marshal Coningham's tactical air force.⁴¹

General Arnold had other ideas. On the 31st he cabled Brereton that the most effective use of his experience would be "in command of the Tactical Air Force now being formed as part of the Eighth Air Force under command of General Baker." He went on to say that "this Tactical Air Force is growing rapidly and will ultimately consist of ten medium groups and fifteen light groups with ample fighter groups for protection." As alternatives, he offered the general a responsible command in the United States, or some sort of position in the Cairo headquarters after the merger between the Ninth and Twelfth.⁴² A few days later, General Brereton replied that he accepted the offer to command the tactical air force under Baker "with utmost eagerness."⁴³ It was eventually arranged, on the basis of an earlier suggestion from General Eisenhower⁴⁴ that Ninth Air Force personnel, both combat and service, be sent to the Twelfth, except for certain units from the headquarters of the Ninth Air Force, and from IX Bomber, Fighter, and Service Commands which would go with General Brereton to England.⁴⁵

Up to this point, nothing seemed to indicate a separate status for the tactical air force; it was generally assumed that the original

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plan of placing it under the Eighth would be adhered to. However, such was not to be the case. Just what caused this change is not altogether clear. It is known that the British desired a unified tactical air force, composed of both their own, and the American forces, and had suggested that Air Marshal Sir Trafford Leigh-Mallory command it with Brig. Gen. Haywood S. Hansell, Jr. as his deputy.⁴⁶ This suggests that they favored the separation of the proposed tactical air force from the Eighth, but whether or not they took the initiative in this cannot be ascertained at present. On 6 August, General Hansell prepared a memo for General Arnold on the training of a tactical air force, in which he suggested the training be carried out in the United States; he seemed to imply in this document the existence of a separate and independent tactical organization not a part of the Eighth.⁴⁷

Apparently, these questions were taken out of the hands of the air forces and placed on the agenda of the QUADRANT conference, which met at Quebec during August 1943. The QUADRANT meeting officially endorsed an invasion of the continent under the code name of OVERLORD, to be proceeded by an all-out attack on the German Air Force known as Operation POINTBLANK. It approved the idea of a combined Anglo-American tactical air force as distinct from the Eighth or Strategic Air Force, and selected Air Marshal Leigh-Mallory to command the new combination, henceforth known as the Allied Expeditionary Air Force (AEAF). What these decisions meant for the air forces was set forth

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15

succinctly in a memorandum prepared by AC/AS, Plans:⁴⁸

Specifically, it becomes necessary to establish a Strategic Air Force whose primary function is to continue the operation POINTBLANK prior to OVERLOED and a Tactical Air Force which will be trained and employed primarily in close cooperation with surface forces in the operation OVERLOED. The decision by the Combined Chiefs of Staff to place the Tactical Air Forces, both British and American, under a single commander makes it necessary to clarify the command relationships of the various air commanders in the theater.

The memo then draws up a tentative directive which definitely refers to the American tactical air force as the Ninth. From this it seems apparent that, shortly after the QUADRANT meeting agreed to make a separate air force of the tactical air arm in England and combine it with British forces as the Allied Expeditionary Air Force, the American air authorities decided to retain the name which General Brereton's air force had borne in the Middle East and to apply it to the tactical organization which he was to command in England. Thus, by the beginning of September, the plans for the tactical branch of the Eighth Air Force had developed into a separate and independent air force known as the Ninth.

The creation of a second American air force in Britain raised many administrative and tactical questions. Who, for example, was to coordinate the administration of the new Ninth Air Force with the Eighth, and what were to be the relations of the tactical air force to operation POINTBLANK?

During August and September, when these and other issues were discussed by Arnold and Portal, some differences of opinion developed

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between the two air chiefs. However, they were agreed that Air Marshal Leigh-Mallory, the new Supreme Tactical Commander, should concern himself primarily with the broad tactical plan without becoming entangled in administrative details;⁴⁹ they also agreed that the Ninth Air Force should pass to operational control of ABAF at some date in the near future. It was finally decided that the administration of American air forces in the United Kingdom would be centered in the Eighth Air Force, and on 15 October 1943 when the Ninth was officially activated, there was also established the United States Army Air Forces in the United Kingdom (USAAFUK) under General Baker.⁵⁰ USAAFUK was to act as a sort of supercommand between the two air forces, and was to be responsible for strategic management, military organization, and administration on the highest echelon level. Its general staff was identical with the general staff of the Eighth, and its special staff largely the same as the special staff of the VIII Air Service Command.⁵¹ Thus the Eighth's administrative control of the Ninth was assured. This control was maintained after USAAFUK was replaced 1 January 1944 by United States Strategic Air Forces in Europe (USSTAF), including the Eighth and Fifteenth Air Forces. Since the directive provided that the commanding general, USSTAF, would continue to be responsible for administrative control of air force units, including base services, in the area of his command, it is clear that the extinction of USAAFUK made no real change in the administrative relations of the Eighth and Ninth.⁵²

For a time, the Ninth received its operational orders through the Eighth, but with the activation of ABAF on 1 November 1943, it

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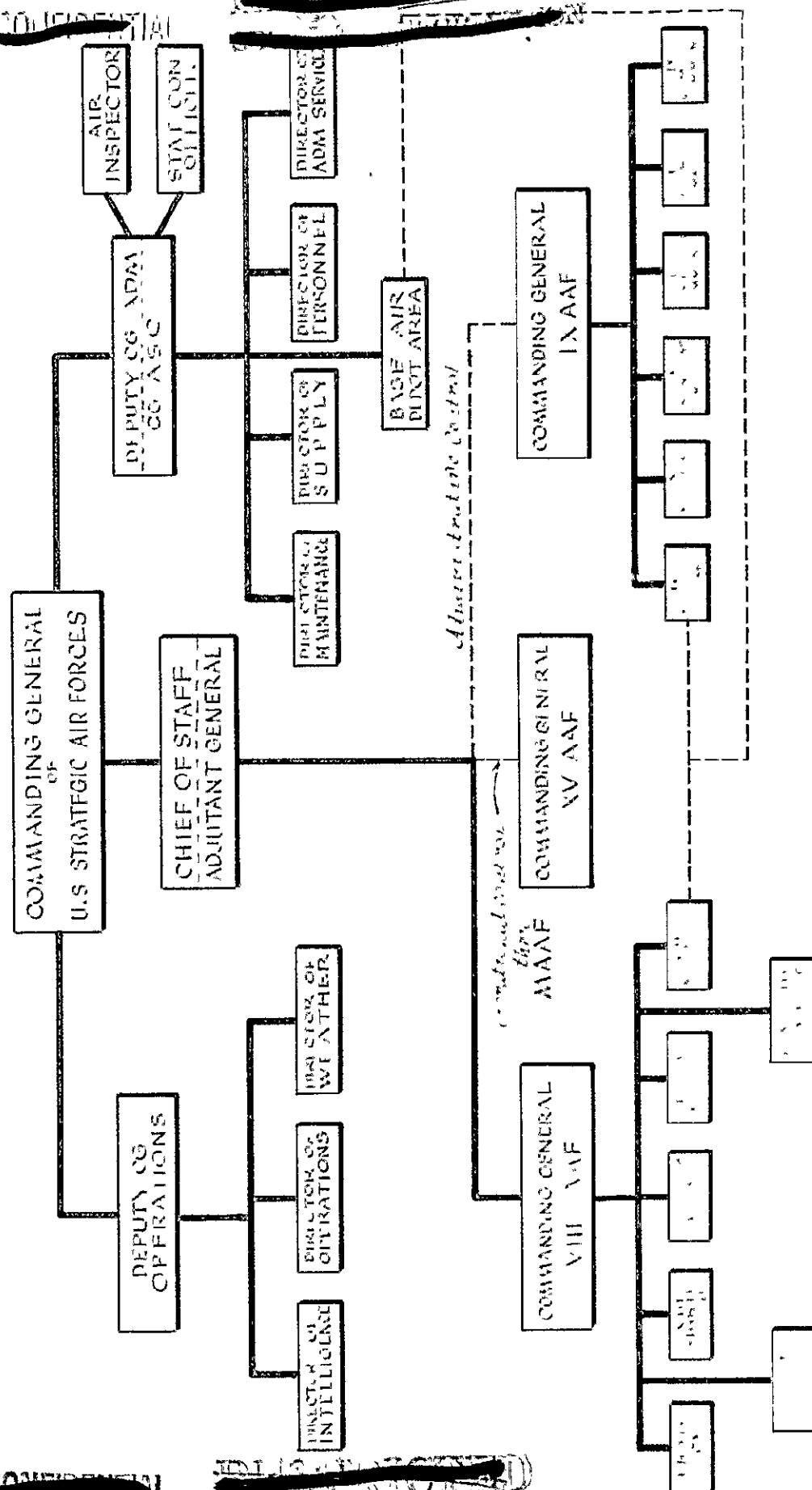
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17

came under the operational control of this body as had been previously arranged by the Combined Chiefs of Staff.⁵³ The Ninth was to plan for OVERLORD and to get ready for it as soon as possible, but operationally it was first committed to the support of the Eighth Air Force in carrying out POINTBLANK.⁵⁴ The details of these operations can be found in Chapter V, but before they can be traced, it is necessary to explore somewhat further the growing organization of the tactical air force.

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Chapter II

ESTABLISHMENT OF THE NINTH AIR FORCE IN BRITAIN

The first blueprint of the organization of the Ninth Air Force appears in the Bradley Plan which was drawn up in May 1943. It proposed to create a tactical air force within the fabric of the Eighth by a great expansion of its Air Support Command. There were to be bomber, troop carrier, and service commands, plus fighter units grouped in two air support divisions, and signal, weather, engineer, and reconnaissance units.¹ Although the original document did not contemplate a tactical air force distinct from the Eighth, the provisions for the air support divisions closely resemble the final organization of the Ninth. As Maj. Gen. Henry J. F. Miller said, "the Bradley Plan is the plan under which the Ninth Air Force will operate, and the Bradley Plan has the last word."²

The recommendations for the service command, derived to a great extent from the experiences of the African campaigns, were especially important as most of them were taken over completely by the new air force.³ The Plan proposed the establishment of an air service strategic control area for heavy-bombardment units, and a similar tactical control area for units of the tactical air force; this control area would become an air service command for the tactical air force when it was located on the Continent.⁴ Control of service

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19

organizations was divided between the tactical station commanders and service command officers. Since the latter were to have jurisdiction over technical matters such as supply, maintenance, administration, employment, and training of all service personnel, this arrangement actually enabled the tactical station commander to devote himself almost entirely to operations, and the service commander thus acquired considerable freedom.⁵

Wherever possible, the Bradley Plan proposed separation of functions at tactical air stations: administration, service, and operations were to be kept independent, and, if possible, co-equal. It was deemed especially important to keep the functions of tactical command from becoming entangled with problems of supply; to make sure that this separation was maintained to the highest echelon, it was suggested that the head of each command should be assisted by two deputies: one for operations, and one for maintenance.⁶ Operations and control of the tactical air force were to be based on the system worked out in North Africa, and the total strength of the force was set at 230,847 men.⁷

It is interesting to point out that thought in the theater closely paralleled the Bradley concept of a tactical air force. A "Proposed USAAF (TAF) Troop Basis," issued by the Eighth Air Force headquarters 11 August, provided for three air support commands, a troop carrier command, and an air service command. Meanwhile, Brig. Gen. Robert C. Candee, commanding the VIII Air Support Command, was

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20

carrying on studies in the organization of a tactical air force. One of his charts dated 1 October 1943 shows a tentative plan which provides for a bomber command, a fighter command containing two air support divisions, a tactical air service area command, an air defense command, and an engineer command. This appears to be the first mention of these last two commands. They had not been included in General Bradley's report.

After being approved by the theater commander, and then by General Arnold, the Bradley Plan was submitted to the final judgment of the War Department. Here it ran into difficulties. On 13 August, General Marshall cabled General Devers that the plan was being studied, and it would probably be approved "with modifications."⁸ After some delay, Devers received another communication which indicated the principal objections of the War Department. It was felt that the VIII Air Force Service Command was too heavy in headquarters units, and elimination of the special organization of the strategic control area was recommended since it was believed that this area could function under the Headquarters of the VIII Air Force Service Command. Elimination of the headquarters and headquarters squadron of the base air depot area was also advised.⁹ The final decision on 15 August included all these recommendations plus two additional provisions: (1) only T/O units were to be shipped, but technically trained fillers were to be furnished to fill the gap between standard T/O units and theater requirements; (2) authority to increase the T/O's was not approved.¹⁰

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21

The decision of the War Department to remove these headquarters organizations was protested by the theater commanders. The service areas had been introduced into the Bradley Plan by General Knerr as a part of his theory of centralized control with de-centralized operation. He complained to General Baker that this decision prolonged a critical situation which had been originally criticized by the Bradley Committee.¹¹ In a long cable of 29 August, General Devers protested to General Marshall that the War Department's proposals nullified the Plan and upset the integration of functions so carefully established by the Bradley Committee. He believed that the size of the area where the Eighth was operating required decentralization, and for that reason he strongly opposed the elimination of the strategic control and base depot areas. He concluded with an appeal for an unqualified acceptance of the Plan.¹²

Perhaps the strongest protest of all came from General Baker. In a letter to General Arnold, he stated his position in colorful and vigorous language:¹³

There must be something wrong with our system. You send General Bradley, General Knerr, and a carefully selected committee here to work out with us what is required to give us a proper maintenance organization; we come to agreement on it bearing in mind always the necessity for saving manpower to the maximum; our agreement is approved by the theater commander, comes back to you and you approve it, and authorize us to undertake its implementation provisionally, stating that War Department approval is expected in the near future; we get the organization initiated, going to great trouble to provide the headquarters establishments and the whole new organization is showing much promise. Then some individual in the G-4 Section of the War Department . . . decides that the organization is all wrong and throws his wooden shoes squarely into

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the delicate machinery. . . . No greater service can be performed for this Air Force than to obtain the approval of this plan. It is now nearly three months since it was agreed upon by people who know most about the problem and the best solution.

By now it was clear to the War Department that there was a slight difference of opinion in regard to its modification of the Bradley Plan. Maj. Gen. Barney H. Giles undertook to explain to General Baker the reasons for the changes. The Army Air Forces still lacked some 200,000 enlisted men, and as a result, they were not able to balance service units with combat units. Because of this, General Arnold had been told that a balance must be achieved or the activation of additional combat units would have to be stopped. Part of this lack of balance was caused by the additional service units specified by the Bradley Plan. Since they had been unsuccessful in getting the War Department to reconsider its decision, they preferred to cut out service organizations rather than combat units.¹⁴

An additional statement soon came from General Marshall. Replying to General Devers' cable of 29 August, he stated that "the War Department accepts the Bradley Plan as a statement of a requirement and recognizes that the Plan is an integrated whole."¹⁵ He then re-emphasized that the shortage of manpower, as cited by General Giles, made it impossible to achieve an ideal organization; nevertheless, implementation of the Bradley Plan was receiving "intense study" in the Department. Special units needed in the theater could be activated there provisionally. Trained personnel above priority assignments would be sent as fillers and replacements, but within the percentage assigned

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23

to over-all AAF shipping allotments; this personnel was to be used to organize special units for which no provision had been made. As these groups were organized on a temporary basis, the theater commander was to apply to the War Department for formal constitution and activation. "We shall do all possible to send these trained men and grant authority for your activation within existing policies. Units so activated will be charged against the Bradley Plan."¹⁶

Unfortunately, this cable still further confused an already complicated situation. General Marshall's remarks about the acceptance of the Bradley Plan by the War Department gave General Devers the erroneous idea that the original Plan was now approved without alteration. Therefore, he informed the General that his understanding of his cable was that "the Bradley Plan is accepted and that objections raised in cable R 1720 11 August . . . are rescinded." He assumed that the Eighth Air Force had the authority to activate the headquarters organizations for the strategic air service area and the base air depot area.¹⁷

These statements brought a quick reply from General Marshall. Devers' interpretation of his cable of 3 September was incorrect. The Bradley Plan was accepted by the Department as a guide only to the needs of the Eighth Air Force; moreover, because of the inability of the War Department to implement the Plan, he considered it "out of phase."* He still insisted on the vital need of cutting down the

* By this time, the decision to establish a new air force in England to take care of tactical problems had been made. (See Chap. I) In spite of this change, the Bradley Plan was still considered the instrument to regulate the situation, and, as indicated in this (cont'd)

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flow of service and overhead personnel from the desirable to the absolutely necessary. "In view of serious manpower shortage, we cannot fully approve Bradley Plan until convinced that your absolutely minimum requirements only are represented in the Bradley Plan."¹⁸

By now the situation had become almost too complex for the usual channels and firsthand information was needed by both sides. Therefore the War Department decided to form a committee of officers, with Col. J. W. Baylor as senior member, to go to England and consult with General Devers on the best means for implementing the Bradley Plan.¹⁹

The Baylor Committee was in the United Kingdom from about the 1st to the 17th of October 1943.²⁰ On the whole, its final recommendations supported the original Bradley ideas as well as the arguments of the theater commanders who had urged the acceptance of the unmodified Bradley Committee report. Colonel Baylor's recommendations called for a IX Bomber and IX Fighter Command in addition to the two Air Support Commands listed in the original plan. For the IX Air Service Command, one base air depot area, and two tactical air depot area commands were added to provide for technical supervision of the service groups, and operation of the advanced air depots.²¹ Through suggestions made by General Brereton, a considerable saving in personnel was achieved without deviating from the basic Bradley concepts.²² It is interesting to note that no provision appears to have been made

(cont'd) study, the provisions for the VIII Air Support Command were taken as the guide in the organization of the Ninth Air Force. General Marshall's remarks about being "out of phase" evidently did not apply to the creation of the separate air force, but to the implementation of the Plan as a whole. See the remarks of General Miller as quoted in Chap. I.

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for the engineer and air defense commands suggested in General Candee's chart of 1 October. However, authorities in the theater continued to urge their creation. A chart of 15 October issued by Headquarters, USAAFUK includes both these commands plus a fighter command with two air support divisions, a troop carrier command, and an air service command with two advanced air depot areas, a base air depot area, and a transport wing.²³ Eventually, the War Department approved all these organizations, but it was to require considerable proof of their necessity before taking action. Meanwhile, the Bradley Plan, with Colonel Baylor's revisions, was approved by Headquarters, ETOUSA on 16 October, the day the Ninth was formally activated, and subsequently was approved by the War Department.²⁴

Preparations for the transfer of the remaining units of the Ninth to the United Kingdom had begun in September. It was decided that the following units of the old Ninth would be transferred from Africa to the United Kingdom to form a part of the reconstituted Ninth: Headquarters and Headquarters Squadron, Ninth Air Force; Headquarters and Headquarters Squadrons, IX Bomber, Fighter, and Service Commands; the 26th Statistical Control Unit; the 414th Signal Company (Avn); the 303d Signal Company Wing; the 392d Signal Company; the 1058th Military Police Company (Avn); the 13th Replacement Control Unit; and the 696th Army Postal Unit.²⁵ Other parts of the tactical air force were to come from units in the United Kingdom and from the United States. The VIII Air Support Command and the VIII Tactical Air Service Area Command were to pass into the IX Fighter

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and IX Service Commands respectively, and the surplus of headquarters personnel caused by these amalgamations was to be used as filler for units later to be activated or reorganized in the theater.²⁶

Final details were adjusted at a Joint Commanders Meeting, held in the theater on 12 October with General Eaker presiding; also present were Generals Brereton, Butler, Miller, Chauncey, Knerr, Quesada, Borum, Candee, Harriner, and B. H. Giles.²⁷ The purpose of the meeting, as stated by General Eaker, was to work out the details of the Ninth's activation using the VIII Air Support Command as a nucleus. The medium bombardment wing of this command was to continue its regular operations, but a fighter wing was to be activated at once. Until the Tactical Air Force went over to the command of Air Marshal Leigh-Mallory, Eaker was to be in general charge of both Eighth and Ninth. With 40,000 men arriving each month, a great organizational task had to be completed in a very short time.²⁸

On 15 October, General Ira G. Eaker became Commanding General of the United States Army Air Forces in the United Kingdom (USAAFUK), and on the same day he issued the first of a series of Letter Orders, file 320.2, transferring units from the Eighth to the Ninth, and authorizing the activation of other units from casual pools in the theater.²⁹ The following day Maj. Gen. Lewis H. Brereton assumed command of the Ninth and established his headquarters at Sunninghill Park, Berkshire.³⁰ Brig. Gen. Victor Strahn, who had been with General Brereton in the Middle East, served as Chief of Staff.

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NINTH AIR FORCE UNIT COMPOSITION
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47	
29	
277	

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27

The IX Fighter Command, commanded by Brig. Gen. Elwood R. Quesada, derived its headquarters organization from the old Ninth. After arriving in England, this headquarters was augmented by the headquarters and headquarters squadron of the 44th Bombardment Wing which had previously served in that capacity for the 1st Fighter Division (Prov) in the Eighth Air Force. Several key officers came from the United States by direct assignment.³¹ Additional units included the 67th Tactical Reconnaissance Group with five squadrons, and on 2 November the 354th Fighter Group arrived, thus becoming the pioneer Mustang group in the Ninth Air Force.³²

The IX Bomber Command was a merger of three old organizations, each with considerable combat experience. The oldest of the three, and the one that furnished the bulk of the operational units, was the 3d Bombardment Wing. This organization had been activated at Mitchel Field, 7 June 1942. Later it was shipped overseas and assigned to the VIII Bomber Command. As a unit of this command, it became operational in the spring of 1943, and took part in the disastrous mission against Ijmuiden on 17 May. As a result of this action, it was temporarily removed from operations, and on 17 June was transferred with the 322d, 323d, 386th, and 387th Bombardment Groups to the VIII Air Support Command. In this command, it was engaged in operations against German-held airdromes in France when it was again transferred on 16 October to the IX Bomber Command under Brig. Gen. Samuel E. Anderson.³³

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28

The two remaining elements of the new IX Bomber Command had originally been under General Brereton in the Middle East. The bomber command of the Middle East Air Force was activated on 12 October 1942 at Cairo with personnel from the 12th Bombardment Group, the Halverson Group, the 98th Group, and from USAFIAF at large. On 14 November, 2 days after the USAFIAF became the Ninth, the XIX Bombardment Wing, which had been activated at McDill Field on 20 July 1942, arrived to join with the bomber command of the former USAFIAF to form the IX Bomber Command in General Brereton's new air force. After an outstanding record in the remaining African campaigns, the headquarters organization of this command was selected to perpetuate the name of the IX Bomber Command by transferring to the MTO with other air force units from Egypt.³⁴

Unlike the other commands mentioned, the headquarters of the IX Troop Carrier Command did not come from Cairo, but was activated in the theater by the Ninth Air Force. The original cadre came from the headquarters of the I Troop Carrier Command.³⁵ Also added at this time were the 315th Group with its two squadrons, originally part of the VIII Air Support Command, and the 434th Group with four squadrons. Both these groups were assigned to the 50th Troop Carrier Wing, which had just been shipped from the United States after nearly 3 years' experience in training, and operation of transport, maintenance, air service, and troop-carrier functions.³⁶ Benjamin F. Giles was the commanding general until 25 February 1944 when he was replaced by Brig. Gen. Paul L. Williams.

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29

The nucleus of the IX Air Service Command was the VIII Tactical Air Service Area Command which was transferred intact from the Eighth to the Ninth on 16 October along with six Air Depot Groups and many units of lower echelons. Maj. Gen. Henry J. F. Miller came from the Eighth to assume command of this new service organization and set up his headquarters at Grove, Berkshire.³⁷

To summarize, the bulk of the units transferred during 1943 came from sources in the United Kingdom. Contributions from Africa and the United States were small, being 10 and 55 units respectively. The VIII Air Support Command furnished 2 bombardment wings, 4 bombardment groups containing 16 medium bombardment squadrons, and other smaller organizations, making a total of 101 units. From the VIII Air Force Service Command came most of the organizations of the IX Air Service Command, including different types of repair squadrons, quartermaster units, air depots, station complement squadrons, and ordnance and medical companies. A total of 53 units came from this source.

From unspecified organizations in the Eighth Air Force came 71 units. Service groups predominated but there were also many troop carrier, signal, quartermaster, and engineer units.

Several major organizations were activated in the United Kingdom by the Ninth. These included a bomber, a fighter, and a transport wing, the Troop Carrier Command headquarters and headquarters squadron, and a large number of service units such as mobile reclamation and repair squadrons, station complement squadrons, and ordnance, materiel, and maintenance companies. Units so activated came to 119 by the end of 1943.³⁸

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Chapter III

THE BUILD-UP OF COMMANDS

The fundamental organization of the Ninth Air Force during the remainder of 1943 consisted of General Brereton's headquarters and the Fighter, Bomber, Troop Carrier, and Service Commands, with their respective wings, groups and squadrons. Later Engineer and Air Defense Commands would be added, and additional fighter organizations would appear, but these first four commands were, for a considerable length of time, the Ninth Air Force. Before considering each command in some detail, certain basic considerations need to be emphasized.

With the exception of the Air Service, each command was divided into three or four wings. The wing, which was intended to be an operational organization rather than an administrative unit, was divided into from three to five groups that were again subdivided by about the same number of squadrons. In general, the tendency was to emphasize the group at the expense of the squadron. The organization of the Service Command was based on depots and service areas; only its transport unit possessed the familiar wing and group setup. The Engineer Command was made up of regiments and battalions, while the Air Defense Command was eventually composed of night fighter squadrons and an antiaircraft brigade.

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31

From the standpoint of operations, the Ninth might be regarded as a union of tactical stations. The tactical station was the basic "cell" of the Ninth Air Force. It was the actual home, or base from which an operational unit, usually a group, operated. The organization of the station was divided into three main functions: (1) tactical, or operations, (2) administrative, and (3) maintenance and supply.

The tactical organization consisted of the group headquarters, and the squadrons engaged in carrying on whatever type of operations were performed by the group. In addition to this, new personnel were trained, and the ground crews carried on first and second echelon maintenance. They also operated the tactical message center.¹

The administration of the station, or "housekeeping," was carried on by the station complement squadron. It ran the physical plant, did the paper work, and was responsible for the station message center. Assisting it were one-half a military police company, an engineer fire-fighter platoon, and an Army postal unit. Personnel from the 21st Weather Squadron and the 40th Mobile Communications Squadron operated the weather station. A small RAF Utilities Unit completed the housekeeping staff. It should be pointed out that no medical unit was attached to the station. Such units were assigned to tactical groups rather than to the stations themselves. The senior medical officer of an operational unit also served as station surgeon and furnished whatever medical attention was needed by station personnel.²

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32

Supply, repair, and maintenance at the station were carried on by a service team usually composed of six units, formed from maintenance and repair personnel. It handled third echelon maintenance and supplies for aircraft and third and fourth echelon repairs on crashed planes. Trucking, ordnance, and quartermaster supplies were managed by appropriate organizations. In addition to the foregoing, fighter and bomber stations also possessed one-half a chemical company for air operations.

Insofar as possible, complete separation was maintained between these three divisions of a station. Fighter, bomber, or troop carrier units communicated directly with their wing headquarters, and only matters pertaining to local administration and housekeeping went through the station headquarters. Service organizations dealt directly with the next higher echelon of the Service Command; the station commander could tell them what he needed, and what he wanted done, but he was especially enjoined not to interfere in their functions. Thus the doctrine of "centralized control, decentralized operations" was carried out in the station organization.³

Airfields were provided by the Air Ministry, the first selected being originally intended for the VIII Air Support Command when it was expected to become the tactical air force. The runways were planned for Spitfires and Mustangs, but when the Ninth took over with the Thunderbolt as its principal fighter plane, longer runways were required and had to be constructed.⁴

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Among some units, usually ground organizations, a shortage of headquarters sites and buildings developed. The establishment of a new air force brought more headquarters organizations into being than had previously been planned. Likewise the construction program, already somewhat behind in schedule, was further delayed by increased demands for buildings. As a result some organizations had to put up with makeshift buildings until more permanent quarters could be built. In some instances, there was considerable overcrowding at stations, and there was also much shifting of nonoperational units throughout England. Some of the engineering units were occasionally dispatched to new quarters which, upon arrival, turned out to be little more than pastures, or open fields. Until permanent buildings could be built, the troops were forced to carry on as best they could.⁵ Operational units such as bomber and fighter groups were much better off, as a rule, with fields and installations that were permanent constructions. After the beginning of 1945 an adequate building program considerably improved the situation.

During the winter and spring, as plans for the coming invasion took shape, the Ninth underwent certain organizational changes in preparation for the great attack on Testing Europa. A Ninth Air Force Planning Staff was set up in London on 15 December 1943, composed of officers drawn from special and staff sections of headquarters who had had previous service with Headquarters, Chief of Staff Supreme Allied Command (COSSAC). This section worked in close cooperation with other planning groups, and together they worked out a Ninth

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34

Air Force tactical plan for operation NEPTUNE.

At approximately the same time, insofar as facilities permitted, some combat units were regrouped near the coast in order to provide better concentration for the invasion. By the end of April about half of the tactical organizations had arrived at their new positions.

Another important development preliminary to D-day was the establishment of Advanced Headquarters, Ninth Air Force. On 17 February 1944 this unit was opened at Hillingdon House, Uxbridge, along side a similar group of the Second Tactical Air Force (British) with which it worked in close cooperation. Later advanced units of the IX Fighter Command moved to Uxbridge to facilitate communications and coordination with the Advanced Headquarters. Not far away were also located headquarters of both British and American troop-carrier units. Thus the area around Uxbridge became a nucleus of advanced echelons so as to centralize tactical operations after the first groups were engaged in combat on the Far Shore.⁶

IX Fighter Command. Following its activation on 16 October 1943, the expansion of the Fighter Command was steady. The 44th Bombardment Wing, originally earmarked for the Bomber Command, was temporarily moved to the Fighter Command along with the 67th Tactical Reconnaissance Group and its five squadrons.⁷ On 2 November the 354th Fighter Group arrived from the United States, thus becoming the pioneer Mustang group in the command. It was later assigned to the 100th Wing, which was activated on the 24th. Early in December the 70th

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35

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Wing took shape and on the last day of the year an additional wing, the 71st, was added to the rapidly growing command.⁸

On 1 February an exchange of fighter groups took place. The Eighth transferred the 358th Group (Mustangs) to the Ninth in return for the 357th Group which was a Thunderbolt organization. Only the 70th Wing was affected by this transfer. The 84th Wing made its appearance 3 days later, but did not begin to receive its groups until March. On 9 March the 303d was activated completing the wing allotment of the fighter commands until after the invasion.⁹

The history of the 356th Squadron furnishes a fairly typical account of the origins and training of one of the smaller units in the command. Created on 15 November 1942 at Hamilton Field, Calif., its early days were confused and uncertain. On 10 December the total personnel consisted of 2 officers and 35 enlisted men. However, with the new year, it began to show signs of life, and by the end of January 1943 it had acquired 30 pilots and 12 planes. March and February were months of concentrated flying in formation with combat practice, aerial gunnery, and defense. They were also months of accidents and the first fatalities, but by the beginning of April the squadron had a total of 1,350 hours of flying time to its credit since activation.¹⁰

By May, dive bombing, strafing, and large-scale maneuvers with ground units were the principal training activities. 13 May was something of a historical landmark, for on that day Capt. James H. Howard assumed command of the squadron. Captain Howard was destined

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36

to become one of the most daring and successful fighter pilots and group commanders in the Ninth Air Force, and under his guidance, the squadron was to become famous; however, this was considerably in the future. The nickname of "the Whiz" which was bestowed on the captain at this time by his pilots in the squadron indicated something less than enthusiasm for his training methods, however necessary they may have been.¹¹

But the work continued. August was marked by tactical formation flying and many inspections. On the 23d, a 3-day bivouac at Troutdale, Oregon, under camouflage and field conditions, proved extremely valuable. September brought more inspections and much low-level strafing and dive bombing, and at last in early October, the long-awaited day arrived: the squadron left for the Port of Embarkation. Embarking on H. M. S. Athlone Castle, they docked at Liverpool on 5 November and shortly afterward learned for the first time that they were to be the nucleus of the IX Fighter Command which was being formed under General Quesada. Although all expected a few weeks transitional flying training, they made their first fighter sweep over Hitler's Europe on 1 December, and carried out their first bomber escort 4 days later when they accompanied Eighth Air Force bombers to the Amiens area. On the 13th, they took part in the longest fighter escort mission till then recorded: the attack on Kiel with fighter protection all the way over and back.¹² The 356th Squadron had now come of age.

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37

Meanwhile the Fighter Command had its own growing pains. Problems of supply dominated all others in these early days. Shortages existed in each department, and since other commands were faced by a similar situation, there was a wild scramble for all kinds of equipment. Either through accident or design, many units were relieved of quantities of equipment at the POE on the grounds that the same articles would be supplied in England and shipping space was needed for other things.¹³ Although denounced by General Arnold,¹⁴ this practice continued to the great benefit of units permanently assigned in POE areas, and may partially explain some of the shortages in the ETO that proved so galling to harassed Army administrators. A note from the Fighter Command staff meeting of 19 December is typical of a situation constantly referred to in minutes and special histories of all the commands:¹⁵

A-4 reported that information has been received by telephone from . . . D/C of Supply Division, IX Air Service Command that there will be no equipment for the headquarters of IX Air Support Command, or the Hq of the 100th Wing until April. This includes all equipment. . . . The Chief of Staff said that this statement . . . is certainly not satisfactory and they should be able to do better.

Wherever possible, the Eighth Air Force was used to furnish needed materiel to the Ninth. This is especially true of aircraft, since the planes used by the first tactical units were Marauders and Thunderbolts transferred from the Eighth; as late as the beginning of March 1944, the Ninth was still dependent on the Eighth.¹⁶

The most important organizational changes during the first 6 months of the Fighter Command's history are concerned with the

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38

activation of the wings, and the appearance of the IX and XIX Air Support Commands. For some time it had been intended that operational control of combat air units should be exercised by wings rather than by higher headquarters.¹⁷ This policy of decentralized operations was one of the basic doctrines of the Ninth Air Force, and was applied widely. In this case, after the principal objectives of an attack had been set up, the actual composition of the combat force was to be determined by the wings who would then issue the necessary orders to their groups. Since the wing headquarters was to be located at a station shared by an operational group, the wing commander would replace the group commander as head of the station, although the wing itself was to avoid involvement in purely administrative problems in order to devote full time to operations. In addition to the usual administrative, signal, and weather units, fighter wings were assigned a fighter control squadron to provide liaison with ground forces.¹⁸

The first fighter wing to become operational was the 70th. On 3 February it controlled a mission by the 354th and 358th Fighter Groups, and was congratulated by General Quesada on the successful beginning of a new system.¹⁹ However, as time went on, the wings ceased to be strictly tactical organizations and found themselves becoming more and more involved in paper work. By the end of April the Assistant Inspector General was forced to make a strong appeal to General Brereton to direct the commanding generals of the IX and

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39

XIX Air Support Commands to stop channeling administrative matters through wing headquarters. How much success was achieved in thwarting this ancient and apparently irresistible tendency in army administration does not appear in the documents.²⁰

The creation of two new support commands, the deactivation and reappearance of the IX Fighter Command, all caused a certain amount of confusion in nomenclature, which, fortunately, did not extend to the operations of tactical units themselves. It had originally been planned that the IX Fighter Command would serve principally as a transitional training command; when enough units were operational, it was to be transformed into an air support command modeled after the organizations which had proved successful in Africa.²¹ On 14 January, General Brereton informed General Quesada that, beginning with the first of February, the Headquarters and Headquarters Squadron of the IX Fighter Command would cease to function as such, and would be redesignated the IX Air Support Command; at the same time, a XIX Air Support Command would be created and attached to the IX for training and operations.²² Thus the original Bradley concept of two air support commands was to be carried out.

Consequently on 1 February the IX Fighter Command was reorganized in accordance with General Brereton's orders, and on the 4th the XIX Air Support Command made its appearance, with personnel drawn from the old IX Fighter organization; General Quesada was placed in charge of the new IX ASC and Brig. Gen. Otto P. Weyland took over the XIX.²³ In order to obtain sufficient strength for the two new

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40

commands, the T/O of the dormant fighter command was used to augment the Air Support T/O of 1 July 1942 and the total strength provided by the combined T/O's was divided between the two support organizations.

It was generally assumed that the Fighter Command would not be revived, but on 21 February General Guesada was reappointed commanding general of the IX Fighter Command "in addition to his other duties,"²⁴ and at a commanders' meeting a week later, he told his men that the old fighter command was very much back in the picture.²⁵ Its new personnel was to be drawn from the IX and XIX ASC and its advanced headquarters was to be located at Uxbridge. By 1 March it had assumed control of all operations and training for the support commands, and served as an advance headquarters for the fighter organizations. The IX ASC performed the administrative functions for the revived fighter command, while the XIX ASC remained under operational control by its twin.

About this time occurred what amounted to a switching of names between the two air support organizations. "The IX Air Support Command which had been at Aldermaston Court was transferred, less personnel and equipment, to Middle Wallop, while the XIX Air Support Command which had been at Middle Wallop was transferred, less personnel and equipment, to Aldermaston."²⁶ By this time, some pilots had passed from the old fighter organization, through the bewildering metamorphoses of the support units, and back again to the new fighter command with such suddenness that they left a long trail of mail and personal

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41

property scattered throughout three commands and were slightly dazed about the whole thing. A final change occurred when both the air support organizations were redesignated Tactical Air Commands on 18 April 1944.²⁷

As the time for the invasion drew near, most of the commands set up advanced headquarters to facilitate control of their units when they would be operating across the Channel. The IX Fighter Command acting as forward echelon for the two support commands was located at Uxbridge where it was closely associated with No. 11 Group RAF, and with the Advanced Headquarters of the Ninth Air Force. At the same time, Advanced Landing Grounds were acquired along the coast to accommodate the Ninth's aircraft in readiness for the movement to the Far Shore. Seven of these ALG's were assigned to the XIX, and four to the IX Air Support Command.²⁸ Although the American forces were not able to take over any of these fields until April, and although considerable additional work had to be performed by the Engineer Command before the sites were large enough to hold the anticipated quota of 2,000 men each,²⁹ by 1 June, all were completed and occupied by the pilots who realized that D-day was at last drawing near.

IX Bomber Command. With the publication of G.O. No. 123 by the Ninth Air Force on 12 November 1943, the IX Bomber Command under the direction of Brig. Gen. Samuel E. Anderson began to take shape. This order redesignated the old 3d Bombardment Wing as the 98th Combat Bombardment

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42

Wing (I) and the 44th Bombardment Wing, now transferred back from the Fighter Command by teletype order, as the 99th Combat Bombardment Wing (II); a third wing, the 97th, was also activated from new personnel.³⁰ The four groups which had been a part of the old 3d Wing were now divided, the 323d and 387th being sent to the 98th Wing, and the 322d and 386th to the 99th. Unlike the fighter organizations, these three bombardment wings remained the only ones activated prior to the invasion, as plans for a fourth did not materialize. As time went on, all the B-26 groups were combined in the 98th and 99th Wings, while the 97th became the light bombardment wing with the 409th, 410th, and 416th Groups made up entirely of A-20's.³¹

December and January were filled with a wide variety of activities all connected with the rapidly growing organization of the command. The usual tactical station setup prevailed in this command as in others, and was instituted by General Anderson in the December reorganization. Only the engineering and operations sections of the squadrons maintained their identity, while the rest were merged in the group, and the squadron tended to lose some of its independence. In January a great deal of construction work was carried on at most stations, and by the end of the month many fields were ready for the new combat units expected in February and March. A pressing problem at this time was the shortage in the solid-fuel supply. While some of the older stations had been able to build up a slight reserve, many of the newer ones were unable to do this, and suffered considerable hardships during the winter months.³²

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Intelligence was very busy at this time with the dissemination of target materials and mission reports throughout the command. The increasing number of operations against the robot-bomb installations in northern France, Belgium, and Holland posed a considerable problem in target identification. Since the majority of these "ski sites," as they were called, were located in small woods, it was often very difficult to locate and identify them properly. Therefore, A-2 made especial efforts to aid the pilots, bombardiers, and navigators by obtaining better reconnaissance photos and achieving a wider distribution of the prints.³³

A valuable improvement was made during February in the bomb capacity of the B-26. Reports from the Mediterranean Theater indicated that instead of the usual load of six 500-pound bombs, Marauders in that area were successfully carrying eight of these general-purpose bombs. An investigation of the explosives used by the medium bombers in the IX Bomber Command revealed that their bombs were equipped with a lug, originally to convert them for Navy use, which prevented the successful carrying of eight in a B-26. However, a convenient supply of obsolete 600-pounders was discovered without this lug and it was decided to make use of them for the two extra bombs as long as the supply lasted. Experiments in combat missions having proved successful with the eight-bomb load, it was adopted as standard, and arrangements were made at the depots to have the lug sawed off the 500-pound bomb before delivery to the stations. Similar

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44

experiments with the 250-pound bomb resulted in building up the load to 14 bombs per plane, an increase of 40 per cent.³⁴

Another important development in February was the organization of a pathfinder squadron. After the original plan of transferring such a unit from the Eighth Air Force had failed, it was decided to organize one in the IX Bomber Command while waiting for the arrival of equipment from the United States. Consequently, the squadron was provisionally activated on 13 February with a temporary T/O which called for 18 aircraft and 13 crews. Most of the personnel came from the command except for 22 specially trained enlisted men who were brought in from outside sources. The first assignment of aircraft consisted of 9 planes, instead of the 18 expected, and these became operational on 21 February when the squadron took part in a raid on Coxyde. Henceforth the work of this unit became a regular feature of the command's operations.³⁵

Increased activity marked the operations of the Communications Section of the command headquarters. Initiated in January and put into complete operation on 24 February, a teletype network was set up for the dissemination of information on weather conditions. This network was operated by a detachment of the 21st Weather Squadron; after the movement to the Far Shore, it was to be run by units of the 40th Mobile Communication Squadron which was being put through its training during this month. There was also a considerable expansion in VHF communication. On 25 February this type of transmission went into operation for air, air-to-ground, homing, and air-sea rescue message

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45

sending. HF radio sets were still left in the planes, however, for emergency command use and for emergency homing to bases other than those of the IX Bomber Command.³⁶

Three new fields were acquired by the command during this month, leaving only two more to be completed before the full quota was reached. New groups and crews were arriving to fill out the skeletal wing organization set up early in the command's history. The 98th Wing was in charge of the 387th and 394th Groups and was also given a temporary jurisdiction of the recently arrived 391st. The 322d and 386th were still assigned to the 99th, as well as the 416th which arrived on 4 February. This group of light bombers was originally intended for the 97th Wing, but since this wing was not yet ready to assume control because of lack of space and personnel, the group was given a temporary assignment to the 99th. During the last week of February, a portion of the 394th Group arrived and was placed under the 98th Wing. The four original groups were well supplied with personnel, having about 80.5 crews per group; however, the new units arriving came with only 57 crews per group and had to be built up. As a result 32 crews were sent to the 391st Group, 14 to the 344th, and 15 to the 394th.³⁷

The rapid increase in the number of operational units placed a growing burden on Operations Section of headquarters since the wings were as yet confining their supervisory functions to training. On 18 February, Col. J. C. Kilborn, operations officer, wrote General Anderson to suggest that the wings should now assume their operational

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control. In this letter he pointed out that the increase of functioning groups from 4 to 11 threw a tremendous burden on the controllers. Furthermore, A-3 did not have the personnel or signal equipment to deal with 11 groups and set up missions on the short notice which the weather frequently required. The system of inter-group and inter-wing rendezvous was becoming increasingly burdensome and could be handled, he felt, equally well by the wings. The increased ratio of bombers to fighters, plus the different fighter formations available, was making it impractical for Operations to arrange for escort squadrons. For these reasons, Colonel Kilborn recommended that the wings perform the following functions: (1) specify size and type of formation, following the basic IX Bomber Command directive; (2) select the rendezvous for bombers and fighters, and indicate routes to it; (3) specify methods and techniques of attack against different types of targets; (4) specify initial points, axes of attacks, rally points, and altitudes, except the fighter rendezvous altitude. The Fighter Squadrons were to provide wing, rather than group escort.³⁸

After a wide discussion, this plan was accepted with minor exceptions by Ninth Air Force Headquarters. To clarify the latest ideas about wing functions, General Anderson stated at a staff meeting on 9 March that they [the wings]³⁹

will never take over any administrative work of Bomber Command. We are trying to unload on them the maximum amount of operational work. On the 15th they will take over part of planning a mission; we will send them a Field Order to which they will add a supplement on assembly of their wing and the route of attack, etc. As far as administration or supplies are concerned we will continue to work direct with the group.

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47

However, the new scheme required extensive communications between wing and group headquarters, and at the time, signal facilities were not yet available to assume this additional load. It was hoped to begin wing operations on 15 March, but this date had to be moved into April, and the new procedure was not applied until the first mission of that month which occurred on the 8th. As finally put into effect, the new plan closely resembled Colonel Kilborn's suggestions. The general combat orders were drawn up by the Bomber Command, and were then elaborated by the wing which specified in detail the role of each group in the operation. Apparently, the activities of the bomber wings were successful. In the words of the Assistant Inspector General:⁴⁰

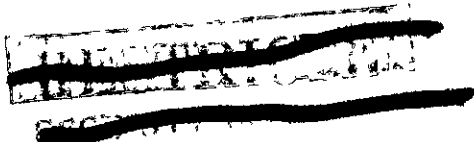
Based on the success that the Bomber Command is having with a purely tactical wing, only one conclusion can be drawn with regard to the Bomber Command. That conclusion is that the Bomber Command is operating its wings to meet the needs of bomber operations. The present system is successful and no change is indicated.

Closely correlated with wing operations were the studies produced during February and March by the Operational Research Section (ORS) of the IX Bomber Command. The first one, entitled "Recommendations on Bomb Loading and Fuzing for Attacks on Airfields" came out 21 February. It was an investigation of the raids of 3 October, 24 October, 3 November, and 13 December. The findings of the study indicated the probability that 250-pound bombs should have been used on the dispersal areas instead of the 500-pound general-purpose bomb, and 100-pound instead of 500-pound bombs on the main hangar areas.⁴¹

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"Report on Bombing Accuracy and Pattern Dimensions for the IX Bomber Command" was issued on 1 March. The conclusions of this elaborate piece of research indicated that the primary cause of gross errors in bombing accuracy was weather, which often made it difficult to see or identify the aiming point in the bomb sight. The OES suggested that aiming points be more carefully chosen for easy identification, that the navigator should assist the bombardier in target identification, that the bomb run should not be made into the sun, and that pilot, navigator, and bombardier should be kept together to function as a team.⁴² Additional studies were "Report on the Vulnerability of Target ZH1001" (the IJmuiden E-boat pens) on 2 March, "Railway Networks as Joint Objectives for the IX Bomber Command and IX Air Support Command," 18 March, and "Estimation of Effort Required to Neutralize a Typical Mobell Installation" which was issued on the 27th.⁴³

Thus in every phase of its activities, the IX Bomber Command expanded, and its operations were constantly extended. However, two serious shortages threatened to halt this progress: a shortage of bombs, and a lack of sufficient aircrews to man the planes. The bomb shortage first made its appearance in February. During that month, several new groups had become operational, two missions a day were being frequently mounted, and the average bomb load per plane had been increased. All these factors raised the demand for bombs, and early in the month Ordnance reported an acute shortage developing, especially in 100- and 500-pound general-purpose bombs. On 14 February it was



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reported that there were enough 100-pound bombs for one, and enough 500-pound bombs for two missions left in supply stocks. A statement from the IX Bomber Command's ordnance officer, Lt. Col. C. P. Vansant, charged the Service Command with failure to build up its stocks of bombs in spite of pressure to do so from Ordnance.⁴⁴ Receipt of small stocks and balancing and redistribution among operational groups made it possible to continue attacks on the Continent, but these were temporary expedients, and the complete exhaustion of bomb supplies was an immediate probability.

In March the situation came to the attention of USSAF, and General Spatz cabled to General Arnold for assistance.⁴⁵ As a result, an investigation was made in the United States which showed that relief was near. Bombs en route to the theater, in port loading, or on order to port totaled 315,410. In addition to this, 20,000 x 500-pound bombs were being shipped from surpluses in the Middle East, and 1,452 were being brought in from Iceland.⁴⁶ During the week ending 13 March a large number of light bombs were received from the Eighth Air Force, and by 20 March levels were attained in stations for the 250- and 500-pound bombs. Although a slight reserve was continued at the stations until 31 March, there was none at the depot. About this time an agreement was worked out with USSAF to coordinate Eighth and Ninth Air Force requirements and since the Eighth was now using considerably heavier bombs than the Ninth, to release to the latter

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50

available stocks at both Eighth and RAF stations.⁴⁷ At times the bomb situation looked critical during April, but judicious use of 1,000- and 2,000-pound bombs when levels of the 500-pound variety were low prevented crises; and as the month drew to a close, additional shipments came in to reinforce supply levels in the depots.⁴⁸

The shortage of aircrews was not so easily handled. The first sign of trouble was a lack of bombardiers. The standard T/O (1-127) for a B-26 group allowed one bombardier-navigator to each plane. This proved to be insufficient since the lead plane in each group usually required an extra bombardier, and special radio aids like GEE required two to four extra bombardier-navigators with special training. Thus the available bombardiers went on more missions than any other crew members. A request on 5 January 1944 for 90 extra bombardiers was unfavorably considered, and the arrival of new operational groups brought the shortage up to 150. Meanwhile, the growing manpower problem began to affect combat crews as a whole. Replacements had been set up on the basis of 57 crews per group, but when this number was increased to 84 crews, a corresponding increase in the flow of replacements did not occur. Furthermore, the official policy of the command was to release a man from the theater when he had completed 50 missions. Because of the unusually low rate of casualties among the crews, a large number of men began to complete their 50-mission tour of duty just about the time the combat crew shortage developed. Under these circumstances, the command took the logical step of canceling the 50-mission limit on operations in the theater early in

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51

March. Although this created a temporary relief, there was a considerable drop in morale, possibly because of the way in which the new order reached the men. It had been originally planned to have the information given verbally by the commanding general to the wing commanders, who would in turn pass it through the command. Unfortunately, there was the usual "leak" and before any official explanation could be made of the reasons for this change, the men were well informed on all aspects of the new regulation.⁴⁹

At the same time, the possibility of genuine cases of operational fatigue began to cause General Anderson concern. On 1 March he wrote to Col. A. L. Jennings, surgeon of the command, stating that he had heard reports of numerous crew members who were "flak-happy" and able to continue in combat only because of the great effort they were making to complete their tours.⁵⁰ Colonel Jennings' reply on 8 March confirmed General Anderson's suspicions. In the opinion of the command and unit flight surgeons, "there is definite evidence of operational fatigue, manifested by irritability, sleeplessness, battle dreams and so forth, present to some degree in 60 to 65 per cent of combat crews after about thirty-five missions."⁵¹ After 50 missions, it was felt that crews should have a rest of 3 or more months.⁵²

To combat this development and to compensate for the abolition of the 50-mission tour of duty, a new operational leave policy was established on 3 April by the command. Maximum leaves for light-

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52

and medium-bomber crews "under normal conditions" were set at 1 week between the twenty-fifth and thirtieth missions, and 2 weeks between the fortieth and fiftieth missions. This regulation was not to apply to cases of operational fatigue which could be handled at the regular "rest homes" by order of the flight surgeons, nor was it to interfere with the normal operational effort of 36 aircraft per group.⁵³ A further adjustment of this policy came on 21 April when Headquarters, Ninth Air Force authorized Bomber Command to relieve crew members from duty (up to 10 per cent of total strength) if their operational fatigue was interfering with the efficiency of the unit.⁵⁴

Yet these efforts to relieve the strain on combat crews produced other problems. The greatest shortages were among the pilots and bombardiers, and yet these men would be among the first affected by the new leave policy at a time when they were needed the most. Furthermore, the command was at this time under great pressure from General Brereton to improve its bombing, and consequently needed all its most experienced bombardiers for training and operations. Just at this crucial moment the 409th Group was committed to night bombing, and therefore required a bombardier-navigator for each plane. As a result 49 officer bombardiers were transferred to this group from the B-26 units, leaving an average total of 76 officers and enlisted bombardiers per B-26 group and 22 crews without bombardiers.⁵⁵ In an effort to carry out the new operational leave policy, as well as take care of the cases of battle fatigue that were growing more numerous, the command requested Ninth Air Force headquarters to allow it

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53

approximately 115 crews per group.⁵⁶ In reply, headquarters stated:⁵⁷

The assignment of 115 combat crews to each medium bombardment group is believed to be excessive. The authority for placing of combat crews on rehabilitation leave within the theater, and within the continental limits of the United States is an authorization only and will not interfere with your operational commitments.

All that could be hoped for was that after 1 July the flow of replacements would be increased and that groups might be maintained at 100 crews each. The problem therefore was not solved within the period covered by this study, and a shortage continued, "that, although minor, was yet sufficient to affect adversely the efficiency of various groups for some time to come."⁵⁸

One other difficulty that tended to retard operations was the delay in shipments of A-20G's and A-20J's. This light Douglas bomber was to supplement the activities of the Marauders in bombing communications, bridges, airdromes, and the like, and it was planned to set up three groups of A-20's (409th, 410th, and 416th Groups) under the 97th Wing (L). But as the planes arrived much more slowly than had been anticipated, training was greatly delayed, and the groups became operational very slowly. Because of their shorter range, these light bombers were not flown across the Atlantic like the mediums, but were dismantled and shipped. Realizing the need of having the necessary tools and parts on hand when the assembly of the planes began, requests for these items had been made as early as December 1943.⁵⁹ In spite of letters, teletypes, cables, and investigations, practically nothing

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came in for the A-20. Yet when some planes began to arrive, it was found they were not equipped with extra plexiglas noses or side windows, and these items were not expected from the United States until June or July. Arrangements were finally made for British sources to manufacture the noses and side windows.⁶⁰ This helps to explain why only 55 Bostons were operational out of a total of 125 in the theater by the end of March.⁶¹

In spite of these problems, many of which were incidental to the activation of a large command in a remote theater, the growth of the IX Bomber Command is one of the outstanding achievements of the Ninth Air Force. By the beginning of May, bombing had greatly improved, organizational difficulties were being smoothed out, and all was in readiness for the highly successful attacks on German communications which ushered in the preliminaries to D-day.

IX Troop Carrier Command. After the activation of this command under Brig. Gen. B. F. Giles, the first operational wing to be set up was the 50th. The headquarters of this wing, composed of men with 3 years' experience behind them, was brought from the United States early in October, and by the 18th, command offices were being established. EOC General Order No. 3, dated 16 October, assigned the wing the 315th Group with two squadrons, and the 434th with four. Early in November the 435th Group arrived and was assigned to the 50th Wing, thus completing the command's skeletal organization which was to remain unchanged throughout the rest of the year.⁶²

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In February 1944, additional units began to arrive. The 436th Group came into the 50th Wing on the 4th, and on the 18th the 315th Group was relieved from the 50th Wing and assigned to the 52d, although activation of that wing did not take place during the month. On the 22d, the 53d Wing was sent to the command and received the 435th, 436th, 437th, 438th, and 439th Groups.⁶³ In March, the 52d Wing and four groups arrived from Sicily and the wing organization was now complete. During this month, additional units arrived, and there was a general reorganization within the command. The final arrangement gave both the 52d and 53d Wings five groups each, while the 50th remained with four only. This organization was maintained until after the invasion.⁶⁴

To a great extent, the activities of Troop Carrier Command units prior to D-day were concerned with training, and they are discussed in the chapter covering that subject. Aside from training problems, there were the usual difficulties caused by the supply shortage which, as indicated previously, affected all commands. The 437th Group was told at the staging area that certain essential items were to be obtained in the theater, and therefore these articles were innocently left behind. To the surprise of no one, except perhaps the 437th, the equipment eventually proved to be unobtainable in the theater. Glider-towing was handicapped by a shortage of Horsa and CG-4A tow ropes, D rings, and sister hooks. The tactical air depots which were to furnish the supplies were usually undermanned and often widely

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56

scattered. The 437th, for example, found its supply problem complicated by the fact that its tactical air depot was 140 miles away.⁶⁵

The 438th Group suffered from acute transportation problems. The advance air echelon was supposedly assigned to the IX Troop Carrier Command, but their first orders sent them to an Eighth Air Force base where their arrival was a complete surprise. After virtually touring England, trying to find some one who knew where they were to go, they received verbal orders to report to Ninth Air Force Headquarters at Sunninghill, Ascot. Upon reporting here, they were then ordered to the IX Troop Carrier Command at Grantham and were assigned to Langar Field which they reached about 9 February. They had no means of transportation, lacked their enlisted personnel, and did not receive their planes until 18 February. Their supplies had been sent to Barkston Heath by mistake and after much loss of time were finally moved in by motor transport. Meanwhile, the rest of the group were assigned to Langar Field and arrived there on 11 March. Hardly had they settled down when the entire group, united at last, was transferred to Greenham Commons on 16 March.⁶⁵ By this time they were firmly convinced that the advantages of travel had been over-emphasized.

In spite of various handicaps, much was accomplished during the first months in the EEO. Extensive training exercises involving aircraft and glider formations were carried on as often as the weather permitted, and joint operations with airborne troops in paratroops

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~~CONFIDENTIAL~~

57

and glider tows were practiced. Some freight was carried in the command's planes, and gliders were transported to marshalling areas. The gliders were shipped disassembled from the United States, and were put together by Troop Carrier mechanics at Camp Columbia near Greenham Commons. As they rolled off the assembly points, they were picked up by C-47's and towed to the areas where they were stored pending the invasion. For the Horsa gliders lent to the command by the British, the towing planes were sent to Netheravon, Berkshire, where these craft were stored. This glider transportation became one of the few activities of the IX TCC not concerned with training.⁶⁷ Another job was the evacuation of hospitalized American military personnel from Ireland to England. Evacuations began early in December, and when the 810th Medical Air Evacuation Squadron was assigned to the 50th Wing on the 23d, they became a regular feature of the command's operations.

As the wing organization took shape, it became more deeply involved in administrative problems than was usual in the Ninth Air Force; however, upon inspection, it was decided that this administrative supervision was required by circumstances, and no change was recommended. As in other commands, the final stage in preparation for D-day was initiated by the establishment of an advanced headquarters, and the movement of operational units to stations near the coast. In April advanced units of the command were moved to Eastcote, in southern England, where they were associated with advanced units of British airborne troops. The site at Eastcote had the advantage of being

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~~CONFIDENTIAL~~

58

near advance headquarters of the Ninth Air Force and IX Fighter Command at Uxbridge and not far from AAF advance headquarters. Thus as D-day approached, closest cooperation between these organizations was assured.⁶⁸

IX Engineer Command. This command was a decided innovation in AAF organization, and the story of its activation is therefore of considerable interest. Like so much in the Ninth Air Force, the idea for a separate engineer command was suggested by developments in the Middle East and North African Theaters. General Spaatz seems to have been one of its earliest protagonists for there is a reference to his interest in the idea of a separate command for all air engineers in a document dated 12 February 1943.⁶⁹ However, the Bradley Committee, although usually strongly influenced by the lessons of the African campaigns, made no provision for an engineer command in its recommendation but scattered the units throughout various organizations.

But the idea persisted, and an "engineer division" was shown on the chart of 4 August 1943 which described the implementation of the Bradley Plan.⁷⁰ Shortly afterward, during the course of an interview, Brig. Gen. S. C. Godfrey stated that⁷¹

General Spaatz spoke to me of his strong conviction that aviation engineers should operate under Air Force control. It worked so well in northwest Africa and every one seemed to agree on that, including the staff at Theater Headquarters. These aviation engineers have done well because they were a part of a trained team that made up the Air Force and were recognized as such.

Nevertheless, the War Department was hesitant about taking such a step, and therefore no action was taken for the time being.

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~~CONFIDENTIAL~~

59

Meanwhile, authorities in the theater went as far as they could in the direction of centralized control of the air engineers without formal War Department approval. These officers believed with General Spaatz that the Army Air Forces should control units doing construction work for air organizations and that command decisions should be made by engineers rather than the service command.⁷² Therefore on 24 November 1943, 1 warrant officer and 12 enlisted men were assigned to the headquarters of the Ninth Air Force and were ordered to station 474 to establish a detachment of the IX Air Force Engineers Section.⁷³ Unimpressive as this event may seem, it was the beginning of the IX Engineer Command. Three days later, Ninth Air Force Headquarters issued a letter ordering the detachment to assume the functions of a command; Col. Karl B. Schilling was placed in charge. During the next 2 weeks there was great activity at the detachment headquarters: T/O's were being set up for approval and conferences were being held to put the new organization into action.⁷⁴ About this time, another important event in the history of the engineers took place: on 26 November, Matching Airdrome was turned over to the 99th Bombardment Wing, thus becoming the first field to be completed by American engineering units in England. This airdrome, which had been started in August 1942, contained 120,000 cubic yards of concrete, 350 buildings, and 94 acres of cleared forest lands. It was considered completely adequate for all operations.⁷⁵

On 5 December an important conference was held with representatives of the Engineering Section of the IX Air Service Command. After

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60

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some discussion, an agreement was reached on securing engineering supplies. It was decided that units of the Engineers Detachment should requisition their supplies directly from SOS engineer depots, while all other Ninth Air Force units were to get their engineering supplies through normal service command channels. The supply, storage, and distribution of bulk maps was ruled a service function, but the preparation, reproduction, supply, storage, and distribution of special maps was to be handled by the Engineers Detachment. Maintenance and supply tables for engineer units would be prepared by headquarters of the detachment, who would also be responsible for all engineer supply planning based on minimum construction requirements furnished by other commands.⁷⁶

The decisions of this meeting show that a considerable advance had been made toward setting up an independent command for all engineering groups. A further step was taken on 18 December when the Ninth Air Force, pending final approval of the War Department, redesignated the Engineers Detachment the Engineer Headquarters, Ninth Air Force, and ordered it to assume the functions of a de facto command.⁷⁷ To all intents and purposes, the command had become a reality. At the same time, an expansion of personnel was underway. A large number of officers and enlisted men arrived from the United States and Iceland,⁷⁸ and on 25 January, Colonel Schilling was replaced by Brig. Gen. James B. Newman, Jr.⁷⁹ Prior to this assignment, he had been the chief engineer of the VIII Air Force Service Command.

~~CONFIDENTIAL~~

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61

The usual supply difficulties made their appearance as the command was beginning to take shape. Carbon paper, stencils, stamp pads, office supplies in general, were very hard to find. Transportation facilities were even scarcer; and when the command obtained a few cars, an even more serious shortage was discovered: there were no drivers.⁸⁰ Communication equipment was equally hard to find. A switchboard borrowed from the 1028th Signal Company to set up radio communications had to be returned on 4 February, and as a result, the Engineer Headquarters was out of the radio network until a new board could be obtained.⁸¹

By February the value of the existing engineering units to the Fifth Air Force was so evident that efforts were again made to secure its formal activation by Washington. General Brereton and his officers, supported by General Arnold, urged that the War Department take action, but again nothing was done.⁸² A second attempt in March was more successful,⁸³ and on the 30th the IX Engineer Command was formally activated by the War Department.⁸⁴

IX Air Defense Command. Early plans for the tactical air force included a provision for an air defense command, but as in the case of the Engineer Command, the War Department was slow to take action. However, on 16 November, Brig. Gen. Dale D. Hinman was designated as commanding general of the IX Air Defense Command, although that organization was still unactivated. Pending authorization, it was known as the Air Defense Headquarters, Fifth Air Force.⁸⁵

With the arrival of the 51st Anti-Aircraft Artillery Brigade on 9 February 1944, prospects for the activation of the command looked

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62

better. The brigade reported to the headquarters of the Ninth and was assigned to the Air Defense Section for administration and operations. Until 4 April, all personnel for pre-activation operations of the IX Air Defense Command came from this brigade.⁸⁶ Other units arrived as follows:⁸⁷

118th AAA Group	30 March
448th AAA (AW) Bn.	30 March
550th AAA (AW) Bn.	30 March
633d AAA (AW) Bn. (M)	30 March
635th AAA (AW) Bn. (M)	10 April
555th Sig. AW Bn. Co. D	12 April
21st AAA Group	29 April

On 30 March the IX Air Defense Command was activated by the War Department under the command of Brig. Gen. William L. Richardson, General Hinman having been previously transferred. On 2 April the 51st Brigade was relieved of assignment to the Ninth's headquarters and assigned to the new command, undertaking the duty of furnishing antiaircraft protection to units of the IX Bomber and XIX Air Support Commands.⁸⁸ To facilitate close coordination and liaison with the operational units, the Headquarters Battery of the brigade moved from London to Aldermaston Court and established a headquarters in close proximity to the headquarters of the XIX ASC. This setup was maintained without much change until D-day operations.

Special units below command level. By the end of March 1944, all commands of the Ninth had been activated, and most of them had successfully passed through the formative stages and were awaiting the test of invasion operations. Their histories have been briefly

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~~CONFIDENTIAL~~

63

recounted here, except for the story of the IX Air Force Service Command. This organization is so important that its development is covered in a separate chapter. There now remains to be treated a few special organizations which, although not separate commands, nevertheless performed vital functions in the air force.

The all-important work of providing weather data for aircrews was handled by the 21st Weather Squadron. This squadron was split up into more than 60 detachments which were attached to tactical organizations throughout the Ninth Air Force. At the top, the commanding officer of the squadron also served as weather officer on General Brereton's staff, and there was a staff weather officer for each echelon down to and including the group. These officers worked closely with the A-3 or S-3 Section in each unit, provided the crews with the latest meteorological information, and arranged for briefing.

Weather detachments with bomber and troop-carrier units were considered semipermanent organizations and had heavy equipment. Weather detachments with fighter groups, on the other hand, operated from trucks and were completely mobile. The importance of the work of this squadron can hardly be overemphasized; in many cases, the success or failure of a mission depended on the correctness of the weather forecast. As a result, great pains were taken by the weather officers to predict weather changes with scientific accuracy. At 0400 and 1600 daily, the weather officers at the Bomber Command, at the headquarters of the PAF squadrons assigned as fighter cover for the Ninth,

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64

and at General Brereton's headquarters held a scrambled phone conversation to work out their two daily weather forecasts on the basis of information received from the detachments. After this, the weather officers would study the list of missions that the commands wished to fly and would indicate which operations, on the basis of the forecast, could be flown and which could not. An accurate record of weather on these missions was kept and published in the Monthly Operational Weather Record.⁸⁹

The 67th Tactical Reconnaissance Group and its five squadrons served as the eyes of the entire air force, although it was placed under the administrative control of the IX Fighter Command and later of the IX Air Support Command. One of its great achievements was the photographing of a long strip of the invasion coast during February and March of 1944, without any losses. Photo interpretation was handled by a mobile subsection of intelligence known as the "Photo Center," although the bulk of this sort of work continued to be carried on by the British Central Interpretation Unit at Medmenham, which employed over 1,000 specialists. This organization was the main source of photo interpretation in the theater.⁹⁰

The Chemical Section of the old VIII Air Support Command was transferred to the Ninth in October. Some key personnel, however, were sent from Middle East Theater of Operations to take charge of organizing chemical activity throughout the command. A conference was soon held with chemical officers present from all units; questions of training, supply, intelligence, and chemical warfare were discussed, and

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65

long-range policies adopted.⁹¹ As in many other cases, great dependence was placed on special schools conducted by the British, although as soon as possible American schools were organized. Of particular interest is the Chemical Warfare Mobile School which traveled among stations of tactical commands giving special instruction in the tactics and technique of chemical sprays, incendiary bombs, and smoke screens.⁹²

Medical work was largely under the control of the surgeons of the four major commands, and as pointed out previously, the medical units were attached to tactical organizations rather than to the stations themselves. Most incoming groups were already equipped with their own medical officers, and whatever additional Medical Department personnel was needed came from the Replacement Control Depot. Usually, the demand was much greater than the available supply. The principal task of the medical personnel was, of course, to keep the planes in the air by making sure that aircrews and ground crews were in good health. Next in importance came the reception of new units and the establishment of a satisfactory standard of sanitation and training. Training included the instruction of officers and enlisted men in the Medical Department and also teaching the principles of first aid to all AAF personnel. Nurses in the Ninth received their instruction in the schools of the VIII Bomber Command.⁹³

Such, in brief, is the story of the organization and build-up of the tactical commands in the Ninth Air Force. Before an account of their combat operations can be given, however, the vast operations of the Service Command and the Ninth's training program, without which no bombing missions and fighter sweeps could have been mounted, must first be described.

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Chapter IV

THE IX AIR FORCE SERVICE COMMAND

The history of the IX Air Force Service Command is closely connected with the Air Service Command in general, and with the VIII Air Force Service Command in particular. Ever since the first World War the special nature of air supply problems was becoming more and more apparent. The rapidly shifting combat zones occupied by a modern air force, their enormous extent, and the constant fluctuation in type and amount of materiel needed made it clear that procedures based on orthodox ground-force supply theories would not satisfy the needs of air power. As one writer neatly puts it:¹

The struggle for air power was not merely a struggle for a more independent Air Force capable of carrying on a unique strategical or tactical mission of its own. It resolved itself into a drive for air depots, a supply system, and a maintenance service, and into a reorganization and integration of Air Force elements responsible for these functions which ultimately took the form of the Air Service Command.

During the twenties and thirties, as new possibilities for combat aircraft were being discovered and explored, there was a growing tendency for new air supply agencies to come into being and to operate with considerable independence within the organization of Army supply. Although there were as yet no air service commands, officers such as Cols. Harold A. McGinnis and Hugh J. Enerr were advocating organizational changes that clearly tended in that direction. In a report

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67

dated 25 July 1941, Colonel McGinnis recommended that a service command should be set up to administer and service all the air bases of the Second Air Force. This service command was to be equal to the bomber, fighter, and other commands.² Evidently this report paralleled thinking in the War Department, for on 17 October 1941 an over-all Air Service Command was set up under Brig. Gen. Henry J. F. Miller, combining all supply and service elements of the Air Corps.³

With the outbreak of the war on 7 December it was evident that the United States would send expeditionary forces abroad, and this brought to the fore the planning of adequate service organizations for the overseas branches of our air power. Although discussions on this question had been going on for some time, the matter did not come to a head until early in 1942. During January it was proposed that an air force be formed to provide air support for an invasion of North Africa, which was then under discussion between American and British staffs. This was the origin of the Eighth Air Force, and at the end of January several commands were activated including an VIII Air Force Base Command. Although this North African project was temporarily laid aside in March, the Eighth Air Force was retained as the air force to be sent to England.

Meanwhile, discussions on service organizations for the new air force were continuing, and in April there was submitted a proposal entitled "Activation of the VIII Air Force Air Service Command," During the conferences that followed, Maj. Gen. H. F. Harmon, Chief of Staff of the Army Air Forces, agreed to the idea of separate service

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68

commands in overseas task forces and asked that the proposed activation be reworded so that it might have general application.⁴ Consequently, with a slight change of title, the proposal was officially issued on 20 May as AAF Regulation 20-9, "Air Task Force Air Service Commands."

The principle of separate air service commands had now been recognized, but it was still necessary to define their relations with SOS. Here again the experiences being observed in the Middle East campaigns were highly suggestive. According to Brig. Gen. Hugh J. Knerr:⁵

The Air Forces in each theater should have their own SOS extending from the port of entry to the consuming units. Such is actually being done in North Africa through necessity. If the Air Service Command had been content to depend on the ground SOS for expected performance, the situation in Africa would be quite different from the present one

However, little was done to break away from the controls of SOS until after the rapid growth of the Eighth Air Force in England. Then the urgencies of supply in this area caused a certain amount of opposition to the existing system. Ordnance officers of the VIII Air Force Service Command complained of certain SOS procedures which they felt made it difficult for them to get supplies, and one of them stated caustically that "in requisitioning motor vehicles from SOS, existing procedures required them to report among other things that the function of a heavy bomber squadron was to 'carry destructive materiel over enemy territory.'"⁶

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69

Properly to control and distribute materiel arriving from the United States, it became necessary for VIII AFSC officers to set up intransit depots at ports of entry in the United Kingdom and to arrange for direct service and transportation to air depots at bases. The efforts of SOS to obtain control of these facilities were unsuccessful. Finally, on 9 November 1943 the AAF published Regulation 20-13. This regulation provided for an "AAF Arm and Service Integration Committee," which among other things was to "transfer efficiently and expeditiously the Attached Services with Army Air Forces (ASWAAT) to the Air Corps."⁷ At the same time a board of officers of VIII AFSC recommended that⁸

SOS be requested to supply Chemical, Signal, and Ordnance common materiel, in bulk, as requested by the Headquarters Eighth Air Force, without requiring a detailed defense of the request. . . . [That] VIII AFSC be authorized to request US Air Service Command to ship as an Air Force special project, common materiel on which the availability date furnished by SOS is unsatisfactory.

On 30 December, SOS confirmed the general findings of this board, and by the beginning of 1944, much of the subordination of VIII AFSC to SOS was over; henceforth, the two organizations were to cooperate on a more or less equal basis.

Another important problem was being worked out at the same time. Superficially, this concerned the relations of the VIII Air Force Service Command and the A-4 Section of Headquarters, Eighth Air Force, but fundamentally it raised the question of the effectiveness of traditional Army administrative methods in dealing with air supply problems.

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70

In the United States, the chief exponent of what might be called the functional theory of supply administration rather than the traditional staff organization was General Knerr. Instructed by General Arnold to examine the organization and operations of the Air Service Command in the United States, Knerr based his approach to the problem on his experience with great industrial organizations engaged in mass production. After much study and many conferences with his staff, his ideas were embodied in a memo to General Miller, entitled "Organization of Air Service Command," 19 November 1942. The basic doctrines were embodied in two important paragraphs:

The function of the Air Service Command is essentially one of business management rather than military operation There exists in the business world a reservoir of available management talent thoroughly conversant with analogous functions in comparable corporations The current military staff type of organization of the Air Service Command is not adequate to the basic functions of the Air Service Command. . . .

An industrial type of organization can be substituted for the present inapplicable and cumbersome military type . . . by placing all activities essential to the three main divisions of the command under control of the division chiefs with the result that the divided responsibility attendant upon cross references to other equal agencies is eliminated. At the same time essential chain of command requirements are maintained without interposition of non-essential steps.

At an important conference on 20 November 1942, General Knerr's plan was examined, while members of the conference had an opportunity to study a chart showing the comparable organization of the General Motors Corporation. The plan divided the ASC Headquarters into three main divisions: supply, maintenance, and personnel and training. Special staff sections were tied in with these three divisions for

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71

technical control, and the A-1, A-2, A-3, and A-4 sections were eliminated. In this headquarters, the Chief of Staff was dropped in exchange for an assistant commanding officer with certain household services, like adjutant general, judge advocate, and inspector general,¹⁰ under his jurisdiction.

In putting this plan into effect for the Air Service Command in the United States, the directive practically quoted General Znerr in stating:¹¹

The primary function of the Air Service Command is essentially one of business management rather than military operation. The basic principle of this management function is that of centralized control and decentralized operation.

The Eighth Air Force was not immediately receptive to these new doctrines. In this air force, the A-4 Section had begun to exercise a control over supply and maintenance almost as restrictive as that formerly exercised by SOS. Although practically the same functions were assigned to the Headquarters A-4 and VIII AFSC, there was a tendency for A-4 to take over more and more operations, excusing itself by saying that its aim was to refrain from "participation in the details of operations," but adding that "because of the diversified channels of communication, this is at times difficult of attainment."¹² Nevertheless, its power over questions of supply increased remarkably. Two statements in an indorsement by A-4 of a request for certain training materials from the VIII AFSC speak for themselves. The first line admits that the request was submitted to A-4 through an error; the second reports action taken to fulfill the request.¹³

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72

Thus through its A-4 Section, Headquarters, Eighth Air Force became more and more concerned in supply, although in the United States the thinking of General Knerr and his associates was strongly opposed to this sort of thing. It seemed to many officers that in general A-4 was much better informed on questions of supply than the VIII AFSC itself. As one officer stated:¹⁴

On specific supply and service items, officers of A-4 frequently seemed better informed than officers of the Service Command present. . . . It is a reflection of the fact . . . that A-4 of the Eighth Air Force Headquarters in some instances has more immediate and direct access to supply and service matters and even operations than the Service Command.

When on 10 June 1943 the Engineer, Quartermaster, and Ordnance Sections were eliminated from the VIII AFSC by a special order and transferred to the Eighth Air Force Headquarters, it seemed that some sort of re-definition of functions was necessary.¹⁵

During July, Lt. Gen. Delos C. Emmons was in the United Kingdom to explore the situation, and in discussions with General Baker, he pointed out certain duplications in the functions of the VIII AFSC and Headquarters A-4. General Baker ordered General Miller to see what could be done to prevent this.¹⁶ On 30 July, General Miller forwarded to his chief some of General Knerr's ideas on the place and functions of the Service Command, and on 11 October the confusion and overlapping was eliminated by making the commanding general of the VIII AFSC also the Headquarters A-4 in the Eighth Air Force. At the same time the following staff sections were transferred back to the Service Command: Signal, Surgeon, Quartermaster, Ordnance, Engineer, Finance, Chemical.¹⁷

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73

Thus shortly before the IX Air Service Command was activated, several important decisions had been carried into effect in the VIII AFSO. It was now fairly well established that the functions of supply would be given to a separate command in each air force and that this command would be independent of SOS, and also protected against interference from the air force headquarters. These were important decisions of policy and were strongly to affect the future organization of the IX Air Service Command.

But the debt of the Ninth to the Eighth did not cease with broad over-all questions of policy. Important techniques of administration and control were worked out in the Eighth and were almost as important in the development of the Ninth as the larger issues previously mentioned. Typical is the problem of echelon maintenance.

The basic directives and memorandums which established the mission of the VIII AFSO state that its units were to undertake third and fourth echelon maintenance and repair of equipment only when it was beyond the means of the combat or tactical elements to perform such services. Memorandum No. 155-1 seemed to imply through its rather negative phraseology that these service units were to be under the technical control and command of the service forces.¹⁸ However, the line of policy taken by the Eighth was to place service units under the control of the tactical group they served. This included not only first and second echelon repair, but third and fourth as well. In spite of strong opposition on the part of a small number of VIII

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AFSC officers, this line was maintained for some months. In defense of the policy, it was stated that the static condition of air warfare at the time, with operations proceeding from a small area like the United Kingdom, made it convenient to have all airdrome units under the same command.

While the Bradley Committee was in England preparing its plan, this aspect of service functions must have come under its critical scrutiny, for its final study provided for elements doing third echelon repair under the direct control of the Service Command. Even units assigned to combat commands are shown as under the indirect or technical control of the service organization.

This sign of a disagreement with the Eighth's service policy is significant, for shortly afterward General Moxer decided to place service units in the VIII AFSC under actual service control, although this policy was not to be applied to the VIII Bomber Command.¹⁹ This distinction between commands was destined to be temporary, however, as the visit of General Arnold to the theater shortly afterwards changed everything. On his inspections in England, General Arnold had seen U. S. combat crews working on planes that should have gone to the Service Command and he had not been satisfied with the maintenance situation.²⁰ As a result, on 21 September 1943 it was announced by letter to the Eighth Air Force that the responsibility for all but first and second echelon maintenance now lay with the Service Command and it would be given technical control over the work.

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75

Technical control was defined as "the operation of the means whereby the men, machines and materials required for maintenance of the Eighth Air Force are applied to that purpose."²¹ As a result of this letter, Memo No. 155-1 was now revised and reissued. In its new form it met practically every wish of Service Command authorities. Technical control over first and second echelon activities of combat commands was clearly indicated, and the new definition of the term was interpreted to mean "full control over supplies and general control over service personnel and service units at combat stations."²² For the first time, a broad responsibility for training all service personnel by the Service Command was clearly stated, and a similar statement gave the command responsibility for their "health, safety, and welfare."

In this way the first step in the doctrine of separation of commands and functions at combat stations worked out. Although originally applied to give service units greater freedom in the exercise of their functions, it became a basic principle of administration on all Ninth Air Force stations as has already been shown.

Another successful innovation of the Eighth was the airservice "area" device. When planning for the Eighth in the United Kingdom was going on, it was thought to divide England into service divisions based on geography as had been done in the United States. However, by 2 September this proposal was given up, and it was decided to establish instead advanced air depots in close proximity to areas occupied by combat units. As early as 12 October 1942 the advanced

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76

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air depots began to specialize in different types of airplanes, and also began to control various satellite stations within 10 or 12 miles radius. To coordinate still further the supply and maintenance at these advanced depots, there was set up in February of 1943 the Advanced Air Service with headquarters at a location fairly close to the advanced depots. This headquarters was to "command, control and direct" supply, maintenance, repairs, and salvage of the advanced air depots. At the end of July the command was renamed the Strategic Air Depot Area, and a Tactical Air Depot Area was organized to coordinate the servicing of the medium bombers and fighters of the VIII Air Support Command which was soon to be transferred to the Ninth Air Force.²³

This area plan was not actually based on geography, although superficially it may appear to have been so; its real purpose was to decentralize the operations of supply by delegating certain functions into the field. Later, when the boundaries of the Ninth's two Advanced Air Depot Areas (AADA) were drawn, there was a further deviation from a purely geographic concept since a depot of one AADA was actually located in the area controlled by the other.

Another important development in the VIII AFSC that was to influence the Ninth was the improvisation of new and highly mobile service units to assist in reducing the great pressure on service crews repairing battle-damaged planes. While it had been realized from the first that the repair of planes damaged in combat would be

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77

an important problem, no one appreciated the fact that the excellent flying qualities of American planes plus the skill and courage of the pilots were going to make this task tremendous. Planes riddled almost beyond belief managed time after time to return to their bases, thus adding to the work in the repair centers. At the end of 1943, General Baker estimated that on deep penetrations anywhere from 25 to 50 per cent of the planes involved would be damaged.

At one time it was thought possible to replace, rather than to repair, all such injured aircraft, following the example of the RAF. But experience soon showed that no real similarity existed between the two situations. The comparatively short distance between an RAF airfield and the factory where its planes were manufactured made it a simple matter to send the damaged craft to its manufacturer and replace it with a new plane. In the case of American aircraft operating thousands of miles from their manufacturing centers, this convenient system was unfortunately impossible. Thus the rapid and efficient repair of battle damage became a vital necessity as combat operations increased.

The Bradley Committee, cognizant of the magnitude of the problem, provided for the formation of subdepots situated with and under the command of the combat groups to which they were assigned, although under technical supervision and control by the Service Command. The subdepot was merely an augmented service squadron given additional equipment and the responsibility for third and fourth echelon repair on aircraft requiring more than 36 hours of work to put them in combat

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78

²⁴ again. Work that could not be carried out by the subdepot was to go to the advanced air depot having jurisdiction over that particular station.

Since the amount of damage sustained in combat fluctuated among the different airfields as the tide of battle ebbed and flowed, it became necessary to provide assistance to subdepots suddenly swamped by a few days of unusually heavy damage. To meet this need, roving work parties were organized at the advanced air depots and dispatched to relieve stations faced with the repair of a large amount of damage. In many cases the planes most seriously injured had been landed away from their home bases and then could not be flown back. To bring these strayed aircraft back to their own fields, mobile maintenance and repair units were formed. These units were made up of 18 to 20 picked civilian and military personnel who were skilled in all kinds of repair. Equipped with machine shops on semitrailers, they were able to make repairs on the spot, which would enable the damaged craft to be flown back to base.²⁵ To handle its own battle damage, the IX AFSC later adopted this system with a slight change of nomenclature; the term "subdepot" was changed to "service teams."

Modification of combat aircraft after they reached the theater became a problem almost as important as repair. Theoretically, the planes arriving in the United Kingdom from the American manufacturer were ready for combat. Actually, old equipment had to be modified to meet theater conditions or new equipment added before it was safe to fly the craft into battle. The B-17 for example had to be equipped

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with chin turrets, and jettisonable fuel tanks had to be prepared for all fighters after the middle of 1943. Eventually this work would be done at factories in the United States, but at first it had to be done in the theater if the planes were to get into combat with the new equipment. Space does not permit a detailed description of the methods used by the Eighth Air Force to carry out plane modification. After different plans had been tried, a system of establishing priorities for the various structural alterations was set up by the middle of July 1943 and proved to be successful. Later, much modification work of the Ninth was carried on in VIII AFSC depots. Between October and the beginning of February 1944, all B-26 modification was handled by the Eighth, and the A-20 was similarly serviced. By February however, most of the work was taken over by the Ninth and placed in its advanced depots.²⁶

Thus by the time that the IX AFSC was ready to operate in England, the VIII AFSC had developed certain mobile and flexible service organizations that the Ninth Air Force was to find most useful. The Eighth had discovered that battle damage was the main burden of maintenance and that some type of mobile repair unit was essential such as the subdepot assisted by the roving work party. Furthermore if repairs were to be accomplished quickly, the echeloning and organization of different levels of work was a prime necessity. All these devices proved most valuable to the Ninth and were utilized as models in the formation of the IX AFSC.

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80

As the summer of 1943 wore on, a series of steps were taken to pave the way for the establishment of a service command in the tactical air force which every one knew was coming--either as a part of the Eighth or as a separate organization. The Bradley Plan had proposed a Tactical Air Service Area Command (TASAC) to serve the tactical air force, and as a step in this direction, the VIII AFSC established a Tactical Air Depot Area (TADA) on 31 July. On the 23d of August the TASAC was activated by the VIII AFSC and redesignated TADA on 4 September. Finally on 20 September the War Department notified EMOUSA that 92 officers and 270 enlisted men were being transferred to the United Kingdom from the IX AFSC in the Middle East. Thus when the TADA was transferred to General Brereton's command on 16 October to become the nucleus of the IX AFSC, it was assigned the men arriving from Egypt as well as some specialized personnel from the VIII Service Command.²⁷

The Eighth Air Force had been expecting this movement for some time and was prepared to assume responsibility for assisting the new service command. The VIII TADA predecessor of the IX AFSC, had received most of its supplies from the Eighth, and after the activation of the Ninth, these supplies continued to be so furnished. On 17 December 1943 it was decided that the Ninth would requisition directly to the zone of the interior for equipment and materiel pertaining to aircraft exclusively with the Ninth, while the Eighth would satisfy demands for equipment common to both air forces. All

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81

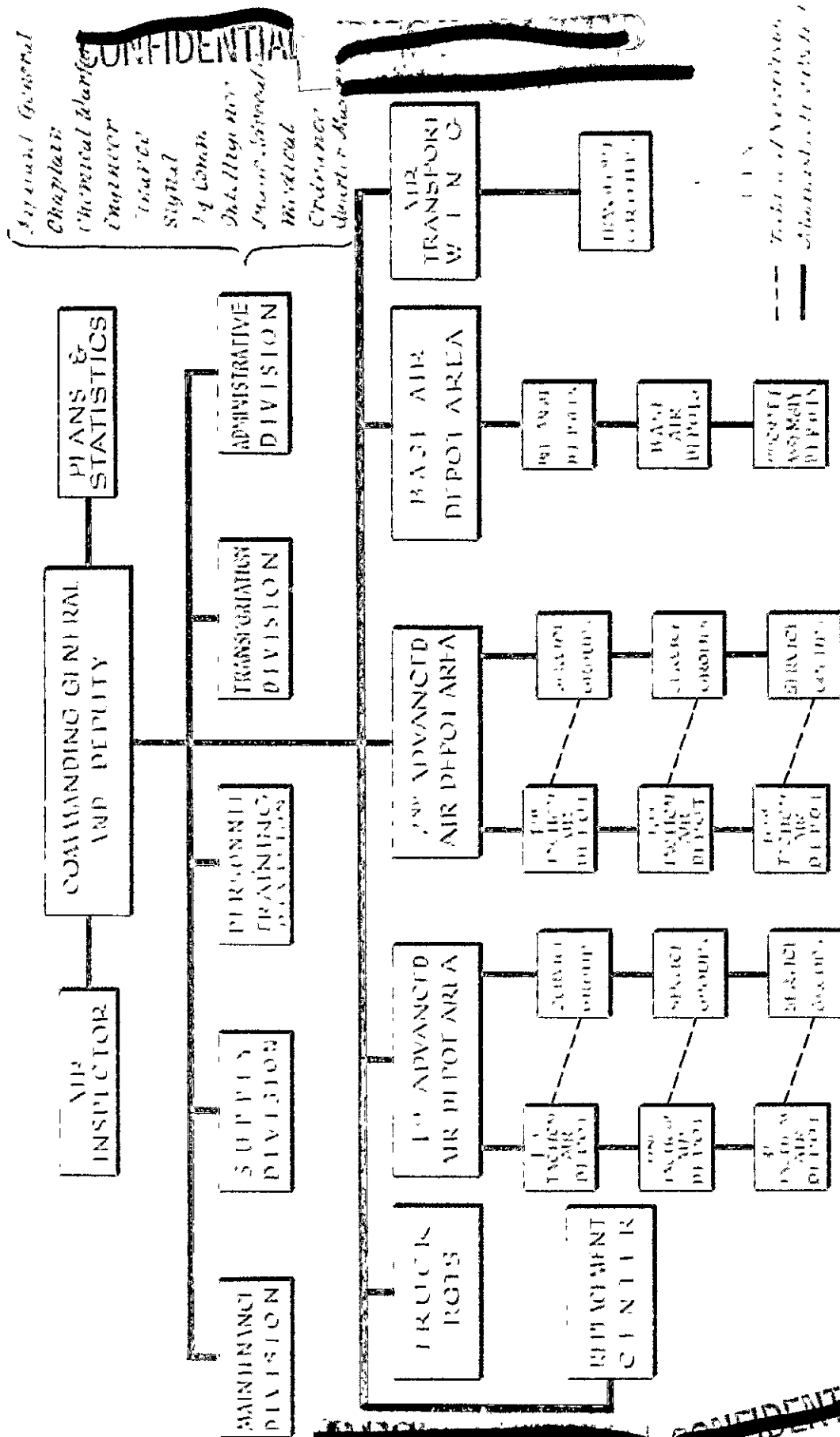
local services and supplies obtained in the United Kingdom would also be arranged for by the Lightn.²⁸

The final organization of the IX AFSC was closely patterned after the service command in the strategic air force and reflected many of the innovations of that pioneering command. Its headquarters arrangement was based on the functional concepts of General Knerr which had eliminated the old staff sections. Directly responsible to the commanding general and his deputy were a Base Air Depot Area (BADA), and a first and second Advanced Air Depot Area (AADA). The BADA controlled the intransit depots, the base air depots, and the aircraft assembly depots. The two AADA's were originally one Advanced Air Depot Area Command which, like the amoeba, had split in twain. Each AADA controlled three Tactical Air Depots (TAD). Two air depot groups were usually placed under each of the six TAD's; these groups served as a center for fourth echelon repairs, and work on airframes, instruments, propellers and auxiliary equipment usually for three service groups. The service groups, although placed under the TAD's for technical control, were administered directly by the AADA's. The basic unit of the command was the service group; in December these groups were broken into two identical units known as service teams and were completely mobile.²⁹

But this bird's-eye view of the IX AFSC misses a great deal. For the purposes of a more detailed analysis, the organizations of the command can be divided as follows: (1) headquarters, (2) depots and areas, and (3) the service and mobile units.

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ORGANIZATION IX AIR SERVICE COMMAND 15 JAN 44



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82

The headquarters organization consisted of the commanding general and his deputy, assisted by an air inspector, and a group for plans and statistics. Instead of the traditional A-1 to A-4 staff setup, the administration of the command was carried out by five divisions as follows: (1) maintenance, (2) supply, (3) personnel and training, (4) transportation, and (5) administration. ³⁰ This last section was subdivided into 14 departments of the usual kind found on any sizable military station, such as finance, judge advocate, chemical warfare, ordnance, medical, and the like. Since their functions are usually the same in most American military organizations, it is unnecessary to describe them in detail.

The Maintenance Division formulated operational and technical plans for, and executed maintenance, modification, repair, overhaul, and reclamation of Ninth Air Force technical materiel which was beyond first or second echelon repair. One of the first tasks of this division was the modification of the P-51. By December, P-51A's were ready for combat, but a delay in the shipment of aircraft slowed up modification of the P-51B model. Another important achievement was the installation of an 85-gallon fuselage fuel tank on the fighter planes of the Ninth, a task requiring 500 man-hours of work. Besides planes, the division modified other items including 250 Brockhouse trailers for mobile field offices, and constructed 21 mobile flying ³¹ control units and 10 glider-borne mobile repair units.

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83

The Supply Division formulated plans, and directed operations connected with the procurement, receipt, storage, and distribution of the command's equipment. The organization of this division, patterned after that of the Eighth, consisted of a control section which supervised procurement and formulated policies, a United Kingdom procurement section which arranged for all supplies and services needed from the British, and a petroleum section which recommended policies for the control of high priority fuels such as aviation gasoline.

The wide extent of the division's activities is illustrated by a random selection of some of its accomplishments. At the request of the Troop Carrier Command, equipment was set up for the maintenance of 200 C-47's and C-53's. To forestall a possible shortage of oxygen, six portable oxygen generators were acquired, and with the cooperation of Plans and Training, arrangements were made for the instruction of personnel to operate the generators.³² In November the division began to set up tables of equipment and tables of basic allowances for units to be activated in the theater. By February arrangements were completed to permit the issue of initial supplies to newly arrived units without requisition. To take care of the ever-present shortages, new units were to send in lists of items they lacked at the end of the first 4 weeks, and where Supply was unable to meet demands--which was no doubt frequent--a system for

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84

making local purchases was worked out.³³

The Transportation Division controlled all the facilities of the command in the United Kingdom for moving equipment and personnel by air, rail, motor vehicle, and water. It also controlled the 31st Air Transport Group which assumed the direction of ferrying P-51's to the Ninth Air Force, using Fighter Command pilots. The 31st Group also was to receive all replacements for C-47's coming into the United Kingdom. The greatest problem that the division had to overcome was the shortage of trucks, and especially the two-and-a-half-ton variety. Even after obtaining some of these machines from the Eighth Air Force, it finally became necessary to assign only 40 trucks to truck companies instead of the 52 authorized.³⁴ But these difficulties did not hold back the work of moving troops and supplies. By January 1944 the efficiency of the division had reached such a point that an entire air depot group, 500 troops and 50,000 pounds of cargo, was moved by air a distance of 200 miles in a total time of 6 hours.³⁵

To decentralize the operations of the command, three subordinate organizations were set up under the supervision of IX AFSC Headquarters. These were the Base Air Depot Area and the two Advanced Air Depot Areas. The BADA was largely concerned with the distribution of supplies. It received items from the intransit depots at ports of entry in the United Kingdom and routed them to their final destination through the command. Under the control of the headquarters of the BADA were several important elements in the over-all service

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85

organization. At Dinton was the Base Air Depot which acted as the central depot for all supply items for the Ninth Air Force, and functioned much like a service command general depot in the United States.³⁶ The intransit depot at Wapley Common controlled installations at British ports of entry and airports and channeled materiel and personnel to the Base Air Depot and replacement control depots. In addition to these, there was an aircraft assembly depot at Filton which assembled P-51's, a glider assembly depot at Crookham Common, and an ammunition supply depot at Grovely Wood.³⁷

The two AADA's, which were formed from the old Advanced Air Depot Area Command near the close of 1943, were a further attempt to relieve IX AFSC Headquarters of some burdens and responsibility by decentralizing operations. These new areas each included three Tactical Air Depots (TAD) and the area headquarters acted as a coordinating and administrative center. At first the chain of command went from the Service Command Headquarters to the AADA's, and then on down through the TAD's, the service groups, and finally the service teams. However, the TAD's found it difficult to supervise the service groups and it was later decided to place these units directly under the AADA for administration, although remaining under the TAD for technical control. It has been pointed out that the "area" concept was not strictly geographical. In further proof of this, it is interesting to note that there was a specialization of functions which differentiated one AADA from the other. The first AADA and its three TAD's serviced bombers, and the second with its

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86

attendant tactical depots was utilized by fighter planes.³⁸

The TAD's were unusual organizations, and represent a determined effort to adhere to the principle of decentralized operations. Actually, each TAD was little more than a name for a combination of two air depot groups both of which were independent organizations, since either one could at any time be transferred from the TAD to function on its own. It did not possess a T/O, and the senior group officer automatically became the depot officer. Although the TAD might be located on a tactical station, the depot commander was allowed to function independently of the station commander.³⁹

The organization of each air depot group consisted of a headquarters; a depot supply squadron for fourth echelon storage, issue of technical supplies, and procurement; a depot repair squadron for fourth echelon repairs; a mobile reclamation and repair squadron for handling crashed aircraft in the field; and an ordnance medium maintenance company for procurement and distribution to lower echelons of supplies, parts, and assemblies for vehicles. This last unit also performed third echelon maintenance on vehicles and evacuated those beyond its competence to fourth echelon shops. A quartermaster truck company provided transportation, and a quartermaster platoon took care of ordnance needs.

In addition to these units, of which there were two each on every TAD, the following organizations were undivided units assigned to both groups: a medical supply platoon, and ordnance depot company, and a signal company and depot group. An MP company was usually

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57

found either assigned to the depot or to the tactical station where the depot might be located.⁴⁰

The operations of the TAD were not intended to exceed the activities of its two component groups. It was intended to store and distribute equipment and supplies to service teams located on tactical stations. It was also responsible for maintenance, modification, repair, overhaul, salvage, and reclamation of equipment when this was beyond the capacity of the service team. As time went on, there was a tendency for the TAD's to become involved in administrative activity to a greater extent than had been intended. The group functions of the organization were becoming subordinated to the depot functions. To check this tendency and keep operations decentralized, Headquarters IX AFSC issued Memo 20-12 on 3 March.⁴¹ This directive forbade the TAD commanding officer to create a separate staff or headquarters organization for his depot. He was reminded that no special staff for the TAD had ever been contemplated, and was instructed to use the personnel of the station complement squadron if he needed assistance in running the depot.⁴² It is not possible at present to ascertain how successful this directive was in keeping the TAD from becoming an administrative center.

Among the smaller units the basic organization was the service group. In December 1943 it was broken into two identical service teams for greater efficiency, each one assigned to some tactical combat group. The service group headquarters was located with one of the two teams and consisted of a headquarters and headquarters

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squadron, plus administration, engineer, supply, medical, finance, and quartermaster sections. Each team was made up of the following: a service squadron, one-half a quartermaster truck company, one-half a signal company, one-half a quartermaster company, one-half a chemical company for air operations, one-half an ordnance maintenance and supply company, and four units of a mobile reclamation and repair squadron.⁴³

The mobile reclamation and repair (MRR) squadron was the most flexible element of the service group. The idea was largely derived from a similar organization in the Eighth Air Force. In the Ninth the MRR units were designed to aid service squadrons in the field, with the special idea of operating on the Continent after invasion and in the immediate presence of the enemy. Until D-day, they were to assist the repair personnel of the service squadrons in their regular work; four units of the squadron were assigned to each two service teams with a ninth unit under the control of the service group commander to be shifted to either group as needed.⁴⁴

Modification of new aircraft for combat continued to be one of the most vital activities of the command since the number of new combat groups becoming operative in the Bomber and Fighter Commands was absolutely controlled by the number of planes passing through the modification centers. During February and March, General Arnold and other authorities in the AAF were greatly concerned over the slowness with which combat planes were turned over to the Ninth.⁴⁵ It was assumed in Washington that too many planes were being immobilized in modification centers, and this was called to General Spaatz' attention.⁴⁶

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89

A lively exchange of cables resulted which brought out the fact that, since General Arnold had given the Eighth first priority on long-range fighter craft, the Ninth received them only after the immediate needs of the Eighth had first been filled. More important, however, in delaying the arrival of planes at tactical stations was their very uncertain and undependable arrival in the theater. In January, 1,098 planes had been promised, and modification centers were adjusted to this expected shipment. Instead of this number, only 807 were delivered, and of these 375 arrived in a last-minute rush. Naturally this upset schedules completely and greatly delayed the passage of aircraft through the depots.⁴⁷ In March a similar situation threatened when of the 914 fighters promised only 250 had arrived during the first 2 weeks. This time the tables were reversed and the theater began to put pressure on Washington to get the planes out. "General Arnold finally cabled in the language of desperation: 'we are doing our damndest' to supply aircraft as required."⁴⁸

Much of the modification work was carried out on the P-51 and P-38, but attention was also given to improving the B-26 and the recently arrived A-20. Most important of all such changes was the installation of jettisonable fuel tanks on fighter planes thus enabling them to furnish long-range escort to the heavy bombers. The speed and efficiency with which this modification was effected so impressed one English wing commander that he called it the greatest achievement of the American air forces.

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90

Such was the organization and functioning of the Air Service Command in the Ninth Air Force during the first 6 months that the tactical air force spent in Britain. As the end of that period approached, the command had been assigned some 91 per cent of its authorized 61,167 men, and was prepared to play its part in the coming invasion.⁴⁹

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Chapter V

TRAINING IN THE NINTH AIR FORCE

The rapid growth of the Ninth Air Force, plus the diverse units which had to be rapidly incorporated into it, created a serious training problem. Between October 1943 and April 1944 the personnel of this organization expanded from 2,162 to 163,312 men distributed throughout some 960 units.¹ Many of these units were hastily activated in the theater from recently arrived casualties and therefore suffered from a lack of trained personnel.² Other groups were transferred directly from the Eighth Air Force. While the latter were more experienced, their training was based on modes of thought formed in a strategic air force and was not always applicable to the problems of a tactical organization.³ Some units arriving from the United States contained well-trained specialists, but by far the greater number who arrived in England could only be described as "raw" from a military point of view.⁴ Training, therefore, was a vital necessity if these heterogeneous elements were to be forged into the necessary degree of mobility and flexibility required by a tactical air force.

The first step toward the organization of an instructional program was taken on 8 November 1943.⁵ A training memorandum of that date ordered each command to provide the training needed by its men and called for a weekly report on progress. Training and

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92

Operations Section, Ninth Air Force Headquarters, was to supervise this program with special attention to operational instruction. Technical training became the particular task of the IX Air Service Command except for certain subjects which were considered a part of Intelligence and were naturally handled by that section.⁶ The prime importance of mobility was fully recognized, and subsequent directives from headquarters required that all commands be prepared to move at a moment's notice and that special mobility exercises be included in all training programs.⁷

As instructional procedures developed, they tended to fall into two general classes: (1) indoctrination and instruction for officers and men immediately upon arriving and prior to permanent assignment; and (2) "in service" training conducted by the commands for the benefit of their own assigned personnel. The training of new men began immediately upon debarkation when they were handed a booklet entitled "Information for Incoming Units," issued 3 November 1943. This manual contained pertinent facts on the organization of the Ninth Air Force and special information on conditions in the theater.⁸ Security lectures for officers were scheduled within 24 hours after arrival, and within the first week intelligence officers were sent to an orientation course on intelligence procedures.⁹

For those in lower echelons preliminary training was more intensive, being based on a 7-day week with a minimum of 44 hours required of each man, exclusive of night flying.¹⁰ Ground units received immediate lectures on airdrome defense, basic weapons review,

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93

physical training, defense against paratroops, and defense against chemical attack.¹¹ Pilots' initial training dealt with general airport and local field rules, English flying rules, radio procedure, special safety instructions, and aircraft recognition.¹² Signal and communications personnel received instruction in use of message centers and radio in the United Kingdom, British telephone systems, and teleprinter procedure.¹³

Naturally the RAF, with its experienced and highly developed facilities, was of great help to the Ninth Air Force and was frequently called on to open its special schools to American officers and technicians. Typical is the way in which training for flying control officers was set up. These officers were first sent to an operating RAF station for a fortnight's orientation and observation of procedures. Then followed 6 weeks' training at the RAF Flying Control School; next, the men were returned to the RAF station for 3 weeks of operational practice, followed by a concluding 2 weeks at an AAF station.¹⁴

Intelligence likewise depended to a considerable extent on British experience, plus some lectures by American instructors. Upon reaching the European Theater, the intelligence officer was sent to a special indoctrination course lasting from 4 to 10 days and consisting largely of lectures by British and American specialists.¹⁵ Following this, he might be sent to any one of a number of British schools opened to American officers, such as the RAF Intelligence School at Highgate, London; the Central School of Recognition at

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84

Southport; the Armoured Vehicle Fighting School at Dorset; the Prisoner of War School in London; and the Central Photo Interpretation School at Matlock, Derbyshire.¹⁶ After completing his preparatory training, the officer would then be assigned to a unit and would continue his training at the command's intelligence school where courses on such subjects as target approaches, geography, flak, and maps and map-making would be given. As the Intelligence Reception Manual stated, "the field of intelligence training is a broad one and one in which there can hardly be too much training."¹⁷

But the greatest amount of teaching was done after classification and assignment by the various commands themselves. Only by an investigation of the training efforts of such organizations can the extent and variety of this program in the Ninth Air Force be revealed.

Air Service Command. The Bradley Plan had envisaged specific, specialized service units, carefully organized and trained in the United States for their particular tasks and transported to the theater intact and ready for action.¹⁸ Actually, many of these units were not allowed to leave the United States because of insufficient training, but since the need for service organizations was acute, they were often activated provisionally in the theater and casualties assigned to them as fast as they were available.¹⁹ These service units rapidly took shape, therefore, but frequently they were undermanned and almost always lacked the requisite skills for their

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95

difficult tasks. In some cases, reclassification procedures in the theater relieved the situation, but the basic need was for a program of intensive training throughout the command and this was soon undertaken by the Personnel and Training Division.

At the end of October 1943 men were sent to British salvage units for a 30-day course of salvage training. Instruction in tire spotting, motor vehicle waterproofing, and mobile reclamation and repair was being given in various groups by the beginning of November. Later in the month, training in mines and booby traps was started, but instruction proceeded rather slowly and had to be supplemented by courses at some of the British schools.²⁰

On 6 December 1943, Col. Stanton T. Smith was placed at the head of a newly formed Training Division in the command. It was divided into four training sections: (1) physical training, (2) technical training, (3) supply, and (4) specialist (military) training.²¹ To speed up this work, mobile teams of instructors were instituted who traveled from unit to unit supervising instruction and making demonstrations. Thus a traveling school of P-51 maintenance specialists coordinated work in this field throughout the command.²² In order to give equal experience in repair work to the mobile reclamation and repair squadrons, they were rotated through the various air depots so that each man might have an opportunity to do his particular repair job on an airplane damaged in actual combat.²³

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96

In spite of these efforts, a survey of the IX Air Service Command training facilities made in January 1941 showed that only 50 per cent of the requests for training were being met.²⁴ Shortly afterwards a serious shortage in sheet metal workers was revealed.²⁵ Although men were being sent to the Basic Sheet Metal School (British) at Weston for a 9-week course and a special school for sheet metal work was instituted at each of the tactical air depots, this shortage continued into April.²⁶ Another training survey made in March showed continuing deficiencies, and as a result USSTAF finally gave the IX Service Command a first priority on all available technical training facilities for the next 10 weeks so that an adequate supply of basics could be trained for duty with service units.²⁷

Notwithstanding difficulties, March was a month of great expansion in the command's training program. An "on-the-job" training project was started to supplement the work of the technical schools and meet the deficiencies brought out by the surveys of January and March.²⁸ On-the-job instruction was offered in such fields as sheet metal work, automotive equipment mechanics, aircraft electrical work, and aircraft instrument specialist work. To familiarize British and American mechanics with Allied equipment, reciprocal training in aircraft maintenance was introduced. Arrangements were made for approximately 200 RAF mechanics to receive training in the servicing of American planes, while 120 American technicians received instruction in the maintenance of British aircraft.²⁹

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97

Some truck companies had begun their "battle-wise" training as early as February.³⁰ In March additional units practiced maneuvers and received instructions in preparation for D-day. On 15-16 March a special series of lectures on overseas movement was given to all unit commanders and S-4's. The following subjects were covered:³¹

1. Problems involved in planning an overseas movement. Brigadier General Riddell (British War Office)
2. Transportation problems involved in a short sea voyage. Brigadier General Posa (SOS)
3. Air Corps supply system in a far-shore movement. Major Grunder (Plans, Hq. IXAFSC)
4. Landing craft and their use. Colonel Henriques (British Army Troop Command)
5. Preparation of units and organizations for overseas movement. Lieutenant Colonel Green (IXAFSC)

The climax of this "battle-wise" training was BOOMERANG, an exercise for all commands in the waterproofing and landing of motor vehicles. This exercise, which began on 19 April and continued for several weeks, involved 55 units, 667 vehicles, and 2,668 men.³² The historical officer gives an account of a typical "run" which he witnessed during the exercise. The particular unit which he observed was sent to a marshalling area 15 miles west of Southampton. The first day was spent in watching the waterproofing of other vehicles, and the next day the group went into action. After being loaded on LCT's at the Royal Dock, the units were moved down the coast in the morning and anchored offshore in about 3 feet of water. The vehicles then slid down the gang planks and plowed through the surf to the beach.³³ From this training exercise it was learned that many units were not yet familiar with procedures in preparation for overseas

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98

movement and a widespread knowledge of waterproofing was still to be achieved.³⁴ Although much had been done by the IX Service Command, a full program of training still lay ahead.

Troop Carrier Command. Aside from the evacuation of patients from northern Ireland and some freight transportation, the Troop Carrier Command engaged in practically no operations until D-day, and this gave them an advantage in training not shared by other organizations. It may be said that from its activation until 6 June 1944 the entire history of the command was largely one of training.

During November 1943 a preliminary trip to North Africa was made by Brig. Gen. B. F. Giles and a group of officers to study the work of the Troop Carrier Command there. Special attention was paid to units engaged in training maneuvers involving large-scale glider exercises,³⁵ and similar operations were later introduced in England. A field order of 9 November 1943 ordered the 50th Wing to undertake full-scale training missions,³⁶ and on 18 November troop carriers and gliders of the wing carried the 101st Airborne Troops in a rehearsal of cross-Channel operations.³⁷

In December, the operations known as "regimental combat team exercises" began. These were elaborately planned exercises involving as many of the battle techniques of air transportation as possible. The directive for these maneuvers prescribed the following regulations:

1. Pathfinder aircraft and ground crews to employ E/E Cryton lights, Delta lights, smoke bombs, colored flares, Aldis lamps, and Very pistols.

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39

2. Smoke to be laid by aircraft covering the approaches to carrier planes and landings of paratroops and gliders.
3. Operations to employ combined paratroops and gliders, i.e. tugs carrying paratroopers.
4. Night re-supply missions to be undertaken.³⁸

Paper war games and exercises during the month revealed a need for more efficient staff planning, better communications, and in general, more practice in all operations connected with airborne landings.³⁹

During the constant paratroop and glider training exercises, the day of 20 December 1943 stands out as historically important since the command's first genuine operational mission took place on that date. Two planes of the command evacuated patients from Maghaberry, Ireland, to Pershore, England.⁴⁰ Henceforth, these trips were a regular feature of Troop Carrier Command's activities.

Although severely hampered by adverse weather conditions, glider tows and paratroop drops were continued in January and February of 1944.⁴¹ With the advent of slightly better weather in March, as well as an increase in units and personnel, training in the command was considerably expanded. The calendar of the 435th Group gives an excellent idea of Troop Carrier training activities at this time:

- 2 March: 12 a/c and one Pathfinder a/c in night paratroop drop (troopers simulated)
- 3 March: 12 a/c with other squadrons in a re-supply mission
- 7 March: 3 a/c formation flying, two hours thirty seconds
- 12 March: paratroop jump: 79 troopers
- 15 March: 13 a/c in paradrop mission; 213 troops and 79 parapacks
- 20 March: paradrop with engineers and some British units
- 23 March: maneuvers and paradrops for Churchill, Eisenhower, and guests
- 25 March: 11 a/c in a group mission, dropping 123 troops, 3 mortars, 1 buggy, and 2 bundles of rock--a total of 200 pounds

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100

27 March: 10 a/c and 10 gliders; tow formation morning and afternoon⁴²

The wings carried on exercises with larger units. On 15 March, some 50 planes participated in exercise ~~THEUSE~~ with the 6th Airborne Division of the Home Forces (British). At 2000 British Standard Time, the aircraft took off and flew to the dropping area near Winterbourne Stokes where units were successfully dropped. Altitude was 500 to 800 feet with a jumping speed of 110 miles per hour. The exercise took place on a very dark night with no visible horizon, and although the dropping zone was lighted with a "T" of white lights, this could not be seen by the pilots. However, the use of a green C 3 lamp guided the planes to the proper area.⁴³ On 20 March an unusually massive operation occurred involving 279 planes and 154 Horsa gliders; although the planes reached the dropping zone, conditions there prevented jumping.⁴⁴

These training operations revealed that the need for extensive practice in airborne movements was still great. During the first 4 days of March, the 53d Troop Carrier Wing ran three missions, all of which were adjudged unsuccessful.⁴⁵ On a bundle-dropping mission 10 March, the 434th Group completely missed the target,⁴⁶ while a glider mission a few days later showed poor dispersal of gliders.⁴⁷

In April, training operations were greatly extended. Increased numbers of airborne troops, both glider and parachute, were delivered to dropping areas in day and night maneuvers.⁴⁸ Techniques especially emphasized in the accelerated training of the command were formation

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101

flights, take-offs and landings with overloads, dead reckoning, and ascent and descent through the overcast.⁴⁹ With the establishment of a IX Troop Carrier Advanced Headquarters at Station 456, it was apparent to all that the goal of their training efforts was not far off.

Fighter Command. To stimulate the interest of the men of the Fighter Command in training exercises, the expression "combat drill" was substituted for the over-worked and unpopular term "training." Directives for combat drill were then issued in the form of field orders to heighten the illusion of combat activities.⁵⁰ On 24 November 1943, exercise BREKS was held to train headquarters personnel in setting up and operating a field command post. During the exercise, emphasis was placed on mobility and effective communications. Exercise THUNDERCLOUD was the appropriate name given to an operation for the training of the all-important weather units. Between 12 and 20 December, a combat team of five weather units in the field worked the weather net by radio and, by providing weather service for forward echelon air force units, simulated weather unit operations behind an advancing combat front.⁵¹

To make the command mobile for field operations with ground forces, a mobile operations team was created VOJC 28 November under Lt. Col. Ray J. Stecker. This was not so much a separate organization as it was a mobile forward echelon of headquarters. It was made up of a cadre of 18 officers and 44 men, representing the staff sections of headquarters that were concerned with operations. To simulate field conditions, the "Mobile Ops," as it was called, set up camp in the

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102

woods adjacent to the Middle Wallop airdrome, with officers living in vans, and enlisted men in tents. The team was completely self-sufficient with its own kitchen and trucks. During December, the Mobile Ops spent most of its time building camp, getting its equipment, organizing its sections, and training personnel.⁵²

With the cooperation of both the Eighth Air Force and the RAF, training for fighter pilots was instituted early in November. On the 5th, one of the training officers of the Eighth visited Ninth Fighter Headquarters to assist in setting up a system similar to that used by the Eighth.⁵³ The basic training memorandum provided for pilot instruction in map reading, R/T procedure and homing practice, formation flying, instrument flying, individual stern attacks, navigation, air-to-ground firing, aerobatics, air fighting, search formations, cloud flying, air-to-air firing, squadron formations, high-altitude climb to 30,000 feet, low flying, bombing practice, night flying, and rendezvous missions.⁵⁴

Ground school training in the command specifically required classes in airdrome control, air-sea rescue, dinghey drill, security, study of mosaics, and prisoner of war interrogation.⁵⁵ Navigators were required to be proficient in cross-country flying, night flying, meteorology, shooting techniques, cannon, machine guns and ammunition, and pyrotechnics.⁵⁶

Intelligence training in the Fighter Command stressed briefing of various types of missions, and numerous officers were sent to the

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103

Eighth Fighter Command Orientation School and the RAF Escape and Evasion School at Highgate, where such subjects as security, briefing, geography, prisoners, recognition, combat reports, organization of the RAF, and organization of the GAF were studied.⁵⁷ After this thorough preparation, intelligence officers were allowed a week's observation period at an Eighth Air Force station before being assigned to a Ninth fighter unit.⁵⁸

Owing to a shortage of "recon" pilots, it was considered desirable to give this training to fighter pilots who could be used in reconnaissance when necessary. During February and March men from the Fighter Command were sent to a special school at Station 449 with pilots of the 67th Tactical Reconnaissance Group as instructors. The subject matter covered included map reading, low and medium-level navigation, basic organization of enemy forces and their tactics, organization of the U. S. Army, accurate reporting of T/R missions, and tactics of reconnaissance missions. One fighter pilot from each squadron was to be assigned to this school, and beginning with February it was expected to train a minimum of six pilots per course. The pilots in training were expected to furnish their own planes and crew chiefs.⁵⁹

The experience of the Ninth Air Force in the Middle East and of the Twelfth in North Africa had shown the great value of air-ground cooperation. At a comparatively early period in the history of the IX Fighter Command, preparation was made for both theoretical and practical

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104

training in these tactics. At Ninth Headquarters, A-3 arranged a series of short lecture courses. Six of these were given throughout December of 1943 and January and February of 1944;⁶⁰ they were attended by officers from Ninth Air Force Headquarters and the command headquarters, commanding generals of corps and divisions of the ground forces, specially selected staff officers, air liaison officers, and various key U.S. Navy and RAF personnel.⁶¹ The course given 24-25 January 1944 is especially significant, not only because of the diversified subject matter, but also because of the imposing "faculty" that gave the lectures:

"Origin and role of the Ninth Air Force," Lt. Gen. Lewis H. Brereton

"The principles of air support," Lieutenant Colonel Laroque

"The organization and operation of the Air Support Command," Maj. Gen. E. R. Quesada

"Functioning of radar in air support," Lieutenant Colonel Garland

"Fighter and fighter/bomber operations," Colonel Stecker

"The organization and operation of medium bombardment," Brig. Gen. Samuel L. Anderson

"The organization and operation of the Airborne Division," Maj. Gen. Wm. C. Lee

"The organization and operation of the Troop Carrier Command," Brig. Gen. E. F. Giles⁶²

Meanwhile, actual training in air-ground tactics was being carried on at almost the same time at the tactical stations. Brig. Gen. Elwood R. Quesada set up a training course in bombing for fighter

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105

pilots as a preliminary to using some fighter units as fighter-bombers. The course called for two weeks of concentrated bombing practice per tactical group. Each pilot was to go on five dive- and five low-level bombing missions; and each squadron was to undertake three dive- or glide-bombing missions as a unit.⁶³ Some difficulties were encountered in getting fighter groups off bomber-escort missions long enough to undertake this training, but at last some were released, and in March and April instructions proceeded approximately as scheduled, with the 365th Fighter Group the first unit to be given the course.⁶⁴

The arrival of the 422d Night Fighter Squadron posed a difficult problem for the Fighter Command since the Ninth had engaged in no night operations after reaching England. Arrangements were finally made for an RAF liaison staff of experienced night fighters to be attached to the squadron during its training period, and this assistance proved to be of great benefit.⁶⁵

In March the command established closer relations with the Twelfth Air Force in Italy in order to bring into its training the lessons of actual battle experience in air-ground cooperation.⁶⁶ Officers of the IX Fighter Command were sent to Italy to observe fighters working with ground forces and then brought back to assist in training. Especially important in this connection was the Millfield School for low attack. This training center was a British institution used by the Allied Expeditionary Air Force to work out the best tactics and techniques in dive bombing, ground strafing, and rocket-projectile

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106

attacks. Both British and American pilots were brought from the Italian theater to serve as instructors, and when the first American trainees began to arrive in March they were placed under the command of Col. Arthur Salisbury, a bombardment expert brought to the school to act as advisor on fighter bombing. Ninth Fighter pilots studied principles of bombing, and ran practice missions against bridges, locomotives, trucks, and tanks. They also practiced strafing attacks on convoys. After each "dry run," a critique would be held at which the pilots would discuss the tactics of the mission and point out mistakes that had been made. Pilots selected for this school were usually senior group operations officers, squadron commanders, and flight leaders. Classes were to last about 3 weeks with approximately 60 pilots in a class.⁶⁷

Training was intensified with the arrival of better weather in April. As many units as could be released from current operations practiced dive and glide bombing, low-level attacks, reconnaissance, night flying, low-level navigation, continuous patrol convoys, and smoke laying.⁶⁸ Serious engine trouble in the P-38's, however, retarded to a considerable extent the training of the 370th Fighter Group.⁶⁹ The 432d and 423d Night Fighter Squadrons suffered an even more serious handicap in their training activities: they had no planes, nor had any indication been received from the United States as to when additional night flying aircraft would be forthcoming.⁷⁰

By the middle of April the initial phase of Fighter Command

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107

training was over; however, in-service and on-the-job instruction in many subjects continued, and plans were made to continue this indefinitely.

Bomber Command. Owing to the fact that the 98th Bombardment Wing (formerly the 3d Bombardment Wing, VIII Air Support Command) had been operational since May 1943,⁷¹ extensive training in the IX Bomber Command did not begin until the arrival of relatively inexperienced units. The basic directive for training was issued 15 December 1943 to cover the period from 1 January to 28 February 1944.⁷² The purpose of the directive was to

serve as a guide for unit commanders in sustaining training in conjunction with and in furtherance of actual operations. It prescribes training requirements which must be undertaken by all units upon completion of the training proscribed in Ninth Bomber Command Memorandum 50-3, 4 February 1943.⁷³

Bomber crews were to make all possible use of Link and various other trainers, involving bombardment, gunnery, navigation, and recognition. Combat wing commanders were to have general supervision over training, but most of the work was carried on in the groups by group training sections, composed of nine officers and 29 enlisted men each.⁷⁴

Under the supervision of these sections, an attempt was made to give new pilots 73 hours training, bombardier-navigators 33, gunners 53, and radio operators 80 hours, as called for by the old Ninth Bomber Command training directive.⁷⁵ On 17 December 1943, a basic gunnery program was set up with a definition of minimum gunnery requirements for participation in combat missions. This was to

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106

make possible the training of additional gunner to be selected from ground crew and office personnel.⁷⁶

New units began to arrive in increasing numbers after the first of the year,⁷⁷ and since they were unfamiliar with flying techniques in the theater, various training memoranda were hurriedly published by the command to acquaint the new officers with the needed information. Training Memorandum 50-3, dated 30 January 1944, covered ground training, British flying procedures, and formation flying;⁷⁸ and for the benefit of navigators, all problems connected with navigation in the theater were fully covered in Memo 50-7--a manual of 71 pages.⁷⁹

But publications alone do not constitute a training program. For operations as complicated and involved as aerial bombardment, intensive preparation in specialized schools is essential, and for this the IX Bomber Command turned to the RAF. The British Central Gunnery School at Sutton Bridge offered one course for pilots and another for flexible gunners; it was hoped that all gunnery officers of the Ninth Air Force would have received training there by the end of April.⁸⁰ The RAF School of Army Cooperation offered courses for commanding officers, wing and group commanders, and wing S-2's, S-3's, and group S-2's. From December 1943 to April 1944, 65 places were reserved for Americans, and Generals Brereton, Strahan, Quesada, and Anderson were among those who attended.⁸¹ The Air-Sea Rescue School at Blackpool and the Central Night Vision School at Upper Heyford were also available to a small number of Americans. The

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109

Specialized Instructors' School of Low Attack at Millfield, although largely devoted to fighter-bomber problems, was also utilized by some of the IX Bomber Command because of its instruction in low-level bombardment.⁸²

By the end of January 1944 training in the command was so advanced beyond the preliminary stage that practice bombing operations could be undertaken in support of assault troops establishing a beachhead against a theoretical enemy. Slapton Sands, Devonshire, was frequently used for these operations.⁸³

A training survey made in March, when training had been in effect about 2 months, showed that progress was being made with the older groups but not always with the newer arrivals. Combat crews just become operational were not yet solidified into smooth-working teams.⁸⁴ Gunners needed greater familiarity with the zone system of firing, and new radio operators had not yet fully mastered the complex signal set-up in the area.⁸⁵ The performance of inexperienced flight and box leaders was considered unsatisfactory, and command headquarters was concerned over a "lowered level of proficiency" in bombing

operations.⁸⁶ Apparently operations were cutting too extensively into training, and to counteract this, authority was obtained from Fifth Air Force Headquarters on 9 March to reduce the pressure on individual B-26 crews. Henceforth, only 30 aircraft were to be airborne per group per mission, except for a maximum effort. In such an attack, 54 bombers might be used. Seventy-five planes were set as the maximum number of planes to be airborne during the day, and this

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110

policy was followed throughout the month except for the mission
against Ijmuiden on 26 March 1944.⁸⁷

The results of this operation caused a certain amount of disappointment at Ninth Air Force Headquarters. The attack had been made in great force against German U-boat pens, and 341 Marauders had participated. Later photo reconnaissance revealed that the amount of damage was not as great as had been anticipated. The pens were not seriously damaged, and a cofferdam nearby was not breached in spite of receiving four direct hits.⁸⁸ After the effort expended to bring about a neutralization of the target, General Brereton requested that the Bomber Command undertake an investigation of errors made during the attack.⁸⁹

The results of the inquiry showed that incorrect wind data, plus the failure of the lead bombardiers to recheck their meteorological information while nearing the target, were prime causes of the bombing failure. Other factors were a lack of coordination among members of individual crews, a slackening of concentration when the weather was good, and hurried and insufficient bomb runs.⁹⁰

As a result of this mission, it is not surprising that Headquarters, Ninth Air Force demanded "a first priority on daylight bombing practice."⁹¹ Henceforth, IX Bomber Command required that strip photographs of bombing runs be turned into headquarters within 24 hours after completion of a mission.⁹² All commanders were instructed to stress bombardier-navigator teamwork, with constant

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111

rechecking of weather data and the use of the 163 computer.⁹⁴ Whenever possible, medium bombers returning home from a mission were to engage in practice bomb runs before the planes were rearmed for the next operation.⁹⁴

At the end of March, General Anderson went to Italy to study the employment of medium and light bombers in the Mediterranean Theater with a view to improving the Ninth's bombing record.⁹⁵ On his return, he advocated more careful selection and training of lead crews, greater emphasis on the offensive spirit in briefing, ruthless elimination of incompetents, and more careful checking of wind data by lead bombardiers and navigators. He also recommended that, prior to D-day, the command be assigned bridges as targets to determine their bombing accuracy, that each group have three practice bombing runs against beaches, and that four of the oldest groups be removed from operations for 1 week's practice before D-day.⁹⁶

Progress was made, but it was slow, and there were setbacks. As a result of a report submitted 10 April on bombing errors of the 394th and 344th Groups, General Brereton stated that the bombing of these groups showed "poor leadership, lack of aggressiveness, improper tactics and techniques, and a lack of training or a proper application of these elements."⁹⁷ It was then decided to remove old bomb groups from operations for a period of 1 week where additional training seemed imperative. The first group to receive this extra training was the 323d, which had been operational since 15 July 1943

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112

and was beginning to show signs of war-weariness. Precision bombing was emphasized in this training and crews were encouraged to be alert in correcting errors and the sources of errors. By the end of April these efforts began to bear fruit, and the bombing of the IX Bomber Command began to show marked improvement.⁹⁸

Engineer Command. Although this command was not formally activated until 30 March 1944, units of air engineers began training for invasion operations as early as November 1943, while at the same time they carried on construction jobs. General training subjects for all groups included physical education, close order drill, map reading, defense against chemical attack, water-proofing, motor convoy, mines, booby traps, bivouac and assault training, scouting and patrolling, camouflage, and small unit combat problems.¹⁰⁰ A Mine and Booby Trap School was organized by A-3 with a course lasting 1 week,¹⁰¹ and a special camouflage school was instituted to give officers some idea of the basic elements of this art and their application in the field.¹⁰²

Wherever possible, units of the command were sent on special training exercises such as the 3-day field exercise (23-26 March) which completed the formal training of the 818th Engineer (Avn) Battalion. In addition to serving as a basic infantry refresher, this exercise involved the firing of weapons of various types, the water-proofing of vehicles, and actual participation in embarkation and loading.¹⁰³ In the words of the unit historian,

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113

The static conditions of the preceding year were discarded and to a great extent, the desired mobility of a unit of this type was achieved. Bivouacing and training in the field, and, last but not least, knowledge of the bad and the good of the 'C' and 'M' rations all helped to make the unit a more well-rounded one.¹⁰⁴

Large-scale field and mobility exercises. As the time for invasion drew nearer, training exercises increased in size and scope. Most of these operations were conducted in the field under conditions that reproduced as accurately as possible the actual invasion tactics and problems. In exercise DUOL, a simulated invasion operation from landing to beach assault was staged along the south Cornwall and Devonshire coast from 30 December 1943 to 4 January 1944.¹⁰⁵ Unfortunately, tactical units of the Ninth Air Force were not present because of high priority operational commitments. It had been planned that a squadron of the 67th Reconnaissance Group would operate with the ground troops during DUOL, but through a misunderstanding, 10 Group RAF refused to clear planes into the area; by the time this confusion was resolved, most of the exercise had taken place.¹⁰⁶ Although tactical units of the Fighter Command were unable to take advantage of this opportunity to practice with the ground forces, many Ninth Air Force troops did take part in the operation. Approximately 600 men of the Engineer, Fighter, and Service Commands, plus 238 trucks, were landed on the beachhead. The exercise indicated the need of additional coordination between the Air Forces and the Navy, since during the embarkation and landing many special Air Forces units were broken up and their fragments widely scattered.¹⁰⁷

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114

On 10 March a practice amphibious landing known as exercise FOX was held with Army and Navy units participating. Bad weather prevented the 368th Fighter Group from functioning as planned, but some units of the 67th Reconnaissance Group did go out on missions, and some air units went ashore with the ground troops.¹⁰⁸ Exercise BEAVER, 30-31 March, proved to be a similar operation. Again bad weather prevented the fighter groups from simulated dive-bombing attacks on the beach, but some valuable lessons were learned. It appeared that more detailed preparations were necessary, especially in the case of communications between the headquarters ship and air units. Liaison between the Army and the IX Air Support Command was not good, and it was believed that the Navy showed a lack of knowledge of air matters generally.¹⁰⁹

No account of training in the Ninth Air Force would be complete without some mention of the group mobility exercises. In conformance with General Brereton's insistence on flexibility and general mobility, Memorandum 50-3 was issued 26 November 1944 to provide the necessary instructions for exercises in sudden and rapid movement by commands and housekeeping organizations. Each combat and service organization was expected to execute one move under such conditions as might face it on the Continent after D-day. Special preliminary training was to be instituted by each command, and when this was complete the unit was to be alerted for a 7-day period during which time the order to move could occur at any moment. The first echelon was to be ready to move within 2 hours after receiving the order.¹¹⁰ However, lack

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115

of time, space, and equipment often interposed serious difficulties, and little was done until the month of March 1944. On the 8th and 9th, a series of letters written to commands from General Brereton's headquarters ordered any change of station to be treated as an exercise in mobility. Sometimes these exercises had nothing to do with a station move. A unit might entruck, make a tour of the countryside, and then return to its own station,¹¹¹ but so far as possible each move was to imitate a genuine military situation, although a lack of sufficient transportation equipment sometimes made it impossible to reproduce war conditions accurately. For example, the truck shortage often made it impossible to carry out scheduled mobility exercises. In this situation, resourceful G.I.'s would stake out a rectangle on the ground, label it "truck," and place an appropriate amount of material on it.¹¹² Thus the exercise was of some value even if the actual move did not take place.

The IX Bomber Command ran into difficulties in planning moves because of a shortage of landing fields. It had been arranged that first changes of station should be made by the 323d and the 336th Bomb Groups, but owing to the shortage of available stations, it was finally decided that the two groups should merely exchange fields.¹¹³ Each group was divided into an advanced air and ground echelon, and a rear ground echelon; equipment was divided in the same way. After the move had been made, each unit was to be prepared for a 10-day stay at the new field and was to fly at least one mission while away from its regular base. Food for the entire move was to be

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116

carried along by each group, since messing facilities at the stations were not to be used by the visitors. Thus an attempt was made to reproduce the conditions under which mobile, tactical bomber groups would operate after moving to temporary bases on the Continent. In addition to the 323d and 386th, exchanges were worked out between the 322d and 387th, the 391st and the 344th, and the 394th and the 416th. These exercises in the Bomber Command began on 31 March and were fairly successful. The omnipresent shortage of trucks handicapped the entire exercise; routes were sometimes carelessly selected and at times ignored by convoys, but on the whole, the experience was valuable.¹¹⁴

Because of its great diversity, as well as its broad extent, it is difficult to summarize the training program in the Ninth Air Force. Much had to be done in a short time, and confusion and duplication were inevitable. Nevertheless, some broad trends of policy can be isolated, such as the emphasis on mobility. Constant dependence on the knowledge of older and more experienced organizations in the theater was another basic policy. Without the help of RAF and Eighth Air Force personnel and the numerous special training centers in the British Isles, the growth of a tactical air force in LHO would have been greatly delayed. The use of training exercises, repeating so far as possible the actual combat conditions that the particular organization might expect to meet during and after invasion, was a technique of instruction constantly employed and might be called the basis of all training in General Brereton's command.

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117

During 1943 the program was largely concerned with problems of organization and planning. The usual bad winter weather of England reduced activities to a minimum during January and February of 1944. March brought more operational days and considerably increased activity, but not until April can the training program be said to have been in full swing. By that time, mistakes were being eliminated and there was a general improvement in the quality of training. It is easy, of course, to pick flaws and suggest improvements, but if the tremendous expansion of the Ninth Air Force during its first 6 months in the European Theater be borne in mind, one can only agree with the historian that¹¹⁵

the difficulties and problems herein recounted constitute but a small part of the picture of Ninth Air Force development. On the whole, the process has been remarkably smooth considering its complexity. . . . Some of the problems that have been reviewed could have been avoided by better and earlier planning. . . . For the most part, however, the headaches have been such as are practically inevitable to so large and complicated a task in a foreign theatre.

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Chapter VI

NINTH AIR FORCE OPERATIONS, 16 OCTOBER 1943 TO 16 APRIL 1944

The first operational commitments of the Ninth Air Force in the European Theater were against landing fields and installations of the German Air Force within range of the B-26. These sorties were carefully synchronized with the massive assaults which the Eighth Air Force was delivering against the aircraft industry deep in the heart of the Reich.¹

Not only was this policy in accord with sound air doctrine,² but it also represented the answer to a tactical problem of increasing seriousness in the western air war. The German fighter command was growing at an alarming rate and was threatening the entire daylight bombing offensive of the AAF. This increase in fighter power had been achieved by a sharp reduction in the number of German bombers. Between August of 1943 and April of the following year, the estimated number of these planes dropped from 1,760 to 1,450, while fighter production rose from 720 to 810 per month. If the trend was allowed to continue unchecked, Allied air authorities feared a German fighter strength of 3,000 planes would be available to oppose the bombing offensive.³

This expansion of German fighter production was immediately felt in the West, notwithstanding the Russian and Mediterranean campaigns.

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119

It was estimated that instead of the 430 planes which had been adequate in 1942 to defend the Reich over France and Belgium, by 1943 the GAF was able to maintain 830 aircraft to oppose both RAF and AAF.⁴ The critical situation is well described by the statement in the Combined Bomber Offensive Plan which was drawn up in April 1943:⁵

The German fighter force is taking a toll of our forces both by day and by night, not only in terms of combat losses but more especially in terms of reduced tactical effectiveness. If the German fighters are materially increased in number it is quite conceivable that they could make our daylight bombing unprofitable and perhaps our night bombing too.

It was therefore decided that the "German fighter strength must be considered as an intermediate objective second to none in priority."⁶

The destruction of the German Fighter Command therefore became one of the major objectives of the combined Anglo-American air forces. To achieve this objective operation POINTBLANK was organized. This required the heavy bombers of the Eighth Air Force to pound aircraft factories and assembly plants anywhere in the Reich, while the mediums were to support the heavies by attacking industrial targets within their range, as well as GAF airdromes and landing strips in northern France, Belgium, and Holland. Since a powerful, active German fighter command could greatly increase the hazards of invasion, POINTBLANK was regarded as an indispensable preliminary to OVERLORD and, therefore, was to be pressed home with all available forces in the face of the strongest opposition. As a matter of fact, it was hoped that the Germans would oppose POINTBLANK with their entire air force so that it could be wiped out in air battles over the continent.

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120

The attacks on German-held airdromes near the Channel coast which the Combined Bomber Offensive assigned to medium bombardment were regarded as especially important. Most of them were either old French Air Force installations or were built by the Germans between 1940 and 1942 to contain the entire Luftwaffe in case of invasion operations against England. Experts estimated that the Low Countries and northern France contained more fields in relation to area than any other part of Europe. Such bases usually possessed two or three dispersal areas, and each was a self-contained unit with repair hangars, fuel, and ammunition stores.⁷ Here too, it was hoped that German fighters would come out in force so that our air superiority could be brought to bear in wearing them down. Unfortunately, as time was to show, the German authorities were also versed in air logistics, and they were to use their planes sparingly, except where extremely vital targets were under attack.

By the spring of 1943 the architects of the coming air offensive against the Reich had formulated a policy for the medium bomber. But although the general picture of the employment of this type of bomber had been drawn, the actual techniques were yet to be worked out. The method of attack finally set up was based, as always, on the advantages and limitations of the type of aircraft available.

The medium bomber of the Eighth Air Force at this time was the sleek B-26. It had been used by the Fifth Air Force as early as April 1942 in bombing Japanese airfields, antiaircraft installations,

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131

and shipping. While some attacks on ships, notably in the Bismarck Sea action of March 1943, were made at low level, the average altitude for medium bombing in this area was 5,000 feet.

When this bomber began to arrive in England as the weapon of the 3d Bombardment Wing, it was regarded by the aircrews with mixed feelings. It was supposed to be a "hot" plane and dangerous in the hands of an inexperienced pilot. Although its work at low and medium altitudes in the Pacific had been considered good, some did not believe it suitable for low-level operation in the LTO. This point of view was strongly expressed by Maj. Alfred H. von Kolnitz, senior intelligence officer of the 322d Bombardment Group, in a memo to the commanding general of the 3d Wing on 30 December 1943:⁸

It is obvious that if the main assaulting force attempts to overwhelm these light flak installations by sheer speed and evasion, assisted by such fire power as it might effectively deliver in the face of well-organized ground defenses, then the pattern of attack has followed exactly the method which the enemy anticipated and against which they have set up their defenses. That such an attack would result in terrific loss of life and aircraft is indisputable. Many instances in ground combat . . . have revealed the futility of the main assaulting force dissipating its strength in frontal attacks against a strongly emplaced enemy, and the outcome could be equally disastrous in low level bombing attacks against light flak installations of the type now known to be located upon the continent.

Evidently the wing commander was not greatly impressed by this line of reasoning because after the air echelon of the 322d Bombardment Group reached England on 8 March, it was given 8 weeks of training in low-level operations.⁹ However, Major von Kolnitz persisted in his opposition to this type of attack, and on 13 March he sent what

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122

was practically a copy of his memo of 30 December to the commanding officer of the 323d Group.¹⁰

Early in May certain objectives in Holland and northern France were cleared as "freshmen targets" for the 3d Wing.¹¹ These included various industrial installations such as a chemical works, a cable works, a power plant, and a shipyard. Although the name of the IJmuiden power station does not appear on this first list, it was this objective which was selected for the initial trial of low-level bombardment by the Marauder in the European Theater.

Before any action could be taken by the 3d Wing, the RAF made unsuccessful attacks against this target on the 2d and 5th of May. They reported heavy flak and a target that was evidently thoroughly alerted. On 14 May the initial raid of the 323d Group took place without success. Of the 13 planes involved, 1 crashed on return, and all were damaged.¹² Since the results of the mission were inconclusive, it was decided to try a second mission on the 17th.

At this point, Major von Kolnitz made a final attempt to convince his superiors of the dangers involved in the proposed attack. At 0130 on the morning of the 17th with the mission only a few hours away, he presented a final memo entitled "Extreme Danger in Contemplated Mission." He argued that after the RAF raids of 2 and 5 May, as well as our attack of the 14th, the Nazis at IJmuiden would now be thoroughly prepared and waiting for more sorties against them. He urged that fighter cover be provided for the mission, saying that

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123

"Our formations are too loosely flown to hope for successful resistance to fighter attack." Apparently the major delivered his memo in person but found the commanding officer of the 332d still asleep when he arrived at headquarters. He therefore left the memo with a penciled note stating his reluctance to wake the commanding officer, and added as a final postscript with prophetic desperation: "For God's sake get fighter cover!"¹³

Later that morning at 1056, the mission took off as scheduled. Although 12 planes were assigned, 1 did not take off, and another aborted, so the total force over the targets was only 10. Upon reaching the Dutch coast, it had been planned that one-half the mission would attack the power station at IJmuiden, while the other element would strike a similar target in near-by Haarlem. Bombing was to be carried at altitudes of 100 to 200 feet.¹⁴ Back at the field, ground crews nervously awaited the return of the planes. At 1250, the estimated time of arrival, nothing was in sight, and in the conservative statement of the historian, there was "evidence of tension on the field."¹⁵ When no planes had returned by 1330, watchers at the field were faced with the grim realization that all the aircraft had been lost.

The story of the tragic IJmuiden raid did not remain long a mystery. A few days later two enlisted men who had taken part were picked up in the Channel, and their testimony clearly revealed what had happened. While many of the aircraft had been shot down by the

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124

heavy and accurate flak over the targets, there were other factors involved in the failure of the mission. The story told by these two survivors indicated poorly trained, inexperienced crews faced with a very difficult situation. The formation flying of the 10 planes had been very bad, and 2 Marauders had collided and gone down in flames. In the words of S/Sgt. George W. Williams: "The whole second formation was all screwed up and scattered after they passed through flak on the coast. Captain Crane asked 'where in the hell are those guys going?'" The navigation had been poor, and evidently the navigators had been disturbed by the violent flak. The testimony of Sgt. Lester Miller, who took part in the raid and was later repatriated after being captured by the Germans, is very clear on

that point:
16

Continuing their flight Sgt. Miller had the impression that they were 'flubbing around a bit' because he heard over the inter-phone Col. Furinton ask, 'where is the target?' Lt. Jefferis, navigator, answered that he did not know for sure. Sgt. Miller then heard Col. Furinton ask for the course home and Lt. Jefferis gave him a course of 270°. Just then Lt. Jefferis told Col. Furinton, 'Hold it a minute, I think I see the target. Yes, there it is'.

Unfortunately, there is considerable doubt that Lieutenant Jefferis ever did sight the right target.

Following this fiasco, the whole question of the use of the B-26 was once more under discussion. On 21 May General Baker visited the home base of the ill-fated 323d Bombardment Group and "used words to the effect that mediums would never go out again without

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125

fighter support."¹⁷ Soon afterward, all B-26 bombers were temporarily grounded in the theater for additional training while questions of their employment were being thrashed out at various headquarters.

General Eaker was apparently still influenced by the use of Raiders in the Bismarck Sea action, for he referred to this combat as justification for using mediums against shipping in the ETO in a letter of 7 June to Air Marshal Sir John Slessor. "The feeling that our medium bombers should have training for possible use against sea targets has grown from their successful employment in the SW Pacific as, for example, their action in the Bismarck Sea Battle."¹⁸ However, these ideas must have been dropped by 14 June 1943 since a letter of that date from Plans, Eighth Air Force to A-2 in the VIII AFB states that "low level attacks are off."¹⁹

Meanwhile, the 3d Bombardment Wing was transferred to the newly formed VIII Air Support Command on 17 June and 2 days later there came the first definite statement of a new policy for the medium bomber operating from the United Kingdom. Henceforth, the bombers of the VIII AFB were to be used against targets authorized for RAF CIRCUS operations (attacks with fighter cover in daylight against targets in occupied countries) in small formations flying at 12,000 to 15,000 feet. In case any changes in size of formations or operating altitudes were desired, the Air Ministry was to be informed so that "any possible increase in the risk of casualties to civilians which may result from the alteration in tactics may be duly assessed."²⁰ Even more

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specific was the VIII ASG directive of 18 August. This stated that the primary objective of the command's operations was the destruction of the German fighter force, and its supporting industries.²¹

While these policies were being determined, the 3d Bombardment Wing was undergoing additional training in close formation flying and medium-altitude bombing. On 16 July it became operational again and began to mount attacks against German-held airdromes in France, Belgium, and Holland, as well as marshalling yards, power stations, and other enemy installations within range of the fighter escort. The principal factors affecting the extent and frequency of the missions flown appear to have been the weather and the availability of the fighter escort planes. Targets most frequently attacked were the Abbeville marshalling yards, the airdromes at St. Omer, Etricqueville, Amsterdam/Schiphol, Le Poix, Recanmont, Woensdrecht, and the Ghent and Zeebrugge coke ovens. By the middle of September, 2,988.95 tons of bombs had been dropped on these objectives.²² In addition, the 3d Wing also furnished medium bombers for operation STANLEY which was an elaborate but unsuccessful attempt to force a large part of the GAF to commit itself to an all-out combat over the Channel coast by simulating an invasion operation from the United Kingdom.

On 9 October the command mounted Mission No. 61 against the Woensdrecht airdrome and with that the history of the VIII ASG came to a close. No more missions were flown until 18 October when Mission 62 was scheduled, and by that time the wing had become the nucleus of the new IX Bomber Command.²³

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127

This did not produce any fundamental change in operations since the basic strategy had already been formulated. Although the tactical bomber units were no longer a part of the Eighth, they were still bound by the directives of 19 June and 18 August previously mentioned, and were still committed to the support of POINTBLANK. General Baker had been particularly insistent that the control of this operation should not be divided, and doubtless this wish had something to do with the establishment on 15 October of a general coordinating agency for American air forces in England. This organization, known as the United States Army Air Forces in the United Kingdom (USAAFUK), was under the command of General Baker and served to adjust questions of supply and manpower between the two U. S. air forces, as well as to exercise a general supervision over operations, particularly POINTBLANK. Since the commanding general and most of the staff of USAAFUK were serving in similar capacities with the Eighth, this air force was still able to exercise control over the medium bombardment groups after they became a part of the Ninth.²⁴ When the IX Bomber Command took over the work of the VIII ASG there was only a slight modification of the 18 August directive. USAAFUK laid down a prohibition against bombing any airdrome in Holland or Belgium, except the Amsterdam/Schipol airdrome, without specific permission; this also applied to attacking industrial targets in occupied Europe.²⁵

The Ninth was activated on the 16th and the Bomber Command

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123

scheduled a mission* for the 18th. However a stretch of bad weather ensued and prevented aerial activity for several days. Missions 82, 83, and 84 were abortive, and only on 22 October were a few planes able to bomb the Evreux/Fauville airdrome with undetermined results.²⁶ Other attacks scheduled during the rest of the month fared badly because of weather interference; successful attacks were possible only on the 28th and 30th--against the airdromes at Montdidier, Beauvais/Mivilliers, St. Andre de l'Eure, and Cherbourg/Maugerhus.²⁷ During the month, 792 planes were airborne, but only 265 were successful in bombing the target. A total of 426.50 tons of bombs were dropped. The principal cause of abortives was weather.²⁸

November saw an increased number of planes operational, but it also brought winter gales and bad flying conditions. The Marauders of the Ninth were able to take the air during only 12 days in the month, to drop a total of 1,572.65 tons of bombs. Out of 1,561 planes that took off from the IX Bomber Command's fields in England, 878 bombed the targets.²⁹ These included the usual German airdromes in France plus the Amsterdam/Schipol airfield in the Netherlands, which was struck by the command for the first time on 3 November. On the same day 72 Marauders carried out an unusually successful mission against the airdrome at St. Andre de l'Eure. The southern boundary of double hangars was destroyed, as well as two small hangars. Other hangars and work shops were damaged. Among living quarters and other small constructions 36 out of a total of 45 were destroyed or damaged.³⁰

* The term "mission" as used officially by the Ninth Air Force often includes several targets. The term is used similarly in this study.

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129

Exceptions to the attacks on airfields were the raids of 5 November on what was described as "construction works" at Limoyeques and a mission on the 11th against a similar target at Martinvast. These "construction works" were the beginnings of rocket-bomb installations, but their real purpose was not fully recognized at this time. The attack on the 11th was particularly heavy, with 162 Marauders of the 323d, 333d, 386th, and 367th Bombardment Groups taking part; the close umbrella of fighter protection was furnished by six squadrons of RAF Spitfires.³¹

Other large-scale operations were mounted on 7 November when 216 planes were airborne, 10 November with 144 planes taking off, and 26 November with 193 planes over the targets. This last raid is a good example of the results being achieved by the IX Bomber Command at this phase of its history. The Cambrai/Spinoz airdrome was attacked by the 367th Group with negative and by the 323d with good results. Rosières-en-Santerre was assigned to the 386th and 323d Groups, but being unable to bomb this target, they hit the Foy/Amy landing field--the 386th with negative results, and the 323d with fair success. Audinghem village, located in the Pas de Calais area, contained one of those mysterious "construction works" and was severely hit by the 323d, the 386th, and the 367th with good, fair, and fair results respectively.³²

As indicated above, weather began to interfere more and more with operations. Planes taking off in reasonably good flying conditions

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130

in England, often found the target partially or completely covered by clouds. Varying weather conditions in the United Kingdom caused some elements of an attack to miss the bomber rendezvous, while others were able to reach the appointed spot at the exact time. Sometimes the zero hour was shifted several times in the hope of taking advantage of more favorable atmospheric conditions, but this was occasionally carried to excess. A typical case occurred on 19 November when 108 B-26 bombers headed toward the Channel coast on the 90th mission of the command. Upon reaching the escort rendezvous, not a fighter was in sight, and the formation was forced to turn back to England. What had happened was that the zero hour had been postponed, and the fighters had not had time to return to base and refuel their planes. As a result, they did not have sufficient gas left to escort the bombers to the targets. This was not an uncommon cause of abortive missions.³³

December was a month of significant developments. Operational control of the Ninth passed from USAAF to another organization; and the rise of the robot-bomb menace introduced an entirely new variety of target for the Ninth's bombardiers. When the decision was made to establish a separate U. S. tactical air force in England, the Chiefs of Staff had indicated that it was at some future date to be joined with the 2d British Tactical Air Force and No. 38 Group RAF in an organization known as the Allied Expeditionary Air Force (AEAF) under command of Air Marshal Sir Trafford Leigh-Mallory.³⁴

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ABAF was activated on 15 November, but actual control of the Ninth did not pass to Leigh-Mallory until exactly one month later. In the new directive for tactical bomber operations of 15 December, a clear statement was made of basic objectives:³⁵

The basic objective of tactical bombardment operations will be the reduction of the enemy day and night fighter forces in Northwest Europe. . . . So far the attacks on enemy airfields have done little to reduce the strength of the enemy air forces, principally due to the high measure of dispersion adopted by the enemy and the number of air fields available to him. . . . It is therefore necessary to increase the scope of tactical bomber operations to inflict cumulative damage principally by sustained attacks on selected industrial targets. . . . The object of these operations is to force the enemy to divert a proportion of his fighter force to the defense of these targets with the resulting opportunity of attacking his fighters in the air and on the ground. The fullest support will be given to the strategic bombers whenever they are operating.

First priority, therefore, was accorded to all Ninth operations in support of the VIII Bomber Command efforts. Second priority was established for operations against robot-bomb installations, and third priority went to selected targets announced weekly by the Air Ministry.³⁶ Originally fourth and fifth priorities were German airfields and targets listed in CIRCUS operations, respectively, but on 25 December these were changed to industrial targets (fourth priority) selected from the latest JOCKEY lists, and German-held airfields (fifth priority).³⁷ Both fourth and fifth priorities were largely intended as last-resort targets when bombing other objectives proved to be impossible.

The actual planning of missions was under the direction of two important committees. The Combined Operational Planning Committee

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131a

was a joint Anglo-American fighter and bomber organization that arranged daylight operations when USAAF heavy bombers were in action. However, it also included in its plans recommendations for medium and light bombers of the Ninth when they were required in support of the massive air invasions of the Eighth Air Force. Under such conditions, the plans of this committee took precedence over all other daylight operations.³⁸ Next in importance was the No. 11 Group Planning Committee which contained a representative of the Ninth Air Force appointed by the commanding general of the IX Bomber Command. Actions initiated by this committee took precedence over everything except the operations of the Combined Planning Committee.³⁹

The early history of the development of the "buzz bomb" and its discovery by the British is a fascinating tale of intelligence that is still shrouded in considerable secrecy. It is known that for some time the Air Ministry had been aware of the advances being made by German scientists in experiments with pilotless aircraft. After Peenemunde on the Baltic coast had been identified in August 1943 as the center of these experiments, a tremendous raid by the RAF destroyed many of the laboratories and killed some of the experts engaged in this work. However at this time the connection between Peenemunde and the mysterious constructions being built along the Channel coast was not realized. These excavations and reinforced concrete buildings had been observed since June and had aroused considerable speculation as to their ultimate purpose. It was noted that most of them lay in the Pas de Calais area, although a few were seen on

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133

the Cherbourg peninsula. As the construction progressed, there appeared at all sites two or three curiously curved buildings resembling ships. As a result the term SMI sites was applied to these locations, and somewhat later MOBALL became their code designation;⁴⁰ CROSSBOW was the usual term employed to describe operations against them.

Between 27 August and 4 December the attitude of the Air Ministry might be described as watchful waiting. A few minor raids were carried out against the sites: 4 attacks were made in August, 5 in September, and 11 in November. It is virtually impossible to discover which air force made these attacks.⁴¹ By November, the real purpose of these works began to be suspected. It was observed that those in the Pas de Calais and Dieppe regions seemed to be pointed toward London, and those on the Cherbourg peninsula seemed aimed at Southampton and Bristol. None were more than 140 miles from their apparent targets, and it seemed evident that some type of projectile was to be fired from these construction works. By the beginning of December, 64 sites had been photographed, and it was expected that the total number would well exceed one hundred.⁴² It was clear to the Air Ministry that further delay in halting the construction of these new weapons would be dangerous.

Consequently on 1 December, AIRM sought the approval of the Combined Chiefs of Staff for attacks on the works, and the following day the necessary authorization was issued.⁴³ A directive of 4 December from the Ninth Air Force established operation CROSSBOW

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133

for the IX Bomber Command and provided a list of targets "which are to be attacked immediately."⁴⁴ So rapidly was this order carried out that the first GROSSEAU mission was sent off the next day, although it must be added that the bombing results were nil.⁴⁵ The ANAF directive of 15 December already referred to gave GROSSEAU a second priority for operations which was maintained until the end of February.

For a time after the unsuccessful mission of 5 December, SMI sites were unharmed by the Ninth, although the 3d Tactical Air Force (British) visited them several times. On 20 December the IX Bomber Command returned to the attack by sending 35 Marauders of the 323d and 386th Groups to the construction works at Agenviller.⁴⁶ The evaluation of this mission brings out one of the difficulties in GROSSEAU operations: it was extremely hard to judge results. In addition to weather interference with photo reconnaissance missions, most of the SMI sites were located in small woods, and the shadows thrown by the trees often obscured ground details. In the case of this particular mission, one report⁴⁷ states that many direct hits were scored on constructions, while another states that although good grouping was secured, "unfortunately, however, few direct hits are to be seen on installations."⁴⁸ Assessment of damage to MOBAIL targets continued to remain one of the most persistent problems of the operation.

On the 21st, 79 bombers attacked the SMI sites at Cocove and Vacqueriette with poor results. Damage on the robot installation

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134

at Cocove was hard to estimate because of unusually poor photo coverage. In the case of Vacqueriette, the 323d charged with the attack bombed St. Remy au Bois by mistake.⁴⁹ Other CROSSBOW operations assigned to additional groups were blocked by bad weather which forced the planes to strike targets of last resort. Additional raids took place on 24, 30 and 31 December with varying results. Bombardiers and navigators found the sites hard to locate and identify. The 337th Group achieved something of a record by dropping 33.75 tons of bombs on an uninhabited wood 24 miles south of the target, while one box of the 336th was 4 miles off its target. On the other hand, the 322d and 336th were successful when they attacked the SII site at Audincourt on 21 December. A large concentration of bombs landed directly in the target area and either direct hits or very near misses were made on the second and third SII buildings.⁵⁰

By the end of the month, a method of classifying SII sites according to the damage inflicted on them was worked out by the Crossbow Subcommittee of the Joint Intelligence Committee. A series of categories of damage was set up and designated A through D. Category A damage meant that there was a concentrated burst on the target with one or more direct hits on some of the main buildings. Category B indicated hits within the target area near enough to important buildings or SII sites to cause serious damage. Category C was applied to targets that had received some bursts in the area but no direct hits on any of the essential elements. Category D meant that there were no hits in the target area.⁵¹

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135

In explaining the policy behind these classifications, W/C J. McComb of the RAF made it clear that no bombing efforts were to be wasted on targets that might be already neutralized. As soon as a vital part of a MOBALL was destroyed, even if only temporarily, a fresh target must be substituted. When any air force thought a particular site should be suspended because of hits on vital elements, it was immediately to inform all other organizations to withhold their attacks until a final judgment could be pronounced by the Air Ministry. Targets suspended were not to be attacked again until the Air Ministry decided that repairs had proceeded far enough to justify further missions.⁵² By the 31st of December, it was estimated that only six sites were completely finished, 27 were three-quarters complete, 39 were only half finished, and 16 were less than half finished.⁵³ Such was the state of GEOSSEOW operations by the end of 1943.

But attacks on MOBALL installations were not the only operations during December. Attacks on airfields were still considered a phase of POINTBLANK which enjoyed top priority in IX Bomber operations. 1 December was one of the big operational days of the month against this type of target. 176 B-26's from the four groups of the command dropped 372.03 tons of bombs on airdromes at Cambrai/Miergnies, Lille/Vendeville, and Cambrai/Epinois.⁵⁴ The bombing of the first two targets was quite successful. At Cambrai/Miergnies the southwest dispersal area received a large concentration of bombs covering the

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136

entire area. Ten or twelve bombs fell on the landing field of which four hit the NW-SE runway.

The Lille/Vendeville airdrome received a very effective bombing. A heavy concentration occurred north of the repair hangar and large groups of craters appeared in the north dispersal area, at the west end of the NW-SW runway, and in the south dispersal area. Bombs also landed among ammunition stores causing violent explosions. As the planes left this airfield, they could see towering behind them a pleasant memento of their visit in the form of a column of smoke several thousand feet high.⁵⁵ This field was one of the more important bases of the GAF. Constructed originally by the French, it had been used briefly by the RAF in the disastrous weeks of 1940. After being occupied by the Germans, it was turned into a bomber and bomber-reconnaissance station. Considerable construction took place during the latter half of 1942, and in 1943 it was believed that a fighter training unit was based there.⁵⁶

The outstanding mission of the month, and the largest yet accomplished by the Bomber Command was the attack on the Amsterdam/Schipol airdrome on 13 December. All groups contributed to put a total of 208 Marauders with fighter escort over the target. The raid lasted from approximately 1415 to 1445 and consisted of 8 flights made up of from 15 to 36 aircraft. A total of 757 x 1,000-pound bombs were dropped, of which at least 65 per cent appear to have landed within the target area. The hangar and repair shop area

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137

on the south side of the field were well covered with bursts, and one repair building received a direct hit. Many bombs landed on the runways and taxi strips and various aircraft shelters were destroyed or damaged.⁵⁷ This airbase was considered one of the most heavily defended in Europe and flak over the target was intense. Although only 2 aircraft were lost, battle damage was unusually heavy. The Flying Dutchman, piloted by Lieutenant Van Antwerp of the 453d Bomb Squadron received 150 holes during the action, some of them the size of a dinner plate. Every plane in this squadron received some kind of battle damage, and the day after the mission, only 5 of the squadron's 17 planes were in condition to fly.⁵⁸

December represented a considerable increase in planes dispatched over November, but thanks to the very bad weather over the Channel, only a slightly larger number actually attacked the targets. A comparison shows the following figures:

November: a/c dispatched 1561; attacking 878
 December: a/c dispatched 2067; attacking 912

Weather continued to lead as the cause of abortive missions, accounting for 79 per cent of the failures during the last 3 months of 1945. Since the command followed the policy of putting planes into the air if there was the slightest chance of attacking, this tended to cause a large number of weather abortives. In the opinion of Brig. Gen. S. E. Anderson of the IX Bomber Command, this policy was justifiable on the grounds that it placed more bombs on enemy installations and increased the offensive spirit among combat crews.⁵⁹

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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~
138

Fighter escort for IX Bomber Command missions in 1943 was largely provided by No. 11 Group of the RAF, although on some occasions the Eighth Air Force sent fighters when there was a special need for them. The first combat fighter operations of the IX Fighter Command occurred on 1 December when 28 Mustangs of the 354th Fighter Group made a sweep over northern France.⁶⁰ The first escort mission took place on 5 December when the 356th Fighter Squadron accompanied bombers of the Eighth Air Force to Amiens. The first really big effort in this type of operation occurred on 13 December when IX Fighter Command Mustangs of the 356th Squadron escorted the Fortresses all the way to Kiel and back. The total distance out was 490 miles (allowing for a dogleg course over the North Sea) and constituted a record flight for fighters at that time.⁶¹

Approximately 150 fighters constituted the normal escort for medium-bomber operations during the winter months. Later the percentage of fighters in relation to the number of bombers declined somewhat. The fighter escort was usually divided into three flights, beginning with a top cover several thousand feet above the bomber boxes. The bulk of the fighters would be stationed somewhere between this top cover and the Marauder formations, and a third fighter flight would remain at the same altitude as the bombers to pick off German planes that penetrated through the two upper layers. Three fighter escorts were an indispensable part of IX Bomber missions, and except in the case of certain NOBALL installations, the bombers were

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139

ordered to return to base if the fighters were unable to make the rendezvous at the appointed time.⁶²

Enemy raids on the Ninth's airfields were not a serious problem at any time during the period covered by this study. The VIII ASC sustained a few visits from individual German raiders during the summer and fall of 1943, but no serious damage was done. These minuscule attacks did bring about a change in attitude toward the uses of the slit trench. At Boxed a shallow trench, dug with a marked lack of enthusiasm during the hot summer days, was filled with such haste and earnestness during one sortie that the mass of bodies soon filled the little ditch to overflowing.⁶³

After the Ninth was activated, only 1 German attack of importance occurred. Between the hours of 1920 and 2000 on 10 December, 20 enemy aircraft struck at the 4 fields of Gosfield, Andrews Field, Earl's Colne, and Great Bumpow. At this last base, 8 were killed, 7 severely wounded, and 21 slightly wounded. The bombs hit living quarters rather than aircraft and the Germans were evidently well informed as to the location of the installations. Since there was no anti-aircraft opposition, it may well be believed that the enemy missed an opportunity to inflict serious damage.⁶⁴

January was marked by few changes in the operational policy of the Ninth Air Force. Missions in support of POINTBLANK still were accorded a first priority, and CROSSLOW came next. Amendment No. 3, dated 4 January, to the directive of 25 December canceled last-

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~~CONFIDENTIAL~~
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140

resort targets, but otherwise there was no change. As in December bad weather continued to interfere with operations. Twenty-five missions were scheduled during the month, involving 89 attacks against various targets and 15 photo and weather reconnaissance missions. Sixteen attacks failed to bomb the objectives, largely because of weather interference, and 14 attacks were on secondary targets.⁶⁵ A total of 1,740 planes were dispatched of which 1,022 dropped 1,521 tons of bombs, with a loss of only 4 planes.⁶⁶

The most heavily bombed objectives during the month were the LOSALLS at Croisette, Bonnieres, Fruges/Bois de Coupelle, Embry/Bois de Pottier, Bois Rempre, and Melineux. The only airfield attacked was the Cherbourg/Maugerbus airdrome, which was bombed twice as a secondary target on 7 January.⁶⁷

By this time the performance of the B-26 in this theater had completely dispelled the bad reputation which had so undeservedly clung to this plane. Although previously considered dangerous to handle, nevertheless it was able to brave the heaviest concentrations of flak and to return in spite of direct hits and serious damage to both men and equipment.

A typical story of the excellent flying qualities of the Marauder and the courage and ability of the medium bomber pilots is this story taken from the History of the 552d Bombardment Squadron. Lt. Leonard Burgess was coming up on the target during the mission of 14 January 1944 when his plane was rocked by a near burst of heavy flak. The

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~
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141

nose of the plane was shattered, the bombardier was wounded, and the right engine was knocked out with such damage to the propeller that feathering was impossible. The hydraulic system was punctured, and the gas tank received so many hits that fuel was leaking into the fuselage. The tail gunner was mortally wounded, and the right propeller was vibrating so violently that the plane could be kept up only with the greatest difficulty. Lieutenant Burgess nevertheless held his course over the target and dropped his bombs. Although steadily losing altitude and unable to close his bomb bay doors, he was able to fly back at low altitude and crossed the English coast just in time to make a good turf crash landing.

Also typical is the story of the Grim Reaper, piloted by Lts. Eugene Reeves and L. R. Crisman. On 15 February this plane took part in an attack on a NOBAL installation near Cherbourg. Flak was unusually heavy, and just before releasing the bombs, the Grim Reaper was hit and the waist gunner severely wounded. Immediately after the bombs were away, the plane was struck again, knocking out an engine, putting out most of the instruments in the pilot's compartment, and wounding Lieutenant Crisman in the face. In spite of these difficulties, the pilots managed to bring the plane across the Channel, although they dropped from 4,000 to 900 feet while crossing it. A crash landing seemed inevitable, and Lieutenant Crisman, the co-pilot, went into the waist to tie the wounded gunner to a gun swivel when the dead engine miraculously started and held long enough for

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143

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~
Lieutenant Reever to make a skillful landing at 145 m.p.h.⁶⁸

Fighter operations during the month consisted of the usual escort cover. In support of operations by both the Eighth and Ninth combos, the IX Fighter Command flew 359 sorties, with claims of 45 enemy planes destroyed, 14 probables, and 43 damaged. American losses were confined to 4 aircraft.⁶⁹

About this time a serious technical defect in the firing system of the P-51 began to cause concern. Pilots of the 354th Fighter Group had been reporting gun stoppages as early as December, but the trouble increased in January with stoppages reported on almost every mission. On 11 January it was found that 36 per cent of the guns in fighter aircraft had jammed on missions flown that day. The British, who had been using the P-51 before it was operated by American units, were aware of this defect, but had been unable to correct it successfully. A study carried out by the Operational Research Section of the IX Fighter Command on the gun stoppages between 16 December and 11 January concluded that "our pilots have been fighting under the handicap of poor fire-power. They have compensated for this by superb tactics with a highly manoeuvrable airplane."⁷⁰

A large percentage of stoppages, it was found, was caused by the failure of shells to extract from the belt. The final solution to the problem consisted in using a booster motor in the feed chute. When in a sharp maneuver the pressure on ammunition in the belt increased to more than 17 pounds, a contact was closed and the motor

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~ 143

was electrically started. When the pressure dropped to 17 pounds, the contacts were automatically broken, and the motor was stopped. This device was installed on the Mustangs as fast as modification lines permitted and greatly reduced gun jamming.⁷¹

During January and February a good many studies were made by both British and American experts on the progress of attacks on IOBALL targets. On 13 January, 93 sites had been confirmed by photo reconnaissance. Of these, seven large sites had been located, and six supply dumps had been found. The difficulty of identifying the SKI sites, plus the solid construction of the buildings and their dispersion, made these operations among the most exacting performed by the VIII and IX Bomber Commands and the RCAF. On the above mentioned date, 11 sites had sustained direct hits on some of the essential elements, 23 sites had received near misses on essential parts, and 12 sites showed hits in the target area without evidence of serious damage to the important structures.⁷²

Some efforts were made to ascertain the approximate time needed to repair badly damaged sites, but this was made difficult by the fact that no consistent repair policy could be noted at first. Sometimes the robot constructions were repaired promptly after a raid, and at other times a long delay ensued. Increasing attention seemed to be paid to camouflage which appeared to take priority over repairs. When extensive repairs were undertaken, they were carried out by pioneer units and not by civilian workers.⁷³

Additional photo reconnaissance in February provided more accurate information on the progress of damage control. Photos taken

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
144

21 days after an unusually successful raid by the VIII Bomber Command on a SKI site at St. Josse au Bois showed repairs in full swing, although the bombers had covered the site with 200 craters, including direct hits on several buildings, roads, and power lines. Craters near the essential elements were being filled in, and buildings were being repaired. A week later more photos showed large dumps of materials and indicated that destroyed buildings were being completely rebuilt. The last pictures, taken 46 days after the attack, showed the repairs well on the way to completion.⁷⁴ Apparently, even a badly damaged robot installation could be fairly well rebuilt within 50 days, provided local labor could be obtained. British information indicated that a considerable difficulty in finding workmen had developed, and this, even more than the extent of the bombing itself, frequently retarded the course of reconstruction.⁷⁵ However, in spite of all the efforts of the Germans to protect their SKI sites by camouflage and repair, a total of 29 sites had been confirmed in category A damage by the Air Ministry and were therefore suspended.⁷⁶ Considering the difficulties that affected CROSSCOW operations, this record is a tribute to the persistence and accuracy of the American air forces and the 2d EAF.

February was one of the big operational months of the Ninth Air Force, owing to an improvement in the weather; sorties took place on 17 days. The month was important for other reasons: 8 February was the first 2-mission day in the IX Bomber Command's history; a fifth group, the 391st, became operational on the 15th; and the ratio

~~CONFIDENTIAL~~

~~RESTRICTED~~ ~~CONFIDENTIAL~~ 145
~~SECURITY INFORMATION~~

of fighters to bombers declined to the over-all figure of 3 fighters to 4 bombers.⁷⁷

Several important modifications in combat policies occurred during the month. A Ninth Air Force directive of 8 February, while still requiring the IX Bomber Command to give first priority to the support of the Eighth's POINTBLANK operations, extended the command's choice of targets considerably.⁷⁸

The IX Bomber Command will, for the present, place in first priority diversionary operations in support of the Eighth Air Force bomber effort in Operation POINTBLANK. Whenever possible targets included in the third priority below will be attacked in support of the Eighth Air Force strategic bomber operations. When weather or other considerations prevent attack of these targets, the Commanding General IX Bomber Command is permitted to select, at his own discretion, those targets which he deems most suitable in which to support the Eighth Air Force operations in Operation POINTBLANK.

Second priority was given to CROSSBOW targets, and a third priority was given to railway repair, servicing shops, and facilities--a target hitherto unmentioned in Ninth bombing directives. Fourth and fifth priorities went to selected industrial targets, and sixth priority was assigned to German-held airfields within medium-bomber range.⁷⁹

A new directive 3 days later split CROSSBOW targets into second and third priorities and thus moved the remaining objectives one priority lower, German-held airfields becoming seventh instead of sixth.⁸⁰ On 21 February a directive permitted bombing of industrial targets only when visible bombing conditions prevailed. It also removed the limitation on the size of formations attacking such

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~~SECURITY INFORMATION~~~~CONFIDENTIAL~~
146

targets and definitely stated that they "may be attacked by all available forces" ⁸¹ A further change of policy was made on the 26th when the directive of the 21st was amended to permit attacks on railway centers and installations as a part of the Ninth's support of POINTBLANK. ⁸²

As in previous months the principal effort was against JOBALL installations, with 79 attacks as compared with 31 attacks reported against airdromes and one attack on marshalling yards. Out of 3,934 aircraft dispatched, 2,187 dropped 3,232.36 tons of bombs on the targets. The relatively small number of 15 planes were lost, but 553 sustained battle damage. Fighter escort sorties came to 3,109. ⁸³

Attacks were scheduled for 3 February but weather interfered with most of them, and the first operational day of any consequence was the 5th, when 226 aircraft attacked 7 JOBALL targets in the St. Omer area; the mission was successfully carried out, but 6 aircraft were lost. On the following day, airdromes at Comuilles-en-Vexin and Rosieres-en-Santerre were bombed by 78 and 33 Marauders respectively. ⁸⁴

February 9 was an important day as it marked the first of the raids on marshalling yards. Fifty-four Marauders dropped 79 tons of bombs on tracks and railroad installations at Terguier, causing considerable damage and holding up traffic until 25 February. ⁸⁵ Some bad weather developed which rendered bombing uncertain for the next few days, but on the 13th the skies cleared somewhat, and 207

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~
147

planes attacked 6 MOBILE targets in the Dieppe area with good results, and no losses. A further improvement in the weather permitted extensive operations on the 15th. GEOSCO targets on the Cherbourg peninsula and airdromes at Beaumont le Loger and Cherbourg/Maupertus were attacked in the morning by 247 bombers of which 53 failed to bomb owing to cloud over the target. During the afternoon 141 bombers struck the robot installations in the Dieppe area with results that were poor to good. Seventeen aircraft were unable to locate the targets and did not bomb.⁸⁶

After a period of poor flying weather, the IX Bomber Command attempted to resume its large-scale operations on the 20th, but without success. Nevertheless, the missions of that day were important as they were planned against targets in the Netherlands heretofore unvisited by Marauders. Aside from the two raids on the Amsterdam/Schipol airdrome, the Ninth had not penetrated Dutch territory; however, from 20 February on, airdromes in the Netherlands were included among the regularly scheduled targets of the Ninth Air Force, and these attacks took the mediums on some of their deepest penetrations of enemy-held territory.

Meanwhile, the Eighth Air Force had begun its all-out attacks on the German Air Force and its supporting industries. As the weather improved during the 22d and 23d, the intensity and scope of these massive air invasions steadily mounted. By the 24th the weather had become excellent and to keep pace with the unparalleled

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
148

~~TOP SECRET~~
~~CONFIDENTIAL~~

efforts of the VIII Bomber and Fighter Commands, the Ninth made some of its deepest penetrations of German-held territory. The Dutch airfields at Leeuwarden, Gilze Rijen, and Deelen were attacked with 236 aircraft. The results were classed as good to excellent. On the afternoon of the 24th, 146 planes hit MOBILE constructions between St. Omer and Abbeville with fair to good results. The weather deteriorated by the next day, but the groups were able to attack airdromes at Venlo and St. Trond, the attack on the former being the longest flight yet made by medium bombers based in England.⁸⁷

Flying conditions during the remaining days of the month were poor, and the missions that were run off were not especially successful. However, the great air offensive of 20-25 February had been largely successful, and missions of the Ninth had played an important part in winning air supremacy for the AAF and RAF. Moreover, the Ninth's record showed a definite advance over January in number of planes airborne and bombing the targets. Although MOBILES continued to hold the spotlight, an increased activity against airdromes and landing fields is clearly evidenced. According to the studies of the Air Ministry, these attacks were effective. "A study of reports from all areas concerned," states the Weekly Intelligence Summary, "leaves no room for doubt about the marked effect such attacks have had on German morale particularly where they have been sustained." In certain places, when raids occurred, it was "normal for the ground staff and officers to clamber into the first available vehicle and

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~ 143

and drive for the open country. Others use motorcycle or bicycle and the unlucky ones have to run."⁸⁸

Considerable success was also achieved against the robot bomb sites by the AAF and VIII Bomber Command. An estimate of 26 February lists only 8 as completely finished, and the number of sites suspended was materially increased over January. The official damage classification for February gives NOMALS in each category as follows:⁸⁹

Category A.....	50 sites
" B.....	37 "
" C.....	16 "
" D.....	4 "

It was hoped that some squadrons of the three A-20 groups scheduled for the IX Bomber Command would become operational during this month, but such was not to be the case. By the 18th both the air and ground echelons of the 418th had arrived in England, but there was a shortage of planes. Since these light bombers could not be flown to the theater, it was necessary to ship them in crates and then assemble them under the supervision of Lockheed representatives. All this consumed considerable time, and by the end of the month, only some 30 Bostons were available for combat.⁹⁰ Thus they were not able to take part in missions until March.

Fighter organizations were increasingly active throughout February. For the first time, a Ninth fighter wing began to control its groups, which had hitherto operated on field orders from the VIII Fighter Command. The advanced headquarters of the IX Air

~~CONFIDENTIAL~~

150

92

The P-47 pilots were out for blood and forced the squadron to break continually in order to avoid the possibility of being shot down by these 'hot rocks.' Relationships toward P-47 pilots were becoming somewhat strained around the Dexted air-drome, and it was generally considered that perhaps Thunderbolts should be marked with German crosses or at least award their pilots with the Iron Cross for the work they were doing in disrupting the bomber escorts.

93

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
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151

might have been the beginning of a trend in this direction occurred on 8 February when, during a briefing, Colonel Martin informed the 354th Fighter Group that after the bombers were "on deck," the group was to break away and bomb targets of opportunity, as well as strafe ground installations. This was carried out as planned, but the loss of four planes was considered excessive and it was felt that the experiment had not justified itself.⁹⁴ For the time being, this kind of action was definitely out.

February was the first month that blind bombing tactics were employed in the Bomber Command. The activation of a pathfinder squadron on the 13th has been described in a previous chapter of this study. By means of special navigational equipment, the planes of this squadron were able to guide a flight of bombers to a target, even if completely obscured by clouds. The apparatus first used by the Ninth was a British development known as GEE. This used the same pulse as radar, but since it did not depend on the echo, it is not strictly classifiable as such. The system consisted of a Master and two Slave stations sending out pulses which were received by the GEE Box in the pathfinder plane. By noting the time required for impulses from the ground to reach the plane, the navigator or bombardier could obtain fixes by triangulation and thus proceed over the overcast to the target area. The effective range was supposed to be about 250 miles, but actual experience showed that it could operate successfully at considerably greater distances.⁹⁵ As used by the IX Bomber Command, one pathfinder plane would lead a flight to

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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
152

the target area, and by either dropping its own bombs or releasing a flare, it would give the signal to the other bombardiers that the target was below. Pathfinder planes were first used in a raid on the Comys airbase by the 323d Group on 21 February, and soon proved their value. Later the arrival of additional equipment from the United States, as well as the installation of more effective equipment such as O-03 and E2X, permitted much greater accuracy in blind bombing. From this time on, the overcast ceased to afford complete protection to enemy targets.

March was a month filled with important developments. Considerable changes were made in operational policy, new targets came under attack, and several new groups went on their first missions. The first important change in policy was indicated by a directive of 4 March from Advanced Headquarters, Ninth Air Force. Instead of the usual list of priorities, this directive outlined two conditions under which attacks might be conducted and then listed priorities for each general situation.

The first condition given was where the Marauders were operating in support of POLYNESIA. In this case, the IX Bomber Command was to choose its targets as follows: first priority, airfields occupied by the GAF; second priority, marshalling yards, "L" and "R" pens, railway repair and service shops--provided visual bombing conditions prevailed; third and fourth priorities, JOUAL targets which now received the lowest rating yet issued to robot-bomb sites; fifth and sixth priorities, selected industrial installations.⁹⁶

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153

The second condition governing bombing was to prevail when the VIII Bomber Command was not operating, or had not requested the support of the Ninth. In this case, the IX Bomber Command might conduct independent operations, observing the following priorities: first, marshalling yards, "E" and "R" pens, railway repair and service shops, and certain POLARIS contained in a special listing; other priorities were the same as indicated in the first condition, except that German-held airfields were moved down to sixth priority.²⁷

This directive prevailed until approximately 15 March, when action by the AEF Headquarters brought about another change. It will be recalled that POINTBLANK was considered a preliminary to OVERLORD and that the Ninth Air Force, temporarily forsaking its tactical duties, had been turned largely into an adjunct to the Eighth in its POINTBLANK Operations. However, this had never been viewed as other than a temporary assignment, and it was expected that, as the time for OVERLORD drew nearer, the Ninth would come more directly under the command of the AEF, for operations in keeping with its tactical functions.

Early in March, Sir Trafford Leigh-Mallory evidently considered the time ripe to affect a change in the Ninth's operations. On the 10th he wrote General Brereton that the time had now come to prepare for OVERLORD and that the Ninth was to be released from its Eighth Air Force commitments, except in the case of P-51 aircraft, which were to be available as escort for heavy bombers when needed. After the

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154

requirements for OVERLORD had been met, any available P-47's or P-53's should be placed at the Ninth's disposal in support of POINTBLANK. Although the first impression from a hasty reading of this communication is that the Ninth was virtually independent, a second glance makes it clear that the exceptions which accompanied Sir Trafford's statement still gave the Ninth a certain claim on a share of the Ninth's operations.⁹⁸

The letter went on to say that the greatest contribution the Ninth could make to OVERLORD would be to attack rail communications, especially shops, sheds, maintenance facilities, signal systems, junction points, and marshalling yards. The number of such targets in northern France and Belgium came to 78, and more in Germany itself would be added for the strategic air force to attack.⁹⁹

In view of Leigh-Mallory's letter, it seems reasonable to assume that these ideas were responsible for the Ninth Air Force bombing directive of 15 March. And yet, there are important divergencies between the two documents. The directive makes the unqualified statement that "the Ninth Air Force is now released from its previous first priority commitment to assist the Eighth Air Force when called upon."¹⁰⁰ The only reference to the fact that units of the Ninth might still assist the Eighth in POINTBLANK is the statement that "when the Eighth Air Force Heavy bomber forces are operating and request diversionary attacks by the IX Bomber Command, this Headquarters will make every effort, within the limitations imposed

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~~SECURITY INFORMATION~~

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155

by established priorities, to so select targets as to provide maximum possible support."¹⁰¹

Whether this was a simple misunderstanding or a conflict of policies regarding the employment of the tactical air force, ARAF issued a directive on 25 March which clarified the situation. Paragraph 3 definitely stated the obligations of the Ninth to operate in support of POINTBLANK.¹⁰²

When practicable, the Ninth Air Force will, however, continue to afford assistance to operation POINTBLANK of the Eighth Air Force. To accomplish this end, the Ninth Air Force will select targets from the list shown in paragraph 5, and so far as possible in the stated order of priority, so as to provide a maximum diversionary effect. For this purpose, the Eighth Air Force will indicate the time and area where the diversionary effect is required on each operation.

Paragraph 5 dealt with selection of targets. First priority went to railway centers, but it was understood that, weather permitting, a minimum of 4 boxes of 18 aircraft each were to be employed against LOBAIL installations. Second priority went to MOBILE listed in the Air Ministry letters, amended weekly. Third and fourth priority targets were to be selected industrial objectives, and fifth and last priority went to GEF-occupied airfields.

A definite statement concerning fighter operations reaffirmed the P-51's commitment to support POINTBLANK.¹⁰³

P-51 aircraft of the Ninth Air Force and Mustangs of the Second Tactical Air Force will continue to operate in support of POINTBLANK operations as and when required by the Eighth Air Force. Subject to training requirements of the Ninth Air Force, the P-47 aircraft will also support, until further notice, the POINTBLANK operations of the Eighth Air Force when required to do so.

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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~ 156

In fact, so complete was the control exercised by the Eighth over these fighter craft of the Ninth that when deep penetrations were to be made, it became necessary for the Ninth to request the use of its own fighter planes from the Eighth Air Force.¹⁰⁴

These new operational policies were reflected by the Ninth's March sorties. There was a definite trend away from LO-ALL attacks, and increased activity against marshalling yards. Approximately 3,000 planes were sent against 15 yards, as compared to 1,100 aircraft attacking 34 LO-ALL sites, and 750 attacking 13 airdromes.¹⁰⁵ Although the weather was generally unfavorable to daylight precision bombing, nevertheless the month was a big one operationally. On the 19 flying days of the month, a total of 5,117.08 tons of bombs were dropped as compared with 3,382 tons in February; 4,042 planes were dispatched, of which approximately 75 per cent were attacking. Enemy action against the Ninth's raids was not particularly effective; 11 Marauders were lost, and 423 damaged. Many new groups were becoming operational. The 416th Group flew its first missions during the month, becoming the first A-30 group in the command to become active, and the 34th and the 39th also went into action about the same time.¹⁰⁶ Among the fighters, the 366th and the 368th saw combat for the first time and added their weight to the growing air offensive against the Reich.¹⁰⁷

Operations against the yards and railroad centers began on 3 March when 123 Marauders dropped 334 tons on the yards at Andernach/Longenau, causing much damage. A reconnaissance mission over this

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157

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target showed considerable destruction among the workshops, a good concentration of craters on the center of the yards, and at least 20 wagons destroyed and 130 damaged.¹⁰⁸ On the 6th, the planes of the 323d and 391st Groups bombed rail communications at Hirson with good results. Attempts on the same day to strike at the important center of Creil were unsuccessful and the bombers assigned to this objective attacked airbases as secondary targets.¹⁰⁹

The yards at Meine St. Pierre were struck on the 15th by 42 bombers dropping 48 tons of explosives, but not much damage was caused. On the 17th, there began the attacks on Creil which were later rated as among the finest examples of precision bombing during the war. In the first blow, 70 Marauders of the 323d and 323d Groups dropped 92.25 tons of bombs over the siding area and main lines. The sidings were covered with craters, and through lines were cut in three places. Rolling stock was affected throughout the area.¹¹⁰ But this was only the beginning. On the 20th, 124 planes of the 386th, 344th, 387th, and 391st Groups dropped 1.5 tons that covered the locomotive works, through lines, a railway bridge, and a near-by factory with a fine distribution of bursts.

The climax came on the 23d when all operational Marauder groups sent out a total of 209 planes hitting the target with 331.5 tons of explosives. The target area was, in the words of the official report, "almost completely blanketed," and severe damage was inflicted throughout the target area. In a letter of congratulation to General

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
158
~~SECURITY INFORMATION~~

Erereton, the commander of the ARAF characterized the series of operations against Creil as "magnificent," and asked that his personal congratulations be conveyed to all who participated in or contributed to the success of the attacks.¹¹¹

The last raid against marshalling yards during March took place on the 25th at Hirson. One hundred and eighteen bombers dropped 233 tons of bombs, hitting warehouses, locomotive sheds, depots, repair shops, and tracks. Three fires were started, and an explosion was caused in a goods depot. The groups involved in this highly successful raid were the 336th, the 344th, the 333d, and the 391st.¹¹²

The operations against CROSSING targets tended to occupy the earlier part of March, with a considerable falling off toward the end of the month. Altogether, 36 raids were launched against this type of target, with 16 attacks classed as "good" and 20 as "poor" or "fair." The most successful mission against the robot sites took place when the 336th and 333d Groups bombed the installations at Lestebarne/Ardres. The site was completely covered by the bursts, with direct hits on all three "skis" and the large, square control building. After an examination of the reconnaissance photos of this raid, the site was suspended by the Air Ministry.¹¹³

At the end of March, the progress in the construction of robot-launching areas was as follows:¹¹⁴

Sites complete.....	0
75 per cent ".....	35
50 " " ".....	52
Less than 50%	8

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159

Categories of damage placed 65 sites in class A, 20 in class B, 11 in class C, and none in class D.¹¹⁵

Apparently General Arnold became somewhat concerned at the continued use of heavy and medium bombers on targets whose potential menace was still uncertain. He must have communicated these fears to Leigh-Mallory for in a cable of 13 March, the marshal defended his tactics in GEOSSEOW Operations. He stated that a wide variety of bombing techniques had to be employed and both medium- and high-level bombers were necessary. As to the use of B-17's, this was only done when the weather prevented the bombing of targets in Germany. He concluded his cable by saying that when General Arnold had a complete picture of the situation, he felt sure he would be satisfied with the effectiveness of the methods used.¹¹⁶

Although the British believed some sites could be operational by the end of March, it was felt that effective bombing would keep the number small. Six supply sites would probably be finished by 15 March, but it was hoped that these could be reduced to two by 1 April. The number of pilotless aircraft which the Germans had on hand was believed to be about 2,000, with 1,000 being added each month. With the possibility of an attack on England from SEI sites as early as April, it is clear that the British could not look with favor on the further weakening of GEOSSEOW operations.¹¹⁷

The most controversial mission of the month was No. 205 on 26 March against the U-boat pens at Ijmuiden. As early as 27 February, an annex to the tactical bomber directive of the 21st gave this

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~~CONFIDENTIAL~~
160

installation a first place over all targets in the fourth priority classification.¹¹⁸ Soon after, the Operational Research Section of the IX Bomber Command was instructed to investigate the feasibility of attacking the pens, and to make recommendations regarding the choice of bombs. The results of this order were four reports which indicated a considerable degree of uncertainty as to just how the target should be attacked.

The ORS report of 2 March was based on intelligence reports and a photo reconnaissance of 25 January. From these it was estimated that a concrete roof of 8 feet was in the process of construction. Under such conditions it was doubtful "whether this target is vulnerable to medium altitude bombers using available bombs."¹¹⁹ In conclusion, the report recommended that additional photo reconnaissance should be carried out to determine whether or not the target were vulnerable to medium bombardment and ended by stating that "it would appear that the target could be more successfully attacked by high altitude bombers."¹²⁰

A second report 2 days later was evidently based on more recent reconnaissance, for it found that the roof was only two-thirds complete and recommended an immediate attack using 1,000-pound SAP bombs fused with a .1-second delay tail.¹²¹ A further report of 11 March completely reversed the recommendations of 4 March. It was now found that the roof was completed, and therefore "an attack from 12,000 feet employing any of the available weapons will not perforate the roof."¹²² However, the report still recommended an attack "to

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
161

destroy the construction equipment still in use, and breach the cofferdam which will flood the pens."¹²³ A supplementary report dated 30 March indicates that some disagreement still existed, for the opening paragraphs definitely state that "this supplement was necessary when a disagreement on the constructional progress was directed to Operational Research Section, IX Bomber Command."¹²⁴ In this final word from ORS, the conclusions of the 11 March report were upheld without change.

The mission was scheduled for the 26th, and took place in excellent visibility. It was one of the largest runs during the month. All operational B-29 groups were involved, and the number of planes over the target was 344, dropping 1,000-pound GP bombs for a total of 560 tons.¹²⁵ In a report dated 30 March, ORS assessed the damage inflicted on the target. The cofferdam was not breached, although there were four direct hits on it. The roof proved to be too heavy for effective damage by the 1,000-pound bomb, and not much damage was done to the pens. Camouflage on the old pens was blown off, some of the berths were destroyed, and several L-boats and gun boats were sunk. Construction equipment in the vicinity of the pens was hit and some stores were destroyed. In conclusion, ORS stated:¹²⁶

All the evidence indicates that any type of attack on the main B pens from 12,000 ft. altitude will be abortive. The only remaining possibility would appear to be an attack from 20,000 ft. or over using heavy armor piercing bombs. . . . It appears after the 23 March 1944 attack against this structure that the target is definitely one for high altitude attacks where more and heavier bombs can be dropped achieving a greater effect than future attacks from medium altitudes.

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According to the command historian, the results of this raid, coming so soon after the outstanding success at Creil, caused keen disappointment at Ninth Air Force Headquarters.¹²⁷ General Brereton asked General Anderson to conduct an investigation of the causes of inaccurate bombing in the raid. The investigation showed in some cases that the boxes bombed slightly off the target because of incorrect wind allowances. The wind had been briefed at 30 m.p.h. while at the time of bombing it was actually 40 to 45 m.p.h. In the opinion of General Anderson, it was "gross negligence to drop bombs without having made an attempt to check the briefed meteorological conditions and not to have made indicated corrections in pre-set bombing data."¹²⁸ Other factors which were cited as having caused errors were too hurried approaches to the target, too short bomb runs, and a slackening of concentration.

But these criticisms appear secondary, and it is difficult to avoid wondering if the authorities of the Ninth were not more concerned over the failure of the bombers to destroy the primary objective of the mission. But at this point, a basic question must be raised: what was the primary objective? In the opinion of ORS, undoubtedly the answer was the colliery. But there appears to be some question as to whether or not the recommendations of 11 March were used by the IX Bomber Command. Nothing in the available documents indicates that the emphasis placed by ORS on this installation and its destruction was communicated to the bomber crews. In fact, the writer of this study was informed by one of the pilots who participated in the attack that, to the best of his knowledge, the

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~~SECURITY INFORMATION~~
~~CONFIDENTIAL~~

163

dan had not been mentioned during the briefing of his squadron.¹²⁹
 In the interrogations made after the raid, the records indicate that the crews were anxious to tell the interrogator whenever their bombs had landed on the roof of the pens--implying that they considered this the main objective.¹³⁰ Yet the reports of ORS had already indicated that with the weapons available, the command could not succeed in such an attack.

The men themselves believed that the raid had been satisfactory. The historian of the 328d Bombardment Group quotes one crew member as saying: "We knew we had paid them back with dividends when we made the turn after dropping the bombs and saw smoke billowing over the target."¹³¹ In the opinion of T/Sgt. Lewis Lacher, a navigator on one of the planes, "By the time the Marauders had finished, every building in the target area was on fire."¹³²

Probably no final decision can be rendered at this time, but it is difficult to escape the impression that some of the criticism directed against the bombing of the command in this mission is unjustified in view of the uncertainty as to the primary objective. If the principal purpose of the attack had been to destroy the pens by breaking through the concrete roof, the ORS reports make it clear that the fundamental limitations of the aircraft and bombs used were responsible for the failure and not minor inaccuracies of navigation and bombing.

For the fighter units, the month of March was one of great activity. One hundred and seven missions were staged, and 5,092

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164

planes were airborne, of which 339 were abortive. In view of the great number of planes operating, losses of 35 aircraft and pilots do not seem excessive. Fifty-three enemy aircraft were claimed as destroyed during the month. As indicated previously, operational directives still obligated the fighters to act as escort to the Eighth as well as the Ninth. One of the biggest actions took place on 4 March. Both U. S. air forces were asked to contribute fighters to accompany 240 Flying Fortresses and Liberators to Berlin. As a result, the Ninth fighter organizations made a great effort, and the 354th, 363th, 363d, 363d, and 365th Fighter Groups took part. The last 2 organizations actually made 2 flights in the course of this mission. The range of the Thunderbolts and Mustangs were strained to the limit, and the 354th achieved something of a record by staying in the air 5 hours and 10 minutes. Unfortunately, the 363d sustained a heavy blow during the aerial combats by a record loss of 11 planes.¹²³

March was also the beginning month for fighter dive-bombing operations. The first mission of this type was carried out by the 366th Group on 15 March, when 7 planes dive-bombed the St. Valery airdrome with a 250-pound bomb apiece. Three hits were scored on runways.¹²⁴ From that time on, dive bombing increased until a climax was reached on 26 March. On that famous day, while the bombers were heading out across the Channel toward Ijmuiden, 5 fighter groups attacked marshalling yards and GROSSLOW targets in France. At

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165

the same time, many fighter sweeps across northern France and Belgium were carried out as often as weather permitted.¹³⁵

One great achievement during the month must be credited to the 67th Tactical Reconnaissance Group. This was to carry out what was perhaps the most secret and important photo mission of the war without the loss of a pilot or a plane. The assignment was to make Herton Oblique photos of 160 miles of French coast line and then to take two inshore strips 130 miles long each. The coastline strip was to be taken 2,000 yards offshore, and the inshore strips were to be taken at 7,000 and 14,000 yards inland.¹³⁶

To carry out this great task, elaborate preparations had to be made. Weather, of course, was a major problem as good visibility was a prime essential. Weather planes had to be flown frequently to check predictions. Another serious problem was the danger to the planes from flak. To take the obliques, it was necessary for the photo plane to hold a straight course for approximately 4 minutes at 3,500 feet. However, this proved to be so dangerous that special photographic equipment was installed so that the runs could be made at the slightly safer altitude of 6,000 feet.¹³⁷ Between 23 February and 20 March, 83 missions were flown in the execution of this difficult task. The final total of 9,500 prints produced makes this probably the largest Herton mission as yet planned and executed. In the well-chosen words of the unit citation bestowed on the 67th Group, its performance was an "outstanding and meritorious

~~CONFIDENTIAL~~
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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~ 163

achievement in the performance of duty in action against the enemy.
 . . . In the execution of the aerial operations concerned, remarkable success was achieved without the loss of a single aircraft. . . .
 The brilliant achievement of the 67th Tactical Reconnaissance Group is an important contribution to the furtherance of the war effort."¹³⁸

April brought no change in operational policies. The heaviest attacks were directed against marshalling yards, with GEOSSEBO operations definitely in second place. Other targets were German-held airdromes and coastal gun emplacements. Both bombers and fighters were used in attacks on all types of installations except coastal gun emplacements which were reserved exclusively for Marauders and Bostonns.

The first half of the month was marked by inclement weather. Between 1 and 17 April, there were only 5 operational days, of which 10 April was the biggest, with 550 bombers directing an unusually heavy blow against gun emplacements near Le Havre and carrying out minor attacks against marshalling yards and ROADMIS. Fighters dive-bombed airdromes and railroad installations.¹³⁹

Missions against the robot-bomb sites by VIII and IX Bomber Commands and the IAF resulted in 10 additional suspensions during the month.¹⁴⁰ During the first 2 weeks of April, 6 dive-bombing attacks were executed against this type of target, but the results were not ascertained. By April 3 it was estimated that 34 sites had received direct hits on essential elements.¹⁴¹

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

167

~~CONFIDENTIAL~~

Fighter units were now participating in almost every kind of mission, and for the first time, dive-bombing assignments outnumbered bomber escort missions. The sturdy Thunderbolt took over the larger part of the missions against the airframes by making 23 dive-bombing and 6 strafing attacks as compared with the Marauders' 9.¹⁴² The 405th and 371st Groups became operational during the month, and to orient them to conditions in the theater, the new pilots were sent on fighter sweeps over the Continent. As a result, this sort of operation shows a considerable increase over March. The number of fighter planes that were abortive during the month showed a decrease in comparison with previous records.¹⁴³

As the Ninth's operations were extended in an ever-increasing tempo over more and more targets in northern France, Belgium, and the Netherlands, the problem of civilian casualties seriously concerned the Bomber Command. Most of the marshalling yards, which were receiving such heavy blows, were located in densely populated sectors, and although some damage to the lives and property of citizens friendly to the United Nations war, perforce, inevitable, it was desired to avoid this whenever possible. This point was strongly emphasized by the Bomber Command in a teletype to the commanding officers of all wings and groups:¹⁴⁴

As has been stated many times, the political aspect in occupied countries does not allow for inaccurate bombing in areas which are well populated. Lately our targets have been improperly called marshalling yards. Actually our targets are the locomotive sheds and the wagon repair sheds located within these yards. It is unfortunate that they are often located either within or on the outskirts of rather large cities. I desire

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that it be brought to the attention of every leader again, and prior to every mission the necessity of holding bombs if the target area is not clearly visible. On several of our recent missions we have caused severe civilian casualties because some flight leaders have made poor decisions and have attempted to bomb without proper synchronization through 8/10 and 9/10 cloud. . . . These few isolated cases . . . have caused severe criticism which reflects on the whole command and which may dictate the type of targets upon which we are committed in the future.

On 16 April 1944 the Ninth Air Force celebrated its first 6 months in the MEO. Starting with 2,162 men, by the end of 6 months it had expanded to the impressive figure of 163,512 officers and men.¹⁴⁵ Beginning with small missions against airframes and operating largely under Eighth Air Force control, during these 6 months it had acquired a fair degree of independence, and as the period ended, it was beginning to perform some of the functions and operations suitable to a full-fledged tactical air force.

There had been, of course, many difficulties. Some of them came from the complicated military setup for the invasion of Germany. Thus the Ninth was a part of the MEAF, which also included two important RAF organizations, and at the same time it was under the administrative control of USSEAF, a purely American organization. These complicated relationships required a careful working out of procedures which often took weeks to perfect. The supply situation was especially complex, and requests for additional equipment were sometimes held up 50 days or more.¹⁴⁶

During its early days in the MEO, there was a tendency for the Ninth to be overshadowed by the Eighth Air Force, and since a large

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~~CONFIDENTIAL~~
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169

part of the personnel of USAFUTM and USJIAF came from the latter organization, they naturally tended to think of its problems first; to its own personnel, the Ninth seemed to be something of a step-child. However, these problems were little more than "growing pains," and as the Ninth developed, they tended to slip into the background.

More serious, although perhaps inevitable under the circumstances, was the delay in getting equipment to the new air force. The 26th Fighter Group, for example, was in the theater for almost 2 months before its planes arrived, and a long delay in the shipment of P-61's and P-70's greatly held up night fighting operations and additional photo reconnaissance.¹⁴⁷

Command relationships were sometimes excessively complex. The division of fighter units into three separate commands is a case in point. According to the assistant historian of the Ninth, "there are many evidences that this complicated set-up has caused confusion, not only in the minds of officers outside the three headquarters concerned who must deal with them, but in the minds of persons immediately involved."¹⁴⁸ On the other hand, it was occasionally difficult to obtain War Department approval for organizations that seemed urgently necessary. In the case of the IX Engineering Command and the IX Air Defense Command, the need for them had been envisaged by the old VIII Air Support Command as early as August 1943, but they were not formally activated until 30 March 1944. When the proposed T/O for the Engineer Command was submitted to the War Department, a full 7 weeks elapsed before it was approved. The

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AADA	Advanced Air Depot Area
ADA	Advanced Depot Area
AEAF	Allied Expeditionary Air Forces
AFAEF	AC/AS, Plans
AFIH	Historical Division
AFSC	Air Force Service Command
ALG	Advanced Landing Ground
AMWIS	Air Ministry Weekly Intelligence Summary
ASC	Air Support Command
ASWAAF	Attached Services with Army Air Forces
BADA	Base Air Depot Area
D/CS	Deputy Chief of Staff
ETOUSA	European Theater of Operations U. S. Army
GAF	German Air Force
MRR	Mobile reclamation and repair
ORS	Operational Research Section
SAP	Semi-armor-piercing
TAC	Tactical Air Command
TCC	Troop Carrier Command
TAD	Tactical Air Depot
TADA	Tactical Air Depot Area
TAF	Tactical Air Force
TASAC	Tactical Air Service Area Command
TMR	Tactical Mission Report
USAAFUK	U. S. Army Air Forces in the United Kingdom
USAMEAF	U. S. Army Middle East Air Force
USSTAF	U. S. Strategic Air Forces in Europe

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~~CONFIDENTIAL~~
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170

expectation of having these organizations in the Ninth plus the fact that they had not yet been approved caused much trouble.¹⁴⁹

But some of these problems were no doubt unavoidable in so large an organization, forced to establish itself and carry on operations at the same time. Judged from this point of view, the achievements of the Ninth were great and reflected much credit on the men who made them possible. For the strength of any air force lies in the men that make it live and function, and not in the planes they fly. Day after day, week after week, month after month, the Ninth Air Force was able to send out a constantly increasing number of aircraft against its assigned targets. Flying in all kinds of weather, against heavy flak and fighter attack, the pilots and their crews bombed the objectives and usually brought their planes back, often riddled with holes and badly damaged. The courage and devotion to duty of the men of the Ninth Air Force were the foundation stones upon which its achievements were built, and without which this history would have had a very different story to tell.

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~~CONFIDENTIAL~~

~~RESTRICTED~~ ~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~ 173

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~~CONFIDENTIAL~~

174

~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~

~~RESTRICTED~~
~~LABORATORY INFORMATION~~

175

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~~CONFIDENTIAL~~

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~~RESTRICTED~~
~~LABORATORY INFORMATION~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

176

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

177

~~CONFIDENTIAL~~

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5. Ibid.
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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~EXCLUDED INFORMATION~~

~~CONFIDENTIAL~~
178

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~EXCLUDED INFORMATION~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

179

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60. Ibid.
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62. Build-up of 9th AF.
63. Ibid.
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~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~
100

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~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

181

~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~TOP SECRET~~
~~SECURITY INFORMATION~~

182

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~~CONFIDENTIAL~~

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~~TOP SECRET~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~
183
~~SECURITY INFORMATION~~

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

184

~~CONFIDENTIAL~~

~~SECRETARY INFORMATION~~

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

135

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~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
SECURITY INFORMATION

186

~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~RESTRICTED~~
~~SECURITY INFORMATION~~

187

~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~

~~RESTRICTED~~
~~SECURITY INFORMATION~~ ~~CONFIDENTIAL~~
 188

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~~RESTRICTED~~
~~SECURITY INFORMATION~~ ~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

189

~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

190

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~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~ 191

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

192

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~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~TOP SECRET~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
193

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~~CONFIDENTIAL~~

~~TOP SECRET~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
194
~~SECURITY INFORMATION~~
~~CONFIDENTIAL~~

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~~CONFIDENTIAL~~
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~~CONFIDENTIAL~~
~~SECURITY INFORMATION~~

~~CONFIDENTIAL~~

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The sources for studies of the Ninth Air Force exist in generous numbers, thanks to the excellent work of Lt. Col. R. H. George and Maj. R. G. Angell, Ninth Air Force historians, who carefully assembled copies of orders, directives, unit histories, memorandums, manuals, charts, and operational summaries and forwarded them from the theater to the Historical Division, AG/AS, Intelligence. Certain special studies were prepared by these historians to explain some complex procedure or to call attention to the more significant developments. These reports were found to be especially valuable by this writer.

The best histories were usually on the command level, those of the IX Bomber Command being especially useful, as they were well written and rich in documentation. On the lower levels, the histories of the 354th Fighter Group and the 356th Fighter Squadron were outstanding.

Important documents for this study were also found in the AAF Central Files (cited AAF with decimal) and in the classifications Great Britain, Tunisia, and North Africa in Office Services Division, AG/AS, Plans. In addition to these sources, cables and various operational summaries were consulted. Unless specifically noted, documents cited will be found in the Archives of the Historical Division.

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~~RESTRICTED INFORMATION~~

Appendix 1 - Organization and Build-up of the Ninth Air Force in ETO to 9 June 1944.*

The build-up of the Ninth Air Force in Britain began 16 Oct 43 when Maj. Gen. Brereton assumed command in this Theater. The day before Lt. Gen. Waker had taken command of the United States Army Air Forces in the United Kingdom and established Hq., USAAFUK. On that day, 15 Oct 43, he issued the first of a series of Letter Orders, file 320.2, transferring units from the Eighth to the Ninth Air Force, authorizing the activation of new units from casual pools in the theater, and assigning units upon their arrival from the United States and other theaters. The procedure has been for all units to be sent to USAAFUK (or its successor USSIAF) for allocation within the theater as between the Eighth and Ninth Air Forces. Only a handful of units have come earmarked for the Ninth Air Force. In general, the Bradley Plan as modified by the recommendations of Col. Saylor has set the pattern for the Ninth's structure. That structure has been filled in by the assignment from USAAFUK, or USSIAF, of units which were called for by the Bradley Plan and later modifications of it authorized by Washington.

The command of all elements of the VIII Air Support Command and of the VIII Tactical Air Service Area Command was assumed by the Commanding General, Ninth Air Force by Section I, G. O. No. 101, 16 Oct 43. The activation of Hq. and Hq. Sq., IX Troop Carrier Command, was directed by Section II of the same order. This activation was accomplished by G.O. No. 3, IX Troop Carrier Command. Since the Hqs., IX Fighter Command, IX Bomber Command and IX Air Service Command had arrived or were shortly arriving from the Middle East, the key headquarters for the tremendous expansion to come were then in being. Section III of G.O. 101 announced, among others, Brig. Gen. Victor H. Strawn as Chief of Staff, Maj. Gen. Henry J.F. Miller as Commanding General, IX Air Force Service Command, Brig. Gen. Elwood R. Quesada as C.O., IX Fighter Command, Brig. Gen. Benjamin F. Giles as C.O., IX Troop Carrier Command, and Col. Samuel E. Anderson as C.O., Ninth Bomber Command.

By G.O. No. 102, also 16 Oct 43, the units that had been transferred from the Eighth Air Force were parcelled out to the four Commands, with the exception of a few that were assigned to the Ninth Air Force. In this case, as in all subsequent ones, only the assignment of larger or key units will be discussed. By this order IX Bomber Command was assigned the Hq. and Hq. Sq., 3rd Bombardment Wing and the 222nd, 323rd, 386th and 387th Bombardment

* Excerpt from Memorandum prepared 21 June 1944 by Maj. Robert C. Angell, Historical Section, Ninth Air Force.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

199

Groups (11) each with 4 squadrons. These had formerly been the mainstay of the VIII Air Support Command. The IX Fighter Command received the Hq. and Hq. Sq., 44th Bombardment Wing (L) and the 67th Reconnaissance Group with 5 squadrons. The Hq. of the 44th Bombardment Wing was also assigned to that Command. To the IX Troop Carrier Command was assigned by the same order, in addition to its Hq. and Hq. Sq., the Hq., 31st Troop Carrier Group with 2 squadrons. To the IX Air Service Command was assigned, among many units of lower echelons, the Hq. and Hq. Sq., VIII Tactical Air Service Area Command and 6 Air Depot Groups. To Hq., Ninth Air Force, was assigned the Hq. and Hq. Sq., VIII Air Support Command and the important 31st Weather Squadron and 40th Mobile Communications Squadron.

The Troop Carrier Command received additional units by G.O. No. 105, Hq., Ninth Air Force, 22 Oct 43 - the Hq. and Hq. Sq., 50th Troop Carrier Wing and the Hq., 434th Troop Carrier Group with 4 squadrons. These assignments were effective 18 Oct 43. The 434th Troop Carrier Group and the 315th Troop Carrier Group had already been assigned to the 50th Troop Carrier Wing by IX Troop Carrier Command G. O. No. 3, 16 Oct 43.

With G.O. No. 109, Hq., Ninth Air Force, 23 Oct 43, began the process, destined to continue for several months, of activation of Air Service Command units, the personnel of which had, for the most part, come overseas as casualties. By this order alone 37 such units were activated. One of them was the 31st Transport Group.

On 23 Oct 43 was provisionally activated Hq. and Hq. Sq., IX Air Service Command Base Air Depot Area. This was accomplished by Service Command G.O. No. 19, 29 Oct 43, based upon authority contained in Letter Orders, Ninth Air Force of 24 Oct 43.

The Ninth Air Force was still small at the end of October. The SCU Strength Report on the 31st of the month showed only 32,475 officers and men assigned and attached.

Effective 2 Nov 43 the 435th Troop Carrier Group was assigned to the Troop Carrier Command by G.O. No. 119, Hq., Ninth Air Force, 8 Nov 43. Effective 4 Nov 43, this Group was assigned by G.O. No. 10, Hq., IX Troop Carrier Command, 4 Nov 43, to the 50th Troop Carrier Wing. This brought the total of Groups assigned to that Command and that Wing to 3.

Another Group was assigned by G.O. No. 119, Hq., Ninth Air Force, 8 Nov 43. This was the 354th Fighter Group, destined to become the so-called Pioneer Mustang Group. It was assigned to the IX Fighter Command, effective 2 Nov 43, and later it was assigned by that Command to the 100th Fighter Wing, (G.O. No. 20, Hq., IX Fighter Command, 27 Nov 43).

~~CONFIDENTIAL~~

CONFIDENTIAL
SECURITY INFORMATION

At the beginning of the development of the Ninth Air Force in Britain the units of Service Teams associated with Tactical Groups had been assigned to the Fighter, Bomber or Troop Carrier Commands. G.O. No. 117, 4 Nov 43, reflects a change in policy, since it relieves such units of their assignment to Tactical Commands and assigns them to the IX Air Service Command. This has remained the practice since that date.

The Hq. and Hq. Sq., Ninth Air Force Base Air Depot Area was activated by Ninth Air Force G.O. No. 125, 12 Nov 43, and assigned to IX Air Service Command. The 13th Replacement Control Depot was assigned, effective 5 Nov 43, to the IX Air Service Command by G.O. No. 130, 21 Nov 43.

The first inclusive document concerning the Troop Basis of the Air Forces in the ETO since the establishment of the Ninth Air Force in Britain is the War Dept. Troop Basis of 8 Nov 43 (Inclosure #2). The usefulness of this document for the history of the Ninth Air Force is lessened by the fact that no separation is made between units to be apportioned to the Eighth and to the Ninth Air Forces. However, it is the authority for the assignment of units to the Ninth Air Force by USAARUK (USSIAF).

A most important G.O. in the build-up process was No. 123, Hq., Ninth Air Force, 12 Nov 43. It redesignated the Hq. and Hq. Sq., 3rd Bombardment Wing; and the Hq. and Hq. Sq., 44th Bombardment Wing as the Hq. and Hq. Sq., 98th and 99th Combat Bombardment Wing (M) respectively. (At about this time the last named unit was transferred from the IX Fighter Command to the IX Bomber Command by teletype order. This transfer was never published in a Ninth Air Force Hq. G.O.). The same G.O. directed the redesignation of the Hq. and Hq. Sq., VIII Tactical Air Service Area Command as Hq. and Hq. Sq., Ninth Air Force Advanced Depot Area Command. This was effected by Air Force Service Command G.O. No. 32, 17 Nov. 43. Before this took place the unit was relieved of assignment from the IX Air Service Command and assigned to the Advanced Air Depot Area by Air Service Command G.O. No. 29, 11 Nov 43, effective 12 Nov 43. (The Advanced Air Depot Areas, of which there were later two, were designed each to exercise supervision and control over 3 Tactical Air Depots.)

Two important units were activated by G.O. 125, Hq., Ninth Air Force, 12 Nov 43. These are the 97th Combat Bombardment Wing (M), which was assigned to IX Bomber Command, and the Hq. and Hq. Sq., Ninth Air Force Base Depot Area, which was assigned to the IX Air Service Command. By Air Service Command G.O. No. 35, 28 Nov 43, IX Air Service Command Base Air Depot Area was disbanded and the personnel assigned to the Ninth Air Force Base Air Depot Area. The Base Air Depot at Baverstock was set up by IX Air Service Command G.O. No. 37, 2 Dec 44.

CONFIDENTIAL

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~
 301

By G.O. No. 127, Hq., Ninth Air Force, 16 Nov 43, Brig. Gen. Dale D. Hinton was announced as Commanding General, IX Air Defense Command. By G.O. 131, Hq. Ninth Air Force, 24 Nov 43, the 100th Fighter Wing was activated. By another Ninth Air Force G.O. - No. 133, 27 Nov 43 - this Wing was assigned to the IX Fighter Command. Another Fighter Wing - the 70th - together with the 357th and 362nd Fighter Groups - was assigned, effective 7 Dec 43, to the IX Fighter Command by G.O. No. 146, Hq., Ninth Air Force, 16 Dec 43. The 354th Group was relieved from assignment to the 100th Fighter Wing and assigned to the 70th Fighter Wing 5 days earlier, by Fighter Command G.O. No. 21, 2 Dec 43. By the same order the 357th and 363rd Groups were assigned to the 70th Fighter Wing.

During November, the Ninth Air Force had grown fast. By 30 Nov 43 there were 46, 853 officers and men in the Daily Strength Report.

An important development was the activation by Ninth Air Force G.O. No. 133, 4 Dec 43 of the Hq. and Hq. Sq., IX Air Support Command. It was assigned to the IX Fighter Command. Col. Clarence L. Crumrine assumed command by G.O. No. 1, IX Air Support Command, 4 Dec 43.

The four original Bomber Groups were assigned to Wings by Bomber Command G.O. No. 67, 5 Dec 43. The 323rd and 387th went to the 98th Combat Bombardment Wing (H) and the 323rd and 386th to the 99th Combat Bombardment Wing (H).

A study made as of 8 Dec 43 by Historical Section, Ninth Air Force, revealed that at that time there were 409 activated units (not all of them organized) in the Ninth Air Force. Of these, 10 had come with the Ninth from the Middle East, 226 had been transferred from the Eighth Air Force, 55 had come as units from the United States and had been assigned to the Ninth by USAFTRK, and 119 had been activated from casual personnel in this Theater, (See Chart, Inclosure #3). The chart bears out what is known to be the fact that tactical organizations arrived in the theater as complete units, whereas service organizations came in large measure as casuals.

The Ninth Air Force organization as of 8 Dec 43 is shown in attached Chart I. The groups under IX Air Service Command are not given since they were soon thereafter related to Tactical Air Depots. It is apparent from this chart that tactically the Ninth Air Force was approximately one-fourth complete at this time, 11 of the 45 ultimate Tactical groups being present.

The 466th CI Truck Regiment was assigned to IX Air Service Command by Ninth Air Force G.O. No. 146, 16 Dec 43, effective 10 Dec 43.

The 100th Fighter Wing was assigned to the IX Air Support Command by Fighter Command G.O. No. 23, 12 Dec 43. Hq., 67th

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

RESTRICTED

SECRETARY OF DEFENSE

CONFIDENTIAL 202

Reconnaissance Group was redesignated Hq., 67th Tactical Reconnaissance Group by Fighter Command G.O. No. 145, 16 Dec 43. The Fighter Command was strengthened by the assignment, effective 30 Dec 43, of the Hq. and Hq. Sq., 71st Fighter Wing and two complete groups, the 263rd and 235th Fighter Groups (SB) by Ninth Air Force G.O. No. 2, 4 Jan 44.

The only other Command to change during the remainder of December was the Air Service Command. By its G.O. No. 40, 6 Dec 43, the 1st Advanced Air Depot Area was established at Busely Court and the 2nd Advanced Air Depot Area at Arborfield, effective 15 Dec 43. By G.O. 43 of the same Command, 14 Dec 43, the Hq. and Hq. Sq., 2nd Advanced Air Depot Area, IX Air Service Command (Prov) was redesignated as Hq. and Hq. Sq., 1st Advanced Air Depot Area, IX Air Service Command (Prov) and assigned to the 1st Advanced Air Depot Area. By the same order Hq. and Hq. Sq., Ninth Air Force Advanced Depot Area Command was assigned to 2nd Advanced Air Depot Area. A large number of other units were also assigned to each AADA. By orders (number unknown) of the 1st and 2nd AADA's on 16 Dec 43 the six Tactical Air Depots were officially set up, three to each AADA. The set-up at that time was indicated by IX Air Service Command G.O. No. 2, 4 Jan 44, as follows:

- 1st TAD - North Witham
- 2nd TAD - Stansted
- 3rd TAD - Grove
- 4th TAD - Charny Down
- 5th TAD - Zeals
- 6th TAD - Hembury

The first three were under 1st AADA, the second three under 2nd AADA. Later No. 4 was moved to Kinston-Bagouize and No. 5 to Chilbolton.

Brie. Gen. Eimman was relieved from assignment to IX Air Defense Command and assigned to 2nd General Hospital by Ninth Air Force Special Order No. 343, 14 Dec 43.

The Hq. and Hq. Battery, 52nd AAA Brigade was assigned to Ninth Air Force by Letter Order, USAAFUK, 17 Dec 43.

The development of the IX Engineer Command was foreshadowed by the assignment of the Hqs., 925th and 926th Engineer Regiments (Avn) to the Ninth Air Force by G.O. No. 148, 21 Dec 43, as amended by G.O. No. 116, 28 Apr 44. By this amendment the effective date of assignment to the Air Force was 26 Nov 43, though the units did not arrive in this theater until the spring of 1944.

Gains in personnel during December brought the Air Force total to 69,194 by the end of the month.

CONFIDENTIAL

203

~~CONFIDENTIAL~~

In addition to those already mentioned, important changes were made by G.O. No. 2, Hq., Ninth Air Force, 4 Jan 44. The Hq. and Hq. Sq., XIX Air Support Command, was activated, as was the Hq. and Hq. Sq., IX Air Force Advanced Depot Area Command (*2). This latter unit was assigned to 1st AADA by Air Service Command G.O. No. 5, 8 Jan 44 and by the same order Hq. and Hq. Sq., 1st AADA, IX Air Service Command (Prov), was disbanded.

On the same day - 4 Jan 44 - the 100th Fighter Wing was relieved from assignment to the IX Air Support Command and assigned to the IX Fighter Command by Ninth Air Force G.O. No. 2, 4 Jan 44.

By G.O. No. 10, Hq., Ninth Air Force, 11 Jan 44, the Eighth Air Force Intransit Depot Group was assigned to IX Air Service Command. It was assigned to IX Air Force Base Air Depot Area by Air Service Command G.O. No. 7, 13 Jan 44, effective 2 Jan 44.

The period from 27 Jan to 1 Feb 44 was a most important one in the development of the two Air Support (later Tactical Air Commands). Two new Fighter Groups, the 366th and 368th (SE), were assigned to IX Fighter Command by G.O. No. 22, 27 Jan 44. These were further assigned by Fighter Command G. O. No. 5, 22 Jan 44, to IX Air Support Command, effective 1 Feb 44.

On 31 Jan 44, Brig. Gen. Elwood R. Quesada was relieved as Commanding General, IX Fighter Command, and announced as C. G., IX Air Support Command, by G.O. No. 23, Hq., Ninth Air Force. (He assumed command by G.O. No. 2, IX Air Support Command, 17 Feb 44). This action made it appear that the IX Fighter Command was going out of existence as an operating unit. Other units beside these already mentioned assigned to IX Air Support Command, effective 1 Feb 44, by Fighter Command G.O. No. 6, 22 Jan 44, were Hq. and Hq. Sq., 71st Fighter Wing, with the 366th and 368th Fighter Groups; Hq. and Hq. Sq., 100th Fighter Wing; 70th Fighter Wing with the 354th, 357th, 363rd, 363rd and 363th Fighter Groups, together with the 67th Tactical Reconnaissance Group. A trade of groups with the Eighth Air Force took place - effective 1 Feb 44 - the 357th Fighter Group being relieved of assignment to the IX Air Support Command and the 359th being assigned to that Command by Ninth Air Force G.O. No. 30, 9 Feb 44. This replaced a Mustang group by a Thunderbolt group. The shift was made within the 70th Wing, the 357th being relieved from that Wing by IX Air Support Command G.O. No. 9, 15 Feb 44 and the 358th being assigned to that Wing by G.O. No. 5, 10 Feb 44. This action evidently relieved the 363rd and 355th Groups from the 71st Wing and assigned the 366th and 368th Groups thereto.

The set-up of the two Air Support Commands was further complicated by what amounted to an exchange of names on 1 Feb 44. The IX Air

~~CONFIDENTIAL~~

~~RESTRICTED~~

204

Support Command, which had been at Aldermaston Court was transferred, less personnel and equipment, to Middle Wallop, while the XIX Air Support Command, which had been at Middle Wallop, was transferred less personnel and equipment to Aldermaston (Fighter Command G.O. No. 6 - 23 Jan 44, effective 1 Feb 44). By G.O. No. 1, XIX Air Support Command, Col. Clarence E. Gruenine assumed Command of XIX Air Support Command. He was relieved three days later by Brig. Gen. O. P. Heyland who assumed command by G. O. No. 2, XIX Air Support Command, 4 Feb 44.

The 84th Fighter Wing was assigned to IX Air Support Command, effective 4 Feb 44, by Ninth Air Force, G.O. No. 30, 9 Feb 44.

The name of the Air Service Command was changed to IX Air Force Service Command by an unnumbered memorandum, En., Ninth Air Force, 29 Jan 44. The Hq. and Hq. Sq., 20th Replacement Control Depot was activated by Ninth Air Force G.O. No. 24, 31 Jan 44, and was assigned to the IX Air Force Service Command by G. O. No. 23, 4 Feb 44, effective 31 Jan 44.

A large increase in size of the Air Force was recorded in January - more than 20,000 officers and men. The total at the end of the month was 99, 324.

There were several new units assigned to IX Bomber Command early in February. The 391st Bombardment Group was assigned to the Command effective 3 Feb 44, by Ninth Air Force G.O. No. 30, 9 Feb 44. Effective the same day it was assigned to the 98th Combat Bombardment Wing by Bomber Command G. O. No. 41, 8 Mar 44. Effective 4 Feb 44, the 416th Bombardment Group was assigned to the Bomber Command by Ninth Air Force G. O. No. 30, 9 Feb 44. Effective the same day it was assigned to the 97th Combat Bombardment Wing by Bomber Command G. O. No. 38, 1 Mar 44. The 344th Bombardment Group was assigned to the Bomber Command, effective 14 Feb 44, by Ninth Air Force G. O. No. 38, 22 Feb 44, and was further assigned to the 99th Combat Bombardment Wing, also effective 14 Feb 44, by Bomber Command G. O. No. 38, 1 Mar 44.

IX Troop Carrier Command also expanded during February. The 436th Troop Carrier Group was assigned to it, effective 4 Feb 44, by Ninth Air Force G. O. No. 30, 9 Feb 44. This Group had been assigned by Troop Carrier Command almost a month before to the 50th Troop Carrier Wing by that Command's G. O. No. 2, 10 Jan 44, effective 14 Feb 44. The Hq. and Hq. Sq., 53rd Troop Carrier Wing and the 437th Troop Carrier Group were assigned to the Troop Carrier Command by Ninth Air Force G. O. No. 38, 22 Feb 44. The 437th Group was evidently assigned to the 50th Wing, though there is no Troop Carrier Command G.O. on the subject. A reassignment of groups took place effective 18 Feb 44 by Troop Carrier G.O. No. 7,

~~RESTRICTED~~
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

205

~~CONFIDENTIAL~~

17 Feb 44. The 315th Group was relieved from the 50th Wing and assigned to the 52nd, (although that Wing was not assigned to Troop Carrier Command until 21 Mar 44), while the 435th and 437th were relieved from the 50th and assigned to the 53rd Wing.

The Hq. and Hq. Battery, 51st AAA Brigade was attached to Ninth Air Force for administration and operation by Letter Orders, USSTAF, 14 Feb 44.

The 570th Fighter Group (FL) was assigned to IX Air Support Command, effective 14 Feb 44, by G.O. No. 39, Hq., Ninth Air Force 22 Feb 44, and was further assigned to the 71st Fighter Wing by IX Air Support Command G.O. No. 9, 15 Feb 44, effective 13 Feb 44. By Ninth Air Force G.O. No. 37, 31 Feb 44, the IX Fighter Command came back into the picture with the announcement of Brig. Gen. Quercia as Commanding General, IX Fighter Command, in addition to other duties.

Effective 24 Feb 44, the 10th Photo Group (Reconnaissance) was assigned to Ninth Air Force Hq. and attached to IX Air Support Command for training (G.O. No. 42, Hq. Ninth Air Force, 1 Mar 44).

By Ninth Air Force G.O. No. 40, 25 Feb 44, Brig. Gen. Paul L. Williams was announced as Commanding General, IX Troop Carrier Command, vice Brig. Gen. Benjamin N. Giles, relieved.

An expansion of some 18,000 officers and men during February brought the Air Force total to 117,975 by the end of that month.

The structure of the Ninth Air Force, so far as principal units are concerned, at the end of February is shown in Chart II, attached. This chart reveals that the Ninth Air Force was then about half complete tactically, though it was nearing completion in service units.

By IX Air Support Command G.O. No. 13, 8 Mar 44, the 365th Fighter Group was relieved from assignment to the 70th Fighter Wing and assigned to the 84th Fighter Wing, effective 6 Mar 44; also, 2 squadrons of the 67th Tactical Reconnaissance Group, the 12th and 15th, were made available to the XIX Air Support Command for operations, though remaining under their Group for administration.

G. O. No. 52, Hq., Ninth Air Force, 12 Mar 44, made several important assignments. The 402nd Bombardment Group (L) was assigned to the Bomber Command effective 7 Mar 44. (It was further assigned to the 97th Combat Bombardment Wing by Bomber Command's G.O. No. 49, 24 Mar 44, effective 7 Mar 44). By the same Ninth Air Force G.O. the 405th and 371st Fighter-Bomber Groups were assigned to the IX Air Support Command. (The former was assigned to the 84th Fighter

~~CONFIDENTIAL~~~~CONFIDENTIAL~~

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Wing, and the latter to the 100th Fighter Wing, effective 12 Mar 44, by IX Air Support Command G.O. No. 14, 18 Mar 44). Also by Ninth Air Force G.O. No. 52, the 303rd Fighter Wing was assigned to the XIX Air Support Command, effective 2 Mar 44. By Bomber Command G.O. No. 44, 14 Mar 44, the 891st Group was relieved of assignment to the 98th Wing and assigned to the 99th Wing.

There were many additions to, and reassignments within the IX Troop Carrier Command in March. One Wing and nine Groups were assigned to that Command - the 438th and 439th Groups, by Ninth Air Force G.O. No. 63, 18 Mar 44, effective 11 Mar 44; the 440th Group by Ninth Air Force G.O. No. 82, 29 Mar 44, effective 25 Mar 44; the 52nd Troop Carrier Wing and the 61st, 313th, 314th and 316th Groups by Ninth Air Force G.O. No. 82, 29 Mar 44, effective 21 Mar 44; and the 441st and 442nd Groups by Ninth Air Force G.O. No. 90, 5 Apr 44, effective 31 Mar 44. The four groups that came with the 52nd Wing remained assigned to that Wing. The 438th and 439th Groups were assigned to the 50th Wing by Troop Carrier Command G.O. No. 9, 25 Feb 44; the 440th and 441st Groups, to 50th Wing by Troop Carrier Command G.O. No. 14, 21 Mar 44, effective 21 Mar 44; and the 442nd Group to the same Wing by Troop Carrier Command G.O. No. 17, 30 Mar 44. Groups formerly assigned to the 50th Wing were relieved of that assignment and assigned to 53rd Wing as follows: 434th and 436th Groups by Troop Carrier Command G.O. No. 10, 1 Mar 44, effective 3 Mar 44, and the 438th Group by Troop Carrier Command G.O. No. 17, 30 Mar 44.

Ninth Air Force G.O. No. 52, 12 Mar 44 changed the status of the 13th and 20th Replacement Control Depots from assignment to IX Air Force Service Command to attachment thereto, effective 2 Mar 44.

Ninth Air Force G.O. No. 63, 18 Mar 44, assigned two new Groups, effective 11 Mar 44 - the 394th Bombardment Group to the Bomber Command and the 474th Fighter Group (II) to the IX Air Support Command. The former was further assigned to the 98th Combat Bombardment Wing, effective 7 Mar 44, by Bomber Command G.O. No. 49, 24 Mar 44. The latter was assigned to the 100th Fighter Wing by IX Air Support Command G.O. No. 14, 18 Mar 44, effective 17 Mar 44.

The Engineer and Air Defense Commands which had been contemplated for a long time, and which existed as Hqs. only until 30 Mar 44, were on that day established by the activation of their Hq. and Hq. Sqs. by Ninth Air Force G.O. No. 83, 30 Mar 44. G.O. No. 84, same day, announced Brig. Gen. William L. Richardson as Commanding General, IX Air Defense Command, and Brig. Gen. James S. Newman as Commanding General IX Engineer Command. The Hq. and Hq. Batteries, 51st and 52nd AAA Brigades were relieved of attachment to Ninth Air Force Hq. and attached to IX Air Defense Command by Ninth Air Force G.O. No. 87, 2 April 44, effective 30 Mar and 27 Mar 44 respectively. By the same

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

257

G.O. the 925th and 926th Engineer Regiments (Avn) were relieved of assignment to Engineer Hqs. and assigned to IX Engineer Command. The 92nd and 924th Engineer Regiments (Avn) were assigned to IX Engineer Command by G.O. No. 94, 7 Apr 44.

With the targets single month's growth in its history - almost 33,000 - the total personnel of the Ninth Air Force reached 150,741 by the end of March 1944.

A number of new Fighter Groups were added to the two Air Support Commands about this time. Effective 31 Mar 44, the 48th Fighter Group was assigned to IX Air Support Command by Ninth Air Force G.O. No. 90, 5 Apr 44. Effective 4 Apr 44, the 36th and 373rd Fighter Groups (SE) and the 406th Fighter-Bomber Group were assigned to the XIX Air Support Command by Ninth Air Force G.O. No. 93, 7 Apr 44. (These three were further assigned to the 303rd Fighter Wing by XIX Tactical Air Command G.O. No. 3, 7 May 44, effective 4 Apr 44). Also by Ninth Air Force G.O. No. 93, the 50th and 367th Fighter Groups (SE) and the 404th Fighter Bomber Group were assigned to IX Air Support Command, effective 4 Apr 44. The 50th and 404th Groups were assigned to the 84th Fighter Wing by IX Air Support Command G.O. No. 17, 13 Apr 44, effective 7 Apr 44. By IX Air Support Command G.O. No. 17, 13 Apr 44, the 48th, 367th, 371st and 474th Groups were relieved from the 100th Fighter Wing and assigned to the 70th Fighter Wing effective 15 Apr 44. (There is no record of the 48th and 367th Groups ever having been assigned to the 100th Fighter Wing). By Ninth Air Force G.O. No. 71, 23 Mar 44, the 100th Fighter Wing was relieved of assignment to IX Fighter Command and assigned to XIA Air Support Command.

An important change of name occurred 18 Apr 44 when the two Air Support Commands were redesignated the IX and XIA Tactical Air Commands, (Ninth Air Force G.O. No. 103, 18 Apr 44). By Ninth Air Force G.O. No. 116, 23 Apr 44, the 367th and 370th Fighter Groups (SE) were redesignated as (IE).

IX Bomber Command changes during April were few. By IX Bomber Command G.O. No. 54, 4 Apr 44, the 97th Combat Bombardment Wing (H) was redesignated as the 97th Combat Bombardment Wing (L). The last two Groups, the 397th and 410th, were assigned to the Command by Ninth Air Force G.O. No. 93, 7 Apr 44, effective 4 Apr 44. The 397th was assigned to the 98th Wing and the 410th to the 97th by Bomber Command G.O. No. 62, 21 Apr 44, effective 4 Apr 44.

The Service Command also changed little during April so far as major units is concerned. By Ninth Air Force G.O. No. 104, 18 Apr 44, the 13th and 20th Replacement Control Depots were relieved of attachment to IX Air Force Service Command and were assigned thereto effective 13 Apr 44. By Ninth Air Force G.O.

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No. 111, 23 Apr 44, the 466th QI Truck Regiment was redesignated as the 1585th QI Truck Regiment (Avn) Sp.

April was another month of tremendous growth for the Ninth Air Force. Total personnel assigned and attached 30 Apr 44 was 175,725.

By Ninth Air Force G.O. No. 125, 6 May 44, Brig. Gen. Myron R. Wood was announced as Commanding General, IX Air Force Service Command, vice Maj. Gen. Henry J. F. Miller, relieved. By USSIAF Letter Orders, 15 May 44, IX Air Force Base Air Depot Area was relieved of assignment to the Ninth Air Force, but by Air Force Service Command G.O. No. 72, 17 May 44, Hq. and Hq. Sq., IX Air Force Base Air Depot Area was attached to IX Air Force Service Command for rations and quarters only. Advance Hq., IX Air Force Service Command was established by that Command's G.O. No. 73, 19 May 44.

A double-reversal with regard to IX Engineer and IX Air Defense Commands was involved in Ninth Air Force G.O.'s Nos. 129 and 145, 10 and 22 May 44. The former activated Hq., Engineer Command (Prov) and Hq. and Hq. Sq., IX Air Defense Command (Prov) as of 30 Mar 44 and rescinded Ninth Air Force G.O. No. 83 of that date; the latter disbanded the two provisional units and established the two Headquarters on a regular basis.

The 48th, 357th, 371st and 474th Groups were relieved from the 70th Fighter Wing and assigned to Hq., IX Tactical Air Command by that Command's G.O. No. 7, 25 May 44, effective 14 May 44.

The Ninth Air Force growth slowed down during May, since the structure was pretty well complete. Under current plans, only the IX Air Defense Command would grow much thenceforth, as new units become attached to it on the far shore. The total of personnel assigned and attached 31 May 44, was 184,702.

Ninth Air Force G.O. No. 157, 6 June 44, redesignated Hq., Ninth Air Force as Hq., Ninth Air Force (Rear), and Advanced Hq., Ninth Air Force, as Hq., Ninth Air Force.

(Signed) ROBERT C. ANGELL
Major, AC.
Historical Section.

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Appendix 2

Headquarters
Ninth Air Force

AFO 696, 24 Dec 43.

Memorandum concerning Sources of Units of Ninth Air Force:

The attached table shows all units of the Ninth Air Force as of 8 Dec 43 according to their source. The basic data were obtained from letter orders, USAASUM; from General Orders, Ninth Air Force; and from TAA reports. The table is subdivided by types of units, and sub-totals are given. This table may be of significance in showing: (1) trained units, e.g., those from North Africa and those from the VIII Air Force; (2) Units requiring training in ETO, e.g., those arriving from the United States; and (3) units requiring organization and training, e.g., those activated by the Ninth Air Force in ETO.*

(Signed) ROBERT C. ANGELL
Major, AG
Historical Section

* This memorandum and accompanying table were supplemented by the chart appearing following p. 26 in the text.

332 333 386 387

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[illegible]

From North Africa From VIII Air Support Comd From VIII CASAO From VIII Unspecified Total From United States Activated by Ninth in U.S.

Fighter (Co)

67 Recon

354

357

362

Troop Carrier (HQ)

315

454

455

Service (Hq & Hq Sq)

36

42

53

70

78

84

10

318

9

309

326

Transport (Hq & Hq Sq)

31

Air Depot (Hq & Hq Sq)

10

16

30

43

44

45

33

42

85

86

87

88

Sub

Total 0

6

7

25

5

5

Squadrons

Bombardment

449 (M)

450 "

451 "

452 "

211

Activated by
Fifth in U.K.

From United
States

Total
VIII

From VIII
Unspecified

From VIII
FASAC

From VIII Air
Support Comd

From North
Africa

453 (11)
454 "
455 "
456 "
553 "
553 "
554 "
555 "
556 "
557 "
558 "
559 "

Sub
Total 0 16 0 16 0 0

Fighter
353
355
356

12 Recon
107 "
108 "
153 Liaison

Sub
Total 0 4 0 7 0 0

Troop Carrier

71
72
73
74
75
76
77
78

34
43

Sub
Total 0 2 0 8 10 0

312

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From North Africa From VIII Air Support Com From VIII CASG From VIII Unspecified VIII Total From United States Activated by Ninth in U.S.

Service

63
70
95
99
761
769
790
282

480
461
462
463

13
87
237
453
459

Sub Total 0 8 0 5 13 4 0

Station Complement

16
17
18
19
20
21
45
46

51
52
53
54

65
67
69
71
73
75
79
81
82
86

90
96
97
98
99
100
202
203
204
205
206
207
208
209
210
211
212
213
214
215
30

Sub Total 0 8 2 4 14 10

From North Africa From VIII Air Support Comd From VIII TASSAC From VIII Unspecified VIII Total From United States Activated by Month in U.K.

Airdrome

6
9
64
63
81

Sub
Total

0

5

0

0

5

0

0

Transport

313
314
315
316
317
318
319
322
336 Ferrying

Sub
Total

0

0

0

0

0

0

9

Squadrons (Con't)
Mobile R & R

21 36
22 37
23 38
24 39
25 40
26 41
27 42

314

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315

Activated by
Ninth in U.K.

28 43
29 44
30 45
31 46
32 47
33 48
34 49
35

From United
States

Total
VIII

From VIII
Unspecified

From VIII
EASIO

From VIII Air
Support Comd

From North
Africa

Sub
Total

29

Sub
Total

0

Weather

21

Depot Repair

16
33
42
310
311

10
22
50
43
45
92
96

Sub
Total

0

5

12

0

0

Depot Supply

33
42

10
30
43
45
92
96

Sub
Total

0

2

8

0

0

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216

Activated by
Rinrh in U.K.

From United
States

Total
VII

From VIII
Unspecified

From VIII
TASAC

From VIII Air
Support Comd

From North
Africa

Signal

Signal Co, Service GP

1055
1071
1075
1081
1089

Mobile Communications Sq

Signal Co Wing

531
232
234

Signal Co T/O Wing

326

Signal Bn ASO

Air Support Control Sq

8

Signal Air Warning Sq

690
705
718
719

Fighter Control Sq

327

Signal Co Avn

Signal Depot Gp

896
909

900

303

392
414

Signal Construction Bn

Quartermaster
QM CO, Service Gp

Q. 10. What is the difference between a total and a partial?

Q! Flat, Air Devot Cr

430
443
445
421
435
442
444
446

Hq 6 Hq Det, 61 Truck Bn

Sub	4	10	12	26	4	9
Total	0	10	12	26	4	9

317

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From North
Africa

Orderance Oil Co

45

1605
1666
1703
1764
1823
1834

1922
1923
1924

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Total **CONFIDENTIAL** **Page**

From North Africa From VIII Air Support Comd From VIII TAGSO From VIII Unrecified VIII Total From United States Activated by Ninth in U.K.

Airborne Engineer (Avn) Bn

876

Sub Total 0 1 0 9 10 7 1

Chemical Co (AO)

807
808
868
873

Chemical Depot Co
785
789

Sub Total 0 4 0 2 6 0 0

Medical
Medical Supply Flat (Avn)

1
10
27
11
24
25
45

Medical A/E Sn

808

220

From North Africa From VIII Air Support Comd From VIII TASC From VIII Unspecified Total VIII From United States Activated by Ninth in U.K.

Veterinary Flot

2, Ho
15, Det
16, Det
17, Det
18, Det
19, Det
20, Det

Sub Total	0	1	3	0	4	4	7
	13th Regt Cont Dep 28th SCU			<u>Miscellaneous</u>		4th Combat Camera U	Ninth AF Fin Det
Sub Total	2	0	0	0	0	1	1
Grand Total	10	101	53	71	225	55	119

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~~SECURITY INFORMATION~~

I N D E X

A

A-1, 71, 82
 A-2, 43, 71, 125
 A-3, 46, 63, 71, 104, 112
 A-4, 37, 39, 69, 71-72, 82
 A-20, 42, 53-54, 79, 89, 149, 156
 A-20G, 53
 A-20J, 53
 AAF Arm and Service Integration
 Committee, 69
 AAF Regulation
 20-9, 68
 20-18, 69
 Abbeyville, 126, 148
 "Activation of the VIII Air Force
 Air Service Command," 67
 Advanced Air Depot Area Command,
 81, 85
 Advanced Air Depot Areas (AADA),
 76, 81, 84
 Advanced Air Service, 76
 Advanced Headquarters, 9th AF,
 34, 41, 152
 Advanced Landing Grounds (ALG),
 41
 Africa, 2-3, 5-C, 8-9, 12, 18-19,
 25, 28-29, 67-68, 98, 103
 Agenviller, 133
 Air Corps Tactical School, 4
 Air Defense Headquarters, 9th AF,
 61
 Air Defense Section, 62
 Air Depot Groups, 29
 Air Ministry, 32, 125, 131-132,
 135, 144, 155, 158
 Air-Sea Rescue School, 108
 Air Service Command, 66-68, 70-71
 Headquarters, 70
 Air Support Control, 3
 "Air Task Force Air Service Com-
 mands," 68
 Aldermaston Court, 40, 62
 Aldis lamp, 98
 Alexander, Gen. Sir H., 8

Allied Expeditionary Air Force
 (AEAF), 14-16, 105, 130-133, 149,
 153, 155, 158, 168
 Amiens, 36, 138, 156
 Amsterdam, 126-128, 136, 147
 Anderson, Brig. Gen. S. E., 27,
 41-42, 45-46, 51, 104, 108, 111,
 137, 162
 Andrews Field, 139
 Angell, Maj., 179 (n 64), 186 (n 33)
 Andres, 158
 Armored Vehicle Fighting School,
 94
 Arnold, Gen., 4-6, 8, 11-15, 21-22,
 61, 70, 74, 88-89, 159, 177 (n 14)
 Ascot, 56
 Assistant Chief of Staff, Plans, 15
 Assistant Inspector General, 28, 47
 Athlone Castle, 56
 Attached Services with AAF (ASwAAF),
 69
 Audinethun, 134
 Audinghem, 129

B

B-17, 78, 159. See also Flying Fortress.
 B-26, 42-43, 50, 52, 79, 89, 118,
 120, 124-125, 130, 135, 140, 161.
See also Marauder.
 Baltic, 131a
 Barkston Heath, 56
 Base Air Depot, 85
 Base Air Depot Area (BADA), 81, 84
 Basic Sheet Metal School (Brit.),
 96
 Baylor, Col. J. W., 24-25
 Baylor Committee, 24
 Beaumont, 126
 Beaumont le Roger, 147
 Beauvais, 128
 BEAVER, 114
 Belgium, 43, 119, 126-127, 154, 165,
 167

~~CONFIDENTIAL~~

BERKS, 101
 Berkshire, 26, 29, 57
 Berlin, 164
 Bismarck Sea, 121, 125
 Blackpool, 108
 Bois de Coupelle, 140
 Bois de Pottier, 140
 Bois Rempre, 140
 Bonmieres, 140
 BOOMERANG, 97
 Borum, Gen., 26
 Boston (plane), 54, 149, 166
 Bosted, 139, 150
 Bradley, Maj. Gen. F., 11, 19-21, 24, 39
 Bradley Committee, 11, 21, 58, 74, 77
 Bradley Plan, 12, 18-25, 58, 80, 94
 Brereton, Maj. Gen. L. H., 3, 5, 12-13, 15, 24, 26, 28, 30, 38-39, 52, 61, 63-65, 80, 104, 108, 110-111, 114-116, 153, 158, 162
 Brett, Maj. Gen. G. H., 4
 Bristol, 132
 British, 1-3, 8-10, 14-15, 34, 57, 67, 83, 85, 90, 93, 95-96, 105, 108, 116, 131a, 142-144, 151, 159
 British Army Troop Command, 97
 British Central Gunnery School, 108
 British Central Interpretation Unit, 64
 British War Office, 97
 Brockhouse, 82
 Burgess, Lt. L., 140-141
 Butler, Gen., 26

C

C3 lamp, 100
 C-47, 57, 83-84
 C-53, 83
 Cairo, 2, 13, 28
 Cambrai, 129, 135
 Camp Columbia, 57
 Candee, Brig. Gen. R. C., 19, 25-26
 Central Night Vision School, 108
 Central Photo Interp. School, 94

Central School of Recognition, 93
 CG-4A glider, 55
 Chauncey, Gen., 26
 Chemical Section, 64, 69, 72
 Chemical Warfare Mobile School, 65
 Cherbourg, 128, 132, 140, 147
 Chief of Staff, AAF, 67
 Chief of Staff, Supreme Allied Command (COSSAC), 33
 Chief of Staff, USAAFUK, 26
 CIRCUS, 125, 131
 Cocove, 133-134
 Combat Orders, 4
 Combined Bomber Offensive Plan, 9-11, 119-120
 Combined Chiefs of Staff, 11, 17, 130, 132
Command and Employment of Air Power, 1, 9
 Communications Section, 44
 Coningham, Air Marshal, 8, 13
 Continent (European), 10, 12, 18, 49, 88, 114, 116, 167
 Corneilles-en-Vexin, 146
 Cornwall, 113
 Coxyde, 44, 152
 Crane, Capt., 124
 Creil, 157-158, 162
 Crisman, Lt. L. R., 141
 Croisette, 140
 Crockham Common, 85
 CROSSECO, 132-135, 139, 144-145, 147, 158-159, 164, 166
 Crossbow Subcommittee, 134
 Crypton lights, 98

D

D-day, 54-55, 57-58, 62, 88, 97-98, 111, 114
 Deelen, 143
 Delta lights, 98
 Derbyshire, 94
 Devers, Lt. Gen. J. C., 12, 20-24
 Devonshire, 109, 113
 Dieppe, 132, 146
 Dinton, 85
 Dorset, 94
 Douglas, 53
 DUCK, 113

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
224

Dutch, 123, 147-148. See also Holland; Netherlands.

E

8th Air Force, 10-19, 21, 23, 26-27, 29, 36-37, 44, 49-50, 56, 67-69, 71-75, 79-81, 83-84, 88-89, 91, 102-103, 116, 118-120, 125, 127, 131a, 138, 142, 145, 150, 153-156, 164, 169
Headquarters, 69, 72
Plans, 125
VIII Air Force Base Command, 67
VIII Air Service Command. (AFSC), 16, 18, 20, 29, 60, 66, 68-69, 71-76, 79-80
VIII Air Support Command, 12, 19, 24-29, 32, 64, 76, 107, 125-127, 139, 169, 191 (n 28)
8th Army, 3-4
VIII Bomber Command, 27, 65, 74, 131, 143-144, 148-149, 153, 166
VIII Fighter Command, 148-149
VIII Tactical Air Service Area Command, 25, 29
11 Group (RAF), 41, 138
Planning Committee, 131a
84th Wing, 35
810th Medical Air Evacuation Squadron, 57
818th Engineer (Avn) Battalion, 112
E6B, 111
Eaker, Maj. Gen. I. C., 10-13, 16, 21-22, 26, 72, 74, 77, 124-125, 127
Earl's Colne, 139
Eastcote, 57
E-boat, 48, 110, 159, 161
Eclimeux, 140
Egypt, 3, 28
Eighth Fighter Command Orientation School, 103
Eisenhower, Gen., 12-13
Embry, 140
Emmons, Lt. Gen. D. C., 72
Employment of Aviation of the Army, 4
Employment of Combat Aviation, The, 4

Engineers Detachment, 60
Engineer Headquarters, 9th AF, 60-61
Engineer Section, 72
England, 12-13, 15, 23-24, 27, 33, 56-57, 67-68, 72, 75, 79-80, 89, 93, 99, 105, 117, 120-121, 127-128, 130, 141, 148-149
English Channel, 41, 98, 120, 123, 126, 130, 131a, 137, 164
"E" pens, 152-153, 161
Epino, 129, 135
ETOUSA, 25, 80
Headquarters, 25
European Theater, (ETO) 4, 7, 12, 28, 36-37, 56, 93, 116-118, 120-122, 125, 127, 130, 137, 168
Evreux, 128
"Extreme Danger in Contemplated Mission," 122

F

1st Fighter Div. (Prov), 27
5th Air Force, 120
15th Air Force, 16
40th Mobile Communications Sq., 31, 44
44th Bomb. Wing, 27, 34, 42
50th Troop Carrier Wing, 28, 54-55, 57, 98, 179 (n 64), 186 (n 36)
51st Anti-Aircraft Artillery Brigade, 61-62
Headquarters Battery, 62
52d Wing, 55
53d Wing, 55, 100, 179 (n 64)
405th Fighter Gp., 167
409th Bombardment Gp., 42, 52-53
410th Bomb. Gp., 42, 53
414th Signal Co., (Avn), 25
416th Bomb. Gp., 42, 45, 53, 116, 149, 156
422d Night Fighter Sq., 105-106
423d Night Fighter Sq., 103
434th Gp., 28, 54, 100
435th Gp., 55, 99, 179 (n 64)

~~CONFIDENTIAL~~

225

~~CONFIDENTIAL~~

436th Gp., 55
 437th Gp., 55-56, 179 (n 64)
 438th Gp., 55-56
 439th Gp., 55
 448th AAA (AW) Bn., 62
 453d Bomb. Sq., 137
 550th AAA (AW) Bn., 62
 555th Signal AW Bn. Co. D, 62
 Far Shore, 34, 41, 44
 Fauville, 128
 Field Order No. 57, 150
 Field Service Regulation, 9
 Filton, 35
 Finance Section, 72
Flying Dutchman, 137
 Flying Fortress, 133, 164. See
also B-17.
 FOX, 114
 France, 2, 27, 43, 119-121, 126,
 128, 136, 138, 154, 164-165,
 167
 Franco, 2
 French Air Force, 120
 Fruges, 140

G

Garland, Lt. Col., 104
 GEE, 50, 151
 General Motors Corporation, 70
 German Air Force (GAF), 2, 14,
 103, 118, 126, 136, 147, 152,
 155
 German Fighter Command, 119
 Ghent, 126
 Giles, Maj. Gen. Barney K., 22,
 26
 Giles, Brig. Gen. Benjamin F., 28,
 54, 90, 104
 Gilze Rijen, 148
 Godfrey, Brig. Gen. S. C., 58
 Gosfield, 139
 Grantham, 56
 Great Dunmow, 139
 Green, Lt. Col., 97
 Greenham Commons, 57
Grim Raper, 141
 Ground Forces, [Army] 6, 8-9
 Grove, Berkshire, 29

Grovelly Wood, 85
 Grunder, Maj., 97

H

H2X equipment, 152
 Harlem, 123
 Haine, 157
 Helverson Group, 28
 Hamilton Field, Calif., 35
 Hansell, Brig. Gen. H. S., Jr., 14
 Harmon, Lt. Gen. H. F., 67
 Headquarters, 9th AF, 25, 46, 52, 56,
 59, 92, 104, 109-110, 162
 Operations Section, 92
 Henriques, Col., 97
 HF sets, 45
 Highgate, London, 93, 103
 Hillingdon House, Uxbridge, 34
 Himm, Brig. Gen. D. D., 61-62
 Hinson, 157-158
 Hitler, 36
 Holland, 43, 119, 122, 126-127. See
also Dutch; Netherlands.
 Horsa glider, 55, 57, 100
 Howard, Capt. J. H., 35

I

Iceland, 49, 60, 98
 Ijmuiden, 27, 48, 110, 122-123,
 159, 164
 "Information for Incoming Units,"
 92
 Intelligence section, 9th AF,
 92-93
 Intelligence Reception Manual, 94
 Ireland, 57, 99
 Iron Cross, 150
 Italy, 105, 111

J

Japan, 120
 Jefferis, Lt., 124
 Jennings, Col. A. L., 51

~~CONFIDENTIAL~~

JOCKEY, 131
 Joint Commanders Meeting, 26
 Joint Intelligence Committee, 134

K

Kiel, 36, 138
 Kilborn, Col. J. C., 45-47
 Knerr, Gen., 21, 26, 66, 68,
 70-72, 81
 Kuter, Brig. Gen. L., 8

L

Lachor, T/Sgt. L., 163
 Langor Field, 56
 Larocque, Lt. Gen. L., 104
 LCT boat, 97
 Lee, Maj. Gen. W. C., 104
 Leeuwarden, 143
 Le Havre, 166
 Leigh-Mallory, Air Marshal Sir
 Trafford, 14, 16, 26, 130-131,
 153-154, 159
 Le Poix, 126
 Liberator, 164. See also B-24.
 Lille, 135-136
 Link trainer, 107
 Liverpool, 36
 Lockheed, 149
 London, 62, 93-94, 132
 Longeau, 156
 Lostebarne, 158
 Luftwaffe, 120. See also G/F.

M

McComb, W/C J., 135
 McDill Field, 28
 McGinnis, Col. H. A., 66-67
 Maghaberry, 99
 Maintenance Div., 82
 Marsaudor, 37, 43, 53, 110, 122,
 124-125, 128-129, 133, 136,
 146-147, 152, 156-157, 162-163,
 166. See also B-26.

Marshall, Gen., 5, 12, 20-24
 Martin, Col., 151
 Martinvast, 129
 Master station, 151
 Matching Airdrome, 59
 Matlock, 94
 Maupertus, 128, 140, 147
 Maxwell Field, 4
 ME-108, 150
 Medical Department, 65
 Mediterranean Theater, 12, 43, 58,
 111, 112
 Medmonham, 64
 Merton Oblique, 165
 Middle East, 4-5, 15, 26, 28, 64,
 68, 80, 103
 Middle East Air Force (USMEAF), 28
 Middle Wallop, 40, 102
 Military Police (MP), 86
 Miller Maj. Gen. H. J. F., 18, 24,
 26, 29, 67, 70, 72
 Miller, Sgt. L., 124
 Millfield, 105, 109
 Mimoyeques, 129
 Mine and Booby Trap School, 112
 Mission
 No. 81, 126
 No. 82, 126, 128
 No. 83, 128
 No. 84, 128
 No. 99, 130
 No. 305, 159
 Mitchel Field, 27
 "Mobile Ops," 101-102
 Mobile reclamation and repair (ARR),
 88
 Montdidier, 128
 Montgomery, Gen. Sir Bernard, 6-8
 Monthly Operational Weather Record,
 64
 Mustang, 27, 32, 34-35, 138, 143,
 150, 155, 164. See also P-51.

N

IX Air Defense Command, 30, 61-62,
 169
 IX Air Force Engineers Section, 59

~~CONFIDENTIAL~~

IX Air Service Command (AFSC), 13, 24, 26, 29-30, 32, 49, 59, 63, 65-66, 73, 77-81, 84-85, 87, 90, 92, 95, 97-98, 113 Headquarters, 25, 84-85, 97
IX Air Support Command, 24, 37-41, 48, 64, 114, 149, 191 (n 28)
IX Bomber Command, 13, 24, 27-28, 30, 34, 41-42, 44-48, 52, 54, 62-63, 88, 107-110, 112, 115-116, 126-129, 131a, 133, 135-138, 143-144, 147, 149, 151-154, 160-162, 166-167
Commanding General, 145
Headquarters, 25
IX Engineer Command, 30, 41, 58-59, 61, 112-113, 169
IX Fighter Command, 13, 24, 26-27, 30, 34, 36-37, 39-42, 46, 58, 64, 84, 88, 101-103, 105-106, 113, 138, 142
Headquarters, 25, 39, 102
IX Tactical Air Command, 41
IX Troop Carrier Command, 28-30, 54-57, 98-99, 101
Advanced Headquarters, 101
XIX Air Support Command, 38-41, 62
XIX Bomb. Wing, 28
XIX Tactical Air Command, 41
97th Bomb. Wing, 42, 45, 53
98th Bomb. Wing, 42, 45, 107
98th Group, 28
99th Combat Bomb. Wing, 42, 45, 59
Navy, 43, 104, 113-114
Near East, 4
NEFTUNE, 34
Netheravon, 57
Netherlands, 120, 128, 147, 167. See also Dutch; Holland.
Newman, Brig. Gen. J. B. Jr., 60
Niergnies, 135
Ninth Air Force Planning Staff, 33
NOBALL, 132-133, 135, 138, 140-141, 145-148, 152-153, 155-156, 166
North African Theater, 7, 58
North Sea, 138

O

I Troop Carrier Command, 28
100th Wing, 34, 37
101st Airborne Troops, 98
118th AAA Gp., 62
1028th Signal Co., 61
1058th Military Police Co., 25
OEOE, 152

Operational Research Section (ORS), 47-48, 142, 160-163
Studies
"Estimation of Effort Required to Neutralize a Typical Moball Installation," 48
"Recommendations of Bomb Loading and Fuzing for Attacks on Airfields," 47
"Report on Bombing Accuracy and Pattern Dimensions for IX Bomber Command," 48
"Report on the Vulnerability of Target ZH1001," 48
Operations Section, 45-46, 92
Ordnance, 48-49, 69, 72
"Organization of Air Service Command," 70
OVERLORD, 14-15, 17, 119, 153-154
Oxford, 2

P

P-38, 89, 106, 154
P-47, 150, 154. See also Thunderbolt.
P-51, 82, 84-85, 89, 95, 142, 150, 153, 155. See also Mustang.
P-61, 169
P-70, 169
Pas de Calais, 129, 131a-132
Peeremunde, 131a
Pershore, 99
Personnel and Training Division, 95
"Photo Center," 64
Plans and Training, 83
POINTBLANK, 14-15, 17, 119, 127, 135, 139, 145-146, 152-155
Poland, 2
Portal, 10, 15
Port of Embarkation, (POE) 36-37
Posa, Brig. Gen., 97
Prisoner of War School, 94
"Proposed USAAF (TAF) Troop Basis," 19
Purinton, Col., 124

Q

Quadrant, 14-15

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

Quartermaster Section, 72
Quebec, 14
Quesada, Brig. Gen. E. R., 26-27, 36,
38-39, 104, 108

R

RAF, 3-4, 50, 77, 93, 96, 102-105,
108, 116, 119, 122, 125, 129, 131a,
135-136, 143, 148, 166, 168
RAF Escape and Evasion School, 103
RAF Flying Control School, 93
RAF Intelligence School, 93
RAF School of Army Cooperation, 108
RAF Utilities Unit, 31
Reeves, Lt. E., 141-142
Replacement Control Depot, 65
Richardson, Brig. Gen. W. L., 62
Riddell, Brig. Gen., 97
Robirett, Brig. Gen. P. M., 5
Rommel, 2
Rosieres-en-Santerre, 129, 146
Royal Dock, 97
Roy/Army landing field, 129
"R" pens, 152-153
R/T procedure, 102

S

2d Air Force, 67
2d British Tactical Air Force, 130,
132, 144, 155
2d Tactical Air Force, 34
6th Airborne Division of the Home
Forces (Brit.), 100
67th Tactical Reconnaissance Gp.,
27, 34, 64, 103, 113-114, 165-166
70th Wing, 35, 38
71st Wing, 35
633d AAA (M.) Bn., 62
635th AAA Bn., 62
696th Army Postal Unit, 25
S-2, 108
S-3, 63 108
S-4, 97
St. Andre de l'Eure, 128
St. Josse, 144
St. Omer, 126, 146, 148
St. Pierre, 157
St. Remy au Bois, 134
St. Trond, 148

St. Valery, 164
Salisbury, Col. A., 106
SAP bombs, 160
Schilling, Col. E. B., 59-60
Schipol, 126-128, 136, 147
Services of Supply, (SOS), 68-69,
71, 73, 97
Signal Section, 69, 72
SKI, 132-134, 144, 159
Slapton Sands, 109
Slave station, 151
Slessor, Air Marshal John, 125
Smith, Col. S. T., 95
Southampton, 97, 132
Southport, 94
Spantz, Maj. Gen. Carl, 6-8,
11-13, 58-59, 88
Spanish Civil War, 2
Specialized Instructors' School
of Low Attack, 105, 109
Spitfire, 32, 129
STARKEY, 126
Strehm, Brig. Gen. V., 26, 108
Strategic Air Depot Area, 76
Strategic Air Force, 14-15
Stratemeier, Maj. Gen. G. E., 8
Station
449, 103
456, 101
Stecker, Lt. Col. R. J., 101, 104
Summinghill Park, 26, 56
Supply Division, 37, 83
Supreme Tactical Commander, 15. See
also Leigh-Mallory.
Surgeon, 72
Sutton Bridge, 108

T

3d Bombardment Wing, 27, 41, 42,
107, 121-122, 125-126
10 Group (RAF), 113
12th Air Force, 11-13, 103,
105
12th Bomb. Gp., 28
13th Replacement Control Unit,
25
21st AAA Gp., 62

~~CONFIDENTIAL~~

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21st Weather Sq., 31, 41, 63
 26th Statistical Control Unit, 25
 73 Group (RAF), 130
 503d Signal Co. Wing, 25
 515th Co., 28, 54-55
 522 Bomb. Gp., 27, 42, 45, 116, 121-
 122, 124, 129, 134, 152, 157-158, 163
 523d Bomb. Gp., 27, 42, 111, 115-116,
 121, 129, 132-134, 167
 544th Bomb. Co., 45, 111, 116, 156-158
 554th Fighter Gp., 27, 34, 38, 158, 142,
 151, 164
 556th Fighter Sq., 35-36, 128, 150
 567th Fighter Gp., 35, 150
 583rd Fighter Gp., 35, 38, 150, 164
 582d Fighter Gp., 150, 164
 583d Fighter Gp., 150, 164
 565th Fighter Gp., 105, 150, 164
 566th Fighter Gp., 114, 156, 164
 568th Fighter Gp., 156
 570th Fighter Gp., 106
 571st Fighter Gp., 167
 596th Bomb. Gp., 27, 42, 45, 116-116,
 122, 132-134, 157-158
 597th Bomb. Gp., 27, 42, 45, 116, 129,
 124
 591st Bomb. Gp., 45, 116, 144, 157-158
 592d Signal Co., 25
 594th Bomb. Co., 45, 111, 116, 156
 5911 Bomb Sq., 191 (n23)
 Tactical Air Command, 6
 Tactical Air Depot (TAD), 81, 82-87
 Tactical Air Depot Area (TADA), 76
 Tactical Air Force, 9, 13, 15, 26
 Tactical Air Service Area Command,
 (TASAC), 20
 Tagus Valley, 2
 Tentative Proposed Troop Basis, 11
 Ternier, 146
 Thunderbolt, 33, 35, 37, 150, 164,
 167. See also P-47.
 THUNDERCLOUD, 101
 THURSE, 100
 Training Div., 25
 Memo
 No. 50-3, 107-103, 114
 No. 50-7, 103
 Transportation Div., 34
 Tricqueville, 126
 Troutdale, Ore., 36

United Minster, 1, 11, 16, 24, 29, 69,
 72, 74-75, 78, 80-81, 87-94, 93, 126,
 130
 United Nations, 167
 United States Army Air Forces in the
 United Kingdom (USAAFUK), 1, 16,
 23-26, 125, 127, 150, 169
 Headquarters, 25
 United States Strategic Air Forces in
 Europe (USSIAF), 16, 49, 96, 169-169
 Upper Heyford, 108
 USAAF, 23
 Uxbridge, 34, 40-41, 59, 150

V

Vacqueriette, 133-134
 Van Antwerp, Lt., 137
 Vansant, Lt. Col. C. P., 49
 Vendeville, 135-136
 Venlo, 143
 Very pistol, 98
 VHF communication, 44
 von Kolnitz, Maj. A. H., 121-122

W

Wanley Common, 85
 War Department, 4, 8-9, 11-13, 20-25,
 58-62, 67, 80, 169
 C-4 Section, 21
 Wavell, Gen., 2
 Weekly Intelligence Summary, 148
 Weston, 96
 Weyland, Brig. Gen. O. P., 39
 Williams, Brig. Gen. P. L., 23
 Williams, S/Sgt. G. W., 124
 Winterbourne Stokes, 100
 Woensdrecht, 156
 World War I, 1

Z

Zeebrugge, 126

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MEMORANDUM FOR THE COMMANDING GENERAL, ARMY AIR FORCES: (Attention
Assistant Chief of Air Staff, Intelligence, Historical Division)

Subject: Critique of Army Air Forces Historical Studies:
No. 32, Ninth Air Force in the ETO, 16 October 1943
to 16 April 1944

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