

A HISTORY OF THE EASTERN DEFENSE COMMAND

And of the Defense of the Atlantic
Coast of the United States in the

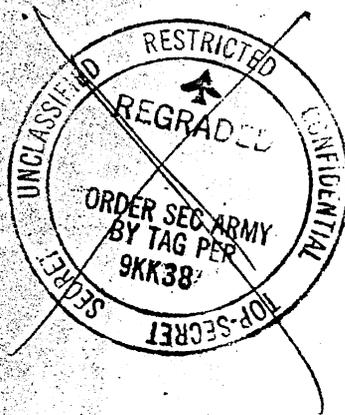
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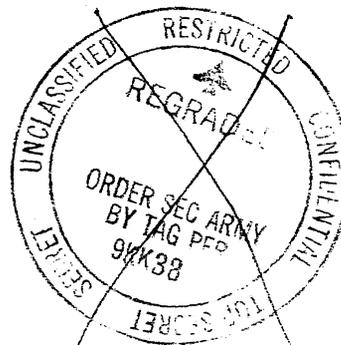
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PEACE TIME MANEUVERS

This is an account of the various ideas of the defense of the eastern United States in the years which preceded and finally included the Second World War. It is further an account of the agencies charged with that defense mission, and of the defense measures which they planned and accomplished.

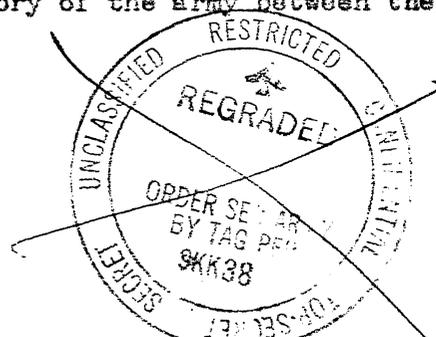
The Eastern Defense Command, which was the agency finally charged with the mission, was not so designated until the eighteenth of March, 1942, three months after the start of the war (1), although for practical purposes the same agency had been set up under a different name a year previous (2). Ultimately two other Defense Commands, the Central and the Southern, which were instituted by the same letter in 1941, were absorbed by the Eastern Defense Command so that its territorial responsibility came to include generally all of those states which are not west of the Rockies, together with their land and coastal frontiers, as well as certain ocean bases in the Atlantic.

The basis from which the whole structure of the Army evolved in the Second World War was the National Defense Act, which was approved by Congress on 4 June 1920. The stated object of this bill was to set up an organized peace establishment consisting of the Regular Army, the National Guard, and the Organized Reserve, which should include all of those divisions and other military organizations necessary to form the basis for a complete and immediate mobilization for the national defense in the event of a national emergency. From this it can be seen that the use of the word "defense" in its title is in no particular or territorial sense, but rather in the broad meaning of preparedness against any future wars or threats of wars. The expediency of conflict in 1917 had found the nation in its characteristic state of unreadiness, and this subsequent Act, passed while the difficulties of that conflict were still fresh in our consciousness, aimed to lessen those difficulties in some future crisis and to do so without burdening the nation with the onus of militarism or the expense of a disproportionately large peace-time standing army.

In order to accomplish its objects, the National Defense Act contemplated a Regular Army of an enlisted strength not to exceed 280,000, including Phillipine Scouts. These troops, together with the National Guard, were to be organized into brigades, divisions, and army corps and, should the President at any time deem it expedient, into Armies. The heart, however, of this system of organization of our peace-time forces, was the Corps Area. The National Defense Act specified a division of the continental area, on the basis of military population, into sections to be called Corps Areas. And through most of those intervening years between the wars, when Field Armies existed, if at all, only on paper, and when Service Command functions had not yet been separated, the Corps Areas which were assigned a mission of administration and training as well as of tactical control, were, in effect, the army. But it was not a war-time or fighting army. The Corps Area system was a peace-time system designed to keep the army at least alive, even if quiescent, and to provide the mechanism and the structure for an emergency expansion and mobilization. Even this modest object, however, was made almost impossible and the original intention of the National Defense Act was subverted by the failure of Congress to appropriate the funds necessary to carry out its provisions. The history of the army between the

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two wars resolved itself therefore into a struggle on the part of the army to remain alive and expansible with only the most grudging and half-hearted support of the Congress and the public. As early as two years after the passage of the National Defense Act, the army was reduced by Congress from an allowable maximum of 280,000 enlisted men to a total of only 175,000, including officers. By 1925 the total of enlisted men was down to 122,000, and a year later the number of combat troops of all branches in the United States proper was only 50,000. The total strength of the army was not materially increased until 1936, when a paper authorization was secured for 165,000 and an actual strength of about 18,000 less was achieved (3). Under this Congressional policy of non-appropriation, almost no funds were of course available for the procurement or development of new equipment for training and experimentation even though new methods and techniques of mechanized and aerial warfare had come into being. Almost the single resource that remained to the Army was the opportunity to organize and to plan on paper.

Among organizations in some stage of operations in the period between wars which would be of later interest in the defense of the eastern states were the Coast Artillery Districts and the Field Armies. Like the Corps Area of which it was a part, the Coast Artillery District was a peacetime organization but with the difference that, should it become necessary or desirable, it could immediately function as a tactical defensive force with no change other than one of name. Coast Artillery Districts were set up to relieve Corps Area Commanders of their functions of discipline instruction and routine training of Coast Artillery troops in all Corps Areas which contained harbor defenses. There were four Coast Artillery Districts along the Atlantic Seaboard with headquarters at Boston, at New York, at Fort Monroe, and at Atlanta. During the years of peace, harbor defenses with almost no exceptions were manned only when National Guard regiments appeared briefly to fire a target practice. At other times, small units or sometimes even a single man comprised the care-taking garrison of a fort. However, a command organization and various types of armament, some of it outdated, were in existence ready for troop occupation.

Although, to be sure, we did have an army during the two decades of the twenties and the thirties, there were nevertheless no forces in the United States capable of waging actual war of either a defensive or offensive character. In reporting on the state of the Army as of the end of this period (1939) General Marshall stated flatly: "Within the United States we had no field army" (4). General Marshall continued, "There existed the mere framework of about 3½ square divisions approximately 50 per cent complete as to personnel and scattered among a number of Army posts. There was such a shortage in motor transportation that divisional training was impracticable. There were virtually no corps troops, almost no Army troops or GHQ special troop units, which are necessary for the functioning of the larger tactical units."

It is not to be assumed from this, however, that no attempt to formulate a field force had been made. Lacking the necessary appropriations from Congress, the attempts of course were not very successful, but the attitude of the Army is well exemplified in an almost pathetic letter (5), in August 1927, which constituted certain higher headquarters and corresponding headquarters special troops, and headquarters companies and troops, as inactive units of the Regular Army and ordered that they be carried in the Army List and

Directory. Among the units so constituted were the Seventh Army, the XX, XXI, and XXII Corps. In a subsequent letter of October, references to these units were changed to read First Army, I, II and III Corps (6). The earliest mention, the rebirth so to speak, of the First Army is its constitution as an inactive unit. Considering the First Army as one of a series of defense organizations associated with or leading up to the Eastern Defense Command, it is to be noted that the motive factor behind the formation of the Field Armies was the desire on the part of the War Department to maintain, in addition to the administrative and generative Corps Areas, at least some fighting forces in readiness for the field. The philosophy of defense thus indicated is that the existence of such general purpose and uncommitted forces, in itself, constitutes a desirable defense.

Actually it was adequately known to all concerned that this object could not be fully realized. Therefore, when the Field Armies were finally established by General MacArthur in 1932 (7), the sights were set somewhat lower. General MacArthur felt that since mobilization and procurement plans, as provided by the National Defense Act of 1920, had already been developed, that the time had now arrived for the organization of Field Armies, as also contemplated in the law, as a further step in the preparation for utilizing fighting forces in possible theatres of operations.

For more specific purposes, the Chief of Staff set down that the Field Armies would provide agencies to complete the development of war plans prepared by the War Department General Staff, and would provide commanders and staff officers for high units prepared to take the field and execute those plans. During peace they would provide agencies for the conduct of command post and other suitable training exercises. In the event that a general mobilization became necessary they would supply a quickly summoned trained force adequate to protect the nation until a larger force could be assembled and trained. And finally they would be a force large enough in themselves to handle any emergency which would not require a general mobilization.

Overall command of all the Field Armies, or Field Forces as they were collectively called, became an additional duty of the Chief of Staff. Individual command of any of the four field armies was given as an additional duty to the senior commander of the Corps Areas assigned to that field army who would have for his army staff his corps area chief of staff and any other members of his corps area that he might designate.

The field armies would comprise corps organized from the divisions of the Regular Army, National Guard and Organized Reserves, which were allocated to the corresponding corps area for mobilization by the War Department General Mobilization Plan. The designation of the four Field Armies from the nine Corps Areas with the territorial missions assigned were as follows:

First Field Army: First, Second and Third Corps Areas, with a mission dealing with the North Atlantic and Northeastern frontier

Second Field Army: Fifth and Sixth Corps Areas, with a mission dealing with the strategical area of the Great Lakes and the central northern frontier

Third Field Army: Fourth and Eighth Corps Areas, with a mission dealing with the region of the Gulf of Mexico and the southern frontier.

Fourth Field Army: Seventh and Ninth Corps Areas, with a mission dealing with the Pacific Coast.

The functions assigned to the commanders of these Armies were in general as follows: The development of frontier defense plans and other operating plans assigned to them in the war plans of the War Department, based upon the employment of forces allocated to them in such war plans. The selection, organization and training of corps and army staffs; the supervision of the assignment of personnel in order to maintain complete officer rosters for all units; the conduct of training for higher staffs and command echelons authorized and directed from time to time by the Commanding General of the Army group.

It was further specified that Field Army Commanders would have no administrative functions outside of their own corps areas in time of peace except as might be necessary to enable them to perform the above designated duties.

Accordingly, on the 8 September 1932, Major General D. E. Nolan as senior Corps Area Commander of First, Second and Third Corps Areas assumed command of the First Field Army with headquarters at Governors Island, New York (8). The office of this headquarters was shortly thereafter set up in Bldg. No. 138, a building directly abutting the ferry slip and on the water side of the present post Headquarters. There is no indication that this office initially transacted much business. In the following year, however, a memorandum directed "all officers on duty at this headquarters," (i.e. Second Corps Area), to attend First Army Conferences on Monday of each week from the 15th of January until the 12th of March.

The forces which were assigned to the First Field Army were grouped into six different Corps, the I, II, III, XI, XII and XIII. In addition to three divisions of cavalry, the 21st (NG) and the 61st and 62nd (OR), assigned directly to the Army there were included within the Corps one active Regular Army division (1st), two inactive Regular Army divisions (8th and 9th), six divisions of the National Guard (26th, 27th, 28th, 29th, 43d and 44th) and nine divisions of the Organized Reserve (9). It can readily be seen from its troop list that the First Army as originally constituted was an army on paper only. The inactive divisions of the Regular Army and the Organized Reserve divisions can be discounted entirely. The National Guard was unfederalized, not well trained, and under strength. Apart from the 1st Division, the First Army had no real troops, and the members of its staff held their positions in addition to their other duties.

Nevertheless the active units of the First Army augmented by certain other small units were gathered for a concentration and combat training in the latter part of August in 1935. The main maneuver took place in the vicinity of Pine Camp, New York, involving some 36,000 troops while smaller exercises were held by the III Corps near Indiantown Gap, Pa. and by the 18th Brigade near Fort Devens, Mass. (10).

The purpose of this exercise was not a full scale battle maneuver but a test of the ability of active units of the First Army to concentrate simultaneously, at existing strength, prepared for field service. In addition, it was desired to train all echelons in the logistics of a concentration and finally to provide combined field training for all active components of the First Army so that they might function smoothly in the initial stages of an emergency.

Several weapons and techniques which were then relatively new and

not universally accepted were tried out at this maneuver. Almost without exception, the participating units were motorized for the occasion, a decision which required the hiring of over 250 taxicabs to supplement the vehicles with which the army was then equipped. General Nolan flew over the maneuvering area in a Martin B-12 bomber to observe operations. Airplanes were also used from a low level to lay smoke screens, a tactic which did not prove entirely successful in this particular case. Five Christie (11ton) tanks were on hand as well as a detachment of 1st Cavalry (Mech) from Fort Knox equipped with half-tracks and armored cars (11). At that time the 1st Cavalry was the only mechanized cavalry in the Army and was still an experimental organization. Telephone communications were supplemented by the use of radio.

General satisfaction was felt at the critique with the possibility of motorization for the rapid concentration of units. Major General Connor, who commanded the I Corps was for one, however, very dubious of its tactical value. "I can't see yet in actual warfare how you can make prompt and effective reconnaissance from a station wagon," he said. "The maneuvers haven't given any indication whatever of the tactical value of motorization and mechanization." He said that the strategic value of motorization and mechanization proved that everything back of the division (the corps and the army) should be motorized, "but from the division down, I'm not so cocksure as some officers seem to be."

Concerning communications, General Connor expressed a belief that the money being spent on radio equipment might better be spent on laboratory work for developing radio and dependence be meanwhile placed on telephone as the safer means. "The message center," he said, moreover, "is so encumbered by procedure that it takes an act of Congress to get a message through. We've got to simplify its procedure."

This maneuver in 1935 proved to be the first of a series of exercises which from that time up until our declaration of war prepared our field forces on an increasingly elaborate and successful scale for the real conflict which finally came. The second of the series was a command post exercise held in August 1937. Plans for this exercise were already under way when General Nolan passed to the retired list and relinquished command in April 1936 (12). Command of the First Army passed at this time to Major General Fox Connor whose primary assignment was as Commanding General, I Corps Area and the headquarters of the First Army was moved accordingly to Boston.

The command post exercise of 1937 was based on a very significant document which will be examined in another Chapter, the Joint Action of the Army and Navy, 1935. This work was a formulation by a joint board of the War and Navy Departments, setting forth the principles and methods of cooperation between the two services and providing, among other things, for the organization of coastal defense. The basic agreement called for the drawing up of supporting plans by subordinate units. This action was embodied in the CPX and the exercise, which included an assumed M (mobilization) Day, was divided into two parts, a period of peace time planning before M day in which plans which would serve not only for the maneuver but for an actual emergency were drawn up, and a subsequent period following the assumed M day in which the prepared plans were put into effect and all orders which were issued and actions which were taken to combat the "enemy" were based on the plan. It was thereby intended to accomplish several things by the exercise. Several hundred officers would be made familiar with the substance of the Joint Action of the Army and Navy, 1935. Certain of the supporting plans prescribed by it would be formulated. These plans would be tested in a simulated operation, thus clarifying in the minds of the numerous staffs involved the functions of the various

elements and echelons of command. And at the same time, the effectiveness or inadequacy of the plans as they stood at that time, and of our procedures and possibilities of mobilization, disposition and supply of defensive troops would be demonstrated. Actually, of course, since this was a GPX, there were no troops or supplies physically involved, but orders were issued and actions taken as though there were. (14).

The situation proposed for the exercise was one in which our fleet (purely a one-ocean Navy) was absent in the Pacific when certain hostile acts, including the destruction of the Panama Canal, were committed by a coalition of enemy powers (Black) against the United States (Blue) which led to a state of war. It was contemplated that Black forces could not only be capable of molesting our shipping in the Atlantic but would be able to and probably would actually make attacks on the coastal frontier, ranging from feints and minor raids to major attacks by joint forces. It was thought that the latter would probably have as their objective the capture of a first class harbor as a main base for operations against Blue's land forces and industrial areas in Connecticut, New York and Pennsylvania. Southeastern New England was chosen as the most probable area for such an attack. The exercise involved the paper employment not only of the usual divisions but also of harbor defense troops and air support, and for probably the first time supposed the actual operation of a carefully planned and extensive aircraft warning net.

As the situation developed, a Black fleet including numbers of transports headed initially for Chesapeake Bay. It remained in this area, bombarding shore installations from the sea and air, long enough for the Commander of the Delaware-Chesapeake Sector to deploy his forces, at which time it withdrew and after this feint finally effected its real landing where it was engaged by our divisions. It was a quite simple problem, the various developments of which were known well in advance by those participating - the dryest sort of dry runs, in other words, played for the purpose of thoroughly indoctrinating the various staffs with the principles and concepts of coast defense as embodied in the Joint Action. It is to be remembered that these staffs existed only in a skeletonized form and for the purposes of the exercise had to be filled in and assembled from far and near under considerable difficulty.

It was sensed of course that longer experience and association among the staff members would result in a smoother working of the defense plans. It was also impressed once more on the minds of army men that from a physical standpoint of troops, armament and reserve supplies, we were unprepared for war. And finally certain minor difficulties were realized in the operation of Joint Action particularly as it related to the division of territorial commands (15). Substantially, however, the plan was found good and workable and was the one which was later used in the wartime years.

Before the next field exercise two years later the Army was to see another change of command, Major General Connor, like General Nolan before him, was retired from active duty and relinquished command in September 1938 (16). The new Commander of the First Army (and of the Second Corps Area) was Major General Hugh A. Drum (17), who had previously held such positions as Chief of Staff of the First Army in the First World War, Inspector General of the Army, and Commanding General, Hawaiian Department. First Army Headquarters returned to Governors Island, New York (18). In the following year its Commander was invested with the rank and title of Lieutenant General. (19).

Initially, it was planned to divide the forces in the 1939 maneuvers into two concentrations in the Pine Camp and Indiantown Gap areas, as was done

in 1935 (20). General Drum would have preferred to have a single concentration of the entire First Army in one place. Although it was found impractical to arrange for a sufficiently large area to permit this, in the time remaining after his assumption of command, he did decide after personal study and reconnaissance that a First and Second Corps concentration in the vicinity of Plattsburg, New York from August 13 to 27, and a Third Corps concentration at Manassas, Va., from August 6 to 20 would permit added training, more advantageous terrain, better facilities, and an increased number of troops at reduced cost.

This was to be an "army maneuver". The two officers regularly authorized for an army staff in peace, augmented by three officers attached, were constituted into a Maneuver Directors' Group. As no tactical army staff had ever functioned as such heretofore in our peace time maneuvers, it seemed desirable to impart training along such lines. The same situation existed relative to tactical corps staffs. It therefore became necessary to constitute a tactical army staff and the various Corps staffs from officers assigned to other important duties. Prior to the concentration, it was necessary for these staffs, together with the inadequate staffs of the divisions, to function in dual capacities and to carry loads beyond the margin of efficiency due to the insufficiency of the staffs and the non-availability of the balance of the contemplated maneuver staff strengths. In order to meet the needs for increasing the strengths of the various staffs for the maneuvers and to provide a semblance of necessary service troops, since the only army or corps service troops available were one Regular Army and one National Guard Signal Battalion, it was necessary to deplete Regular Army antiaircraft and coast defense units and to gather in Regular Army Officers from ROTC, National Guard, and Organized Reserve duties. The adverse effects of such a necessity in an actual emergency, both as regards the weakening of indispensable units of defense which should be immediately available for action, and the improvisation of important staffs which cannot function efficiently at the beginning, are easily apparent.

Application was made to the War Department for the participation of certain GHQ Air Force units of attack and pursuit aviation. It was the purpose to demonstrate their employment on the ground battlefield by using their potential powers to center attacks initially on concentrations, supply and communications, and as the battle was joined, to bring their fire and bombing power into the ground fight for interdiction and counter-battery effects, to facilitate the operations of Infantry and to operate with and against mechanized forces. The Air Force, however, contended that because of the exigencies of the expansion program then confronting them, their units would not be available for the maneuver and the War Department upheld them in their position. A similar request to the War Department, however, for the participation of the 7th Cavalry Brigade (Mecz) was granted in its entirety and the presence of this unit added materially to the maneuver.

As the troop list was finally constituted, it totalled slightly more than 50,000 in the Plattsburg Area and just under 25,000 at Manassas. At Plattsburg, were concentrated the Army headquarters and troops and the I and II Corps, including, in addition to the 1st, 26th, 27th, 43d, and 44th divisions, the 18th Inf. Brig., a battalion of the 66th Inf. (LT), the 101st Cav., two regiments of AA Artillery, the 7th Cav. Brig. (Mecz), some Air Corps observation squadrons, and a Signal battalion. At Manassas the III Corps, consisting principally of the 28th and 29th Divisions, was fortified by a Regular Army Provisional Division, two incomplete regiments of AA Artillery and some provisional troops and detachments.

The whole purpose of the maneuver was training both for the Corps Areas and for the First Army (21). The Corps Areas were to be trained in the Zone of the Interior functions such as hurried mobilization, hurried shipment of forces and supplies to the Theatre of Operations, hospitalization, organization of the concentration areas and finally demobilization. The First Army training was directed toward the organization, administration and supply of the forces while in the Theatre of Operations, and field exercises for the training of divisions, corps, and army, from the angle of tactical and logistical instruction. Training Memoranda issued before the maneuvers emphasized the necessity of preliminary training of troops who were to participate. It was directed that this training be pointed toward the tactical and technical proficiency of small units in field operations and toward the preparation of troops for field service.

The field exercises at Plattsburg began with regimental exercises on August 16 and 17. Each Infantry regiment was opposed to the other regiment within each brigade. Each was reinforced by Artillery and where possible tanks were attached to one or both forces and observation planes cooperated. One of the exercises was drawn to represent an advance guard action and the other to illustrate a flank guard action.

Brigade exercises were conducted August 18 to noon August 19. Each brigade was reinforced by Artillery, tanks, observation aviation and engineers. The problem illustrated the attack and defense of a hastily prepared position. A Corps exercise was held August 21-22. The exercise was prepared and conducted under the supervision of the Army Commander. The I Corps, north of the Saranac River, operated against the II Corps, south of the river. Each corps was of approximately the same strength, - two divisions reinforced by Cavalry and two observation squadrons. Each force was given a mission which required it to cross the river and establish a bridgehead. The mechanized cavalry, with the assistance of horse cavalry, operated in front of the advancing waves of attack of the II Corps and by action from the flank across the front of the Infantry, cleared the way for an assault. The horse cavalry operated to hold ground gained or to fill gaps between elements of the mechanized forces. At nightfall the horse cavalry held positions on the flanks while the mechanized force returned to the rear for refueling of tanks and to refit.

A division exercise with the Provisional Corps was conducted during the same period within which the corps exercise was held. Like the army exercise which was to follow, it was designed to illustrate the action of a small, highly mobile force against a larger but less mobile body of troops.

The culmination of the maneuvers was the army exercise Aug 23-25. The situation was drawn to illustrate a meeting engagement between an Army and a small corps. The Black Army consisted of two corps of two divisions each and a meager amount of corps and army troops. The Blue Corps, much smaller in numbers, was a much more mobile force. It consisted of one division, one Infantry brigade and the mechanized cavalry brigade.

The Black Army was assumed to be part of an invading force which had advanced west to the Lake Champlain area and was preparing to move southwest and strike the left rear of the main Blue Armies. It was suddenly opposed by the Blue Provisional Corps which had the mission of delaying the Black Army until sufficient Blue forces could be assembled to warrant taking the offensive. The maneuver progressed for two days and concluded on the 25th of August.

The III Corps concentration at Manassas, Va., carried on exercises in the earlier part of the month which reflected in a smaller scale the exercises of the rest of the Army. The tactical situation was drawn as a preliminary action to the Army exercise conducted in the Plattsburg area a week later. In preparation for the main effort to be made in New York, the commander of the invading Black Force was assumed to have sent a highly mobile force to make a landing at Quantico and by threat at the Blue seat of government, Washington, to seek to draw forces from the main Blue front. The III Corps, consisting of the 28th and 29th Divisions designated as a mobile force of the coastal defense had been moved to the vicinity of Manassas, Va.

Commenting on the maneuvers at the critique, and in his final report, General Drum drew some interesting conclusions. The announced purpose of the maneuvers was to train and from that standpoint the maneuvers was definitely a success. Valuable experience and training were had by all who participated. For the first time since the First World War an army operated tactically. The benefits derived from such training were thought to be far greater than is the usual case when the Corps is the highest tactical unit. The Corps is properly an expedient for tactical control only and of a small battle area. The various problems of administration and logistics, including supply and evacuation, do not have sufficient scope for comprehensive instruction and sound tactical application of the use of combat aviation, antiaircraft defense, and major mechanized operations cannot be imparted in any unit smaller than a field army.

The maneuvers had been a physical demonstration of an important provision of the National Defense Act of 1920 -- the amalgamation of the Regular Army, National Guard, and the Officers Reserve Corps in one military family. The Regular Army had borne the burden of the exercise. They had prepared the whole area, arranged and operated the supply system and then taken their part in the tactical exercise -- all this in spite of the fact that they had had only 34% of the authorized Regular Army officers which the Tables of Organization allow them in peace time. The National Guard, in General Drum's opinion, had demonstrated an exceptional improvement over pre-World War days. The Reserve Officers had fitted into the framework of the Regular Army and the National Guard and the higher organizations with facility and, in many cases, had demonstrated a professional fitness which warranted their absorption in such a capacity on mobilization.

The participation in the maneuvers by the 7th Cavalry Brigade (Mech) was thought to have been of great interest and benefit to all. Its operations plainly showed that it was a psychological weapon as well as a tactical one. As a matter of fact, at this stage of armored force development, its psychological value proved to be its greater power. It was shown that the very presence of the brigade in the combat area caused great concern to enemy commanders, particularly those on the flanks. This concern at times resulted in such extreme nervousness as to hinder the operations of these units in furtherance of their main mission. As the exercise progressed and more experience was gained in defense against the brigade much of the nervousness disappeared and this new arm was recognized as a powerful force to be guarded against but not as a mysterious demon devouring all those with whom it comes into contact. It was always, however, a factor of serious concern.

The use of the mechanized cavalry and of other units which were motorized, provided an opportunity to consider the operations of a small com-

paratively mobile force opposed to a larger force with less mobility, but greater fire power and ability to sustain a fight longer. The Blue Force was able to partially mobilize its Infantry, and its artillery and mechanized cavalry were wholly motorized. It was an ideal force for the mission assigned it -- that of delaying the advance of Black until the arrival of reinforcements. The hilly country in which it operated was especially suited to such action. The Black Force, slow of movement but having the men and fire power for sustained action would have forced Blue to hurry assistance. General Drum believed that both types of forces were needed in an Army. A highly mobile force, with exceptionally high fire power and capable of short, hard-hitting fights, was very desirable. However, the bulk of the force should be organized for prolonged and sustained combat. This was essential to win the decisive battle.

Although the 1939 maneuvers was designed as a training exercise and not as a test, it was inevitable that certain contrasts should become apparent between the performance of the army in the exercise and a desirable standard of action in the event of an actual emergency. After all, armed disorders had been occurring sporadically in various parts of the world for the last several years and full scale war in Europe was to start early in the following month. General Drum notes that he has spoken of the exercise as an "Army Maneuver" but that the First Army as it took the field that month was not, in fact, an Army. It was a collection of individual units, lacking adequate army, corps, and divisional troops, partially equipped and woefully short in manpower, weapons and materiel. In planning for the maneuvers General Drum was advised that an assumption be made that the strength and composition of the units comprising the Army was that stated under war strength in the paper plans, including the modern armament which was listed there but which actually did not exist. In deciding to take the field with the Army as it stood in peace, the Commander considered that his position was not only more realistic but also less misleading to the public -- some of which, he thought on the basis of frequent statements in the press, held the mistaken belief that we could always instantly mobilize an organized protective force of 400,000 trained and equipped men. The fact that the larger part of his troops, according to the maneuver situation, were to represent a hostile invading force which presumably would be fully and well equipped does not entirely invalidate his point. One wonders however if he was not strengthened in his decision by anticipation of the fatuous situation which is likely to result from conducting a maneuver with simulated troops and materiel. Be that as it may, General Drum's "Army" in the field, representing such forces as could be mustered to combat an actual emergency, required for the formation of the higher headquarters staffs and overhead, the depletion of harbor defenses which in an emergency we could not afford to deplete. Even at that it exhibited such serious shortages by comparison with a type army, as 77% in personnel, 100% in 155 mm guns, 94% in Infantry mortars, 67% in machine guns, and 83% in trucks. Shortages in anti-tank weapons were so great as to falsify the picture of satisfactory methods of defense against mechanized forces. And these tanks, indeed, were not for the most part organic with the army but had been secured from elsewhere for the occasion. These shortages, of course, were nation-wide and not restricted to the First Army. For one river crossing at Plattsburg approximately half of all the modern ponton equipment in the Army was concentrated at the maneuvers.

There were serious deficiencies in training, too -- in deployment, the use of concealment and cover, the formulation and transmission of orders, and the commitment of weapons. Although excellent aerial photographs and maps were distributed to all ranks down to include corporals, it was not apparent that much advantage was taken from them.

"The only remedy for the deficiencies noted, particularly in the

field of training", wrote General Drum, "lies in the organization now in time of peace of a Field Army. Such organization should be brought into being without delay. The present world situation demands a radical departure from our peace time practice. It will take time to create an effective Field Army possessed with a high degree of training and imbued with that unity of purpose and morale so essential in combat. The Field Army need not be large, but efficiency demands that the necessary units thereof exist in peace and that they be brought together in one locality frequently for training. Corps and Army Headquarters should be in being and functioning. The necessary types of Corps and Army troops should be present for duty. This matter is one of highest importance to our National Defense." (22)

In the normal course of events no other field exercise on a large scale would have been held until four years later in 1943. However, the limited emergency declared by the President in September 1939 after the outbreak of war in Europe made funds available for the initial planning phase of a maneuver to be held in the late summer of 1940. The need for further field maneuvers was very apparent to anyone intimately connected with the Army. It was not, however, until the catastrophic European events of May and June that the feeling of the urgency of the need became widespread. Funds for the 1940 maneuvers were made available in May when Congress at the behest of the President appropriated what were then thought to be very large sums for the increase, training and equipping of the army. Congress and the public were at last involved in the war. The Army was no longer the unwanted and unprovided for stepchild. Before the maneuvers were finished Congress would authorize the federalization of the National Guard units which participated in them.

The exercises in 1940 followed a general pattern similar to the ones in 1939 (23). Even if any great change had been desirable, as it was not, there would hardly have been time to effect it. The most significant loss was the participation of the 7th Cav. Brig. (Mech) and the tanks of the 66th Infantry. These units were now acting as the nucleus for the formation of the new Armored Force. The most significant gain was the bringing together of the whole army in a single concentration. This meant that approximately 90,000 troops would be available for coordinated exercises in one area. Moreover the duration of the maneuver was extended this year to three weeks. The place selected was a large area in the St. Lawrence country of Northern New York in the general vicinity of Canton. It was of sufficient extent to allow a wide separation of the opposing forces so that considerable initial movement and reconnaissance would be necessary before contact was established.

The period August 8-12 was devoted to field training of small units. A reinforced brigade exercise was held on August 13-14, division exercises from the fifteenth to seventeenth and finally a two sided Army exercise from August 19th to 22nd and a critique on the 23rd.

The general situation assumed for the army exercise was a state of war between the United States (Blue) and a coalition of eastern and western powers (Black) with considerable naval strength. Black had made landings in force in Massachusetts Bay, Narragansett Bay and on the New Jersey Coast. By 1 August 1940 the main forces of both sides were temporarily stabilized on the line Pittsfield, Mass. - Bridgeport, Conn., in the New England Sector, and on the line New Brunswick - Camden in New Jersey. Subsequently, the Black I Corps moving from New England advanced west via the Lake Champlain area and opposed by small Blue forces succeeding in reaching the Racquette River the evening of August 16 when it lost contact with Blue Forces which had withdrawn toward

Watertown. The main forces of both sides were by then in contact along the general line of the Hudson River south of Lake George and in New Jersey.

The Blue Forces consisted of some provisional organization of headquarters and special troops, some service units, the 244th CA (NYEG) as army artillery, an Air Defense Command, three Aviation Observation Squadrons, the 22d Cav Div (less 54th Brig) and 21st Cav Rcn Sq., and the 27th, 28th, 29th and 44th Divisions (II and III Corps). The Black Forces included similar forces in smaller numbers and although they had superior aviation they lacked extra-divisional artillery and their main strength was in the 1st, 26th and 43d Divisions (I Corps).

The 1st Division had been reorganized under the then new triangular division plan and was capable of rapid movement. This mobility was balanced on Blue's side by the 22nd Cav Div and a highly mobile provisional army reserve which was secretly organized and assembled mainly from the 27th Div consisting of a regiment of Infantry a battalion of Field Artillery, a company of Engineers and two tank companies. This force was under the command of Brig. Gen. Disque and was known as Disque's Mobile Force.

As the maneuver was played, Black, while awaiting reinforcements (from its presumed main body on the Hudson to the south) was forced to take the offensive in the face of a stronger force and in a river crossed terrain which was more suitable to the defense. Its 1st Division swung to the north and attempted to turn Blue's flank. At the same time Disque's Mobile Force penetrated Black's south flank and threatened the whole Black rear. The other units of both sides advanced on a generally frontal line effecting and attempting to hold river crossings and trying to break through and destroy each others forces. In the end, Blue's numerical superiority (approximately 2 to 1) forced Black to withdraw and limited its action to counterattacks against Blue's advance and the exercise was concluded.

The higher commanders in the maneuvers had very evidently been watching the recent developments in Europe. There was full consciousness and concern for the new methods and techniques of warfare. All available aviation was used not only for observation but for attack, and a fairly complete understanding for a tactical air force seems to have been held. The concept of organic air defense weapons and procedure in small units to supplement the larger AA artillery of the Army had come into being. Moreover, for the first time in the history of the US Army a rather complete Air Defense Command with elements of the necessary ground and air units needed, established and operated a system of unified air defense for an army in the field. The Command comprised a brigade of three regiments of antiaircraft artillery, one pursuit squadron later augmented by a second and an Aircraft Warning Service covering the area extending south of Black territory to the Mohawk Valley and eastward to the Hudson River and Lake Champlain. The Army AA units were disposed to cover Army troop installations and communications. During the exercises Corps AA regiments were moved with the action to protect river crossings and some Army units were displaced forward to cover Corps rear area installations.

Observation posts were established in cooperation with local organizations including the New York Telephone Company, posts of the American Legion, and State and Federal fire observation systems. Over 400 such posts were manned by civilians and operated on a 24 hour service basis from August 15 to 22, covering an area of some 7500 square miles. This required the service of about 5300 observers. Within the maneuver area proper, 2d antiaircraft artill-

ary observation posts were set up and manned by the army and corps AA regiments to supplement the civilian warning service.

The operation of the Air Defense Command in this maneuver was not a complete success. The aircraft and the artillery (particularly searchlights) which were available proved inadequate as did the communications equipment and personnel, especially in a moving situation. Of course it can be maintained very reasonably that training and test situations of this kind are successful only insofar as they expose deficiencies. From the standpoint of future operations the experiences of the Air Defense Command were unquestionably beneficial (24).

General Drum, at the opening conference of the maneuver, commented on the great technical advances of warfare. He said that in the past soldiers generally were required only to fire a rifle and march but that after reading the accounts of the present war, everyone could realize that those days were gone forever. He said that soldiers must be trained as specialists to understand intricate and technical mechanical equipment and arms and field craftsmanship. They could not be taught those objectives in a few days or even months. "Troops must be taught to strike with the speed and power of lightning because that is the way war hits now." He felt that our soldiers must know not only the technique and tactics of modern warfare and the use of cross-country routes and cover, but also how to operate tanks, how to handle airplanes, and how to fire modern weapons accurately. In other words, they must not only be field soldiers but also competent mechanics and engineers and the speed of modern war required the individual officer and enlisted man to have physical and mental stamina capable of day and night exertions even to several successive marches of 30 miles in 24 hours.

General Drum indicated a belief that all these things pointed out many lessons for the training to be undergone in the maneuvers. Unfortunately, the forces present did not have available all of the arms, weapons and transportation essential to such training. Although they used motor cars and light trucks as substitutes for scout cars and light tanks, they were still able in only a minor way to illustrate the coordinated blows of combat aviation, mechanized forces, tanks and the speeding advance of motorized troops.

There was one lesson however which needed no special equipment. "Let us avoid", the General said, "before it is too late, the doctrines of the supremacy of the military defensive which have led to the ruin of France and forced England to face so many disasters. We are a peaceful people and in our innermost feelings desire only to defend our nation and ourselves, but these desirable national aspirations should not be confused with the spirit, the will and the determination essential to the successful soldier -- the military man who insures our peace must be a fighter imbued with an offensive spirit. He must apply this spirit to modern weapons and to the hierarchy of our whole military organization, from the smallest squad to the field army. This offensive military spirit should permeate our military operating plans and actions. We have seen a strong military nation stand in defense behind a fortified zone so long that its power, incentive and will for the offensive were so dissipated as to cause its ultimate ruin. Modern weapons are of little value in battle if an offensive military spirit is lacking to the personnel manning them."

General Drum believed moreover that the advent of new techniques and weapons had not so altered the conduct of warfare to an extent that men and small units had lost their primary importance. While the troops were or-

ganized for the maneuvers into an army, corps, and divisions, and would train as such he wished it to be borne in mind that battles were still primarily won in the air and on the ground, by small units -- air flights, and Infantry and Artillery battalion teams and tank groups. "Approach to and the conduct of battle" were the training objectives he had announced for the maneuvers. It was essential that small units fight successfully before larger ones could be assured of decisive results. Commanders of all echelons were advised that the new speed and mobility were not to be substituted for accurate reconnaissance, careful planning and definite objectives. Each local fight and each battle would necessitate a preconceived plan understood by all concerned. Speed was to be encouraged in all ranks but speed for speed's sake alone was generally useless and entailed great sacrifice. Jumping into motors and racing commands around without preconceived plans and coordination -- a tactic that was all "blitzing" and no "kreiging" was to be avoided (25).

The last of peace time maneuvers of the First Army took place in the Carolina Maneuver Area (several counties from both North and South Carolina) in the late fall of 1941 (26). It had been the intention of the War Department to hold maneuvers for all four armies during the early summer in order to use fiscal year 1941 funds and also in order to complete the exercise well before the release of first priority units of the National Guard from federal service, the term of which was for 12 months only (27). The long desired expansion of the army which was taking place at this time turned out to be not an un-mixed blessing. The established idea of mobilization in this country was like the provision of the farmer who out of his harvest hopes to have enough left in the spring both for seeding the new crop and for food until the new crop is ready. But the force which we had on hand at the start of mobilization was too small to provide properly the many nuclei for expansion and still remain effective in itself. The drain on the old units for cadres for the many new units was greater than the old units could bear and as a consequence the whole army was for a time a collection of new untrained units and the effective fighting force was negligible.

General Drum wrote to the Commanding General, GHQ, in February 1941 (28) that to commit units to corps and army maneuvers before they had completed range practice and been thoroughly grounded in the combined operations of combat teams would tend to retard rather than promote the progress of unit training. He did not consider that his army as a whole would be trained and equipped for large scale maneuvers before late September. Moreover unfavorable climatic conditions in the south during the early summer months and restrictions imposed by unharvested crops and the time-consuming operations involved in securing trespass rights and leases over private property throughout so extensive an area as that required for large scale maneuvers all tended to confirm his conclusion that corps and army maneuvers for the First Army should not be held prior to October. Even if a few National Guard units were returned to State Service at that time the largest part of the First Army would still be intact. While appreciating the fact that in time of peace the availability of funds is often permitted to outweigh all other factors in determining the time and place of large scale maneuvers, the excessive damage to growing crops which would inevitably result from extensive military operations held prior to the close of the current fiscal year and the difficulties and expense involved in the settlement of claims arising therefrom were believed to offer adequate justification for seeking to extend the applicability of currently available funds through legislative action.

General Drum won his point (29). The First Army did not assemble for maneuvers until October. However, most of the preceding year its units

were separately engaged in field training which at that time became not an infrequent event as before, but routine. The First Army began training under a unified directive on October 1, 1940 beginning with basic individual and small unit training by all units in accordance with Mobilization Training Programs and passing on through phases of progressive training from smaller to larger units. Organizations activated or inducted later followed a similar sequence. All divisions and army corps carried out command post training simultaneously with unit training of each echelon, including a command post exercise for each division prepared by Army Headquarters and conducted by a corps headquarters. All the divisions conducted regimental and brigade combat team field exercises during this period. Divisional field exercises were conducted by all army corps. The VI Army Corps held corps maneuvers over a three week period. The II Army Corps sent each of its divisions to A. P. Hill Military Reservation for several weeks field training. The I Army Corps, in addition to field training for each of its divisions near their home stations, had one week of field training in the Carolina Maneuver area prior to the First Army maneuvers.

The value of this preliminary training as well as the value of the maneuvers was greatly increased by the fact that the expansion of the army had permitted the early organization of army, army corps and division staffs, and of army and army corps troop units. In this way the unprofitable experiences of previous years with improvised headquarters and staffs were avoided.

Moreover, the field forces were now enabled to devote themselves to their primary purpose of troop training. A War Department letter in October, 1940 directed that such troops of the field forces as were then under the command of Corps Area Commanders be removed from that command and pass to the command of Army Commanders (30). As a corollary, Army Commanders were relieved of all responsibility for a supervision over Corps Area activities. In this way the Army Commanders gained direct access to their troops and were freed from the administrative details and duties of posts, camps and stations. The Corps Area Service Command which had been one of the elements of a Corps Area grew to become the principle section and finally replaced its parent organization.

The First Army together with attached and associated troops began its concentration in the Carolines in the beginning of October 1941. This was a maneuvers which by its scale entirely dwarfed any previous exercises in which this organization had participated. The duration of the training was two months. In its final GHQ phases it involved approximately 400,000 troops. Not all of these, of course, were First Army personnel. Attendance of the First Army aggregated just under 200,000 or approximately two-thirds of authorized strength. In spite of expansion and rearmament there were still serious shortages of both personnel and equipment. These amounted, for example, to 10% in infantry mortars, 40% in 37mm guns, 18% in 155mm and 87% in .50 cal. machine guns. Nevertheless, there had finally come into being a trained and fully functioning field army. Although the full amount of authorized equipment and supplies had not always been available, training had progressed to a degree which would permit rapid absorption of the new equipment as it was received. Training had progressed from the basic instruction of the individual soldier on through the training of small units to that of divisions. It was realized that some of the training would have to be reviewed in the future. That could be done later as it appeared necessary. The purpose to be accomplished now was the tying together of the various units into the picture of the Army team. Three rather separate combat elements had been developed; ground divisions and corps, armored forces and separate tank groups, and air-ground supporting forces. While these three combat elements had been trained separately, they were essentially integral and integrated components of a combat army. To integrate their employment was the big purpose of the 1941 maneuvers.

The maneuvers were divided into three periods. October 6 to 18 was allocated to army corps commanders for command post exercises, field exercises, and other corps training. October 20 to November 14 was to be used by the First Army to conduct three separate and distinct maneuvers and the final period, November 16 to 30, was left for GHQ, for a separate field maneuver prepared and directed by that headquarters.

The large organizations participating in the 1941 Maneuvers were the I Army Corps (8th, 9th, and 30th Divs), II Army Corps (28th, 29th, and 44th Divs) and the VI Corps (1st and 26th Divs). In the GHQ phase the First Army with these three divisions was opposed by the IV Army Corps (4th, 31st, and 43d Divs) and the I Armored Corps (1st and 2d Armored Divs). In addition to the divisions, there were considerable numbers of Army and Corps troop units and of GHQ aviation.

The nature of the Corps exercises which occurred during the first period of the maneuvers can be seen from the missions assigned to participating groups. Some of these were: Occupation and defense of high ground in vicinity of Blackstock; advance and development of Blue dispositions in preparation for offensive by a Red corps (assumed); offensive against Red forces between Wateree-Catawba and Broad Rivers; seizing of line of Highway SC 227 and Highway SC 704 with security detachments and occupation and organization of high ground Cornell-Woodward; securing crossings over Lynches River on Highways SC 9 and SC 906; a night tactical march (approximately 20 miles) and coordinated attack; representation of attack of position by all arms including simulated air, parachute and armored attacks.

The Army conducted maneuvers (Field Maneuvers Nos. 1, 2 and 3), which comprised the second phase of the exercises, afforded opportunity for each army corps to operate as a unit with its organic and attached troops. Also, in Field Maneuver No. 3 the First Army, composed of the II and VI Corps and Army Troops, including the GHQ and First Army Tank Attacker units, was opposed by the I Army Corps and the 1st Armored Division. This gave the army corps coordinated training with the higher echelon, association with other troops not normally with the corps, and experience in operating with and against armored forces. Army Headquarters, at the same time, gained practice in controlling several army corps and special units, particularly the Tank Attacker groups. In all these respects it was valuable preparation for the exercises directed by GHQ.

The final period of the 1941 Maneuvers was devoted to exercises prepared and directed by GHQ and divided into two phases. In these, the entire First Army with its eight divisions and strong tank-attacker groups was opposed by the IV Corps with three divisions and the I Armored Corps with two divisions.

In line with recent developments in warfare certain special task forces were assembled for use in the maneuvers, -- tank attacker, anti-submarine and Army reconnaissance. The Tank Attacker Detachments utilized the forerunners of what later became a separate arm of the service, the Tank Destroyers. As formed here, however, they were composite groups composed of reconnaissance aviation, cavalry, field artillery, provisional Tank Destroyer battalions (simulated self-propelled guns), motorized infantry, combat engineers, tanks, antiaircraft and chemical troops. There were three of these groups. Two of them had offensive

missions of moving to meet hostile threats and destroying hostile forces before they could have decisive effects on Army operations. Their main forces were to remain in concealed positions near an adequate road net until their own or other reconnaissance elements had secured information of enemy dispositions. A third group without aviation or self-propelled guns was given the mission of protecting the Army rear area installations against mechanized attack. In addition to these three groups there were also available for the final month of the maneuver three others formed by the CG, Third Army, under GHQ direction, and similar in mission to the offensive Tank Attacker Groups.

One Antiairborne Detachment consisting of a platoon of cavalry and a battalion each of motorized infantry, field artillery (105 mm HOW) and Coast Artillery AA was formed to destroy hostile airborne forces attempting to capture areas decisive to Army Operations. The actual landing of paratroops did occur during the maneuvers and while the antiairborne detachment did not have the opportunity to oppose or attack the actual landing they did successfully round up troops from the landing who infiltrated into the area in the rear of Army Headquarters.

A third special task force was an Army Reconnaissance Detachment of cavalry (H-M). Their mobile operations for intelligence and counter-intelligence purposes were highly successful and included deep penetrations of enemy flanks and rear areas which resulted in valuable positive and negative information of troop movements and the identification of units. On one occasion they captured the complete field order of the RED IV Corps and transmitted it promptly to Blue Headquarters.

In January 1942 the First Army issued a Training Memorandum which analyzed the training and maneuvers of 1941 (31). At the conclusion of maneuvers a need was felt for further experience in coordinated support with air and mechanized forces but the great fault which became apparent in the test which the field exercise offered was with the training of the individual soldier and the mechanism of battle as exemplified in small unit conduct. Admittedly, the quality of the instructors and the methods of instruction used had not been the best. Furthermore garrison turmoil, housekeeping and administrative duties, losses of personnel and receipt of replacements had obstructed training progress. The complaint against this training deficiency is, however, so old and on the whole so well founded that one might question the possibility of overcoming it. Troops are said to learn fast in battle. Many a commander has greatly blamed himself for the high price of instruction at that time. It was instruction that should have been acquired earlier and not at the cost of lives. Speaking of the disregard of air threats and the lack of measures of passive defense against them the Training Memorandum states, "It is unreasonable to ask that human lives must furnish our first effective lessons in this respect." Among other factors in the winning and losing of battles the conduct of the individual and small units is a very large one. Yet it may not even seem in ordinary maneuvers to be a teachable one. Even at a late period of the war which ensued, serious criticisms were made of the degree of training shown by replacements sent to the fighting fronts. On this basis it seems probable that any peacetime maneuvers will make a poor showing in respect to individual and small unit training. The long experience of the First Army from 1935 through the several maneuvers and command post exercises through 1941 would seem to indicate that much can be taught and learned in peacetime training and field exercises concerning familiarity with plans and SOP's, the strategic employment of troops, technical skills and administrative details. It may be too much, however, to ask in addition that large bodies of men, who are essentially members of the civilian community, remote from war or an enemy, to suppose the unimaginable difficulties and resources and incentives of battle.

CHAPTER II.

SEACOAST ARMAMENT AND PERSONNEL

The basic structures of the Eastern Defense Command were the Coast Artillery armament and troops of the harbor defenses. Other troops and other weapons in large numbers were added from infantry and cavalry and air corps but the harbor defenses were there to begin with and when the command was reduced by the release of the other troops the harbor defenses, though reduced themselves, were still there.

Along the eastern coast of the United States there are certain areas containing harbors which are considered of high strategic importance for one or both of the following reasons: - because they have good harbors for the shelter and traffic of naval vessels, or because they give access to important industrial areas. These defended harbor areas in geographical order from North to South are Portland, Maine; Portsmouth, N. H., Boston, New Bedford, Narragansett Bay, the eastern entrance to Long Island Sound, New York, Delaware Bay, Chesapeake Bay, Charleston, and Key West. In addition to these, there were other smaller areas of lesser importance for which a temporary light defense was provided during the war. Harbors are primarily important in war as bases of supply and operations. Their dock facilities and the rail and road nets which radiate from them could be as valuable to an enemy who brought a war to our shores as they are to us in bringing war to the enemy. The great convoys of men and materiel which achieved the victory for the Allies in Europe sailed from New York and Boston and Charleston and Hampton Roads. Our Navy operated from these ports and from Portland and Narragansett and Key West. In addition to the bases for supply and operation which the ports furnished, many of these areas were the greatest industrial areas on the Continent. Our Navy was in large part built in the protected harbors of the Atlantic coast and much of the other munitions of war was produced here. Delaware Bay gives access to Philadelphia, Camden, Wilmington, and Chester. Chesapeake Bay is a waterway to Norfolk, Newport News, and to Baltimore and Washington.

The harbor defenses were planned and equipped, in order that our shipping might move freely through and in and out of the harbors, in order that access to the harbors might be denied to enemy ships, in order that our shipping and shore installations might be secured from enemy naval gun and torpedo fire and in order that they might support any defense to be made against landing attack. Each harbor of course had its special situation and not all of these missions were assigned to every harbor. Portsmouth, for example, had until after the modernization program no means to prevent naval bombardment and no mission to do so and several harbor defenses were unable and not required to cover the movement of shipping entering or leaving the harbor.

As a matter of fact, few if any, of the harbors were really effectively able to carry out the whole mission which they were assigned with the armament which existed prior to the war. In 1930 there were distributed along the eastern coast 150 seacoast artillery batteries of all types. Twenty of these batteries were the outmoded mortar type and sixty-four the slow and hardly more useful disappearing carriage models of the late 19th Century. All of this armament was the result of two previous modernization programs. In 1885, before the war with Spain, the Endicott Board was appointed by an authorizing act of Congress to draw up a scheme of modern fortifications for our coastlines. The recommendations of this board which were in small part carried out before the Spanish War started, contemplated the establish-

ment of 2,362 guns and emplacements. In spite of this, the Coast Defense Board or Taft Board which functioned in 1906 found that the coast defense we then had would be unable to keep off transports loaded with enemy troops although it might be useful in holding off larger and consequently slower ships. Chesapeake Bay which was later to be the most powerful harbor defense in the country was found to be entirely open for all practical purposes.

The work of these two boards was reviewed by an authorization of August 1931 (1) and once more the existing armament was found to be outmoded. In the next few years projects were proposed and approved to revamp the harbor defenses in reference to their assigned missions (2). Actually, few changes of any great consequence were made at this time. The recommendations made in the projects were very modest because at this period of low, almost non-existent army appropriations, there would be little money forthcoming to pay for major changes. Many of the hundred and fifty existing batteries were incomplete particularly in fire control equipment. The projects confined themselves therefore to planning the completion and improvement of existing batteries, their reinforcement in emergency by mobile armament and, where other existing armament made it possible, advocated the elimination of batteries which were no longer useful. Besides the disappearing carriage guns which had once been held in such high favor, there were, for example, some guns on sliding barbette carriages which were capable of a rate of fire of only one round every five minutes. These, however, noted as they were for extremely accurate fire, were retained in the projects in lieu of any faster armament to replace them. But of twenty-four 10" DC batteries only Battery Bohlen at Portsmouth and Battery Thomson at Charleston were retained. Eighteen other batteries of various types were also dropped from projects originated by the 1931 authorization.

The principal requirements of the Harbor Defenses of Portland were to prevent entrance of enemy ships into the Harbor and to hold their naval units to a line far enough from shore to render bombardment ineffective. This task was simplified by the fact that there was only one waterway, which would permit the entrance of capital ships into Portland Harbor and the only possible approaches to that channel were covered by existing armament. The only long range battery at Portland was Battery Foote (12" DC) but the siting of other armament was advantageously far enough to seaward as to give it quite good ranges in respect to the harbor facilities and anchorages. Battery Foote at Fort Levett (Cushing Island) could bring fire to bear on any ship approaching within 27000 yards of the main entrance channel at Portland Head. This was the only battery which could hold enemy capital ships at such range as to reduce the effectiveness of fire on shore installations and harbor shipping. To some extent this battery would also be able to protect the entrance or debouchment of our own naval vessels, though this was not required (3).

At Portsmouth, whose mission did not include defense against naval bombardment, there were only two batteries of caliber larger than 3". It was necessary therefore to keep both of them and even at this, the maximum range was only 17000 yards from Ft Stark. These batteries did, however, cover the approaches to the single deep channel entrance to the harbor and therefore, as long as they lasted, could deny access to the harbor by enemy capital ships (3).

In Boston, Battery Long, two 16" guns at Fort Duvall assisted by Battery Gardner, two 12" guns at Fort Ruckman, would be able to hold enemy ships to a line 35000 yards from the entrance to North Channel thereby insuring free movement of our vessels in and out and preventing the bombardment of the harbor and shore facilities. None of the other batteries had sufficient range to permit them to take any part in these missions except that they could bring heavy fire against ships which came within 24000 yards to 30000 yards of the Navy Yard at Charlestown. They could not prevent fire against shipping in

the harbor. They could hold enemy ships more than 15000 yards from the secondary batteries covering the mine fields making it very difficult for the enemy to support sweeping operations with heavy units. Five 10" DC batteries were eliminated from this project since their fields of fire duplicated those of other batteries while adding little to them. A battery of mobile 155mm guns was planned for emplacement at Nahant (3).

The next three Harbor Defenses, New Bedford, Narragansett Bay and Long Island Sound were considered to be mutually supporting installations to cover all of the navigable waters on the south coast of New England from the southwest tip of Cape Cod Peninsula (Woods Hole) to the eastern entrance to Long Island Sound, securing them to us, denying them to an enemy, covering the debouchment of our fleet into the Atlantic, protecting our shipping and shore installations from Naval bombardment and supporting the defense against landing attack (4). New Bedford was a small Harbor Defense with a big mission. There was no armament there (Ft Rodman) except a 12" BC Battery (Battery Milliken) and two 8" guns on disappearing carriages. It was all retained. Battery Milliken with a range of almost 30000 yards was considered capable of covering all of Buzzards Bay and much of Vineyard Sound while the 8" guns would be useful against cruisers, and to some extent transports, at close range. There were no secondary rapid fire weapons, and it was considered necessary to increase the armament by a battery of 155's to meet the threat of small fast targets such as destroyers (4).

The existing armament at Narragansett Bay though considerably more extensive (36 guns) was hardly more useful. Most of the guns were slow in their actions. The greatest range was 17000 and armament could be more advantageously sited seaward at Ft. Judith and Sakonnet Pt. which at that time were the outer limits of the existing fields of fire. The project prepared under the 1931 authorization therefore contemplated the elimination of four existing batteries and the emplacement of two 16" guns and two 8" guns, all on barbette carriages, on Sakonnet Pt. Peninsula, a similar 16" battery and a 155mm battery at Ft Judith and an 8" battery on railway mounts at Narragansett Pier.

The Harbor Defenses of Long Island Sound in the vicinity of New London, Connecticut, held the west flank of the area. Its unique long range battery consisted of a single 16" gun on a disappearing carriage and the fire of one gun was considered insufficient to insure keeping enemy vessels beyond its field of fire. The fields of fire of all other armament (39 guns) were such that they could neither prevent the bombardment of New London by capital ships nor assist in supporting the defense against a landing except inside the line Fishers Island-Gardners Island. Nor could these batteries alone cover the debouchment of our naval vessels from Long Island Sound into Block Island Sound. It was planned to strengthen these defenses by the addition of two 14" and two 8" batteries near Montauk and four 155's in a position to cover Fishers Island Sound. All of these mobile guns were to be provided with concrete emplacements to permit a wide field of fire. Two 10" batteries and four 3" batteries which existed were no longer required (4).

Because of its high strategic importance and because of the land and water formations a rather complex problem was offered by the region adjacent to New York City. This was at one time considered as three separate Harbor Defenses, - Eastern New York on the North shore of Long Island at Fort Totten; Southern New York, at the Narrows between Brooklyn and Staten Island; and Sandy Hook, protecting Ambrose Channel between Sandy Hook NJ and Rockaway Point on Long Island. Ultimately these became a single harbor defense. Since the Harbor Defenses of Long Island Sound would presumably prevent all enemy penetration through the Sound, except for the possible entry by stealth of submarines or other small craft, the defenses at Fort Totten were let stand at two 3" rapid fire batteries. As a matter of fact, no new armament was added elsewhere in the Harbor Defense. The defenses at Ambrose Channel were

good, including as they did a 16" battery on one side (Battery Harris at Ft Tilden) and two 12" batteries (Kingman and Mills at Fort Hancock) with almost 30,000 yards range on the other side. These were supported by other lesser guns. The inner defense at the Narrows consisted entirely of old guns which had neither range nor rate of fire to make them of any value if the long range weapons of the outer defenses should fail. They might prevent the passage of enemy vessels through either Ambrose Channel or the Narrows but capital ships could lie outside of their range and place effective fire on all parts of New York Harbor, in the East River and in the Hudson River. The whole artillery defense of New York against naval attack rested on Batteries Harris, Kingman and Mills (4).

The distance between Capes May and Henlopen which mark the entrance to Delaware Bay is only about ten miles and the passage could be easily covered. The fortifications in the area however, were ancient and had been sited eighteen miles up the bay at Fort Saulsbury where there were two batteries of 12" BC guns and the remaining armament some thirty miles further on at Fts. Mott, Dupont and Delaware in the vicinity of Wilmington where they were of dubious value. The project which was planned under the authorization of 1931, while retaining some of the old armament - notably that at Saulsbury, in effect moved the whole defense forward by planning to arm the Capes with 14" and 8" railway guns and batteries of 155's (5).

A somewhat similar situation existed at Chesapeake Bay where most of the existing armament was sited at Fort Monroe far back from the Capes. Accomplishment of the Harbor Defense Mission, however, particularly as it applied to covering the debouchment of our fleet would require that enemy ships be prevented from closing within 35000 yards of a line running from Cape Henry to a turning buoy 6500 yards to the North. The one battery sited at the Capes, Battery Pennington at Fort Story, a 16" howitzer battery, was not able to do this. The solution here was much the same as at Delaware (6).

The Harbor Defenses of Charleston ultimately underwent a more complete change than any other harbor on the coast, preserving only one battery (Lord, 3" BC) of the nine which it had in 1930. In the early thirties, however, the projected modernization included the addition of only a battery of 155mm guns and the elimination of four of the less effective batteries. Those that were to be retained were not much more effective and were later dropped. They included a 12" Battery - Huger (one gun of which was mounted on a barbette and the other on a disappearing carriage), two 12" mortar batteries and a 10" disappearing carriage battery (7).

Key West also planned to add a battery of 155s and retain such other armament as it had, which was not much to be sure, Osceola 12" BC, Seminole 12" Mortar, and Ford and Inman, each 3" pedestal mount batteries (7).

Also included in the planning during the thirties to supplement the armament were projects for underwater defenses in the principal channel in most of the Harbor Defenses (2). For reasons of adverse tidal conditions or water depths, or because they did not pertain to the mission, no projects were planned for New Bedford, Long Island Sound, Charleston or Key West. The projects which were planned included, in addition to fields of Army controlled mines, large fields of Navy contact mines, as many as 3000 in New York and 1500 in Chesapeake Bay. In several cases, Navy contact mine fields were actually emplaced at the start of the war but they were later swept up when more extensive coverage by the superior army-type M4 ground mines were secured. The Navy mines were inferior not only because the life of a field was limited to about twelve months, but because they were a menace to our own shipping particularly since they had a tendency to "walk" or move from positions where they were originally planted.

Work went forward slowly on these minor changes and improvements to harbor defenses during the thirties (8). But in 1940 the threat of conflict engendered a whole new modernization program which was directed by the Secretary of War in September 1940 (9). Numbers of 16" and 6" guns were allocated to the various harbor defenses and a board within each one determined the siting of the armament and planned such other extensive projects as the shielding or casemating of other batteries and the construction of fire control installations and of bombproof command posts (10). The projects as finally approved and including underwater defenses ran to well over a hundred million dollars. The whole picture of the harbor defenses was changed by the addition of new armament and the elimination, either immediately or "upon completion of the modernization program," of sixty-one batteries of the hundred and ten not already dropped or authorized to be dropped. This effectively disposed of the mortar and the disappearing carriage batteries as well as of some others of limited utility, and the new harbor defenses which were for the most part sited as far seaward as possible, were based on two basic weapons, the 16" gun for use against heavy units and the long range new 6" gun (20,000 yds. effective, 27,000 yds. maximum) for use against the smaller and faster targets. These two weapons together could take care of almost any naval unit sent against them with the exception of motor torpedo boats. Originally, twenty-five 16" batteries, one 8" battery and thirty-one 6" batteries were planned as follows:

HD Portland

16"	Cape Elizabeth*
16"	Peak Island
6"	Cape Elizabeth*
6"	Peak Island
6"	Jewel Island

HD Portsmouth

16"	Fort Dearborn
6"	Odiornes Pt.
6"	Fort Foster*

HD Boston

16"	East Point (Nahant)
16"	Fort Dawes*
16"	Fourth Cliff*
6"	East Point (Nahant)*
6"	Fort Dawes*
6"	Fourth Cliff*
6"	Outer Brewster

HD New Bedford

6"	Mishaum Pt.
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HD Narragansett Bay

16"	Fort Church - approved 1934
16"	Point Judith (Ft. Greene) - approved 1934
16"	Point Judith (Ft. Greene)*
16"	Beavertail*
6"	Point Judith (Ft. Greene)
6"	Fort Church
6"	Fort Burnside
8"	Fort Church

*Batteries eliminated, suspended, or otherwise not furnished during the war period.

HD Long Island Sound

16" Fort Wright*
16" Montauk (Camp Hero)
16" Montauk (Camp Hero)
16" Watch Hill*
6" Fort Wright*
6" Fort Wright*
6" Montauk (Camp Hero)
6" Fort Terry*

HD New York

16" Ft. Wadsworth*
16" Navesink Highlands
16" Rockaway*
6" Ft. Wadsworth*
6" Navesink Highlands
6" Ft. Tilden*

HD Delaware

16" Ft. Miles
16" Ft. Miles*
6" Ft. Miles
6" Ft. Miles
6" Cape May

HD Chesapeake Bay

16" Ft. Story
16" Ft. Story
16" Ft. Custis
16" Ft. Custis*
16" Ft. Monroe*
6" Ft. Story
6" Ft. Story
6" Ft. Custis (Fisherman's Island)
6" Ft. Custis*
6" Ft. Wool*

HD Charleston

16" James Island*
6" Ft. Moultrie*

HD Key West

6" Ft. Taylor*
6" East Martello

*Batteries eliminated, suspended, or otherwise not furnished during the war period.

The first two batteries to be completed were the 6" and 16" batteries at Fort Church in the Harbor Defenses of Narragansett Bay, construction of which had been authorized under the previous project (8). They were finished and manned in January and May of 1942, respectively. The first battery to be eliminated from the project was the 16" battery at Fort Wadsworth which was dropped by the local site board. Work on the other batteries proceeded according to priorities assigned for their construction. In November 1942 nine low priority 16" batteries on which construction had not yet started were eliminated from the projects by the War Department. The reason which the Department gave for their action was "to place this program in a workable condition and to effect a reduction in the requirements for seacoast batteries in line with the acute shortage of critical materials." The eliminated bat-

teries included the ones at Cape Elizabeth in Portland, Fourth Cliff in Boston, Beavertail in Narragansett Bay, Watch Hill in Long Island Sound, Rockaway in New York, Fort Miles (Cape Henlopen) in Delaware Bay, Fort Monroe and one of the two at Fort Custis in Chesapeake Bay and James Island in Charleston.

Similarly, in August 1943, thirteen 6" batteries most of which were in advanced stages of completion, were suspended from further construction because an expansion in the more pressing field artillery program had caused a shortage of gun tubes. These batteries were under construction and some had been completed with the exception of the tubes. The cutback in construction included a 6" battery at each of the following places: Cape Elizabeth in Portland, Fort Foster in Portsmouth, Nahant East Point, Fort Dawes and Fourth Cliff all in Boston, Fort Wright and Fort Terry in Long Island Sound, Fort Wadsworth and Fort Tilden in New York, Fort Custis and Fort Wool in Chesapeake Bay, Fort Moultrie in Charleston and Fort Taylor in Key West. Finally a cutback in November 1943 affected three 16" batteries, one at Fort Dawes in Boston, one at Fort Greene in Narragansett Bay and one at Fisherman's Island in Long Island Sound. In the end, therefore, twelve of the planned twenty-five 16" batteries, and eighteen of the planned thirty-one 6" batteries were actually completed during the war period. Some of the new batteries were not actually finished until the war had taken such a turn that the need to man them was not great and for the lack of personnel, which had been transferred to other duties outside of the harbor defenses, they were never manned.

It becomes apparent from a glance at the tabulation by harbor defenses of new 16" and 6" batteries that the combination of planning and cutbacks affected each one in a different way. Some were greatly changed and strengthened in spite of cutbacks as Narragansett, Delaware and Chesapeake Bays. To the already sizeable defenses of New York and Boston only a single battery of each type was added in either place. New Bedford and Key West got only a 6" battery apiece, and Charleston, for which a 16" and a 6" battery had been scheduled, got neither. When the 16" battery at Charleston was cutback in 1942 it was evident that something else should be furnished to supplement the outmoded 12" Battery Huger. In the following February construction was started on a new 12" battery the guns for which had been removed from Galveston, Texas. A similar 12" battery was substituted for a 16" battery at Fort Miles, Delaware with the movement of old Battery Haslett from its former location up the bay at Fort Saulsbury. This was also done in the spring of 1943.

The incompleteness of harbor defense armament during the period of maximum threat to our coastline necessitated the use of mobile 8" railway and of 155mm batteries not only as temporary substitutes on the sites of batteries under construction but also in setting up temporary harbor defenses in places where no other armament existed or was planned. It is interesting to note in the light of later developments by which so many coast artillery troops were converted to field artillery to meet a shortage in that branch, that for short periods in 1942 field artillery units equipped with 105mm howitzers and 75mm guns were installed as coastal defense and taught to fire by coast artillery methods. Field artillery guns occupied positions at Beaufort Inlet and Wilmington, N. C. and at Palm Beach and Fort Lauderdale in Florida.

At various times and for varying periods batteries of 155mm guns were emplaced to protect installations and facilities or to cover favorable landing beaches at the following places: Fort Point (Penobscot Bay), the mouth of the Kennebec River and Biddeford Pool in the Portland Area; Frost Point in the Portsmouth area; Salisbury Beach, Rocky Point, Sagamore, East Point,

Fort Heath and Fort Daves in the Boston area; Butler's Point, Mishaum Point and Fort Rodman in the New Bedford Area; Point Judith, Beavertail, Brenton Point and Sakonnet Point in the Narragansett area; Watch Hill, Camp Hero, (Two batteries) Fort Rodman, Fort Wright and Fort Terry in the Long Island Sound area; Fort Hancock (two batteries), Fort Wadsworth and Fort Tilden in the New York area; Cape Henlopen (two batteries), Cape May and Fort Dupont in the Delaware area; Fort Story, Camp Pendleton and Fisherman's Island in the Chesapeake area; Fort Macon and Bogus Bight in the THD of Beaufort Inlet; Marshall Reservation and Folly Beach in the Charleston area; the Temporary Harbor Defenses of Wilmington, N.C., of Savannah, Ga. and of Jacksonville, Fla.; Fort Taylor and East Martello in the Key West area; and at the Temporary Harbor Defenses of Miami Beach, Fort Lauderdale and Tampa (Pass-a-Grille Beach).

In addition 8" Railway guns were used at various times at Fort Hancock, Fort Miles (two batteries), Fort Custis (two batteries), and Fort Story.

As new construction progressed and was completed and as the war situation changed, these batteries were replaced by new fixed batteries, by batteries of 90mm or smaller caliber guns, or were eliminated entirely when personnel was no longer available to man them. Beaufort Inlet, which supplied a refuge to coast-wise shipping in the submarine infested Carolina Capes regions, was furnished with a battery each of 5" and 6" naval guns in the fall of 1942. The THD's in the south were all eliminated in the fall of 1944 after changing from 155's to 90mm guns in the summer of that year.

The 155mm and 8" railway guns were not the only stop-gaps used in lieu of the uncompleted project armament. Many batteries listed in the projects as "no longer required" were in actuality manned, or maintained for possible manning, and their removal was not authorized until the summer or late fall of 1943. In several instances mortar batteries were manned at the start of the war and Battery DeRussy, the last of the DC batteries to be retained in a project, was supplied with a manning detail until November 1942.

A special problem in harbor defense armament was created by the possibility of attack by the fast and powerful motor torpedo boat which, although not a new weapon, was achieving a new prominence in its most recent developments. The only existing harbor defense armament of much value in combating these craft were the 3" rapid fire batteries which were originally sited to cover mine fields and hamper sweeping operations. Thirty-eight 3" batteries, with as many as six guns in some batteries were in existence in the 1930's. No special defense against motor torpedo boats was contemplated, however, at the start of the war but some 3" batteries were later resited for this purpose. In the spring of 1942 an experimental battery (Battery #21) was installed at Fort Story, Va., for use by the Coast Artillery Board in devising tactics for this type of defense utilizing the 90mm AA gun as a seacoast weapon. Anti-aircraft fire control apparatus was also utilized. As a result of these tests, batteries were planned and appeared in all harbor defenses later in the year. The first pattern called for two fixed 90mm guns, two mobile 90mm guns and two mobile 37mm (or 40mm guns). Supplemented by 3" guns and AA guns with secondary AMTB missions there were AMTB batteries of 90mm guns in the harbor defenses as follows: ten batteries in Portland, two in Portsmouth, five in Boston, four in New Bedford, three in Narragansett Bay, five in Long Island Sound, five in New York, three in Delaware Bay, four in Chesapeake Bay and two in Key West. These numbers were reduced from time to time but some of the 90mm batteries were still manned when all other armament along the coast except a few 6" guns had been placed on a maintenance status.

The Army mine fields which had been planned for the harbor defenses were laid in place immediately after the declaration of war. On the New England Coast a single mine planter, the BAIRD, in spite of severe winter conditions laid all the mines in Portland, Boston, Portsmouth and Narragansett Bay, completing the work in early February. During 1943 the availability of the new M4 ground mines to replace the older buoyant type caused a revision of projects. The ground mine, which rested on the ocean floor, was therefore out of the way of shipping passing over and therefore not subject to damage. Buoyant mines, particularly in channels were so often damaged that large maintenance problem was continuously present and even then, the field was likely to be only partly efficient. Moreover the new projects were extensive enough to do away with any necessity for using the Navy contact mine fields which were unstable in their location and had a limited life. A large field was swept up in Chesapeake Bay which had been down less than a year and few were found to be still effective. The new mine projects called for ten groups in Portland, fourteen groups in Portsmouth, thirty groups in Boston, sixteen groups in Narragansett Bay (of which four, the outerline, were not planted), twenty nine groups in New York, thirty-five groups in Delaware Bay and sixty-three groups in Chesapeake Bay.

Guns and mines are of course of value only when manned by trained and efficient personnel. Those along the east coast were manned in varying degrees and strength during the war period in accordance with changes in our own capabilities and those of the enemy. Even in 1943, however, when the harbor defenses reached their greatest troop strength, there were batteries of guns which were not manned. In sheer quantity, if not always in quality, our seacoast armament proved more than adequate to any possibility of attack.

Some idea of conditions which prevailed before the fall of 1940, and therefore of the magnitude of the problem of expansion, can be gained from taking as examples the forts in New England and Delaware Bay. In New England, all the forts with the exception of H.G. Wright (which geographically is in New York) were on a strictly caretaking status. (11) The 8th Coast Artillery was assigned to the Harbor Defenses of Portland, the 9th Coast Artillery to the Harbor Defenses of Boston, the 10th Coast Artillery to the Harbor Defenses of Narragansett Bay and the 11th Coast Artillery to the Harbor Defenses of Long Island Sound. Within the 8th, 9th and 10th CA, all units were inactive except one battery consisting generally of less than 100 men all engaged in caretaking duty only. One or two caretakers only were quartered at the Harbor Defenses of Portsmouth and New Bedford (sub-posts respectively of Portland and Narragansett Bay). The 11th CA stationed at Fort H.G. Wright always had several active units but in spite of this, Forts Michie and Terry which are also in the Harbor Defenses of Long Island Sound were ungarrisoned and on a caretaking status. The only coast artillery troops in the Harbor Defenses of the Delaware were those of Battery E, 7th CA, consisting of two officers and about 50 men. (12) From these, caretaker detachments were furnished of about 28 men at Fort DuPont, 6 men at Fort Delaware, 6 men at Fort Mott and 6 men at Fort Saulsbury. The guns of the Harbor Defenses of Southern New York (Ft. Hamilton and Ft. Wadsworth) had not been fired since 1918. This was not an exceptional case. For example, in the summer of 1941 all of the New England batteries, even the mortars and disappearing guns were put in commission and fired including functional firing for those batteries for which no manning personnel was available, and during this period guns were fired which had never even been proof-fired before. One reason for this can be seen from precautions taken at the firing of the 16" Battery Long located directly in the rear of the town of Hull, Mass. Considerable sections of the town were completely evacuated. Possible damage to civilian communities was also feared from other initial firings. Actually, however, almost no damage was done.

Battery A of the 31st CA was activated in Key West in January 1943 and the remainder of the regiment, which was activated at Camp Pendleton, moved to Key West in April, where subject to subsequent reductions and changes of designation it remained though some of its batteries were later stationed in THD's which were administered by Key West. Previous to its arrival in Key West and subsequent to the departure of the 265th CA, one battalion of the 263d CA from Charleston was stationed at Key West temporarily.

The first big cut in harbor defense troops came in March 1944 resulting in a reduction of approximately 60% of personnel. (13) The 8th, 9th, 10th, 11th, 5th, and 7th CA regiments, the 286th, 287th and 288th CA Bns (Ry) as well as certain batteries of 22nd, 23rd, 240th, 241st, 242nd, 243d, 245th and all but two batteries of the 246th CA Regiments were released to AGF. This left one mine battery and 7 gun batteries in Portland, one mine and two gun batteries in Portsmouth, two mine and seven gun batteries in Boston, two gun batteries in New Bedford, one mine and five gun batteries in Narragansett Bay, seven gun batteries in Long Island Sound, two mine and eight gun batteries in New York, one mine and four gun batteries in Delaware Bay, three mine batteries and seven gun batteries in Chesapeake Bay, two gun batteries at Beaufort Inlet, four gun batteries in Charleston (including the THD's of Wilmington, Savannah and Jacksonville) and six gun batteries in Key West (including the THD's of Miami, Lauderdale and Tampa). These totals include as gun batteries those which did not man any armament but were retained to maintain the larger caliber guns since the only batteries actively manned after this time were 6" and 90mm. The total authorized strength of CA forces in the Harbor Defenses including officers and Warrant Officers was 15,603.

Effective 1 October 1944 units in the harbor defenses were redesignated and reorganized under new tables of organization (14). While this did not materially decrease the number of batteries (which were even increased in some places) internal economies resulted in a decrease of total personnel to approximately 14,000. Existing units were redesignated as lettered batteries of numbered separate battalions or lettered batteries of a Harbor Defense or as numbered separate batteries as in the case of units at THD's. The redesignations were as follows: in Portland the 185th and 186th CA Bn's (each five batteries), in Boston, the 187th and 241st CA Bn's (each five batteries), in New Bedford, the Harbor Defenses of New Bedford (three lettered batteries), in Narragansett Bay, the 188th CA Bn (four lettered batteries) and the 189th CA Bn (three lettered batteries), in Long Island Sound the 190th CA Bn (three lettered batteries) and the 242nd CA Bn (five lettered batteries) and the 245th CA Bn (six lettered batteries), in Delaware the 21st CA Bn (six lettered batteries), in Chesapeake Bay the 2nd CA Bn (six lettered batteries) and the 175th CA Bn (four lettered batteries), in Beaufort Inlet the 246th and 247th CA Btrys, in Charleston the Harbor Defenses of Charleston (three lettered batteries), in Jacksonville the 248th CA Btry, in Wilmington the 249th CA Btry, in Key West the Harbor Defenses of Key West (three lettered batteries), in Lauderdale the 250th CA Btry, in Miami the 251st CA Btry, and in Tampa the 252nd CA Btry.

The THD of Savannah had been dropped in June. Those at Beaufort Inlet, Jacksonville, Miami, Lauderdale and Tampa were dropped at the beginning of November. (16)

The next large reorganization and reduction was ordered in the spring of 1945 (15). Concurrent with the reduction the removal of mine fields was directed on 20 March. All numerical designations were dropped in favor of lettered designations of batteries of Harbor Defenses. Twenty-nine batteries as well as numerous battalion headquarters and headquarters detachments were inactivated effective 1 April. The inactivation of five additional batteries (mine) was to be effected as soon as possible and before 1 July. This resulted

in a single mine battery in each harbor defense which had had underwater defenses; at least one 6" battery in each harbor defense with two in Portland, Boston, Narragansett Bay and Long Island Sound and three each in New York and Chesapeake Bay; and finally two AMTB batteries in Portland, Long Island Sound and Chesapeake Bay and a single battery in Boston, New York and Delaware Bay. This does not indicate that nineteen 6" batteries were actually manned after this time since some units were specifically designated and organized as maintenance batteries and others would be required to devote a good part of their time to maintenance. The term is used rather to indicate the type Table of Organization from which the batteries were formed (T/O and E 4-67, 11 April 1944) and the cells of that table which could be utilized.

The most significant developments in seacoast armament during the war years were the advent of radar and the Anti-Motor Torpedo Boat battery (13). Prior to radar, the range limitations imposed by visibility would have prevented the employment of 6" and major caliber weapons at their normal effective range, since daylight visibility on the Atlantic Coast cannot be counted on to be more than ten to fifteen thousand yards during most daylight conditions and, under searchlight illumination at night, does not usually exceed eight thousand. Visual surveillance, too, is often unsatisfactory and can be depended on only in good weather or close to shore. The advent of radar removed visibility restrictions and although it was not by any means completely perfected during the war years it nevertheless began to appear as the most likely possibility for the primary means of surveillance, fire control, and position finding. The radar types in most general use in 1944 and 1945 were the SCR-582 and SCR-682 for surveillance, the SCR-296 for position finding and fire control for 6" batteries and the SCR-547 for 90mm batteries, although this latter was designed as an optical track, range only set. The SCR-547 could be used, however, with some practice, to give azimuths though not very accurate ones. In some cases, this set was modified in such a way as to permit effective unseen fire. The SCR-584 was found much more suited to the purpose but was not available and therefore did not come into general use.

Actually, the whole question of the AMTB battery was tied in very closely with radar. Its normal target was equipped to lay smoke against optical detection, and since it was itself equipped with radar also, it was assumed that motor torpedo boat attacks would normally occur at night or during periods of poor visibility. Under these circumstances, the visual means of fire control and position finding in combatting torpedo boat attack would be of little value.

Experimental work of much value in developing the tactics of AMTB batteries was performed in the Northeastern Sector by its Harbor Defenses. This was made possible by the location of the Naval Motor Torpedo Boat Training Center at Melville, Rhode Island. Since both the Army and Navy were developing the tactics of the same weapon from different angles the arrangement was mutually agreeable and highly satisfactory. From the Army standpoint these exercises dealt mainly with fire control methods and with determining the comparative effectiveness of impact ricochet and air burst fusing.

On the twenty-fifth of July 1945 a letter was sent to Chief of Staff, U. S. Army, recommending the adoption of a unified training program for Harbor Defenses (17). By this date, the conclusion of the war in Europe and the distance of the war in the Pacific had permitted the Harbor Defenses, particularly those of the Atlantic and Gulf Coasts, to return almost to peacetime status. It was pointed out that the troop levels in those installations had been arrived at on a caretaking basis. A program was suggested which would maintain the armament of the Harbor Defenses in suitable condition and allow for a small number of target practices. The program was to include also the training of Coast Artillery replacements and attention was called to the fact that the continental harbor defenses constituted the sole source of such men for the Army of the United States. The continuance of the Coast Artillery School and the Submarine Mine Depot was strongly recommended as was the inclusion in the training program of experimental work with new weapons such as rockets.

CHAPTER III

JOINT PLANNING AND EXECUTION OF THE DEFENSE

When war came to the United States in December 1941 there is no denying that we were unprepared for it. This is not to say, however, that nothing had been started by way of preparation or even that the attack came as a surprise, although the direction and time of the attack undoubtedly did. A joint Army and Navy basic war plan (Rainbow No. 5) had been prepared earlier in the year which named our presumptive enemies and outlined the specific measures which were to be taken against them. This plan was based in part on the Report of United States - British Staff Conversations which had been made in March. The Conversations as quoted in the plan had included not only a concept of the nature of the war which seemed certainly imminent, but an overall strategy for waging it.

Several years before this, moreover, and with no particular war in mind, another significant planning document had been prepared which laid down the specific organization and mechanism for coordinating our two military services in war. This was the Joint Action of the Army and Navy prepared by the Joint Board in 1927 and revised by the Joint Board in 1935. We were well prepared for war so far as plans and procedures were concerned. We were not prepared by the awareness of the public, and, lacking that awareness, we also lacked trained men and weapons.

Previous to the formulation of JAAN (called FTP 155 by the Navy) there had never been a definite policy laid down on the division and coordination of the functions of the two services. There had been instances of joint operation but these had been separately and, for the most part, locally arranged. Based on the same realization which prompted the writing of JAAN and certainly facilitated by its provisions, joint operations in this war became the usual rather than the exceptional procedure. A pertinent example is the fact that naval officers were assigned to the headquarters of Eastern Defense Command not as liaison officers but as working members of the staff of the Commanding General. Innumerable examples of this exchange of officers could be cited, most notably perhaps, the Tenth Army in the invasion of Okinawa when the Deputy Chief of Staff to General Buckner was a naval officer.

The basic premise of JAAN was that, "it is vital to success in war that the Army and the Navy so coordinate their action as to produce the most effective mutual support. To accomplish this, it is essential that both services have a common, definite understanding of their respective functions in national defense and of the approved methods for attaining coordination in operations." The Joint Board, therefore, in the publication analyzed the complex problem of defense; assigned missions and responsibilities; defined terms, areas and agencies; and formulated organizations and standard practices for routine joint planning and operations.

It is not intended here to cover the whole publication since it is concrete and concentrated and could only be covered by quoting it entirely word for word. However, certain sections of JAAN formed the basis for the defense of the eastern coast and must be extracted to understand how the defense was accomplished.

On the matter of coordination it was decided that it is the duty of the commander of the service which is not invested with the primary responsibility for the conduct of an operation to render every possible assistance to the commander of the service which is invested with such responsibility. Two methods of coordination were foreseen, - mutual cooperation which was to be the normal method, and the exercise of unity of command which was the method to be used in certain special cases. These cases were, when ordered by the President, or when provided for in joint agreements between the Secretary of War and the Secretary of the Navy, or when commanders of Army and Navy forces agreed that the situation required the exercise of unity of command and further agreed as to the service that should exercise it. Unity of command, in an operation, vested in one commander the responsibility and authority to coordinate the operations of the participating forces of both services. This was to be done by the organization of task forces, the assignment of missions, the designation of objectives and the exercise of such coordinating control as he deemed necessary to insure the success of the operation. However, the commander exercising control was not authorized to interfere with the administration and discipline of the forces of the other service nor to issue any instructions to such forces beyond those necessary for effective coordination.

Beyond general principles, the section of JAAN which is of most interest here is the one which deals with the defense of the coast line. As a first step in coordinated action, geographical areas were delimited and termed "coastal frontiers". These were defined as "geographical divisions of our coastal area established for organization and command purposes in order to insure the effective coordination of Army and Navy forces employed in coastal frontier defense." Within each coastal frontier, an army officer and a naval officer would exercise command over all forces of their respective service which were assigned for the defense of those divisions. On the Atlantic shore of the United States there were two coastal frontiers set off which were termed the North Atlantic Coastal Frontier and the Southern Coastal Frontier. The first extended from the Canadian border to a line in North Carolina, and the second extended from there to the Florida Keys, and thence north and west around the Gulf coast to the Rio Grande. These two large and basic divisions, as a matter of fact, tended to be obscured and almost to disappear as the effectual command organizations when other agencies were created later. Nevertheless, they were the primary territorial division.

The functions of the two services were divided in coastal frontier defense in such a way that the Army was to provide and operate the mobile land and air forces required for the direct defense of the coast and to provide, maintain, and operate essential harbor defenses. The Navy functions were to control and protect shipping in the coastal zones, to conduct naval operations directed toward the defeat of any enemy force in the vicinity of the coast, and to support the Army in repelling attacks on coastal objectives.

The Coastal Frontiers were divided so far as army jurisdiction was concerned, into sectors and further into subsectors. Within these divisions, of course, were the harbor defenses which were discussed in the previous chapter. Within the North Atlantic Coastal Frontier, sectors corresponded to the already existent Coast Artillery Districts, and to some extent as well to Naval Districts, although two Naval Districts were included in the Delaware - Chesapeake Sector. Within the Southern Coastal Frontier, where there was only a single Coast Artillery District designated (the 4th CAD) sectors corresponded instead to Naval Districts.

Frontiers, sectors, and subsectors, as functioning tactical organizations

were to come into existence only in war-time, when Coast Artillery Districts would cease to function and their commanders and headquarters become automatically the corresponding commander and headquarters in the war-time chain of command.

Starting at the north, the New England Sector (Portland, Boston, and Newport subsectors) included the coast from the Canadian border to the Rhode Island-Connecticut boundary; the New York Sector (Long Island and New Jersey subsectors) from there to a line in New Jersey south of the Sandy Hook Peninsula; the Delaware-Chesapeake Sector (Delaware and Chesapeake subsectors) from there to a line in North Carolina which was the southern boundary of the NACF. The Southern Coastal Frontier was divided into three sectors, the Carolina Sector from the southern boundary of the NACF to the Georgia-Florida border; the Florida Sector, all of Florida west to the Apalachicola River; and the Gulf Sector from there to the Rio Grande.

This was the original organization as set up by JAAN. Actually, however, when sectors began to function, the New Jersey subsector and the Delaware subsector disappeared between the New York and Philadelphia subsectors of the New York - Philadelphia Sector. The Chesapeake Bay sector was not subdivided, and a new Southern Sector was created with Carolina, Florida, and Eastern Gulf subsectors. The changes within the NACF were made by the First Army's Northeastern Theater Defense Plan in March 1941 and confirmed by Rainbow No. 5.

Considering possible enemy attacks against our coastal frontiers, JAAN decided that they might be classified as of two separate types, - major and minor. When control of vital sea areas could not be maintained due to our inferiority in naval power, destruction of our fleet, or its absence in distant waters, serious attacks against our coastal frontier were possible and might be expected against strategically important areas when the enemy possessed the requisite force and marine transportation. These attacks might be of major proportions and might have as their object the blockading of our coast or the securing of an area for use as a beachhead, naval base, or air base.

So long, however, as our Fleet retained command of the sea, or so long as such command remained in dispute, our coastal frontiers bordering upon the sea areas in which our fleet was operating might be regarded as protected against a major attack. But neither command of the sea nor superiority of our air forces in any given locality could be counted upon to prevent surprise attacks or raids by minor naval forces for the accomplishment of minor missions. Minor operations might have as their objective reconnaissance, mining, counter-mining, or destruction of shipping or installations.

On the basis of these two types of possible enemy attack a concept of "categories of defense" was promulgated, under which the degree of preparation in coastal frontier defense and the defense measures to be taken, including the armament to be manned and the forces provided, was made to depend upon the enemy and enemy capabilities. In Category "A" were coastal frontiers that would probably be free from attack but for which a limited defense should be provided against possible but improbable isolated raids. In the original definition of this category the nominal show of defense was to be made for "political" rather than tactical reasons. Category "B" was assigned to frontiers that might be subject to minor attack and Category "C" to those that in all probability would be subject to minor attack. Categories "D" and "E", respectively, were for frontiers that might be, or in all probability would be, subject to major attack. A sixth Category, "F", was used to denote the defense

of an extra-continental area which might be subject to either minor or major attack but for which no adequate defense could be provided. The island of Guam was such an area.

In the definition of each category, the specific defense measures to be taken were decided. As the war developed, however, the details of the defense offered were usually derived not from the category of defense but from the particular situation and the availability of armament and troops, and the definition of the category was loosely interpreted and later modified accordingly. Rainbow No. 5 assigned the categories to be assumed in various localities upon the outbreak of war but these were not later adhered to.

One of the most important features of combined operations was the Harbor Entrance Control Post or HECP. This was not instituted by JAAN specifically although something of its nature was obviously contemplated and experimentation was instituted early in 1941. In June of that year a directive was issued over the signatures of the Chief of Naval Operations and the Chief of Staff of the Army which described and instituted HECPs (1). Essentially such a station is a joint Army and Navy command post in a harbor defense. Its missions are to collect and disseminate information of activities in defensive sea areas; to control unescorted merchant shipping in the defensive coastal area; and to take prompt and decisive action to operate the elements of the harbor defense in order to deny enemy action within the defensive coastal area.

The HECP was visualized as being continuously manned by an officer of both the Army and the Navy and the necessary personnel for clerical and communications duties. The officers were to be the direct representatives of the Senior Local Commanders of the two services with authority as defined by the commanders to take any action necessary to accomplish the mission of the HECP. Ordinarily, and whenever possible, HECP's were in the same building as the Harbor Defense Command Post. Each one was to be equipped with a chart room where information relative to enemy or other potentially important activities might be plotted on a graph or situation map of the defensive coastal area. The building was also to contain all of the communications facilities necessary to receive and disseminate information and to communicate with elements of the harbor defense system. In order to eliminate as much communication installation as possible a visual signal station and receiving stations for underwater listening posts, indicator loops, and sono buoys would all be set up in the HECP building itself wherever this could be done.

In other words, the HECP was the joint nerve and control center of the various harbor defense elements for reconnaissance and defense which were provided by the two services. It controlled the movement of shipping in and out of the harbor areas through the use of the naval examination vessels and the army examination gun battery. It gathered, pooled, and evaluated information received from the offshore and inshore patrols of the Navy and from observation posts and beach patrols of the Army, as well as from the underwater and radar detection devices of both services.

Such joint plans as were prepared before the war by echelons below the War and Navy Departments were largely in the hands of the Coast Artillery Districts and the Naval Districts. A certain overall responsibility on the Atlantic coast, however, was exercised by the First Army which, it will be recalled, had been established in 1932. The First Army mission dealt with the North Atlantic and the Northeastern frontier and one of the functions assigned to Army commanders was the development of frontier defense plans and other operating plans assigned to them in the war plans of the War De-

partment (2). The command post exercise of 1937 was played under tentative basic plans for the NACF and an assumed New England Theater of Operations Plan(3).

With the separation of Field Forces from Corps Areas in October 1940, the Coast Artillery Districts came directly under the command and tactical control of Army commanders - the 1st, 2d, and 3d of the First Army and the 4th of the Third Army (4). The First Army at that time also had assigned five active but understrength divisions in three corps (5). The period immediately subsequent to this was that of the rapid expansion of the Army by the induction of National Guard units and Selective Service trainees, and the period also of the remanning and refitting of the harbor defenses. This time of training and preparation merged so rapidly with the period of active defense that one had begun almost as soon as the other. The fact is that the declaration of war in December 1941 was largely an official and open confirmation of a state which had already existed. As early as October 1940, General Drum had radioed the War Department for clarification of the defense status and received a reply that Frontier Defense Commands had not been brought into being and that responsibility pertaining to the North Atlantic Coastal Frontier was still retained by the First Army (6). In March 1941, the First Army produced and sent to its Coast Artillery Districts a plan for the defense of a "Northeastern Theatre".

Defense Commands were instituted on 17 March 1941 (7). Such a command is defined in part in JAAN as follows: "In continental United States a defence command is an Army strategic defensive area designated for planning purposes as a potential theatre of operations of combined air and ground forces. The defense command includes the coastal frontier which is usually coterminous. Combined operations in the defense command area of air forces and ground forces of all arms under a single commander, the Commanding General, defense command, will be required if and when an invasion of the area becomes imminent. The commanding general, defense command, is responsible for peacetime planning for operations of ground forces under his command and for combined air and ground operations"

Under the War Department letter of 17 March 1941 the continental United States was divided into four strategic areas or Defense Commands in order to facilitate and to clarify responsibility in defense planning by elements of the field forces. This letter visualized the Defense Command as a sort of preliminary command to an ultimate or possibly ultimate theatre of operations and termed it a territorial agency with an appropriate staff designed to coordinate or prepare and to initiate the execution of all plans for the employment of Army forces and installations in defense against enemy action in the portion of the United States lying within its boundaries.

Four separate commands were instituted, the Northeast, Central, Southern, and Western Defense Commands. The Northeast Defense Command had the same coastal extent as the North Atlantic Coastal Frontier and extended inland to include all the territory of the First, Second, Third, Fifth, and Sixth Corps Areas and a small portion of the Fourth as necessitated by the southern boundary of the NACF. Command of the new organizations was assigned as an additional duty to the Commanding Generals of the First (NEDC), Second (CDC), Third (SDC), and Fourth (WDC) Armies. These Commanding Generals had responsibilities as defined in JAAN and they were also responsible for the local coordination of plans for the employment of Army Forces with corresponding plans of Naval units. This last, for some reason, had not been specifically stated under the definition in JAAN.

This same letter which instituted the Defense Commands also redesignated the existing Air Districts as 1st, 2d, 3d, and 4th Air Forces and delegated the responsibility of the Commanding General, GHQ Air Forces, for the organization and planning of defense against air attack within the continental limits to an Air Force Commander within each Defense Command, e. g., the First Air Force in the Northeast Defense Command. This, of course, reduced the planning responsibilities of General Drum although he was still responsible for the overall coordination of air plans with the plans for other forces. The responsibilities in matters of domestic disturbances and passive measures for defense against air attack were retained by Corps Area Commanders.

Ten days after the authorization of Defense Commands, authorization was received for the activation of Headquarters and Headquarters Batteries in several harbor defenses where they had not previously existed. These included Portland, Boston, Narragansett Bay, Long Island Sound, Sandy Hook, and the Delaware (8). Headquarters Special Troops, First Army was provisionally constituted on 1 April 1941 and officially activated on the 21st of May (9).

The Headquarters Northeast Defense Command was not activated until the 21st of June and had no separate staff (10). All General and Special Staff Officers of the First Army were detailed in addition to their other duties to corresponding positions on the staff of the Northeast Defense Commander - who, of course, was General Drum, CG First Army (11). Meanwhile, however, by a staff memorandum of April 14, a Defense Command Section of the First Army General Staff had been appointed for the purpose of preparing war plans.

Although the First Army's plan for the defense of the Northeast Theatre of Operations of March 1941 was still in effect and remained in effect as a matter of fact up to and through the final initiation of hostilities, certain other plans were equally pertinent to activities at this period. Some measures of alert were taken in the Harbor Defenses as early as March 1941 when for example a permanently manned harbor defense observation post was established at Fort Story which together with the already operative fort signal station at Fort Monroe maintained liaison with the Fifth Naval District in Norfolk. During this spring, the President directed the Navy to take measures and prepare plans for the defense of the Western Hemisphere. These successive Navy Western Hemisphere Defense Plans required the cooperation of the Army, and beginning in May or early June 1941 determined harbor defense policies. The basis of NWHDP No. 2 was the assumption that entrance into the Western Hemisphere by naval vessels and aircraft of belligerent powers other than those powers which had sovereignty over Western Hemisphere territory would be viewed as actuated by a possibly unfriendly intent. Army forces were directed to engage in combat only when necessary for their own protection or for that of other U. S. military or naval forces or for the prevention of attack on U. S. Flag shipping by belligerents. Under this plan the First Coast Artillery District assumed "Watch Status" under its previously prepared SOP (12). This alert condition which was similar to provisions which went into force in other sections of the coastal frontier provided for: the continuous operation of all headquarters; the manning of one or more observation stations and searchlights within each harbor defense to maintain continuous surveillance of approaches to the harbor; the preparation and maintenance of one or more seacoast batteries in each harbor defense in continuous readiness to open fire on targets approaching vital water areas; the provision of local defense and concealment for seacoast batteries and installations; and the preparation for immediate action of harbor defense AAA

groups. In general, HECP's were prepared for continuous operation at this period and their procedure tested but continuous operation was not yet maintained.

Naval Western Hemisphere Defense Plan No. 4, extracted by the War Department on 17 September 1941, extended protection to Iceland flag shipping and changed the interpretation of the presence of Axis vessels in the western Atlantic from "actuated by a possibly unfriendly intent" to "will be deemed to threaten (our) shipping" and therefore directed their destruction. Further it stated that the approach of any hostile force of the Axis Powers to within fifty miles of Iceland, Greenland, or any British possession on which any United States military or naval base was located would be deemed conclusive evidence of hostile intent and would require attack on such Axis forces unless an attack under the existing circumstances would be tactically unsound. This directive was interpreted as requiring harbor defense forces to engage in combat all German and Italian naval vessels and aircraft which appeared within range of their guns. Finally, under NWHDF No. 5 of October 1941 the Navy was specifically ordered to destroy any German or Italian naval, land, or air forces encountered within its operating areas, which in the Atlantic was an area west of the line Longitude 10° W as far south as Latitude 65° N, thence by rhumb line to a position 53° N, 26° W, thence south along 26° W, - or roughly all of the North Atlantic, with the exception of waters immediately adjacent to Europe, and approximately half of the South Atlantic.

Early in October 1941, the War Department directed General Drum, who was then in Carolina directing First Army maneuvers, to establish HECP's at eight locations on a training basis and prepare them for operation on a war basis. The locations named were Portland, Me.; Portsmouth, N. H.; Boston, Mass.; Newport, R. I.; Fort H. G. Wright, N. Y.; Fort Wadsworth, N. Y.; Cape Henlopen, Del.; and Chesapeake Bay, Va. As a matter of fact, some HECP's had been in operation on one basis or another before. The one at Cape Henry in Chesapeake Bay, for example, since early in July. Until the completion of the permanent Harbor Defense Command Post, it functioned in the U. S. Weather Bureau building at Fort Story and was used as a school for naval HECP personnel (13).

In a final significant change, which as it turned out was hardly necessary, the War Department ordered, in a letter dated 6 December 1941, that command of Coast Artillery Districts pass from the Army Commander to the corresponding Commander, Defense Command, before the first of January (14).

At the time of Pearl Harbor the defense situation on the eastern coast may be summarized as this: overall strategy and general concepts for the war had been laid down in Rainbow No. 5 and further extended by the Navy Western Hemisphere Defense Plans; procedures for joint Army and Navy operations were based on JAAN 1935; in accordance with these previous documents Coast Artillery Districts and Naval Districts had prepared joint plans for present and future operations including those of the Sectors-to-be; overall direction and coordination of these plans stemmed from the Northeast Defense Command and its corresponding agency of the other service, the North Atlantic Naval Coastal Frontier; while it had been invested with responsibility for defense planning, the First Army had prepared a plan for the defense of the Northeastern Theatre of Operations which was still in effect; the Harbor Defenses were manned and ready to assume battle alerts with such armament as existed but had not yet been strengthened by the modernization program; command of Air Forces remained under GHQ and they were therefore not con-

trolled by Defense Commanders; the naval forces for coastal and local defense at the disposal of Naval Districts were slight and of little value; and finally, little or no consideration had been given to the possibility that Japan might be our initial enemy (15).

* * * * *

In accordance with the directive supplied by JAAN, Coast Artillery Districts were discontinued and the tactical organizations of sectors and sub-sectors were instituted within the week after Pearl Harbor (16). Apparently there was some need to make this more official, however, because in February 1942 a War Department letter ordered the activation of sector Headquarters and Headquarters Companies (17). One reason for such a letter could be that this was the first cognizance taken by the Adjutant General's Office of change which had been previously made in the tactical framework between the former New York and Delaware-Chesapeake Sectors which were now officially constituted the New York - Philadelphia and the Chesapeake Bay Sectors, respectively, of the North Atlantic Coastal Frontier. From a practical standpoint, however, it can be said that sectors came into immediate being with the start of the war.

On the twentieth of December, the War Department ordered a new command organization as follows: "The Eastern Theater of Operations is hereby created, effective 12 noon, EST, December 24, 1941." (18) The new command included the United States bases in Newfoundland and the continental United States east of a rear boundary which followed the Ohio-Pennsylvania boundary, Ohio-West Virginia boundary, Kentucky-West Virginia boundary, I and N Railroad to Knoxville, Southern Railroad via Chattanooga to Birmingham, via Selma, Alabama, to the northwest corner of Florida and south along the Florida-Alabama boundary to the Gulf. This as can be seen omitted some of the inland area of the former Northeast Defense Command and extended south to include coastal territories which were not in the North Atlantic Coastal Frontier but in the Southern Coastal Frontier and had been included in the Southern Defense Command.

The Eastern Theater of Operations never really became a theater of operations in the full sense of the word and this title was not actually of very long duration, but it was one of a series of commands of analagous purpose and similar constitution. The troops which were assigned to it consisted of the First Army, 1st and 3d Air Forces, and all other troops stationed within the command boundaries, including thereby part of the Third Army. Altogether there were the I, II, IV, and VI Army Corps with a total of thirteen divisions and in addition to these large numbers of other troops of all branches (19). Indeed, the Commanding General, Eastern Theater of Operations (General Drum), in order to accomplish his mission of defense against both internal and external threats, had command of Corps Area activities and units within the boundaries of his command, although he was directed to exercise control with as little disturbance as possible to existing procedure. Administrative functions of Corps Areas continued to be exercised directly under the War Department. Certain other limitations were likewise imposed. Disruption of existing Coastal Frontier organizations was to be held to a minimum, the integrity of the existing Air Corps interceptor command set-up was to be preserved, other air force organizations, insofar as possible were to be kept intact in preparation for prompt movement to other theaters and transfer of units of the Newfoundland Base Command or of heavy and medium bombardment groups was not to be made without GHQ approval. In a sense, many of these troops were

assigned to the Eastern Theater of Operations on a kind of tentative, tactical loan basis, pending the development and shaking down of the war situation.

A Staff Memorandum issued by the Headquarters Eastern Theater of Operations on the twenty-second of December explains the command organization of the Headquarters as consisting of a general staff group, a Coast Artillery Harbor Defense Section, an Air Force Commander, and an Antiaircraft Artillery Commander (20).

The general staff group performed all the functions usual to such a group and in addition was charged with the preparation of the army portion of joint plans with the Navy. Moreover, it maintained continuous liaison with the Joint Information Center at 90 Church Street, with the North Atlantic Naval Coastal Frontier whose headquarters was also located at that address, and with the Southern Naval Coastal Frontier. These two naval commands which were later known, respectively, as the Eastern and the Gulf Sea Frontiers, were the agencies of the other service which paralleled the successive Atlantic Coast defense agencies of the Army.

The Coast Artillery Harbor Defense Section was charged with the supervision of the execution of all harbor defense plans and projects and with furnishing technical advice on matters of coastal defense.

The Air Force Commander commanded the Air Forces of the Eastern Theater of Operations and was the technical air advisor to the Commanding General. The position of Air Force Commander was held by the Commander, First Air Force, at Mitchel Field, Long Island (21).

The Antiaircraft Artillery Commander commanded the antiaircraft units of the Eastern Theater of Operations and was a technical advisor to the Commanding General of the Theater. This office was filled by General Jarman, Commanding General of the then Provisional Antiaircraft Artillery Command, First Army, which later became the AAAC, Eastern Theater of Operations, and finally AAAC, Eastern Defense Command.

In order to meet the urgency of the existing situation, the Special Staff Sections of the First Army, other than those already specified, were ordered to perform, in their respective spheres, similar functions for the Headquarters Eastern Theater of Operations. Staff groups of both headquarters functioned jointly under the direction of the Chief of Staff, First Army. However, the First Army special staff sections were directed to prepare subsections which would be able to carry on independently should the First Army leave the Eastern Theater. This possibility was considered from the start.

The southward extension of the Army coastal command necessitated the forming of a new sector south of Chesapeake Bay. This was the Southern Sector, Southern Coastal Frontier, embracing the former Carolina and Florida Sectors of that Frontier and a small portion of the former Gulf Sector as well (22). Thereby, the four sectors under the Eastern Theater became the New England, the New York-Philadelphia, the Chesapeake Bay, and the Southern. Together they extended from Canada to Louisiana, both exclusive.

On the twenty-second of February the first major unit left the command. This was the II Army Corps with four divisions and numerous other associated troops (23).

Effective 20 March 1942, the name of the Eastern Theater of Operations was changed to Eastern Defense Command (24). It was stated that the Eastern Defense Command would not be a theater of operations. This was by way of rectifying what would appear to have been an error although certainly not a very serious one. By definition, of course, a defense command is a potential theater of operations. The Atlantic Coastal Command had become a theater only in name and in certain of its procedures but never by the presence of the enemy. Essentially it was a defense command from the start.

We returned therefore to the old division of the continental United States into four Defense Commands, the Eastern, Central, Southern, and Western, with one Army assigned to each. Or more correctly, the First and Fourth Armies were assigned to the Eastern and Western Defense Commands, respectively, while the Second and Third Armies were assigned to Army Ground Forces and their Commanding Generals performed dual functions as Commanders of the Central and Southern Defense Commands.

Under the new organization, Corps Areas or parts of Corps Areas in the territory of the Eastern Defense Command, including units of the field forces engaged in protection of utilities and other installations against sabotage or internal threat, passed to the control of the Commanding General, Services of Supply (Army Service Forces, as it was later called). Also to his control went the existing theater of operations supply establishments in the EDC area. Simultaneously the I and VI Army Corps with their assigned or attached troops passed to the Commanding General, Army Ground Forces. However, any troops stationed within EDC boundaries were to be available to the Defense Commander in emergencies.

Although originally the EDC boundaries were the same as those of the former ETO, a change was brought about almost immediately which caused its boundary on the Gulf of Mexico with the Southern Defense Command to correspond to the limits of the Eighth Naval District, i. e. the Chattahoochee and Apalachicola Rivers (25). This had also been the boundary between the Florida and Gulf Sectors of the Southern Coastal Frontier before it had been made ineffective by the territorial limits of the ETO. The most notable effect of this change was the exclusion of the ND of Pensacola, Fla., from the EDC. A subsequent change, in April, transferred all of the state of West Virginia from the Eastern to the Central Defense Command (26).

One provision of the letter changing the designation of the Eastern Theater of Operations to Eastern Defense Command proved to be a temporary source of confusion and trouble. This was the split between what might generally be called internal and external defense. The former, which included anti-sabotage measures and the control and evacuation of civilians had been handled by Corps Areas. Now, however, Corps Areas had passed from control of the Defense Commanders to control of the Commanding General, Services of Supply. The Defense Commanders, with considerable justification, believed that internal and external defense were so closely related that they could hardly be responsible for one without some measure of control over the other.

As a result of what seems to have been a quite heated and stubborn Washington conference (27) at which representatives of all the various agencies concerned were present, a directive was drawn up by the War Department which supplemented and corrected the previous letter (28). Commanding Generals, Defense Commands, were thereby authorized to prescribe military areas within the geographical limits of their respective Defense Commands, under the provis-

ions of Executive Order 9066 of the previous February. Within these areas the Defense Commanders were responsible for the planning and execution of all defense measures, and certain functions of Corps Area Commanders as subordinate agencies of the Commanding General, Services of Supply, were to be performed under the direction and supervisory control of Commanding Generals, Defense Commands. These functions included the control of civilian population in an emergency, the evacuation of civilians from designated areas, local protection of installations, utilities or sensitive points, segregation and evacuation of enemy aliens, and the employment of State Guards.

The Eastern Military Area, to include all of the continental territory of EDC, was established in May 1942 and a proclamation was issued to the public announcing restrictions on activities, trespass, unshielded lighting, and other similar matters (29). The administration of the Eastern Military Area involved the control of the civil population to the extent necessary to prevent subversive activities and other aid to the enemy, and the supervision of civilian evacuations due to war disaster should local hostilities or attacks ever occur. Control of potential enemy sympathizers - enemy aliens, other aliens, and some citizens, particularly those of enemy descent - was effected by the enforcement of restrictions defining the right of any person to enter, remain in, or leave the Area, and in the case of enemy aliens, by internment. Other measures which could be used in addition to internment were prosecution, exclusion, and evacuation. Since no mass evacuation was contemplated, a process was necessary which required the cooperation of such civilian agencies as the Federal Bureau of Investigation.

In determining the primary allocation of functions, centralized control and decentralized operation was the governing principle. The duties which the Corps Areas were already equipped to carry out and which were enumerated above, were left in their hands. However, control of all operating agencies was retained by Headquarters EDC through its general staff sections and particularly through its Civil Affairs Section. This section was charged with the formulation of basic policies and general plans, the promulgation of proclamations, restrictions and orders, and the coordination and supervision of all activities incident to Area administration (30).

Another arrangement which was worked out at this time was an agreement between the War and Navy Departments as to the exercise of unity of command which had been foreseen in JAAN 1935. This agreement was relayed to the commanders concerned by radiogram on April 19, 1942. Under its terms, the Chief of Staff of the Army and the Commander in Chief, U.S. Fleet, might jointly declare the existence in defense commands and sea frontiers (the Navy coastal commands) of either a state of non-invasion, or a state of fleet opposed invasion, or a state of Army opposed invasion. At the time of the dispatch a state of non-invasion was declared. In this state, joint operations were to be carried out by mutual cooperation without exercise of unity of command except as an agreement of the previous month had provided for a unity of command to be exercised by Sea Frontier Commanders over Army air units which had been allocated to their operational control by Defense Commanders (32). The aircraft were for use in the protection of shipping and for antisubmarine and other operations against enemy seaborne activities.

If a state of fleet opposed invasion should be declared, unity of command would be vested in the Navy over fleet forces and Sea Frontier forces (including the already allocated Army air units but excluding Navy local defense forces); unity of command would be vested in the Army over all Navy local defense forces

and over all Army forces excepting the above air units.

If a state of Army opposed invasion were declared, unity of command would be vested in the Army over all Army forces, Sea Frontier forces, and Navy local defense forces.

The Army air units which are mentioned here had been operating with the Navy ever since the war had started as a matter of strict necessity. Until late in January 1941, when a limited number of planes from the Atlantic Fleet Air Forces based at Norfolk were made available temporarily to the Commander Eastern Sea Frontier, these were the only aircraft capable of maintaining an effective off-shore patrol. All other naval planes attached to the Naval Districts were single-engined with a three hour endurance when armed with depth bombs. Nor were the surface forces of the Eastern Sea Frontier in that spring in any way adequate to its task when the German campaign against our shipping reached coastal waters. Fifteen ships were sunk in February 1941 and the destroyer Jacob Jones as well. Twenty-seven were sunk in March including five on the single day of March eleven. Four destroyers were finally allocated to Frontier forces but the fact that the ships assigned were constantly rotated and those newly assigned generally needed refitting, and of course the necessary instructions, greatly limited their usefulness. The British agreed to send as assistance twenty-four fishing trawlers, the first of which began to arrive at the end of March and although these were of some assistance they were not particularly suited to the task. On the twenty-sixth of February, the Commander Eastern Sea Frontier explained the situation in some detail when he wrote to Cominch that the daily traffic of merchant vessels in coastal waters at that time was about 125 vessels. To protect these vessels, he had nine patrol craft of fourteen knots or better and nineteen craft between twelve and fourteen knots. The speed of a U-boat on the surface was at least eighteen knots. Even if all twenty-eight vessels were used in convoy work they would comprise less than half the number necessary, almost none of them would be able to overtake a U-boat under normal circumstances and this would furthermore strip off completely all protection from harbor entrances and coastal approaches - that is, the off-shore and in-shore patrols which comprised the Navy local defense forces. Not a single U-boat was positively sunk in coastal waters until April. This was a very serious situation and was for a long time impossible to rectify (33).

The Army, unfortunately, was able only to stand by on shore and deny the waters within range of its harbor defense guns to enemy activities. Although these harbors were concentration points for shipping, the area covered by their guns was of course small compared with the whole area of the coastal shipping channels within which the U-boats were able to find good hunting without exposing themselves to danger from shore installations. Incidents did occur, however, in which enemy submarines approached undiscovered within range of our guns and sowed mines causing damage to our shipping and the temporary closing of channels. The Army was sometimes able to gather intelligence of some value to the Navy. One particular incident of which much was made had, however, so little basis as to bring into question the value of the whole service performed if so slight an occurrence should be cited as singular. On the eighth of May 1942, units of the 123d Signal Radio Intelligence Company stationed on the Carolina Coast and equipped with radio direction-finder devices obtained several successive fixes on a transmitting unit at sea and relayed this information to NOB, Norfolk. On the following day, the Coast Guard Cutter ICARUS, engaged in escort duty, contacted and sank the U352 in a position which made it logical to assume that the U352 was the fix obtained by the SRI Company the previous night. However, the contact between the ICARUS and the U-boat appears to have been entirely accident-

al and not based on the information secured from the Army. As a matter of fact, the tendency at Eastern Sea Frontier was to place low evaluation on Army DF contacts and they were frequently disregarded. During the summer of 1942, the U-boat campaign, though intensified elsewhere, dropped off sharply in Eastern Sea Frontier waters.

In June 1942 a letter from the War Department (34) pointed out, apropos of a recently granted request of a Defense Commander for increased personnel, that the time was rapidly approaching when the War Department would be required to re-examine the actual needs of fixed Harbor Defenses with a view to the assignment "to more important work" of a considerable part of all personnel assigned to these elements. This was the beginning of one of a series of recurrent exchanges of correspondence which would appear to stem from a lack of clear and consistent decisions on the part of the War Department as to the relation between the various factors of enemy capabilities for attacks on our coast, the need for and missions of defense commands, and the personnel which would be required to accomplish that mission. The letter went on to request that the Commanding General, EDC, make a study of the Harbor Defense personnel requirements in his command. The War Department also questioned the desirability of manning certain of the older and slower heavy armament. A study of requirements was therefore made and forwarded to the War Department with a note that it did not include the manning of obsolete batteries but only the personnel necessary to man required armament plus that necessary to form reserve batteries.

The Commanding General considered reserve batteries a necessity for all harbor defenses and contended that no military organization should be forced to operate without such resources. At that time no reserves had been provided nor had adequate personnel been provided to man all required armament. It was further pointed out that the then category of defense (Category C) and other instructions required that seacoast elements be prepared at all times to repel enemy attacks and make preparations for extending the defenses under high categories. This twenty-four hour watch status introduced a condition of strain on seacoast batteries which tables of organization did not take into account. Provision for periodic relief of those batteries was felt to be imperative if efficiency was to be maintained at the required standard. Experience of the present war indicated that hostile attacks would be composed of diverse thrusts, including air bombing, parachutists and enemy sympathizers. Harbor defenses were responsible for their own local security, but no personnel over and above that needed for actually manning armament was provided. The War Department, at the instance of the Navy, had directed that measures for defense of our harbors against motor torpedoboats be undertaken and was beginning to supply the necessary armament. It was thought that the reserve batteries could man these guns and in addition the antiaircraft automatic weapons which it was assumed would shortly be made available since they were specified in projects and had not yet been supplied.

To all of this the War Department replied that a strict economy in the assignment of harbor defense coast artillery personnel was considered to be justified by the relatively remote possibility of attack by enemy heavy vessels. It was therefore directed that consideration be given to the reduction of the present status of alert in heavy seacoast batteries and that further consideration be given to the practicability of assigning dual manning and training missions to certain batteries, with one battery assigned a basic mission on light armament with a supplementary mission to man guns of heavier caliber. This was thought by the War Department to be entirely consistent with the requirements under Category C in JAAN 1935.

General Drum replied to this that the gun power then within the harbor

defenses of the Eastern Defense Command was appreciably less than that considered essential for the security of those vital areas; that the War Department had recognized that condition by proceeding with the modernization program; that pending the completion of the program, failure to provide for the full utilization of all existing armament that could be effectively employed was an illogical and highly imprudent expedient; that JAAN specifically provided under Category C that harbor defenses should be fully manned and that no other condition could satisfy the requirements for a reasonable defense. He further pointed out that fast moving world events could force the change from Category C to higher categories and that under such conditions it would be possible to reinforce the Air and Ground Forces units assigned to the defense almost immediately, but that coast artillery harbor defense units required three or four months training on the armament they were to serve in order to function efficiently. He said that the proposed assignment of dual missions to batteries was a theoretical solution and could not actually be accomplished in the face of an attack.

Following receipt of this indorsement the War Department made a study of enemy capabilities and concluded that attack against the East coast of the Continental United States by major Axis fleet units was an extremely remote possibility and would entail a series of necessary preliminary steps which would provide six months advance notice of the likelihood of such action. Actions of the Commando type were improbable and that reduced the practicable enemy capabilities to isolated raids by submarine or light surface vessels. With the concurrence of the Navy, it was therefore directed that 8" DC and 10" DC guns be placed in the status "no longer required," that 6" DC batteries be placed in caretaking status, that the existing Category of Defense C be reduced to Category B as applied to armament of caliber in excess of 6", and that Category C be maintained on all other installations with concentration on defense against raids and harassing attacks.

Harbor defense personnel was neither reduced nor increased as a result of this interchange. After receipt of the armament for anti-motor torpedo boat batteries the harbor defenses would be seventy batteries short of the personnel necessary to man the armament required under the combined categories of defense as directed by the War Department.

This was the period when the tide of Axis conquest reached its greatest height and seemed about to effect a giant pincers movement on the whole globe. It was also the period in which we were preparing and assembling our troops for the first of the counter-assaults. The reasons, therefore, for this conflict over harbor defense personnel and the resultant undermanning of the harbor defenses are easily apparent. As the new project armament became gradually available during 1942 and 1943 some of the older and heavier batteries were turned over to the service commands for salvage (35) thus releasing personnel for AMTB and other new batteries. A decision was shortly made to utilize limited service troops for the manning of harbor defenses and thereby make general service men available for other duty. This exchange was a gradual and continuing process over the course of years.

As our war effort began to turn overseas, a move which was not unconnected with the understrength of harbor defenses, an interesting tactical arrangement was made in Chesapeake Bay. There, the wide expanse of water between Capes Henry and Charles at the mouth of the bay had posed a continuous tactical problem for which various solutions had been proposed but never adopted. These included the creation of an artificial island, the erection of an English Channel type gun tower, or the emplacement of a concrete battleship of the type of Fort Drum in the Phillipines. In September and October 1942 when

a section of the important North African invasion convoy assembled there, this problem became a matter of especially grave concern. The Naval Senior Officer present afloat attached a destroyer to the Approach and Entrance force which took station near the center of the entrance and operated in direct support of the harbor defenses (36).

A relatively stable situation prevailed in the command from the fall of 1942 to the fall of 1943. By the latter time the improved strategic situation of the war began to be reflected in large changes to the EDC. The First Army, which, though it had previously lost its corps and divisions, had continued to function jointly with EDC, was ordered by the War Department to be physically separated effective 10 September 1943 and prepared for overseas shipment. On that date the War Department relieved the First Air Force from the command of the Commanding General, EDC, and assigned it directly to the Commanding General, Army Air Forces (38). Because of other stipulations, this did not result in depriving the EDC of all air support. The First Air Force was still responsible, as before, for the operation and maintenance of an Aircraft Warning Service, control of radio emissions and jurisdiction over all flying in the EDC. Moreover, it was required to maintain four Fighter Squadrons with operational capabilities and deploy them in coordination with the Defense Commander. And in addition, in the event of actual attack or a suddenly imminent threat of an attack in force against the EDC area, the Defense Commander was authorized to assume immediate command of any or all tactical air force units in his area.

During the period of these changes, Lt. General George Grunert, U.S. Army, was assigned to the command as Deputy Commander (39) and on the retirement of General Drum (40) became the Commanding General. General Grunert, then Major General, was originally assigned on the 15 August 1943 and assumed command on the eighth of October and was invested with the rank of Lieutenant General on the same date (41). General Grunert was a former enlisted man of the Regular Army who was commissioned a second lieutenant of the Cavalry in 1902. During the first World War he served as a military observer with the British, as an officer of GHQ, as a member of the General Staff, I Corps, through four offensives and finally as Deputy Chief of Staff, Third Army, in the Army of Occupation. For his war duties he was decorated with the Distinguished Service Medal and was made a Chevalier of Legion of Honor. He was placed in command of the Philippine Department in May, 1940 and relinquished command to General MacArthur in October 1941. On his return to the United States, he commanded the VI Army Corps and later the Sixth Service Command. From there he was called to Washington to become Chief of Administrative Services of the Army Service Forces and finally, before coming to Eastern Defense Command, was Deputy Chief of Staff for Service Commands of Army Service Forces. In this last capacity he initiated the later implemented plans for redeployment of troops from Europe to the Pacific.

The year 1944 saw both reductions in troops assigned to the Command and increases in its territories.

The Central Defense Command was abolished effective 15 January 1944 and the functions formerly exercised by its commander were assumed by the Commanding General, EDC (42). By virtue of this change, the territorial limits of the EDC were redefined to include the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida (East of the Apalachicola River), West Virginia, Ohio, Indiana, Kentucky, Michigan, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Wyoming, Colorado and the District of Columbia.

The principal tactical establishment of the Central Defense Command had been a body of troops assigned to guard the Sault Ste. Marie locks and associated installations. Most of these troops were released to the Commanding General of the major force concerned but a single Military Police Battalion, the 739th, was to be retained with a mission to defend the locks against both sabotage and air attack. The air defense equipment however never materialized and it was recommended in a letter of the Commanding General, Sixth Service Command that a previous agreement made between him and General Grunert be changed to permit the reduction of this force from a battalion to a company since this would be sufficient for the anti-sabotage mission. The letter further requested that the Soo Military Area be discontinued. As a matter of fact the agreement referred to had already been cancelled insofar as it referred to the 739th MP Bn which had been meanwhile released from EDC, and EDC had been relieved of responsibility for protection of the locks and installations. On this basis, no advice was relayed to the Commanding General, Sixth Service Command as to what garrison would be necessary to fulfill his responsibilities. The designation of the Soo region as a Military Area was retained.

On the eighth of December 1943 a radio from the War Department established an aggregate troop strength for the EDC of 35,000 to be achieved by the end of June. It also directed that a plan be submitted for approval which would accomplish that reduction. After staff discussion, a plan was prepared which included first of all, the reorganization of the defense of the North Atlantic Coastal Frontier and the part of the Southern Coastal Frontier which was included in EDC, into only two sectors (43). This move and the concurrent elimination of subsectors resulted in a considerable saving in overhead. The new sectors were the Northeastern, from the Canadian border to the New York-Connecticut boundary (including New York's Nassau County) and the Southeastern extending all the way to the Apalachicola River in Florida. This amounted to a redesignation of the former New England Sector and a unification of the New York-Philadelphia, the Chesapeake Bay and the Southern Sectors. Other economies effected by the plan were the placing of 8", 12", and 16" batteries in maintenance status, a revision of the concept of beach patrols and mobile forces, the curtailment of antiaircraft defense and the transfer of mobile maintenance functions to the Service Commands. The temporary harbor defenses, where installed, were retained for the present. The organization of the two new sectors went into effect on the first of March 1944.

The Category of Defense for Continental United States which had been designated as B in Rainbow No. 5, was raised in December 1941 to C. In May 1943 (44) it was lowered again to B and in November of that year to A as it now remained (45). However, the particular situation called for a change to JAAN 1935 which would fit this category more accurately to the existent needs. The new definition was also more detailed and specific than had been the practice (46). It called for control of shipping and, when required, convoy escort and air coverage, mine sweeping operations if necessary, offshore patrol, limited inshore patrols and limited beach patrols or lookouts as appropriate to the area, offensive action against submarines, and AA defenses capable of operation on short notice in localities of major importance to the war effort. Within the harbor defenses sufficient strength was to be maintained to defend important harbors against submarines and gunfire from single light naval vessels. The following elements were to be on a twenty-four hour basis: HECF's; visual and radar surveillance supported by a minimum of searchlights; underwater defenses, detection devices, and obstacles where appropriate to the area; one AMTB battery for each vital approach and one gun battery either 155mm or 6". One of the gun batteries, and an additional one, if the conformation of the harbor made it necessary, was to serve as an examination battery. At the discretion of a defense commander these twenty-four hour basic elements could be augmented by supporting armament consisting of 155mm and 6" batteries and an

additional two gun AMTB battery all on one hour notice and one battery of larger caliber per harbor defense on six hour notice. Category A is the lowest category of defense and is the one which remained, with certain changes, in effect. As it stood in the definition, it was considerably stronger, of course, than such category had been before. It was stronger, too, in definition, than it later was in application.

On April 5, 1944, a War Department letter redefined the mission of defense commands and collated the previous references and directives which were still in effect (47). By its provisions the Commanding General of a Defense Command was made responsible for planning all measures for defense against external attack by land, sea, or air, of that portion of the United States territory included in command boundaries and such adjacent territories or offshore bases as might be specified by the War Department. Moreover, the Commanding General, Defense Command was to coordinate plans for the employment of units of the Army Air Forces stationed within the limits of the command or designated to provide air defense when required. He was also to coordinate plans for joint operations with Naval Commands located within or adjacent to the Defense Command.

The Commanding General's operations were to include the direction of the operations of Army Forces assigned to the Command as required by the provisions of the applicable Category of Defense; recommendations to the War Department concerning the assignment of such additional forces as might be required to meet changes in the strategic or tactical situation affecting the command; and finally, in the event of imminent emergency the Defense Commander was to assume command of all U. S. Army Forces physically located within his territory upon prior War Department approval.

The defense Commander was also to collect and disseminate such information of the enemy as might be developed by agencies under his control or as might originate in his territory. He was to administer the Military Areas of his Command according to his responsibilities in such matters; prepare Seacoast Defense Projects and Changes and Supplements to them; and maintain liaison with Commandants of Sea Frontiers and Naval Districts located within or adjacent to his command.

For the purpose of clarity, certain functions were stated in this letter which were not the responsibility of Defense Commanders but of the Commanding Generals, Service Commands. These included prisoner of war and internal security, protection against sabotage, and liaison pertaining to State Guards, Civilian Defense, state and local police, protection of vital installations and control of civilian population in emergencies. However, the provision still stood that in Military Areas, these functions would be performed under the supervisory control of the Defense Commander.

At the instigation of General Grunert, a provision of this letter was changed so that the Defense Commander was not obligated to secure War Department approval before assuming emergency command of other troops physically present in the area and authority was granted to Defense Commands to declare emergencies as their own estimate of the situation necessitated. This change in the authority to declare an emergency was a result of experience during a robot bomb scare in November, 1944. A certain amount of confusion and lack of coordination which occurred at that time came about because General Grunert was unable to take effective action in the absence of a declared emergency(48).

Hardly had the new troop basis of 35,000 gone into effect on the first of March, 1944 (49), when the War Department announced a further reduction as the basis for the second half of the year. This was done in a letter of the

thirtieth of March and the maximum strength allotted was 17,500 (50). The War Department authorized a discontinuance of the coastal surveillance mission then being performed by mechanized cavalry units and announced a decision of the Joint Chiefs of Staff which permitted an exception to Category of Defense "A" to allow the discontinuance of antiaircraft artillery in the continental area. In the plan (51) as prepared by the Eastern Defense Command, two mechanized cavalry troops (one for each sector) were retained as sector mobile forces. The other cavalry troops and the whole Antiaircraft Artillery Command (which amounted to some eleven thousand troops) were released to the Army Ground Forces. When this change was completed (52), EDC became virtually a seacoast artillery command and although the statement of its mission remained unchanged, and its responsibility for plans against all types of attacks was still in effect, its operational potentialities were little more than its, by now, greatly reduced harbor defenses.

Effective 1 August 1944, the boundary between the two sectors was moved south to the boundary between Mercer and Monmouth Counties, New Jersey. This placed the Harbor Defenses of New York in the Northeastern Sector and caused the sector boundary to coincide with that between the Third and Fourth Naval Districts and so simplified joint planning (53). In October, there occurred that reorganization within the harbor defenses which was discussed in the previous chapter and this was shortly followed by the elimination of some of the temporary harbor defenses.

Effective the first day of 1945, the Southern Defense Command was abolished (54) and its personnel, area and mission were taken over by EDC as it had previously absorbed the Central Defense Command. The Southern Defense Command had been instituted at the same time as the former Northeast Defense Command in March 1941 (55). Its territory at the time of its absorption by EDC included Florida, west of the Apalachicola River, and all of the States of Alabama, Tennessee, Mississippi, Louisiana, Arkansas, Texas, Oklahoma and New Mexico. Its mission, in addition to the general mission of Defense Commands, included the maintenance of liaison with the Command of the Mexican Army and with local Commanders of Mexican Military areas and garrisons located in territory adjacent to the Southern Land Frontier. The Southern Land Frontier was the boundary between Mexico and the States which were included in the Southern Defense Command.

This Command had formerly maintained numerous seacoast establishments in temporary harbor defenses of the Southern Coastal Frontier, as well as large forces of troops on the Southern Land Frontier. However, by 1945 these forces had been reduced to two harbor defenses--Galveston, Texas and Pensacola, Florida, and the Land Frontier had only two troops of mechanized cavalry. The Southern Defense Command was redesignated Southwestern Sector of the Eastern Defense Command.

The absorption of the Southern Defense Command was one of the few concrete results of considerable correspondence and discussion which was started during that period of high optimism occasioned by the dash of our armies across France. In a letter of 14 September 1944 (56) the War Department announced that, in anticipation of removal of the requirement that defenses for the Atlantic and Gulf Coasts be maintained, it was desirable to inactivate the Eastern and Southern Defense Commands at an early date. This contemplated action would necessitate the formation of agencies to take over EDC functions. Accordingly, the Commanding Generals of the three major forces (Ground, Air and Service) were directed to submit plans for assuming appropriate portions of the responsibilities relative to the continental United States (57) and the Commanding General, EDC, was directed to submit recommendations as to the organization and location of a Headquarters, U.S. Army Forces, North Atlantic, for the control of the forces in Bermuda, Newfoundland, Greenland, Iceland, and the Azores. These recommendations

were all submitted (58). The Army Ground Forces proposed to set up an "Eastern Coastal Defense Command" with headquarters at Fort Monroe, and utilize the overhead personnel of the two inactivated Defense Commands to supervise the continental harbor defenses and carry on joint planning with the Navy and liaison with the ground forces of Canada and Mexico. At the same time the Service Commands would assume the functions relating principally to internal security and the First and Third Air Forces would take over Air Defense and the planning relating to it.

The recommendations of the three major forces were forwarded to General Grunert by the War Department with a request for his comments and recommendations in return. The General's reply was in substance as follows: (59)

The new system would substitute new organizations for one that was already established and functioning smoothly. Any new organization brought into being at that stage of the war should be based on the eventual peacetime structure of the Army but it was impossible to do this since that structure had not yet been definitely formulated. It was quite possible that this defense command might be closer to the agency that would be desired in peacetime than any other agency and it would be a mistake to eliminate defense commands now, only to rebuild them later. Until the collapse of Germany, it would be premature to remove the coastal defense requirements, and so eliminate HECF's and take up mine fields, thereby exposing harbors to attacks by submarines and surface craft.

As an alternative plan, General Grunert recommended the continuation of the Eastern Defense Command and its absorption of the Southern Defense Command. He proposed to eliminate at the same time the sector headquarters and their two remaining Cavalry Troops as well as two bands, the 786th MP Bn and half of the Signal Operating Platoon, Headquarters. EDC would then operate with a total overhead of 241 and it would be unnecessary to activate either the Hq. U. S. Army Forces North Atlantic whose proposed overhead was 192 or the Hq. Eastern Coastal Defense Command (as proposed by CG, AGF) with its overhead of 112. In other words, the existing organization could operate with at least 63 less officers and men than the new proposed headquarters. This figure was achieved by counting in EDC totals the thirty-one people of the Machine Records Unit which would presumably be required also by the Ground Forces plan but had not been computed in their figure. However, it did not compute the saving in personnel which would result from the absorption of the Southern Defense Command nor did it allow for the requirement for additional personnel by Service Commands if they were to assume added responsibilities. Therefore, the figure of sixty-three only partially represented the greater economy of personnel to be gained by General Grunert's plan.

On the eleventh of November, 1944 the War Department announced its decision not to inactivate the Eastern and Southern Defense Commands but to amalgamate them (60). Meanwhile they sent out another letter relative to the whole subject of the preceding correspondence. On the thirtieth of October, it was made known that the Joint Chiefs of Staff had authorized an exception to Category of Defense "A", as it applied to the Atlantic and Gulf Coasts, which removed the requirement that Army installations of harbor defenses be manned for defensive purposes (61). In effect, the only operational functions that would then remain to the Army in harbor defense would be those in connection with the control of shipping which it was thought necessary to maintain so long as the Navy was required to maintain Sea Frontier defenses. Other than this, maintenance organizations and personnel necessary to remove the mine fields--a long operation--would be necessary.

Consequently Joint Planning Committee meetings were held in November and it was decided with the concurrence of the Eastern and Gulf Sea Frontiers that it be recommended that all HECP's except the one at Key West be retained, that all surveillance radar be retained, that the armament defense mission be eliminated and existing mine fields picked up.

The minutes of these meetings and their recommendations were forwarded to the War Department on the fourth of December 1944 with a letter which included the further recommendations that the Temporary Harbor Defenses of Wilmington, N.C. be abandoned, Sector Headquarters be abandoned, and that "effective with the approval of this action, since the means will have been removed, the Harbor Defenses be specifically relieved from all responsibility for the repelling of an enemy attack." (62) In submitting his recommendations and revised troop basis pursuant to the War Department desire that the maximum number of troops be made available for reassignment, General Grunert again invited attention to his statements in the previous correspondence recommending against the further reduction of Eastern Defense Command defense forces so long as Germany remained an active belligerent and so long as the Eastern Defense Command had a defense mission. He pointed out that the reductions indicated on his revised troop basis left the command impotent as an operational defense force and said that unless the manpower situation were most critical, it did not appear reasonable to reduce the Eastern Defense Command to impotency in order to make available a total of only 5,795 for reassignment.

In an indorsement to this letter, the War Department replied that a troop ceiling of 10,200 must be reached by the first of April 1945 and of 9,000 by the first of July. This latter figure was substantially the one which had been submitted by EDC on the assumption that harbor defenses would be relieved of all mission to repel enemy attacks. In other words, this was a maintenance ceiling. The War Department concurred in the placing of harbor defense armament in a caretaker status but stated that the harbor defenses would still be responsible for "opposing enemy attack with such means as are available to them."

Since the defense mission was not to be unequivocally withdrawn, General Grunert found it necessary to revise his recommendations to provide for the active manning of such armament as would be practicable under the troop ceiling, the retention of a single line of mines in each harbor defense which had a mine project, and the retention of the HECP at Key West. This was planned without increase in troop strength.

Meantime, General Grunert had visited Headquarters Southwestern Sector, EDC, the former headquarters of the Southern Defense Command in order to determine what would be the most desirable administrative organization upon the elimination of sectors. He was convinced of the necessity of continuing the existing liaison and contacts with the Mexican Army and Mexican border districts. He therefore planned to institute a "Southwestern section" of Headquarters Eastern Defense Command consisting of a headquarters, two cavalry troops and several small detachments with a General Officer in command because of the importance attached to maintaining the cordial relations existing with the Mexicans. This group would also carry on the name and functions of the Southern Land Frontier. Consequently there was to be no considerable change in this organization other than its name and elimination from its command of the two harbor defenses which were to come directly under the command of Eastern Defense Command headquarters.

In a letter of 16 March 1945 (63), the War Department accepted the troop basis prepared in accordance with their directive and ceiling and concurred with General Grunert's most recent recommendations except that the proposals to keep a single line of mines in position and to retain the HECP at Key West were not favorably considered.

After the conclusion of hostilities in Europe, some apprehension was still felt for a brief period that those submarines which still remained in the Atlantic might ignore surrender terms and make final piratical attacks against our shipping or installations. However, no such attacks occurred and on the seventh of June a War Department message notified of a Joint Chiefs of Staff decision to lift the category of defense in the Eastern Defense Command, Bermuda, and Newfoundland Base Commands and the Caribbean Coastal Frontier (64). This message was further amplified by a letter of the twenty-sixth of June which removed the requirement for active defense of the areas of all the North Atlantic Bases (Bermuda, Newfoundland, Greenland, and Iceland) (65).

In the spring of 1945 further consideration was given by the War Department to the proposal of the previous autumn to inactivate the Eastern Defense Command and divide its functions between the three major forces and a fourth command, Headquarters North Atlantic Bases (66). Before the final enactment of this proposal General Grunert was asked to comment on its efficacy (67). He called attention to his previous stand on this matter and again questioned the wisdom of eliminating a command which had proven its value in the past and was of great possible value in the future. He pointed out that our experience in recent years had led to the conclusion that attack without warning must be regarded as a constant possibility and suggested that we should provide, in our Army organization, command agencies free from all encumbering service functions for the protection of our seaboards and land frontiers in peace as well as in war.

On the seventh of July the War Department advised that action would not be taken at that time to discontinue the command but that it believed that a reduction of the headquarters group would be practical (68). A recommendation was therefore submitted by indorsement which proposed a new bulk allotment of 229 officers and men, a reduction of one hundred.

A new Field Order which described missions and functions in the light of changed circumstances appeared on the nineteenth of July (69).

General Grunert was retired from active service on the thirty-first of July 1945 and Brigadier General Kenneth P. Lord, GSC, who had been Chief of Staff under both General Drum and General Grunert, was designated as Acting Commanding General effective the first of August (70).

CHAPTER IV

COMBAT TEAMS AND RECONNAISSANCE PATROLS

When the four Field Armies were set up in 1932, the intention was to provide a means of national defense, whether the defense should actually entail the taking up of defensive positions on our frontiers or engaging in offensive operations overseas. Quite vaguely at first, they were assigned territorial missions within the country (1). As the emergency created by the Axis threat intensified, the defense missions assigned to the Armies and their accompanying defense commands became more specific and active. The First Army assumed the defensive on the east coast when war finally started and with the erection of the Eastern Theater of Operations late in the month, units of the Fourth Army were also available.

Certainly one of the most significant decisions of the war, however, one which may have been indicated by implication in Rainbow No. 5 but was not specifically stated there, was the decision by which the First Army began to lose most of its combat units as early as February 1942. For this was the decision which took our troops off the static defensive and began to prepare the great offensives in the Mediterranean, against the European Continent and later in Asia.

When the Japanese attacked at Pearl Harbor, the First Army units had barely reached their home stations again after the Carolina Maneuvers. According to a previous plan which, however, was soon changed, certain units were temporarily assigned to reinforce the defense sectors of the coastal frontiers. Three battalion combat teams of the 26th Division were attached to the New England Sector and reattached by them, one to each subsector. These battalions were from the 101st, 181st, and 182nd Infantry Regiments (2). In the New York-Philadelphia Sector, the 28th Division was to have supplied the Sector Mobile Reserve but this Division was relieved during its absence on maneuvers and on the eleventh of December 1941 the 44th Division was substituted (3). On the following day, First Army ordered the II Corps to supply a battalion combat team from the 44th Division for movement to Mitchel Field. And on the sixteenth the movement of a second battalion combat team to the vicinity of Georgetown, Delaware, and of the remainder of the regiment to the vicinity of Freehold, New Jersey, was ordered. These three teams were battalions of the 113th Infantry, each reinforced by a field artillery battery, a combat engineer company, and medical and quartermaster truck detachments as prescribed for combat teams (3).

The 29th Division stationed at Fort George G. Meade, Maryland, had been designated for the support of the Chesapeake Bay Sector and for operations against landings, (4). The sector plan called for the employment of a battalion combat team on the Delaware peninsula, a reinforced infantry brigade, less one regiment, in the sensitive Cape Henry area, the other regiment of the brigade in the Williamsburg area, and the division, less detachments, in the Richmond area. A battalion combat team was to be used in the Beaufort sector. While this Division was never used in the Sector, the framework of the plan was used in the initial assignment of the Sector Mobile Force. For the first few days of the war, troops of the 74th, 57th, and 244th Coast Artillery Regiments were used in guarding installations and sensitive points in the Sector region.

These troops were soon moved elsewhere and the 111th Infantry arrived in Norfolk for civil defense on the twenty third of December, 1941, reporting to the Corps Area Commander. On the eighteenth, the II Army Corps had been directed to furnish a regimental combat team from the 29th Division. The team furnished was the 116th Infantry with a battalion of the 111th Field Artillery attached. These troops were formed into three battalion combat teams designated as the Cape Charles, Cape Henry, and Beaufort Inlet Defense Forces and stationed respectively in those three general areas (4).

In what was later to be the Southern Sector, whose territory was at that time under control of the Third Army, eight battalion combat teams from three infantry regiments (the 135th, 155th, and 156th) were ordered to various points from Carolina to Texas on the eighth of December (5).

In the New England Sector, the original combat teams were replaced on the fifth of February, 1942, by the 104th Infantry regiment and other attached artillery, engineer, quartermaster, and medical troops. This team was in turn replaced by one whose nucleus was the 101st Infantry on the seventh of March, 1942, and they were relieved on the eleventh of May, 1942, by a team whose main organization was the 181st Infantry. This last team remained in place for approximately a year and a half (2).

In Chesapeake Bay, the combat team of the 116th Infantry was replaced on the twenty-first of January by one of the 111th Infantry. In the Southern Sector, the combat teams furnished by the IV Corps were replaced in mid-February 1942 by teams formed principally from the 13th Infantry. Subsequent substitutions in this Sector were the 28th Regimental Combat Team on the twenty-third of March, the 121st on the twenty-eighth of April, and finally the 104th on the 21st of May, all in 1942 (4).

As a result of these changes, a relatively stable situation was reached within the command by late spring of 1942 both as to the size and designation of the sector mobile forces. Each of the four sectors had one regimental combat team - the 181st in New England, the 113th in New York - Philadelphia, the 111th in Chesapeake Bay, and the 104th in Southern. One further change occurred in Southern Sector, however, in January 1943, when the 104th was replaced by the 144th (5).

The command lost its Corps as follows: The I Armored in January 1942, the II and IV in February, and the I and VI in June. The only division that remained in EDC after March 1942 was the 26th, most of whose troops were attached to sectors so that the organic reserve of the command amounted principally to the 101st Regimental Combat Team of the 26th Division. This unit was dropped in January 1943. Infantry regiments, other than those attached to sectors, in EDC were the 176th in the Military District of Washington, the 366th (CID) which guarded airfields in New England, and the 372d (CID) which, by special assignment of the War Department, furnished local guard in metropolitan New York (6).

Of course the Commanding General was authorized in emergencies to call on any troops stationed in his territory (7). However, the number of trained combat troops which were readily available at any one time within the boundaries of the command was not impressive. The chief dependence of the command was necessarily therefore on its small numbers of organic troops most of whom were widely dispersed in reconnaissance patrols on the beaches so that no considerable striking force was ever available.

From the fall of 1942 to the fall of 1943, the patrol of large sections of the beaches was assumed by the Coast Guard. The mission of Sector Mobile Forces was to observe and patrol the coastline; to attack and destroy any enemy landing raids or attempts to land enemy agents; and to be prepared to operate in the rear areas of the Sector in protecting vital installations in support of Service Commands. The observation and patrol of the coast presented difficult problems not only of terrain and weather conditions but the personnel problem of patrolling so long a line with so few men. Some stretches of the Maine coast were entirely impractical for foot patrols due to the contours of the coast; and the swamps and islands near Chesapeake Bay and southward required the use of boats of various kinds. When patrols were at full strength, the beaches were lightly patrolled in the day time and heavily patrolled at night so that generally every part of the beach was covered at least once every two hours. Motor patrols, Army and Coast Guard, supported the foot patrols where possible and reconnoitered the vital beaches daily for evidence of landings. At its maximum in the New England Sector, the combined Army - Coast Guard patrol system permitted a density of approximately one two-man patrol for every mile and a half of beach front.

One quite celebrated incident which illustrates the reason for and the operation of beach patrols was the landing of enemy agents in June 1942, which came to be known as the Amagansett Affair since one of the landings was staged on the South shore of Long Island in the vicinity of Amagansett (8). The other landing was made at Ponte Vedra Beach, Florida, at the same time and was made without discovery. The eight agents, four of whom landed at each point, were transported to our shores by submarine and were equipped with sabotage and demolition material. It was their intention to make and develop contacts with sympathizers in this country, establish themselves here and remain here until the end of the war, engaging in acts of sabotage chiefly against aluminum and airplane production.

The landing at Amagansett was made shortly after midnight at a point about 300 yards east of the Coast Guard Station. This section of the beach was patrolled by one man, alone and unarmed, walking eastward three miles and then back to the station. Five miles down the beach was a detachment of the 113th Infantry, part of the Sector Mobile Force, but the point where the landing was made was a Coast Guard responsibility. The night of the landing was dark and foggy. The first indication which the man on patrol had of the presence of other people on the beach was the sound of their voices. Then he sighted three or four men working beside a small rubber boat at the waterline. One of the men, dressed in civilian clothes, was standing on the shore; two others, wearing bathing suits, stood in the surf up to their knees and seemed to be unloading something from the boat.

The patrolman, a seaman named Cullen, asked what the trouble was and no one answered, but the man in civilian clothes started toward him. Cullen asked him who he was but there was still no answer until he reached to his hip pocket for his flashlight when the stranger, apparently thinking he was reaching for a gun, cried out, "Wait a minute. Are you the Coast Guard?"

Cullen replied, "Yes, Who are you?"

The stranger then answered that they were fishermen from Southampton who had run aground but on being told that they would have to come up to the Station and wait till daybreak he snapped out, "Wait a minute. You don't know what's going on here. How old are you? Have you a father and

mother? I wouldn't want to have to kill you."

At this point a man in swimming trunks, dragging a bag through the sand, came up to the pair and spoke briefly in German. Cullen now believed that the men were Germans and the stranger realized that he did. However, Cullen feigned gullibility and asked if the bag were filled with clams. The stranger fell in with his lead, said that there were clams in the bag and suggested that Cullen forget the whole incident, accompanying his suggestion with the offer of a hundred dollars. When the offer was raised to three hundred, Cullen accepted and returned to the station where he reported the incident. Back at the station, a telephone call was put through to the Napeague Station (Headquarters District Supervisor). The information given was apparently not very forceful or urgent or at least was not treated as such and it was two o'clock before notice of the incident began to come into Eastern Sea Frontier headquarters and pass through them to the Army and Sector. A small party from the Amagansett station had returned to the scene of the encounter but found no one there. They did find clothing and various explosives buried in the sand close by.

Twenty men and an officer from the 113th Infantry Detachment arrived on the scene at about two o'clock. They had not been alerted through normal channels but by a naval radioman at a nearby Naval Radio Station. Shortly after midnight he had heard the sound of motors and smelled diesel fumes. The possibility that these indicated a submarine offshore with a hostile intention - perhaps of destroying his station - seemed strong enough to him that he was prompted to rouse his wife and child who were sleeping and send them away from the station. Then he called the local coast guard and was informed that they were unable to give out any information relative to possible enemy landings. Finally he called the 113th Infantry detachment and after some difficulty convinced them that something might be up.

This was not the only intelligence that was mishandled. The previous evening, a radio direction finder fix had been established, presumably on this same submarine. The information did not result in the alerting of the mobile force because before it reached sub-sector it was erroneously stated that action was being taken by the Navy. And since no further information came from the Navy it was assumed that no action was required of the Army.

As it happened, the submarine had run aground almost as soon as the saboteurs were put ashore in the rubber boat. In an attempt to get free again, its commander had run his motors full speed (this was what the radioman heard and smelled) and then dumped large quantities of oil from his tanks in order to lighten his vessel. Still unsuccessful, he prepared the sub for demolition and made up a coded message announcing that his mission was completed but that he was forced to surrender and could not return to base. He never had to send this message because the tide shifted at daylight and floated him off. He was even able to sink one of our ships before his return to Brest.

Three nights later, another submarine put four saboteurs ashore at Ponte Vedra Beach, Florida. In spite of advance warnings to be on the alert for such an occurrence the local patrols were unaware of the presence of any enemy agents. A motor patrol passed the landing point twice during the course of that night but apparently at the wrong hours.

The eight saboteurs were all picked up by the FBI within two weeks

and before they had been able to do any damage. The two incidents demonstrated quite forcibly that the patrols then operating were not adequate and that the systems of liaison and dissemination of intelligence were not effectively understood or applied. Both of these shortcomings were thereafter corrected. The only other known landing of enemy agents on our shores occurred in the fall of 1944 after all patrols had been withdrawn (9).

The stronger beach patrols remained in effect until the fall of 1943 when they were gradually discontinued both by the Army and the Coast Guard. The Sector Mobile Force Infantry Units were released, the 11th in November, 1943, (4), the 181st in December, (2), and the 113th (3) and 144th (5) in the following March. They were replaced by Cavalry Reconnaissance Groups which served as a mobile reconnoitering and striking force but did not patrol the beaches in the regular fashion. The 16th Cavalry Group served in New England, the 101st in Chesapeake Bay and later in the former New York-Philadelphia Sector as well, and the 11th in Carolina, Georgia, and Florida. Even these small forces were soon to be further reduced. The 16th was lost in May, 1944, the 11th in June, and the 101st in July (10). This left the only mobile forces present in the command the 143rd and 144th Cavalry Reconnaissance Troops, one of which was assigned to each sector. When the Southern Defense Command was absorbed in January 1945 two more cavalry troops came under the command. These were the 56th and 57th on the Southern Land Frontier (11). When the 143rd and 144th Cavalry Reconnaissance Troops were assembled and alerted for release to Army Ground Forces in April 1945, there were effectively no mobile striking forces in all the east coast territory. We had then reached the ultimate point in a long departure from those defensive preparations which had been made in the maneuvers of the pre-war years. The double purpose of those maneuvers was demonstrated by the fact that we had successfully carried the war to the enemy so far from our own shores that the maintenance of a domestic defensive force was no longer necessary. Actually, the whole problem of the defense of the east coast was solved less by any direct measures than by what from this point of view might be called the indirect one of offensive action.

CHAPTER V

ANTIAIRCRAFT DEFENSE

In the Second World War the use of air power came into its own. Obviously, this would include the concurrent development of weapons and technique to combat it and reduce its effectiveness. It was apparent in the First Army OPX of 1937 that the United States Army was aware of the demands of this new weapon since the exercise included the theoretical existence of an aircraft warning service. Actual training and employment, however, was a different problem from a paper exercise. In the maneuvers of 1939 only a small amount of observation aircraft was available and two regiments of anti-aircraft artillery, undermanned and undergunned, were the only ones present at the Plattsburg Concentration.

In February 1940, however, the War Department created an Air Defense Command (1). This Command was to be located in the First Army area and the Commanding General, First Army, was charged with supervision of its activities. It was created in order to further the development of means and methods for defense against air attack and, to that end, was to develop a system for unified air defense of an area through practical application of the coordinated effort of aviation, anti-aircraft artillery and aircraft warning agencies. Brigadier General Chaney, U. S. Army, was in command with headquarters at Mitchel Field, Long Island. Other than a headquarters and headquarters detachment and a Signal Service (consisting of two companies) the Air Defense Command was to have no troops of its own, although both aviation and anti-aircraft artillery units were to be made available to it from time to time as necessary (2).

This organization conducted two exercises, which laid the foundation for the later air defense procedure of the Army and the east coast. The first of these exercises was at the First Army Maneuvers in New York in 1940 and was designed to develop the defense of an army in the field. The second was an exercise called "Test Sector" and its purpose was the development of a system of unified air defense for a non-militarized area.

In the first exercise the Signal Service of the Command moved to the maneuver area in July and organized an Aircraft Warning Service, setting up communications, information centers and observation posts, and securing the cooperation of civilian groups which were to serve in the functioning of the system in the following months. When the provisional brigade of antiaircraft artillery arrived for maneuvers, it set up its own net which functioned as part of the Aircraft Warning Service. The Air Defense Command was the first organization of its kind in the United States Army and the 1940 Maneuvers was the first functioning of such a unit with an army in the field. The first step was the developing of maps to show the location of telephone facilities. This was done, as was so much of the later work, with the cooperation of the Bell Telephone Company. By this means the approximate location of ground observer stations was determined. Following this, local posts of the American Legion were appealed to by mail and they assumed the responsibility for choosing the exact location of observation posts and for enlisting the services of volunteer workers to man the stations. By the time that maneuvers began, 406 observation posts spaced approximately five miles apart over the 20,000 square miles of the area in northern New York were ready for operation. In order to handle the information garnered by these stations an Information Center was set up in Watertown with an alternate center at Syracuse in case the primary installation should be declared destroyed by bombing. The

evaluated intelligence from the Information Center, which was run by the Signal Service, would be transmitted over the AWS communications to the Air Defense Office at Gouverneur, the AAA Brigade Headquarters at Gouverneur and the pursuit airdromes at Utica and Syracuse. The whole exercise was seriously handicapped by shortages in both aviation and artillery so that the test of procedures was indicative rather than conclusive. However, the test was good enough to show that a better channel for the flow of information than the one which was used would be to connect the observers directly to the plotters on the filter board instead of having the intelligence pass through the Information Center first.

The second exercise, Test Sector, the purpose of which was to develop the air defense of a non-militarized area, was held in January, 1941 (3). Meanwhile, in October and November, General Chaney and Captain Gordon P. Saville of his staff made a personal study of British Air Defenses. This visit was made during the final stages of the great air Battle of Britain in which the effectiveness of those defenses was proven. Since it was evident, however, that the British system should not be transposed unchanged to the east coast of America, Test Sector was an experiment with several variations of the basic idea. The territory covered in the exercise was all of the states of Massachusetts, Connecticut and Rhode Island, and a portion of New York east of the Hudson River and south of the Saugerties-Copake. The area included two regions (Boston and New York) and therefore the effectiveness of inter-regional coordination could also be tested. In the Boston region, filter and information centers were under one roof in the Chelsea Armory. In the New York region, on the other hand, remote filter centers at Hempstead, White Plains and New Haven, reported their evaluated plots to the operations room of the Information Center in New York. Moreover each filter and information center was organized a little differently in order to give a basis of comparison regarding the efficiency of trained female telephone operators, untrained civilian men and women, and trained soldiers as personnel. With respect to the reporting by ground observers, a different system of telephone communications and observation posts at each of the filter centers in the New York area would give valuable answers to a number of questions: the use of a private line system for ground observers in the area of White Plains as compared with the use of subscribers' telephone lines in the Long Island area; the use of selected observation posts with instruments especially installed as compared to the use of reselected observation posts by moving them closer to the existing telephones. It was also planned to test the effect of observer inactivity on the continued reliability of their observations and reports. In addition to all these the Test Sector exercise offered an opportunity to examine and improve or discard many technical details of equipment and procedure, too numerous to mention.

By means of these two exercises and by continuous research and consultation with other military agencies and with the Bell Telephone Company, the Air Defense Command was able to work out the basic doctrines and procedures for the air defense of the east coast. Its mission was purely one of planning and development. In June 1941, after a year and a half of existence the command was absorbed by the I Interceptor (later I Fighter) Command under GHQ Air Forces and so passed from control of First Army. Although as part of the First Air Force, it returned to nominal control of First Army and its associated defense commands in the following December, its functions remained largely autonomous.

The anti-aircraft artillery which was provided for the air defense of the east coast was a somewhat different matter. From start to finish it was an integral part of the coastal defense command. The first unification of the Coast Artillery Anti-Aircraft regiments into a single organization did

not come until after Pearl Harbor. By virtue of assumption of control over all organizations in the Northeast Defense Command Area, the troops unified were able to number twenty regiments and three separate battalions most of which had been organized into five brigades. From these troops, the Provisional First Army Anti-Aircraft Artillery Command was formed on December 10, 1941, and Major General Sanderford Jarman, U. S. Army, who was then commanding Camp Stewart, Georgia, was designated as commander (4). In addition to the ordinary responsibilities of a troop commander, he was charged with the supervision of the training of all Harbor Defense Anti-aircraft Artillery and also with the coordinating of the preparation of the Anti-Aircraft Artillery Defense Plans with the Air Force Commander, and the development of the operational control with Air Force units. By subsequent changes of name the Provisional First Army Anti-Aircraft Artillery Command became the AAAC, Eastern Theater of Operations on the thirteenth of January 1942 (5) and the AAAC, Eastern Defense Command on the twentieth of March 1942 (6).

One of the first acts of this command was the preparation of an anti-aircraft artillery defense project for the eastern coast similar to the previously prepared harbor defense projects (7). The project divided the coastal states area into ten regions--Boston, Albany, Buffalo, New York, Philadelphia, Norfolk, Wilmington, Charleston, Jacksonville, and Tampa-Miami. Within these regions, the Critical Areas were selected for protection and a determination made of what armament and personnel would be required to protect them. Recognizing that a full defense could not be established with the men and materiel then at hand the total requirements were divided into three priorities. The first of these provided a skeleton defense of groups of indispensable installations in critical areas and of the most vital isolated plants on or near the coast; the second augmented the critical area defense of the first priority and provided minimum defense for additional vital installations farther inland; the third provided a final augmentation of area defenses and extended protection to installations not included under either the first or second priorities.

Even in its final stages, the planned density of guns was to be considerably less than that used in England. The British had located sufficient guns in defense of an area so that it was practicable to concentrate thirty-two of them on any single plan or formation regardless of the angle of approach. Our own proposed defense could not concentrate more than twelve guns at its greatest, and first priority defenses would be only one-fifth or one-sixth of those used by the British in comparable areas.

Nor was any attempt to be made to provide defenses for manufacturing plants not engaged directly in the war effort, large rail centers, sensitive points on communication lines, sources of water supply for important cities or power plants. This would have required additional widely dispersed materiel and personnel the diversion of which from other activities was not considered either desirable or necessary. Even on this basis the project called for a troop strength which ranged from slightly more than 183,000 under first priority to some 458,000 under priority three. Armament also ran to high figures. Ninety millimeter guns, for example, would number at least 1,507, with 3,859 as the number for the fully augmented defenses. At the time that the project was submitted, troops actually employed numbered some 26,000 and 90mm guns only 48. After submission and approval, this huge project was held in abeyance. It never went into effect. Enemy capabilities for launching air attacks against the United States were too slight to warrant committing such quantities of men and materiel to defense. It was a long time, indeed, before we had them to commit and when that time arrived it seemed wiser to commit them elsewhere.

Because of the large numbers of troops which would be involved if any

adequate AA defense of the east coast were made, General Jarman suggested that limited service men be utilized. This suggestion was discussed at various times with the War Department and was embodied in the project as submitted. In January 1942, the activation of an AA regiment of limited service personnel was authorized and the regiment was formed. This experimental organization proved successful. In October the gradual replacement of general service men and officers throughout the command by those qualified for limited service only was ordered and the units in which these changes occurred were to remain permanently assigned to defense command duties. When this conversion had reached a stage when 45% of the officers of the command were over-age and more than 50% of the enlisted men were limited service, in June 1945, the conversion was discontinued by the War Department. Subsequently, the term "limited service" was discontinued and men who did not meet minimum physical requirements for induction were discharged from the Army. These factors and in addition the formation of numerous cadres for the expansion of the arm caused an almost continuous high turnover of personnel with the usual attendant difficulties of organization and training (8).

One of the most notable achievements of the Command was the development of the "hot loop" system of communications for intelligence and command circuits. These circuits (four wire amplified circuits furnished on a monthly rental basis by local telephone companies) were manned twenty-four hours a day, required no ringing, no repeats, and no acknowledgements. Because of the design every operator heard every message and acted accordingly. The line served as a filter agency for eight to fifteen reporting posts and precluded any extensive filtering at operators boards. Strict line discipline, with the highest echelon acting as control station, insured a well organized and efficient system of voice transmission. It was found in tests that information reported by outposts was consistently delivered to the fire units within twenty-five seconds from the time the "hostile" plane was first spotted until fire units were prepared to deliver effective fire (8).

In general it was believed that the AAAC's own outpost observer system (Antiaircraft Artillery Intelligence Service) was adequate to warn it of the approach of enemy aircraft without relying much on the AWS. This was possible because artillery requires much less warning than fighter aircraft which must be warned in time to get planes in the air and in position for attack. Artillery, on the other hand is already in position and the hostile target either does or does not come within range. Although the AAIS was tied in with the AWS system and intelligence passed over the lines in both directions, the main reliance of the AAAC was on its own warning service.

The excellent communications of the AWS and AAAC on the east coast was largely the result of the great already established telephone network which existed there as nowhere else in the world. The use of the "hot loop" system, however, was not necessarily confined to areas where commercial facilities were available but could be used advantageously under field conditions and it was found that it was carried to active theaters all over the world by former units and officers of the AAAC.

The Provisional First Army AAAC officially became the AAAC, Eastern Theater of Operations on the thirteenth of January, 1942, without change in mission or functions (5). Subsequently, on the eighteenth of March, when the War Department changed the name of Eastern Theater of Operations to Eastern Defense Command, it directed the formation of an anti-aircraft command according to the principles of Training Circular No. 71 and specifically placed the AAAC of the Eastern Defense Command under the operational control of the I Interceptor Command (9). Training Circular No. 71 (WD, 18 Dec 41) was in line with the conclusions reached by General Chaney in his investigation and

experiments in Air Defense. It directed that the anti-aircraft commander be under the interceptor commander and that wherever an interceptor command was divided into regions that anti-aircraft artillery be also divided into regional commands. Since that I Interceptor (Fighter) Command had only four regions to which a fighter wing was assigned this resulted in only four active regions for the AAAC as well. These were Boston, New York, Philadelphia and Norfolk. The defense provided in a region was (in spite of the AAA Defense Project) generally a brigade of three regiments.

A standard operating procedure for operational control was worked out between the Commanding General, Air Forces, Eastern Defense Command and the Commanding General, AAAC, EDC. By this instrument, operational control was vested in the Fighter Commander and was defined as the coordination of the artillery local defense with the fighter general defense by disseminating information as to the location of friendly aircraft, by restricting artillery fire and illumination or barrage balloon operation, and by ordering special fire, illumination, or position finding missions. In the absence of the above specific controls either positive or negative the artillery was free to act on its own initiative (8).

Another Joint Standard Operating Procedure was one with the Navy (Eastern Sea Frontier) for the coordination of the anti-aircraft fire of ships in port with artillery ashore including that organically assigned to Navy yards and bases (10). This move was both desirable and necessary on the basis that although the AAAC never reached any very great strength, ships in port often carried large numbers of anti-aircraft guns. Operational control was vested in the AAAC Regional Commander who was himself controlled, of course, by the Fighter Command. Communications were laid directly to docks and piers and to naval installations ashore from which messages could be relayed to ships afloat in the harbors.

In September 1943, when the Air Forces were separated from the Defense Commands, the First Air Force retained the responsibility for operating and maintaining the Aircraft Warning Service as it was then established. (11) It was further directed that the AAAC remain under Air Force operational control. The War Department pointed out, however, that operational control was to be understood as a transitional phase pending the establishment of a complete command relationship in accordance with a new doctrine which had then been formulated and embodied in the latest Field Service Regulations. This doctrine was directly in line with General Chaney's ideas in Air Defense Command and was quoted as follows, "When anti-aircraft artillery, searchlights and barrage balloons operate in the air defense of the same area with aviation, the efficient exploitation of the special capabilities of each, and the avoidance of unnecessary losses to friendly aviation, demand that all be placed under the command of the air commander responsible for the area. This must be done." Actually, however, it was not done in the Eastern Defense Command because the AAAC was entirely eliminated before it could be accomplished.

The reorganization which was ordered in December 1943 (troop basis 35,000) resulted in a reduction of the firing units of the AAAC to five groups (12). These were to be stationed at Manchester (Conn.), Newport, New York, Washington and Newport News. An Anti-aircraft Artillery Group is composed of three battalions one of which is a gun battalion, one searchlight and one automatic weapons. It replaced the regimental organization. At about the same time as the reorganization of the Eastern Defense Command was ordered, the War Department also announced a particular need for certain types of AA units to be released to the Ground Forces. Twenty-one battalions of various types together with group and brigade headquarters were released to Ground Forces in the following spring.

But it was also that same spring which spelled the end of the AAAC. A War Department letter of 30 March 1944 announced a Joint Chiefs of Staff decision authorizing an exception to Category A of Defense as it applied to the Continental area of the Eastern Defense Command to permit the discontinuance of all anti-aircraft artillery (14). Consequently, the mission was terminated and troops withdrawn from positions effective 1 July 1944 (15). The troops were released to the Army Ground Forces.

After the AAAC had been abandoned and any active air defense by EDC had been discontinued, two novel airborne weapons appeared which seemed to constitute a threat to the Continental United States. The first of these was the German robot bomb and the second the Japanese balloon.

Early in the afternoon of the third of November 1944, General Grunert received a telephone call from the War Department G-2. The call was to the effect that the War Department had received information from what was reputed to be an excellent source that the Germans had several new-type submarines in Norwegian ports, and one of the boats was scheduled to depart for New York Harbor to use the V-1 flying bomb. No confirming reports had been received from other sources as yet although an attempt was being made to secure them and SHAEF had been asked to make photo-reconnaissance. In the absence of confirmation, the War Department did not want anything to be done lest the activity cause general alarm among the public. It was thought desirable to pass the intelligence on immediately for what it might possibly be worth in future developments, but the War Department G-2 and Operations Division had mutually decided that no counteraction should be taken.

An essentially similar message was received by Admiral Leary, Commander of Eastern Sea Frontier at approximately the same time. Later the same afternoon, however, a Cominch dispatch directed Admiral Leary to institute continuous extensive patrol in an arc 250 miles seaward from New York and to secure coordination with the Army for the use of airplanes, radar and anti-aircraft artillery. The directive to Admiral Leary stated that the attack might occur in the very near future and was presumably based on an intelligence evaluation by the Navy considerably higher than that given by the Army. The facilities available to Admiral Leary to take the action directed were quite limited. In order to maintain any considerable reconnaissance and defense, it would be necessary to utilize Army means as well. The Army means, as a matter of fact, were also quite limited. The AAAC having been disbanded, the only anti-aircraft which was left in EDC was that organic to the Harbor Defenses. Much of this was in storage or maintenance or was otherwise not manned. The ammunition reserve was slight. The First Air Force had an anti-aircraft artillery brigade on Long Island in a training status. They were not tactically deployed and were without ammunition. The First Air Force itself was not a tactical organization at this time but primarily a training outfit. However they did have some airplanes and people to fly them and their forces at Mitchel Field could be augmented from other east coast bases. At the maximum, the aggregate of forces which could be assembled by EDC and First Air Force were not overwhelming, but even these forces could not be made available to the Navy by either General Grunert or General Hunter acting on his own initiative. This was the catch in the Navy directive to Admiral Leary.

According to an agreement for Joint Air Support which had been made between EDC and ESF in the previous February (16), the Commanding General, EDC, who was responsible for the air defense of the eastern seaboard, was to assume emergency command of any or all tactical Army Air Forces units stationed within the command, and operational control of any naval fighter aircraft which were made available. The circumstance necessary for such

emergency control was agreed to be the event of an actual attack or the imminent threat of attack as determined by the judgment of the Commanding General, EDC.

However, the previously discussed War Department letter of April 5, 1944, on the subject of defense commands, which had empowered defense commands to assume emergency command of any Army forces physically present within the limits of the command had further stated that under the existing state of communications prior War Department approval would be secured. In other words, it was necessary for the War Department to declare the emergency (17).

The War Department representative had definitely stated that such an emergency did not exist not only in the original telephone conversation, but in a later telephone conversation at eleven-thirty that night, when General Grunert, on the basis of Admiral Leary's strong directive, called General Hull of the Operations Division for further information.

As the situation stood during that night of November 3-4, when representatives of both Army forces were continuously present at Eastern Sea Frontier, planning was possible, (9) but General Hunter of the First Air Force was unable to make any actual commitment in the absence of a directive from either the Army Air Forces or General Grunert. General Grunert was unable to give such a directive in the absence of War Department approval. Admiral Leary planned to start his operations at daybreak on November fourth and needed the Army assistance.

The situation was clarified on the following morning. General Hunter received a directive from Army Air Forces which empowered him to assist Admiral Leary with all of his capabilities. The War Department still did not consider the situation critical and General Grunert was directed not to take over the First Air Force but only to coordinate wherever possible without alarming the civilian public or releasing any information to them.

The Navy instituted its patrols, the First Air Force secured additional planes and deployed its anti-aircraft along the south shore of Long Island in accordance with AAAC plans as retained by EDC. All available AA armament in the Harbor Defenses was prepared for fire and manned with whatever personnel could be assembled, taking them from other duties where necessary. The EDC arranged for an emergency supply of ammunition both for its own and for the Air Force guns. The ammunition was trucked in rapidly from supply points and as secretly as possible. A continuous alert was maintained until the tenth of November, when instructions were received to resume normal operations in the absence of any further confirmation of the original report.

This incident was the first time that the United States was ever specifically defended against robot bomb attack. It was chiefly important as an indication of the desirability of a Joint War and Navy Department evaluation of intelligence in situations which would involve both Services, and as an indication of the need for clarifying the authority to assume responsibility in an emergency. The most salutary result was the power which was subsequently given to Defense Commanders to declare emergencies on their own initiative and to assume command of any necessary Army forces in their territory (18).

Early in November 1944 balloons made of specially prepared and tested paper, with capacity to carry incendiary or anti-personnel bombs first began to be sighted and recovered in Hawaii, Alaska, Canada and the United States. At least one reached a point as far east as the State of Michigan. It was believed that the balloons were being launched from Japan proper, probably

from the Island of Honshu. Meteorological data indicated that the direction and velocity of the west to east wind currents are ideally suited to propel the device to our west coast and inland, particularly during the winter months. No weapons were initially found in any of the balloons which were recovered after landing other than incendiary or anti-personnel bombs which offered only a negligible threat unless the number of balloons landing were to be multiplied many times. It seemed logical to assume that this fantastic weapon might be designed for the ultimate carriage of some more potent threat. Since the Japanese had spoken from time to time of the potentialities of disease-causing agents as a weapon, and had gone so far as to issue warnings to its own troops that the Allies might use biological warfare against them, the possibility that this might be the eventual purpose of Japanese balloons was given serious consideration.

When a balloon landed it constituted a problem of internal security and was therefore a Service Command responsibility. However, the Eastern Defense Command was responsible for defense against balloons within its territory while they were still in flight and was further responsible for coordinating the defense plans of the various Service Commands and for supervising and inspecting the defense training. Early in May, 1945, a basic plan (JBN-45) was prepared which set up a nominal defense structure and provided for increased defense if the situation warranted (19). It was assumed that a well established defense by the Western Defense Command would intercept a substantial number of the balloons either over the water or within its land areas and that consequently only a small number would reach the territory farther east. It was not thought that the situation then warranted a diversion of personnel or materiel or the building up of a force for the purpose of dealing with such an unpredictable and widely dispersed phase of warfare. Three possibilities were allowed for--first that arrivals might continue to be intermittent and negligible, or second that they might increase moderately, or third that the increase might be marked. Under the first condition the balloons would continue to be disposed of by Service Commands without increase in forces. The second would require some augmentation of disposal and surveillance forces with perhaps civilian assistance as in an AFB. The third possibility would warrant the diversion of troops and materiel to an established defense involving the Eastern Defense Command, Service Commands and civilian defense agencies. This condition would necessitate prior War Department action before very definite steps could be taken because EDC had no troops adequate to such a defense and the forces which would be available under General Gruent's emergency powers could not be foreseen.

The plan was written on the basis of these assumptions and conclusions and it was distributed with a directive that supporting plans be prepared and sent to this headquarters for coordination. The plan included Chemical and Medical Annexes dealing with measures to combat disease-producing agents.

The bacteriological warfare potentialities of this weapon were not made public and as a matter of fact no information of balloon activity was initially released officially. Following an incident, however, in which a woman and some children were killed by a bomb explosion while examining a fallen balloon, the War Department decided to warn the public of the danger of touching or approaching balloons and instituted a press and word-of-mouth campaign to that effect.

Early in June, 1945, a Japanese Army spokesman issued a scare statement that balloon attacks would soon increase in intensity and would be piloted for greater control. He said that the first balloons had been released on March 10, 1945, the Japanese Army Day. The statement was presumably for home consumption. Balloons had landed here for several months previous to that date.

At the time of the end of Japanese hostilities in August 1945, a total of thirty balloons had landed within Eastern Defense Command territories and had been reported as recovered. Most of these were found in the western part of the command where ten were reported in Wyoming alone. One, however, traveled as far east as Michigan before falling and two were discovered in Texas. Other landings occurred in Colorado, the Dakota's, Nebraska, Kansas, and Iowa. In addition to the single casualty incident mentioned above, the only other damage caused by these weapons was a five acre grass fire in Marcus, South Dakota, on 30 March 1945.

CHAPTER VI

THE BASE COMMANDS

Besides its continental territories, the Eastern Defense Command had jurisdiction over the Base Commands in Iceland, Greenland, Newfoundland, and Bermuda. These islands were important stations of the sea and air routes to Europe. They offered bases from which to wage war against the submarine menace and in the hands of the enemy would have been useful bases for attacks against our shipping or even conceivably against the continent itself. Although none of these islands are United States territory, it was apparent that our forces should occupy and hold them against possible enemy attack and that we should develop facilities there for use in maintaining our supply lines. The desirability of this move was foreseen early and agreements were negotiated and initial garrisons installed before we were actually at war. Each of these Commands was extensive enough to merit a history of its own and only a brief summary will be included here.

Greenland was occupied by United States forces by an agreement of the two governments concerned. Greenland is a Danish territory. Denmark was invaded and occupied by the Germans in April 1940. Thereafter the people of Greenland while reiterating their allegiance to the Danish King, expressed a hope that the United States might take over their protection. On the basis of this invitation and of certain other diplomatic policies, as well as in recognition of our own interests, the basic agreement for occupation was signed by Secretary Hull and the Danish Minister on 9 April 1941. The agreement provided that the United States would have the right to build and maintain facilities of various kinds on land which would be temporarily leased for the purpose, and in general the United States was empowered to do all things which were necessary to the defense. The first troops arrived in Greenland on the eighth of July 1941. They were 23 officers and 450 enlisted men most of whom were Engineers although the force included one battery of the 62d CA (AA). Later in the month, 6 more officers and 200 more enlisted men arrived. The mission of this initial garrison was to construct military facilities and defend themselves against attack during the construction phase. The construction was to include an airdrome and housing for 2,050 men near Julianehaab and an auxiliary airfield and housing for 480 men near Ivigtut. When the facilities were ready for occupation, an initial defense garrison was to arrive. This would consist of a Heavy Bombardment Squadron and one Pursuit Squadron with other air corps troops, a battalion of Infantry and four batteries of Coast Artillery - two each of antiaircraft and seacoast. Service troops of various types were of course included. Nominal tactical command of the initial construction force was originally given to the Commanding General, First Army, but this passed to GHQ on 15 July 1941 (1). The Greenland Base Command did not return to EDC control until September 1944 (2), at which time the troop strength was approximately three thousand. This was shortly reduced by the release of all the ground forces troops except one infantry company. All operations of the Greenland Base Command both while under GHQ and while under EDC were prescribed by an operations plan (WDOPD-GBC) drawn up by the War Department in November 1942.

The Newfoundland Base Command was so designated by a War Department letter of December 1940 in which it was stated that the military garrison to be estab-

lished there would be known as the Newfoundland Base Command and was attached to the First Army (3). The presence of such a garrison was made possible by the destroyer-bases agreement with Britain in September 1940. In the same month, a board of American representatives conferred with British and Colonial officials in Newfoundland and recommended that parties be stationed there immediately, chiefly for meteorological observations and hydrographic and topographic surveying (4). A civilian survey party went to Newfoundland in October. Construction was of a very limited nature until April 1941. Boundary lines were established and a portion of the temporary camp at Fort Pepperell (near St. John's) was built by hired labor under USED supervision. The first troops arrived in St. John's Harbor on 29 January 1941. A temporary camp was started on the outskirts of the city and named Camp Alexander. The troops did not begin to occupy the camp, however, until May 1941 and the troopship was not entirely vacated until the middle of June 1941. Permanent establishments were built at Fort Pepperell, Fort McAndrew (Argentia) and at Harmon Field (Stephenville). In addition, our forces shared the Canadian built Air Base at Gander. Hospitals were built at all these places.

The first troop contingent which arrived in January 1941 included the 3rd Battalion of the 3rd Infantry, a battery of seacoast guns (57th CA) and one of antiaircraft with attached searchlights (62d CA)(5). These were later augmented by the rest of the 3rd Infantry (less 2d Battalion), four more seacoast gun batteries and six more antiaircraft gun batteries. Numerous air and service troops brought the troop strength to an approximate 10,000 in 1943. Permanent fortifications were built for two of the seacoast batteries (6"). These were entirely similar to the battery construction on the east coast of the United States. A bombproof command post was also built. All three installations were at Fort McAndrew.

The defense of Newfoundland was shared by the United States and Canada (6). Canada had seven thousand troops stationed there in 1943. The command of the United States base passed from First Army to GHQ on 10 July 1941 (7) but reverted to Eastern Theater of Operations when that command was formed on 24 December 1941 (8) and so became an EDC responsibility when the Eastern Theater of Operations was redesignated Eastern Defense Command.

The history of the Bermuda Base Command was generally similar to that of Newfoundland. It was designated by War Department letter of 25 January 1941 (9) and was attached at that time to First Army. It passed to GHQ on 15 July 1941 and came under EDC on 22 April 1942 (10).

The board which selected sites for bases operated in September and October 1940. Their work was complicated by a fear on the part of certain interests in Bermuda that bases offered an opening wedge to the Americanization of the Islands, and by a desire of the American government that the Bermudian life and topography be as little disturbed as possible. The Riddle's Bay Area was first selected as the main base for both Army and Navy use but since this would have eliminated one of the finest residential districts in Bermuda, another site selection was made which placed the Army Base on St. David's Island and secured two islands in Hamilton Great Sound (Morgan and Tucker's) for a Naval seaplane base (11).

The first troop contingent docked in Hamilton on 21 April 1941 consisted of some 800 officers and men and included one rifle company of the 11th Infantry, one 8" Railway battery of the 52d CA and one 155 mm battery of the 57th CA. Each of the gun batteries had an extra range section attached so that it was possible to split the batteries into separately located platoons each

with two guns (12). The 8" guns were installed at old Fort Victoria, St. George's Island and at Scouer Hill, Somerset. The 155s were emplaced at Cooper's Island and at Turtle Hill on Hamilton Island. The Base Headquarters operated in the Castel Harbour Hotel until the new installation at Fort Bell, St. David's was ready in 1943. Also ready in 1943 were two standard 6" seacoast batteries located at Fort Victoria and at Tudors Hill. With its defense at the maximum, the Bermuda Base Command numbered some three thousand troops including an Infantry battalion with a Field Artillery battery, a seacoast battalion (four gun batteries) and an antiaircraft battalion (four firing batteries). A considerable force of combat aircraft had been contemplated but failed to materialize and the great airbase dredged from Castle Harbour found its most important use as a station of the Air Transport Command. Defense of Bermuda for which unity of command was vested in the Commander-in-Chief, United States Atlantic Fleet (1) was again, as in Newfoundland, a joint problem with British Empire forces. British Army forces were chiefly the two colonial organizations, the Bermuda Militia Artillery (with two 6" gun batteries) and the Bermuda Volunteer Rifle Corps.

The last of the bases to be occupied was Iceland. This ancient possession of Denmark seized the opportunity of the political turmoil of Europe and hostile occupation of the mother country to declare her sovereign independence. The British, with an eye to the protection of shipping routes to Canada and the United States, forcibly occupied Iceland in a kind of unopposed invasion. It is understood that they arrived there only one jump ahead of the Germans. The occupation of Iceland was one of the subjects of Joint British and American Staff Conversations in the spring of 1941 and it was agreed that American forces would relieve the British forces there as soon as practicable (13). On the first of July, 1941, the Prime Minister of Iceland wrote to the President of the United States admitting that American occupation would be in accordance with the best interests of Iceland. He asked that the United States undertake the defense of Iceland, recognize its full sovereignty and agree to move its troops out as soon as the war was over. These provisions were accepted. An initial American force of some four thousand Marines arrived in Iceland on 7 July 1941. An Army Air Forces contingent of approximately twelve hundred troops arrived on August sixth, 1941. The second echelon of approximately five thousand troops arrived on the sixteenth of September, 1941 and the gradual relief of British forces was begun. Eventually, the strength of this base reached thirty nine thousand and was thus by far the strongest of the Atlantic bases. In June, 1942, it came under the command of the Commanding General, European Theater of Operations (14). No jurisdiction was exercised by Eastern Defense Command until the first of July 1944 by which time the troop strength had been greatly reduced and Iceland was primarily an Air Base on the supply route to Europe (15). The troop strength at that time was slightly more than 8500.

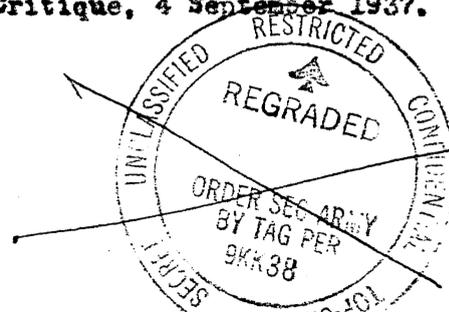
Though not properly a Base Command of the Eastern Defense Command, the Air Transport Command station in the Azores (United States Army Forces in the Azores) was placed under EDC command, for administration only, from 20 May 1944 until 1 February 1945.

NOTES

CHAPTER I

1. Letter WD, TAGO, subject "Defense of Continental United States," 18 March 1942.
2. Letter WD, TAGO, subject "Defense Plans - Continental United States," 17 March 1941.
3. See Gance, The History of the United States Army.
4. Biennial Report of the Chief of Staff, 1 July 1941.
5. Letter WD, TAGO, subject "Constitution, Reconstitution, or Redesignation of Certain Units of the Regular Army, and the Reorganization of Regular Army Divisions," 15 August 1927.
6. Letter WD, TAGO, subject "Redesignation of Certain Units of the Regular Army," 13 October 1927.
7. Letter Office of the Chief of Staff, subject "Establishment of Field Armies," 9 August 1932.
8. General Orders No. 1, Headquarters First Field Army, 8 September 1932.
9. *Ibid.*
10. Training Memorandum No. 1, Headquarters First Army, 29 April 1935.
11. Training Memorandum No. 3, Headquarters First Army, 1 May 1935.
12. General Orders No. 6, Headquarters Second Corps Area, 30 April 1936.
13. General Orders No. 6, War Department, 18 June 1936. See also General Orders No. 12, War Department, 20 October 1936.
14. In connection with this exercise, see letter WD, TAGO, subject "First Army Command Post Exercise Fiscal Year 1938," 30 December 1935; letter Headquarters First Army, subject "Preliminary Study and Training for First Army CPX, 1937," 6 February 1937; and letter Headquarters First Army, subject "Directive for 2d Stage Training for First Army CPX," 20 March 1937.
15. See the remarks of General McCoy at the Critique, 4 September 1937.

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16. Special Orders No. 207, War Department, 3 September 1938.
17. General Orders No. 5, Headquarters First Army, 5 November 1938.
18. General Orders No. 5, War Department, 21 November 1938.
19. Special Orders No. 181, War Department, 5 August 1939.
20. Letter Headquarters First Army, subject "First Army Maneuvers, 1939," 3 December 1938, and a subsequent letter, same subject, 3 January 1939. For a complete account of this exercise, see Final Report, First Army Maneuvers 1939.
21. Training Memorandum No. 2, Headquarters Director First Army Maneuvers, 21 March 1939.
22. General Drum's address at the Closing Conference, included in the Maneuver Final Report.
23. For a complete account of this exercise, see Final Report, First Army Maneuvers 1940. See also letter Headquarters First Army, subject "Army Maneuvers, F. Y. 1941," 11 January 1940; letter Headquarters First Army, subject "First Army Maneuvers, 1940. Planning Basis," 8 February 1940; letter Headquarters Director First Army Maneuvers 1940, subject "First Army Maneuvers 1940. Preliminary Plans," 14 February 1940; and Training Memorandum No. 1, Headquarters First Army, 23 April 1940.
24. For further information on the Air Defense Command see Chapter 5.
25. See General Drum's remarks at the Opening Conference, included in the Maneuver Final Report.
26. For a complete account of this exercise see Final Report, First Army Maneuvers, 1941. See also Maneuver Memorandum No. 2, Headquarters First Army, 8 July 1941, and Maneuver Memorandum No. 3, Headquarters First Army, 14 July 1941.
27. Letter GHQ, subject "Corps and Army Training," 15 January 1941.
28. Letter Headquarters First Army, subject "Corps and Army Training," 11 February 1941.
29. Letter GHQ, subject "Corps and Army Training," 18 March 1941.
30. Letter WD, TAGO, subject "Organization, Training and Administration of the Army," 3 October 1940.
31. This Training Memorandum is included in the Maneuver Final Report.

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CHAPTER II

1. Letter WD, TAGO, 660.2 (8-6-31)(Misc.), 12 August 1931.
2. For the basis of the discussion which follows see the Harbor Defense Projects of the various Harbor Defenses.
3. The requirements and projects for Portland, Portsmouth, and Boston may be found in a document entitled "Harbor Defense Projects for Harbor Defenses included in the Portland - Cape Cod Area." (GCA-P-PCC)
4. The requirements and projects for New Bedford, Narragansett Bay, Long Island Sound, and New York may be found in a document entitled "Harbor Defense Projects for Harbor Defenses included in the New York - Narragansett Bay Area." (GCA-P-NYMB)
5. Harbor Defense Projects for Harbor Defenses included in the Philadelphia - Delaware River Area. (GCA-P-PDR)
6. Harbor Defense Projects for Harbor Defenses included in the Chesapeake Bay Area.
7. Harbor Defense Projects for Harbor Defenses included in the Southern Coastal Frontier.
8. The projects prepared under the authorization of 1931 were approved as follows:

Portland, 13 August 1934.
Portsmouth, 12 June 1934.
Boston, 13 August 1934.
New Bedford, 9 June 1934.
Narragansett Bay, 13 June 1934.
Long Island Sound
New York, various dates in 1937.
Delaware, 19 August 1937.
Chesapeake Bay, 19 February 1937.
Charleston, 19 February 1937.
Key West, 16 September 1936.
9. Letter WD, TAGO, subject "Modernization of Harbor Defense Projects, Continental United States," 25 September 1940.

10. The modernization program authorized in 1940 is recorded in two sets of documents which were prepared by the Harbor Defense Boards. For detailed information as to plans and projects see a document for each harbor defense entitled "Modernization Program, Harbor Defenses of _____," and dated in 1941. For a detailed report on the progress of the program see a document for each harbor defense entitled "Supplement to the Harbor Defense Project, Harbor Defenses of _____."

11. See History of the Northeastern Sector.

12. See History of the New York - Philadelphia Sector.

13. Letter WD, TAGO, subject "Reduction in Strength EDC," 21 January 1944, and letter Headquarters Eastern Defense Command, subject "Reorganization of Eastern Defense Command," 9 January 1944. See also General Orders No. 6, Headquarters Eastern Defense Command, 12 February 1944.

14. See letter WD, TAGO, subject "Disbandment, Constitution, Activation and Redesignation of Coast Artillery Units, Eastern Defense Command," 4 September 1944; General Orders No. 19, Headquarters Northeastern Sector, 22 September 1944; General Orders No. 13, Headquarters Southeastern Sector, 19 September 1944.

15. See letter WD, TAGO, subject "Revised Troop Basis, Eastern Defense Command," 16 March 1945; and letter Headquarters Eastern Defense Command, subject "Revised Troop Basis, Eastern Defense Command," 4 December 1944.

16. With the absorption of the Southern Defense Command in January 1945, the Harbor Defenses of Pensacola, Fla. and of Galveston, Texas, became part of the Eastern Defense Command. Under the authorization of 1931, projects had been prepared for the modernization of these two harbor defenses and were approved on 16 June 1933. At Pensacola, one 12" BC battery, one 12" mortar battery, and two 3" batteries, all of which were in existence, were retained. It was planned to add to these one battery of 155 mm guns. All of this armament was located at Fort Pickens. At Galveston all of the installed armament was listed as required. This consisted of one 12" mortar battery, one 10" DC battery, and one 3" BC battery at Fort San Jacinto; one 12" BC battery, one 12" mortar battery, and

one 10" DC battery at Fort Crockett; one 12" BC battery, and one 3" BC battery at Fort Travis. To this was to be added one 155 mm battery at Fort San Jacinto.

Under the modernization program instituted in 1941 the mortar battery and the projected 155 mm battery were dropped from the Harbor Defenses of Pensacola and two new 6" batteries were added. At the same time, it was planned to have in the Harbor Defenses of Galveston at the conclusion of the modernization program one 12" battery at Fort Crockett; one 3" battery and a new 6" battery at Fort San Jacinto; and one 3" battery and a new 6" battery at Fort Travis.

For further information on these two harbor defenses see

Harbor Defense Projects for Harbor Defenses Included
in the Southern Coastal Frontier. (CCA-P-SCF)

Supplement to Harbor Defense Projects, Harbor Defenses
of Pensacola.

Supplement to Harbor Defense Projects, Harbor Defenses
of Galveston.

History of the Southern Defense Command.

CHAPTER III

1. See "Mission, General Operations, and Desirable Location of a Harbor Entrance Control Post," approved 29 May 1941 by GHO and 23 June 1941 by Chief of Staff, U. S. Army.

Interesting material on the operations of HEGP's may be found in any of the Sector histories, particularly in History of the Chesapeake Bay Sector.

2. Letter WD, OCS, subject "Establishment of Field Armies," 9 August 1932.

3. See Chapter I.

4. Letter WD, TAGO, subject "Organization, Training and Administration of the Army," 3 October 1940.

5. General Orders No. 37, Headquarters First Army, 1 December 1940.

6. TWX, WD, TAGO, subject "Responsibility pertaining to North Atlantic Coastal Frontier," 18 October 1940.
7. Letter WD, TAGO, subject "Defense Plans - Continental United States," 17 March 1941.
8. Letter WD, TAGO, subject "Constitution and Activation of Harbor Defense Headquarters and Headquarters Batteries," 28 March 1941.
9. General Orders No. 9, Headquarters First Army, 1 April 1941, and General Orders No. 14, Headquarters First Army, 21 May 1941.
10. General Orders No. 1, Headquarters Northeast Defense Command, 21 June 1941.
11. Letter Headquarters Northeast Defense Command, subject "North-east Defense Command," 21 August 1941.
12. See History of the Northeastern Sector.
13. See History of the Chesapeake Bay Sector.
14. Letter WD, TAGO, subject "Coast Artillery Districts," 6 December 1941.
15. See Joint Army - Navy Basic War Plan, Rainbow No. 5, 30 April 1941.
16. See the various Sector Histories.
17. Letter WD, TAGO, subject "Organization of Coastal Frontier Sector Headquarters," 19 February 1942.
18. Letter WD, TAGO, subject "Creation of Eastern Theatre of Operations," 30 December 1941; and General Orders No. 1, Headquarters Eastern Theatre of Operations and First Army, 21 December 1941.
19. Letter WD TAGO, subject "Station List, Eastern Theater," 24 December 1941.
20. Staff Memorandum No. 1, Headquarters Eastern Theater of Operations and First Army, 22 December 1941.
21. General Orders No. 2, Headquarters Eastern Theater of Operations and First Army, 27 December 1941.
22. Field Order No. 1, Headquarters Southern Sector, 10 January 1942; also letter WD, TAGO, subject "Organization of Coastal Frontier Sector Headquarters," 19 February 1942.

23. Letter WD, TAGO, subject "Reassignment of Field Force Units,"
22 February 1942.
24. Letter WD, TAGO, subject "Defense of Continental United States,"
18 March 1942; and General Orders No. 1, Headquarters Eastern Defense
Command and First Army, 20 March 1942.
25. Letter WD, TAGO, subject "Coterminous Boundaries of the Southern
Defense Command and Eighth Naval District," 31 March 1942.
26. Letter WD, TAGO, subject "Change in Boundaries between the East-
ern and Central Defense Commands and between the Eastern and Southern
Defense Commands," 19 April 1942.
27. See General Lord's report to General Drum on this conference.
28. Letter WD, TAGO, subject "Defense of Continental United States,"
22 April 1942.
29. Public Proclamation No. 1, Headquarters Eastern Defense Command
and First Army, May 1942.
30. See Memorandum prepared by Colonel Howze, JAGD, Chief of Civil
Affairs Section, for General Drum on the subject "Administration of East-
ern Military Area," dated 30 April 1942. See also letter Headquarters
Eastern Defense Command and First Army, 30 April 1942, "Administration
of Eastern Military Area - Letter of Instruction; letter Headquarters
Eastern Defense Command and First Army, subject "Defense of Continental
U. S.," 1 May 1942; and letter WD TAGO, subject "Procedure in accordance
with directive, Defense of Continental United States 22 April 42," 4 May
1942.
31. See dispatch from COMINCH dated 19 April 1942.
32. See letter Headquarters Eastern Defense Command and First Army,
subject "Allocation of Army Aircraft for Operations Against Enemy Sea-
board Activities," 28 March 1942.
33. See the very interesting naval historical document, "Battle of
the Eastern Sea Frontier," prepared by Lt. Commander Lawrence M. Thompson.
34. Letter WD, TAGO, subject "Personnel Requirements for Harbor
Defenses in the United States," 2 June 1942, with four indorsements.
35. See Chapter 2.

36. See History of the Chesapeake Bay Sector.
37. Letter WD, TAGO, subject "Separation of First Army from Eastern Defense Command," 4 September 1943.
38. Letter WD, TAGO, subject "Air Defense and Responsibility for Training in the First and Fourth Air Forces," 10 September 1943.
39. General Orders No. 12, Headquarters Eastern Defense Command and First Army, 28 August 1943.
40. Letter WD, TAGO, subject "Orders," 7 October 1943. (AG 201 Drum, Hugh A.)
41. Letter WD, TAGO, subject "Orders," 7 October 1943. (AG 201 Gru-
nert, George). General Orders No. 20, Headquarters Eastern Defense Com-
mand and First Army, 8 October 1943.
42. Letter WD, TAGO, subject "Defense Commands in Continental United
States - Changes," 8 January 1944.
43. Letter Headquarters Eastern Defense Command, subject "Reorganiza-
tion of Eastern Defense Command," 9 January 1944.
44. See Memoranda on this subject - Colonel Leitch to Colonel Rayens,
19 April 1943, and Colonel Rayens to General Lord, 19 April 1943.
45. Radio War Department 290349Z (29 October 1943)
46. See paragraph 31A in C.J.A. 13, JAAN.
47. Letter WD, TAGO, subject "Defense of Continental United States
- Defense Commands," 5 April 1944. -
48. See Chapter 5.
49. General Orders No. 6, Headquarters Eastern Defense Command, 12
February 1944.
50. Letter WD, TAGO, subject "Authorized Strengths, Period 1 July -
31 December 1944," 30 March 1944.
51. Letter Headquarters Eastern Defense Command, subject "Reorganiza-
tion of the Eastern Defense Command," 28 April 1944.
52. Letter Headquarters Eastern Defense Command, subject "Termina-
tion of Antiaircraft Artillery Command, EDC, Mission," 26 June 1944.

53. Change No. 1 to General Orders No. 6, Headquarters Eastern Defense Command, 27 July 1944.
54. Letter WD, TAGO, subject "Abolition of the Southern Defense Command," 28 December 1944.
55. See History of the Southern Defense Command.
56. Letter WD, TAGO, subject "Defenses of Continental United States, Defense Commands," 14 September 1944, to the Commanding Generals, Eastern and Southern Defense Commands.
57. Letters, WD, TAGO, subject "Defenses of Continental United States, Defense Commands," 14 September 1944, to the Commanding Generals, Army Air Forces, Army Ground Forces, and Army Service Forces.
58. First Indorsements to letters in notes 56 and 57.
59. Letter WD, TAGO, subject "Defenses of Continental United States, Defense Commands," 7 October 1944, and 1st Indorsement thereto.
60. Letter WD, TAGO, subject "Defense of Continental United States, Defense Commands," 11 November 1944.
61. Letter WD, TAGO, subject "Reductions in Category of Defense in the American Theater," 30 October 1944.
62. Letter Headquarters Eastern Defense Command, subject "Revised Troop Basis, Eastern Defense Command," 4 December 1944, with two indorsements.
63. Letter WD, TAGO, subject "Revised Troop Basis, Eastern Defense Command," 16 March 1945.
64. Secret radio WARX 13275, 8 June 1945.
65. Letter WD, TAGO, subject "Mission - North Atlantic Bases," 26 June 1945.
66. A copy of this proposal is included in the references.
67. Letter Headquarters Eastern Defense Command, subject "Proposed inactivation of Eastern Defense Command," 7 June 1945.
68. Letter WD, TAGO, subject "Proposed Inactivation of the Eastern Defense Command," 7 July 1945.
69. Field Orders No. 1, Headquarters Eastern Defense Command, 19 July 1945.

Command Activities," 4 October 1940, and letter Headquarters Air Defense Command, subject "Aviation Units and Personnel for 'Test Sector'," 18 October 1940.

4. General Orders No. 33, Headquarters First Army, 10 December 1941, and General Orders No. 34, Headquarters First Army, 12 December 1941.

5. General Orders No. 7, Headquarters Eastern Theater of Operations and First Army, 13 January 1942.

6. General Orders No. 1, Headquarters Eastern Defense Command and First Army, 20 March 1942.

7. Antiaircraft Artillery Defense Project, Eastern Theater of Operations, 1942, prepared by Antiaircraft Artillery Command, ETO, 10 January 1942.

8. See "History of the Antiaircraft Artillery Command, Eastern Defense Command." This document contains a brief narrative account of the command together with extensive appendices of papers and documents which it produced.

9. Letter WD, TAGO, subject "Defense of Continental United States," 18 March 1942.

10. Joint Army and Navy SOP for the Coordination of AA Fire of Ships in Port with the AA Ashore, Eastern Defense Command and Eastern Sea Frontier, 7 December 1942.

11. Letter WD, TAGO, subject "Air Defense and Responsibility for Training in the First and Fourth Air Forces," 10 September 1943. See also General Orders No. 23, Headquarters Eastern Defense Command, 10 November 1943.

12. See Chapter III.

13. Letter Headquarters Army Ground Forces, subject "Release of Certain Units to Army Ground Forces Control," 30 December 1943.

14. Letter WD, TAGO, subject "Authorized Strengths, Period 1 July - 31 December 1944," 30 March 1944.

15. Letter Headquarters Eastern Defense Command, subject "Termination

of Antiaircraft Artillery Command, EDC Mission," 26 June 1944.

16. Joint Air Support Plan, Eastern Defense Command - Eastern Sea Frontier, 23 February 1944.

17. Letter WD, TAGO, subject "Defense Continental United States - Defense Commands," 5 April 1944. See Chapter III.

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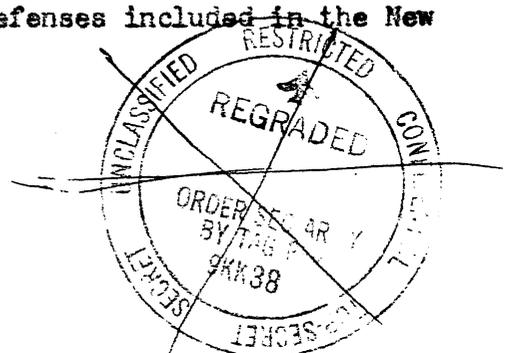
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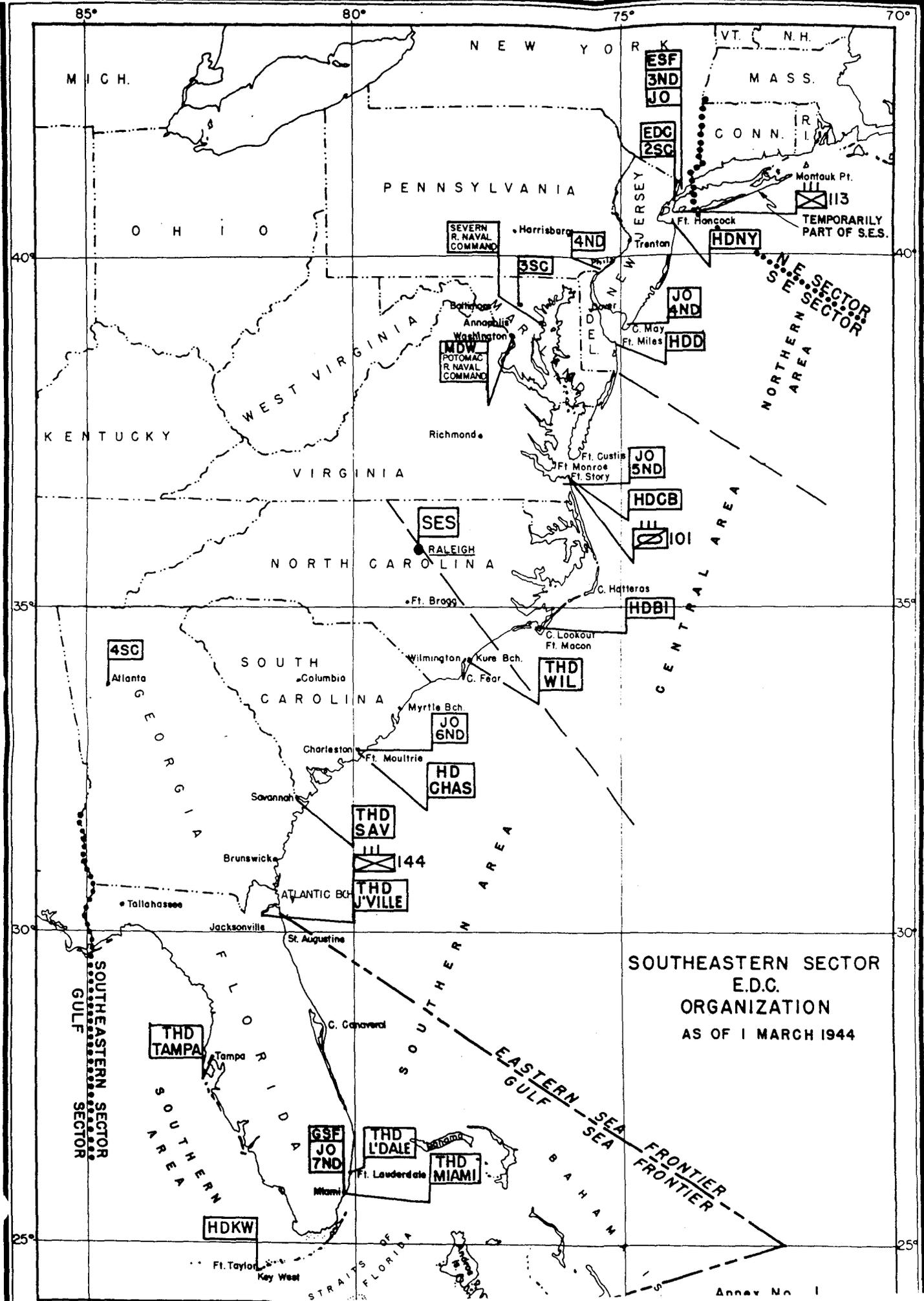
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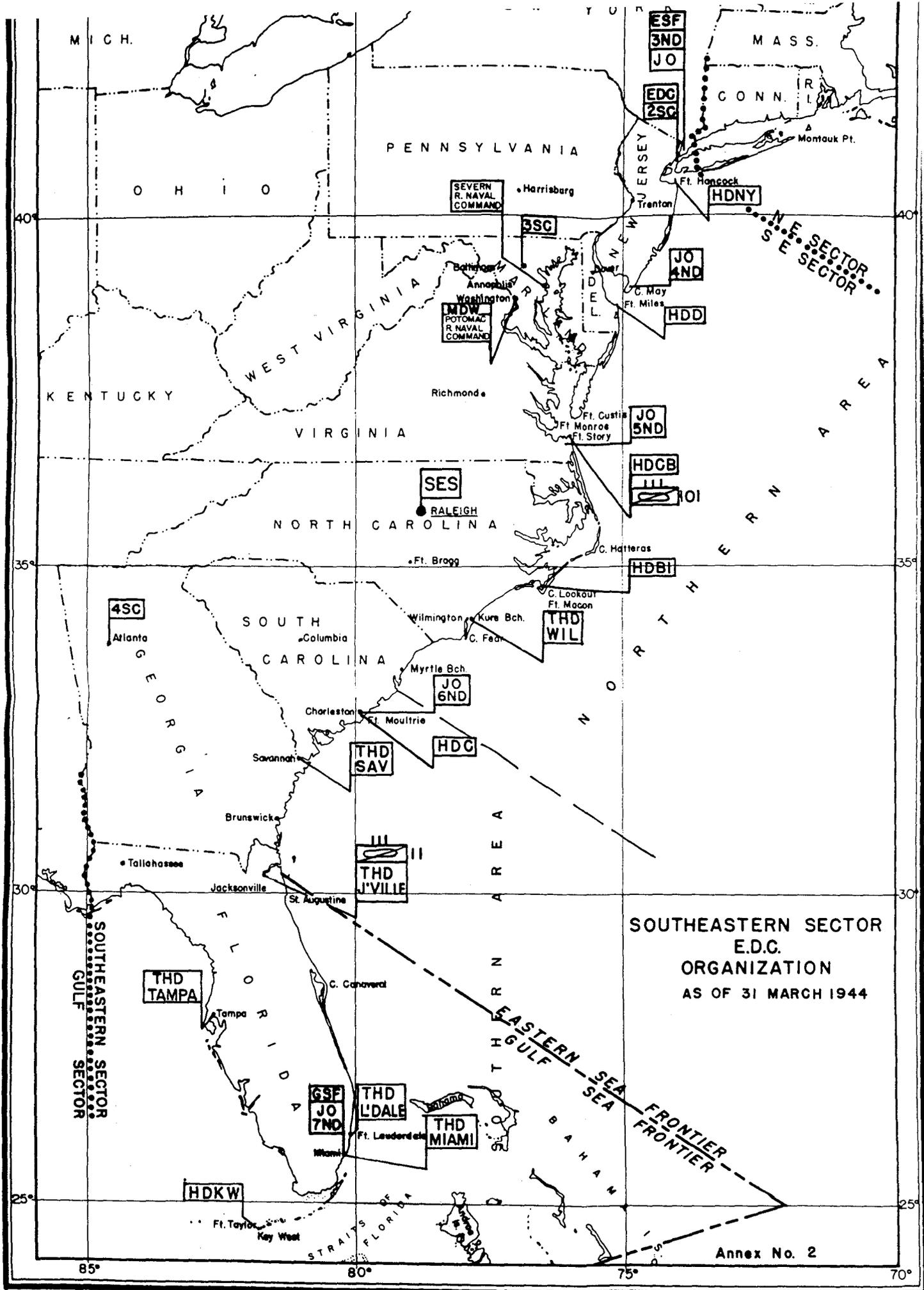
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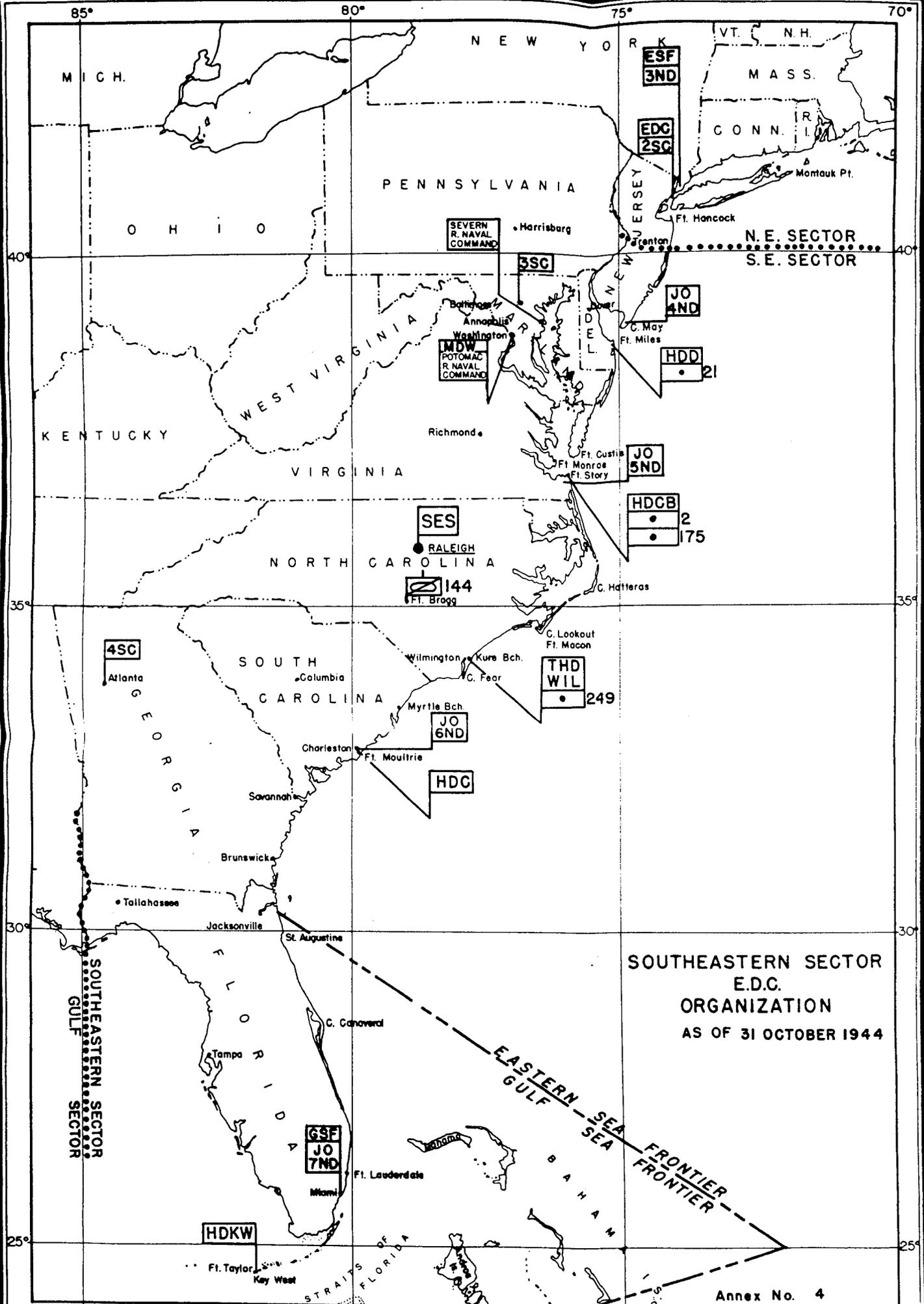
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**SOUTHEASTERN SECTOR
E.D.C.
ORGANIZATION
AS OF 1 MARCH 1944**



**SOUTHEASTERN SECTOR
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