

UNITED STATES ARMY IN WORLD WAR II

The Technical Services

THE TRANSPORTATION CORPS: MOVEMENTS, TRAINING, AND SUPPLY

by

Chester Wardlow



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. . . to Those Who Served

Foreword

The history of World War II is making increasingly clear the central fact that the tightest rein on the military effort of the United States in that war was imposed by transportation. As long as this nation fights overseas the same situation is likely to reoccur—a prospect that gives a special importance to the exposition of the subject in this series. The Army promptly recognized the importance of transportation when, as in World War I, it centralized its supervision of this branch of its vast logistical effort in a Chief of Transportation and created (in July 1942) a Transportation Corps.

The Army did not, and could not, control all the factors that entered into the movement of its men, munitions, and supplies. The larger story the reader must seek elsewhere— in the two volumes on *Global Logistics and Strategy* and in the theater volumes of the U.S. ARMY IN WORLD WAR II. Here the story is told from the records and point of view of the Army's Chief of Transportation, Maj. Gen. Charles P. Gross. In this volume, the second in the group of three Transportation Corps volumes, Mr. Wardlow passes to the policies and methods adopted to move men and matériel within the continental United States and out to theaters of operations—the core of General Gross's mission—and to provide the Transportation Corps' quota of equipment and trained soldiers necessary to accomplish its oversea mission.

Washington, D. C.
7 June 1954

ALBERT C. SMITH
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The Author

Mr. Chester Wardlow was pursuing graduate studies in Political Science at the University of Chicago when the United States entered World War I. In 1918, employed by the Shipping Board, he went overseas with the mission that became the American Section of the Allied Maritime Transport Council. From 1921 until 1935 he was connected with private shipping organizations. During the period 1935–41 he held the office of Sole Arbiter of the Trans-Atlantic Passenger Conference. In 1941 Mr. Wardlow was employed as Coordinator of Transportation for the Army and remained in that position until 1946. From 1946 until his retirement in 1954 he was the Chief Historian of the Transportation Corps. He is the author of the first volume of the Transportation Corps subseries in the U.S. ARMY IN WORLD WAR II, published in 1951.

Preface

The purpose of this volume is twofold: to present and evaluate the machinery and the procedures employed by the Army Chief of Transportation in moving troops and military matériel within the United States and from the United States to the oversea theaters of operations, and to outline the methods used and the problems encountered by the Chief of Transportation in training the troops and providing the equipment and supplies needed to maintain effective transportation services in the oversea commands.

The movement of troops and matériel was the basic and distinctive function of the Chief of Transportation, and for that reason the greater part of the book has been devoted to that aspect of his work. Training and supply functions were performed by other technical services as well as by the Transportation Corps, and since all technical services worked under the general direction of Army Services Forces headquarters, there was considerable similarity in the methods employed and the standards enforced. The discussion of training and supply is therefore confined to those aspects in which the Chief of Transportation had unique responsibilities or encountered exceptional problems.

Much of this account is presented by simply stating what the functions of the Chief of Transportation were and how he performed them, although his operating difficulties and his disagreements with other agencies are treated as fully as seems warranted. During the prewar emergency period, as the United States steadily drifted toward open belligerency, one of the handicaps suffered by those concerned with military transportation was the lack of an adequate record of how the Transportation Service had functioned in World War I. The documented account given here should in large measure obviate a similar lack if the nation should again become involved in a major conflict.

In the interest of completeness some matters that were discussed in *The Transportation Corps: Responsibilities, Organization, and Operations* are dealt with again, but the second treatment has been kept as brief as practicable and cross referenced to that volume. Since the discussion of movements, training, and supply activities can be better understood if the reader has some knowledge of the background of the Transportation Corps, its relations with other agencies, and the broad policies of the Chief of Transportation, these aspects of the Transportation Corps story are reviewed briefly in the introduction.

Valuable information and opinions have been obtained from officers and civilian experts who were on the staff of the Chief of Transportation during the

war and were still accessible for interviews while this volume was in preparation. The assistance of those who have contributed personally or through their writings, and whose names therefore appear in the footnotes, is gratefully acknowledged. It must be emphasized, however, that the author bears responsibility for interpretations of fact and any inadvertent errors or omissions.

The statistics used in this book have been drawn so far as possible from compilations prepared in the Office of the Comptroller of the Army for the statistical volume to be published in this series. Special credit is due Mr. George M. Adams of that office, who by recourse to the original sources has done a thorough job of verifying, correcting, and amplifying the statistics compiled in the Office of the Chief of Transportation during the war. Mr. George R. Powell of the same office has given valuable assistance in the presentation of statistical data and the preparation of graphic charts.

Special thanks are also due Leo J. Meyer, Colonel, Transportation Corps Reserve, Deputy Chief Historian, who read the manuscript and offered helpful suggestions in the light of his wartime experience with Army transportation, and to Marie Premauer, who aided substantially in locating source material and verifying citations in addition to typing the manuscript. Helen McShane Bailey carried out the final editing, Allen R. Clark copy edited the manuscript, and Margaret E. Tackley selected and prepared the photographs.

Washington, D. C.
7 June 1954

CHESTER WARDLOW

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U.S. Maritime Commission: page 92 (middle).
Association of American Railroads: page 270.
Life Photo, Peter Stackpole: page 300.
American Locomotive Company: page 464.

THE TRANSPORTATION CORPS:

MOVEMENTS,

TRAINING, AND SUPPLY

Introduction [1]

One of the facts stamped indelibly on the minds of military men by World War II is that transportation plays a key role in global warfare. In a conflict fought on foreign soil, success is absolutely dependent on the number of soldiers and the quantity of matériel that can be moved to the oversea commands and the timeliness with which they are delivered.

The primary consideration is transoceanic transportation, for in wartime the capacity needed to move troops and cargo far exceeds the capacity required for peacetime traffic. But traffic within the zone of interior also expands rapidly under a war economy, and means must be found for handling military movements promptly while at the same time accommodating essential civilian traffic. In the oversea areas where the forces come to grips with the enemy, the ports of entry and the inland lines of communication must be kept operative, notwithstanding the efforts of the enemy to destroy the facilities and the uncertain value of local civilian labor.

The shipping problem was an especially vital one in World War II, as in the previous great conflict, because while the Allies were heavily dependent upon ocean transport, Germany was not. The Germans, who under the Allied plan of strategy were to be defeated before the war effort was turned fully against Japan, struck heavy blows at Allied shipping in the Atlantic, the Caribbean, and the Mediterranean. Their submarines were so effective for a time that serious doubts arose in the minds of Allied leaders whether a sufficiently large fleet of troop and cargo vessels could be built up to meet the requirements of victory in a multifront war. Such a fleet was achieved nevertheless through the unprecedented performance of the United States in constructing new vessels, the increasingly effective Allied campaign waged against the U-boat, and the economies effected by bringing virtually all shipping available to the Western Allies under the control of the British and U.S. Governments and closely co-ordinating the operations of the two pools. The shipping situation began to improve perceptibly in the spring of 1943; yet up to the time of Germany's surrender there never was a surplus of vessels. In fact, there never was enough shipping to satisfy those who were directing the expanding Allied war effort.

Although excellent results in the effective employment of the Allied cargo fleets were accomplished through the co-ordinating work of the Joint Chiefs of Staff, the Combined Chiefs of Staff, and the Combined Shipping Adjustment Board,

[1] This brief explanation of the background of the Transportation Corps, the fundamental problems that confronted the Chief of Transportation, and the establishment that functioned under his command is essentially a recapitulation of information presented in Chester Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1951). Many of the problems and relationships will be referred to again in the last chapter of this volume, where some observations and conclusions regarding the activities and accomplishments of the Transportation Corps in connection with movements, training, and supply will be presented.

individual vessels were not always used to capacity. During the early years of the war when the production of military supplies in the United States was lagging, sufficient cargo was not always delivered to the ports to fill the ships that were destined for low-priority theaters. Even when matériel was available at depots, camps, and manufacturing plants, the process of assembling at the ports highly diversified cargoes from many sources in such a manner as to avoid port congestion and yet have the cargoes ready for loading in accordance with theater priorities and convoy schedules was a complicated one, and some supplies did not arrive as planned either because of late shipment or because of unexpectedly long time in transit. The preponderance of bulky and light items over compact and heavy items in Army cargoes frequently made it impossible for the ports of embarkation to load vessels to their dead-weight capacities, even though their cargo spaces were full.

The most serious waste of shipping came about through holding cargo vessels idle in the theaters. While such detentions sometimes were caused by unforeseen military developments, too often they were attributable to the failure of theater commanders to keep the tonnages that they sought to have delivered at particular ports within the capacities of the ports to receive, or to the deliberate use of vessels as floating warehouses. This problem became especially acute in the fall of 1944, and it was not cleared up until the President peremptorily directed the Joint Chiefs of Staff to bring the situation under control.

According to prewar plans the Navy was to operate all ocean-going vessels needed by the armed forces if the United States should become a belligerent. The Army actually began turning over its transports to the Navy in the spring of 1941, but it soon became apparent that the Navy was not in a position to provide enlisted crews for a large number of merchant vessels because of the heavy demand for combatant crews. Soon after Pearl Harbor, therefore, the two services agreed that the Army should man and operate the vessels that it owned or controlled under bareboat charter and call directly on the U.S. Maritime Commission for the allocation of such additional vessels as it might require. During the ensuing year efforts were made to achieve an arrangement under which either the Navy or the Army would control all military shipping, since that was recognized as more economical than the operation of separate fleets, but the two departments could not agree on a plan. The bulk of the shipping was therefore operated by agents of the War Shipping Administration, which took over the operating responsibilities of the Maritime Commission in February 1942, and the vessels were allocated to the Army and the Navy in accordance with their requirements. Under subsequent agreements the Navy manned a considerable number of vessels that were to be employed by the Army in the forward areas, and the two services freely interchanged ship space for both troops and cargo moving between the zone of interior and the theaters.

The Maritime Commission was the agency designated by the President to procure the additional shipping required for the war effort. Its achievement in developing new shipyards and expanding old ones to produce a total of 55,000,000 dead-weight tons of new vessels was outstanding. Since most of these vessels were

intended for military use, close collaboration was necessary between the military authorities and the Maritime Commission to insure that the right balance was maintained between troop capacity, dry cargo capacity, and bulk oil capacity. During the latter part of the war, with extensive amphibious operations against the Japanese in prospect, many specialized vessels were built to transport troops and cargoes in assault actions. The Joint Chiefs of Staff represented the armed forces in determining military shipping requirements. In order to facilitate collaboration a representative of the Maritime Commission was designated an associate member of the Joint Military Transportation Committee, which worked out programs to provide the numbers and types of vessels required to support future military undertakings. Because adequate shipping was a prerequisite to victory, the shipbuilding program was given a high priority in the allocation of steel and other scarce materials and components.

Since the Army depended heavily on the War Shipping Administration (WSA) for the allocation of ships to carry its troops and cargoes overseas and to move them between bases within the theaters, the working arrangements between the Army Chief of Transportation and the War Shipping Administration were of high importance. After an unsatisfactory start, during a period when procedures were being worked out and the supply of vessels was critically short, this relationship developed into a very successful collaboration. On the operating level, where ships and cargoes were matched, an efficient working arrangement was achieved. The Army frequently did not get the number of vessels it asked for, and it sometimes complained vigorously regarding the number of ships the WSA allocated to transport lend-lease cargoes and to support the British import program, but the policies governing these allocations were set by the President and the WSA had little latitude in carrying them out.

The most acute disagreement between the WSA and the Army came to a head in December 1942, when the civilian shipping agency obtained an order from the President directing it to assume control of the loading of military cargoes at U.S. ports. The purpose of the order was to utilize ship capacities more fully by loading a mixture of military and lend-lease cargoes, thus obtaining a better balance of light and heavy items. The Army and the Navy saw serious objections to placing the loading of military freight in the hands of a large number of civilian agents of the WSA and were successful in having the order shelved. The Army recognized the merit of the War Shipping Administration's objective, however, and arranged to co-operate with that agency more fully in mixing military and lend-lease shipments.

The domestic carriers were required under the Interstate Commerce Act to give military traffic precedence over all other types of traffic upon demand of the President. No such formal demand was made, but there was general recognition of the fact that military traffic should not be delayed. The railroads, which carried the bulk of the Army's personnel and freight, worked in very close co-operation with the Chief of Transportation and took extraordinary measures to move Army shipments promptly and to expedite them when necessary. Transportation Corps officers concerned with troop and freight movements frequently complained of delayed deliveries and unsuitable equip-

ment, but they recognized that the railroads were confronted with severe wartime operating problems and with an unprecedented volume of civilian and military traffic.

There was a less sympathetic attitude toward the Office of Defense Transportation (ODT), which the President established soon after Pearl Harbor to exercise a broad control over all domestic transportation. The Chief of Transportation felt that the ODT was not sufficiently aggressive in arranging for the construction of additional rail and motor equipment to meet the wartime need, and that it was too slow in curtailing regular railway passenger services in order to make available more adequate transportation facilities for troops. The Director of Defense Transportation, on the other hand, censured the armed forces for their unwillingness to allow a larger amount of scarce materials to be diverted from the military programs to the construction of transportation equipment for domestic services.

When the war began there was a notable absence of established methods of co-operation between the Army and the Navy. Aside from the plan to place all military shipping under naval operation in the event of war—a plan that was not carried out—virtually nothing had been done to co-ordinate the transportation activities of the two services. Agreement was even lacking as to the assignment and equipment of vessels for joint amphibious operations. The Naval Transportation Service and the Army Transport Service were being operated entirely independently and were competing with each other for additional ships. Separate port establishments were being maintained. There was no co-ordination of domestic movements of personnel and supplies beyond that which was provided by the railroads in their own interest. Floating equipment and marine supplies were procured separately and little information was exchanged. During the war considerable progress was made in the orderly allocation of vessels to meet strategic needs, the joint use of ships and ship repair facilities, the harmonization of marine procurement programs, and the reduction of duplicate supply shipments to the theaters, but at the end of hostilities separate steamship services were still being maintained and virtually nothing had been accomplished to synchronize domestic troop and supply movements or to eliminate duplicate port operations. The traditional independence of the Army and the Navy, the fact that the control of Army shipping operations and inland traffic movements was more centralized than was the case with the Navy, and the difficulty of adopting new procedures while working under wartime pressures limited the co-operation that the two services could develop after the war had started.

The fact that the Army transportation service, established in March 1942 and converted into the Transportation Corps in the following July, was a wartime creation had a definite influence on its relations with other elements of the War Department. Aside from the necessity of developing an adequate organization in the face of wartime manpower shortages and establishing procedures to govern all phases of the wartime transportation activity, the Chief of Transportation had to define and defend his position as the chief transportation officer of the new Services of Supply (later renamed Army Service Forces).

World War I had demonstrated the need for a unified Army transportation

service, and strong recommendations were made for the continuance of such a service after the war was over. But the hope that there would be no more great wars and the desire to cut government spending led Congress to disregard this recommendation when enacting the National Defense Act of 1920. As a result, World War II found transportation responsibilities scattered among several Army agencies—the Supply Division (G-4) of the General Staff, The Quartermaster General, the Chief of Engineers, the Chief of Ordnance, and the ports of embarkation. The creation of a Chief of Transportation in the War Department reorganization of 9 March 1942 did not mean that all transportation functions were placed under his control, but it did provide greater concentration of responsibility than had existed previously, and the scope of his authority was extended as the war progressed.[2]

In assuming the office of Chief of Transportation, Brig. Gen. (later Maj. Gen.) Charles P. Gross had two broad objectives—to establish a service that would embrace as many of the transportation functions of the War Department as circumstances would permit, and to maintain unbroken control of troop and supply movements from their points of origin at camps, depots, and factories in the zone of interior until their arrival at the oversea ports of debarkation. There obviously was a close interrelationship between these two purposes.

The first objective was largely but not completely accomplished. After the first year of the war the Chief of Transportation was responsible for all arrangements with the commercial rail, highway, and water carriers in the zone of interior, and for the provision of shipping and the operation of ports of embarkation adequate for the Army's oversea traffic. He was responsible also for the training of troops and the procurement of equipment and supplies required for marine and rail operations in the oversea commands. The Chief of Transportation did not have control of traffic by air, which was regulated by the Army Air Forces (AAF); he found it necessary to accord to the AAF a large degree of independence in controlling its domestic freight traffic by surface carriers. The design and procurement of motor vehicles for oversea highway services remained with the Chief of Ordnance, and the organization of troop units for the operation of motor vehicles as well as the establishment of training programs and doctrine for such troops remained with The Quartermaster General.

The second objective—unbroken control of troop and supply movements from domestic origins to the oversea ports of discharge—was attained with but one exception, that is, movements by air, which were regulated by the Army Air Forces. Troop and freight movements by rail, motor, or water to the ports of embarkation and thence overseas by water were under the control of the Chief of Transportation at all points. Several proposals were made that would have disrupted this control, but the Chief of Transportation was able to block them. He held consistently to the position that continuity of control was necessary to enable his organization to co-ordinate movements to the ports of embarkation with ship schedules, and thus assure the effective loading and prompt dispatch of the vessels as well as the observance of theater priorities.

[2] Although from April to July 1942 this official was known as the Chief of Transportation Service, the title Chief of Transportation is used uniformly in this history.

The Chief of Transportation held a unique position in the Army Service Forces (ASF) organization because of the breadth of the staff responsibilities that he had in addition to technical and operating responsibilities. The extent of his staff functions was the natural result of the position that the Transportation Corps had in the military structure—all other arms and services depended on it for mass movements of men and materiel within the zone of interior and to the oversea commands, and to a considerable extent for movements within the oversea areas. This meant that from the beginning of strategic planning the Chief of Transportation, having knowledge of the means of transportation likely to be available and their capabilities under various circumstances, held the key to many important military decisions. It meant also that his concurrence was a prerequisite to any adjustments that might have to be made in strategic plans because of unforeseen developments. The Chief of Transportation built up a strong Planning Division to aid him in performing his staff functions, and he firmly and successfully opposed a proposal put forward in the fall of 1943 to transfer that division to ASF headquarters.

The staff functions that the Chief of Transportation performed and his insistence on maintaining direct contact with the Operations Division (OPD) of the General Staff in regard to the oversea troop movements that OPD had ordered or was planning to order brought him into conflict with the ASF Director of Operations, Maj. Gen. LeRoy Lutes, on numerous occasions. This is understandable since the latter was charged with co-ordinating all ASF activities pertaining to troop and supply movements. But the Chief of Transportation was unwilling to be confined to the technical and operating aspects of transportation; or rather, he believed that his organization would not be fully and properly performing its mission if it did not bring its practical knowledge of transportation to bear on the staff work pertaining to movements. Lt. Gen. Brehon B. Somervell, commanding the Army Service Forces, recognized the merits of the positions taken by both parties to the argument, and he sought to strike a practical balance between the two rather than to rule arbitrarily against one or the other. This was fairly well accomplished, both sides yielding on some points.

The fact that the office of the Chief of Transportation was not established until March 1942 affected not only the Chief of Transportation's relations with other elements of the War Department but also his relations with the theater commanders. He had no direct responsibility for transportation operations within the theaters, but he was responsible for furnishing the oversea commanders with capable transportation officers, troop units adequately trained for transportation tasks, and marine, port, and rail equipment correctly designed for theater needs. Starting out with small resources and very limited advance planning, the Chief of Transportation found the early problems in fulfilling these responsibilities formidable. Beyond the difficulties encountered in supplying personnel and materiel, the new Chief of Transportation was handicapped by an early lack of standing with the theater commanders. It took time to acquaint them with his place in the scheme of things, the ways in which he could be of help to them, and the ways in which they could co-operate with him. General Gross devoted much time and energy to building up a satisfactory entente with the com-

manders of the forces overseas, and in the end he felt that his efforts had paid good dividends. A more difficult problem was that of persuading some theater commanders to accord their chief transportation officers sufficient authority to enable them to function effectively. On this point there was still room for improvement in the European theater in late 1944, and a satisfactory situation was not obtained in the Southwest Pacific until the summer of 1945.

For the fulfillment of his responsibilities in the zone of interior the Chief of Transportation built up, in addition to a headquarters organization of about 3,100 military and civilian personnel, an extensive field establishment, which in the winter of 1945 embraced personnel (not counting personnel assigned by service commands and attached troop units) totaling over 180,000. The headquarters staff dealt chiefly with the establishment of policies and procedures and the supervision of activities in the field. The field installations were the agencies through which policies and procedures approved in Washington were carried into effect either through direct operations, as at the ports of embarkation and the holding and reconsignment points, or through close relationships with the common carriers and industry, as in the case of the zone transportation offices. The procedures approved at headquarters were in large measure based on the operating experiences of the field agencies.

The port installations constituted by far the largest segment of this field establishment. The eight ports of embarkation (Boston, New York, Hampton Roads, Charleston, New Orleans, Los Angeles, San Francisco, and Seattle), the three cargo ports (Philadelphia, Baltimore, and Searsport, Maine), and the three subports (Portland, Oregon; Prince Rupert, British Columbia; and Juneau, Alaska), which were active at the end of 1944, employed more than 171,000 military and civilian personnel. The New York installation alone employed more than 55,000. The activities of the ports of embarkation were multifarious; they included the operation of shipping terminals, the operation and maintenance of Army-owned and chartered transports and harbor boats, the repair and conversion of vessels, the operation of staging areas for the housing and processing of intransit troops, the operation of storage and processing facilities for equipment and supplies, the regulation of the flow of troops and supplies to the ports in accordance with the ports' ability to transship them and with due regard to movement orders and theaters requisitions, and certain training activities. The cargo ports and subports had more limited functions.[3]

Nine zone transportation officers, as representatives of the Chief of Transportation, supervised a variety of field activities. These included holding and reconsignment points to provide intransit storage for equipment and supplies destined for oversea areas, freight consolidating stations and distributing agencies to handle less-than-carload shipments, reservation bureaus to obtain accommodations on regular trains for military personnel, railroad repair shops for the repair of Army-owned locomotives and rolling stock, and, until 1945, such procurement and depot activities as were not carried on directly by the Office of the Chief of Transportation. The zone transportation offices, the

[3] See Wardlow, *op. cit.*, pp. 95–110, for an explanation of the different types of port installations and more detailed personnel data.

district transportation offices, which were subordinate to the zones, and the port agencies (which toward the end of the war became district transportation offices) also represented the Chief of Transportation in keeping movements of troops and supplies under observation and in expediting the flow of traffic when circumstances required it.[4]

The training of officers and enlisted men constituted a third group of field activities. In the early months of the war all such training was given at the ports of embarkation, but the greatly increased requirements soon necessitated the establishment of special schools and training centers. Although the Chief of Transportation believed that he should command all such training installations, under a policy adopted by ASF headquarters in 1943 some of the centers where Transportation Corps troops were trained were operated by the service commands.

A number of field procurement offices were set up in the fall of 1942 with direct responsibility to the Chief of Transportation. Before the end of the year, however, field procurement activities, as well as depot activities, were placed under the supervision of the zone transportation officers. This arrangement continued until near the end of the war; then, with the procurement program largely accomplished, these activities were detached from the zones and were placed under the direct supervision of the Chief of Transportation.

[4] For a fuller discussion of transportation zones, see Wardlow, *op. cit.*, pp. 111–23.

CHAPTER I

Army Passenger Traffic in the United States

The tremendous upsurge in military passenger traffic that took place during the war was apparent to everyone who traveled. The difficulty of obtaining seats in railway coaches and buses, the scarcity of sleeping car accommodations, and the throngs of uniformed men and women encountered in transportation terminals were unmistakable evidences. Yet the ordinary traveler had no contact with the most significant part of the military traffic—that which moved directly from installation to installation in special trains. Nor could he have any conception of the extent and complexity of the problems involved in moving large numbers of military personnel in a prompt, orderly, and economical manner by common carriers and in making the available railway and motor equipment perform maximum service.

In approaching the discussion of the Army's passenger traffic, two facts must be borne in mind. The first is that civilian as well as military travel increased as a result of the war. The booming industries called for increased business travel, and the greater income of wage earners gave rise to more travel for personal reasons. The rationing of gasoline and tires caused many owners to lay up their automobiles and use public transportation instead. Although some of the less essential passenger services were eliminated or curtailed and efforts were made to obtain a voluntary abstinence from pleasure travel, no positive restriction was placed on the citizen's right to use the services that were offered. As a result, the 1944 railway passenger traffic, measured in passenger-miles, was 334 percent greater than the annual average for the years 1935–39, and intercity motorbus traffic was 192 percent greater.

The second basic fact is that the carriers were able to make only a limited increase in services after the war began. The building of new equipment and structures was severely limited by the scarcity of materials and the higher priority given to military items. Maintaining adequate transportation operating personnel was made difficult by the manpower requirements of the armed forces and the inducements offered by other industries. Because of these limitations on the ability of the carriers to increase their services, the increased demand for passenger accommodations had to be met chiefly by a more intensive use of existing facilities.[1]

Nature and Volume of the Traffic

Army passenger traffic fell into several categories, each involving special prob-

[1] Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, pp. 309–49.

lems and requiring special procedures. There were the larger organized troop movements, usually involving units and their organic equipment, which for the most part moved in special trains. There were the smaller organized groups that traveled chiefly on the regular rail and bus services. Military patients being transferred between hospitals or from ports of embarkation to hospitals were moved on both regular and special trains. Prisoner-of-war groups for obvious reasons were transported chiefly in special trains or special cars. The military and civilian personnel of the Army traveling as individuals on War Department transportation requests naturally used the regular services of the common carriers.[2] The same was true of most military personnel traveling while on leave or furlough, although some of this traffic was handled by special trains. The Army also arranged for the travel of military personnel of Allied nations passing through the United States and for the initial movements of persons of Japanese descent from the Pacific coast for relocation.

The number of military passengers moved by the carriers in World War II far exceeded the number moved during any earlier period. This was necessarily true because the number of men in uniform was far greater and the plan of training required more travel.[3] Specific data are available for only certain categories of passengers. During the first eighteen months of World War II—that is, through May 1943—statistics were prepared on all passengers moved by rail, motor, air, and water on War Department requests. The total for that period was 24,490,707, and the peak month was October 1942 with 2,068,533 passengers.[4] Thereafter, as an economy measure, transportation officers in the field were no longer required to report the number of passengers moved on requests that they had issued; hence the only data covering the entire war period pertain to passengers moved in the organized groups routed by the central routing authority in Washington. During the forty-nine-month period from December 1941 through December 1945, such traffic totaled 35,848,700 passengers; the peak month was August 1945, when 1,207,100 passengers were moved.[5] Neither set of figures includes the travel of Army personnel while on furlough or leave, which was at the individual's own expense and by his own arrangement.

Since complete data for troop travel were not compiled, the exact percentage of the whole that military traffic constituted is not known, but some indicative estimates are available. For the year 1943, the Office of Price Administration estimated that the uniformed personnel of the armed services—Army, Navy, Marine Corps, and Coast Guard—constituted 25.3 percent of the total number of passengers moved (excluding commuter travel) and

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[2] The transportation request is an order on a carrier to furnish transportation to persons for official travel at government expense.

[3] During the nineteen-month period May 1917–November 1918, the railroads moved 8,875,000 passengers on WD requests on special and regular trains; during a corresponding period, December 1941–June 1943, such passengers numbered 21,754,000. See Rpt, Transportation, Comparative Data, World War I–World War II, p. 24, prepared by Contl Div OCT, Jul 43, OCT HB MPR.

[4] OCT HB Monograph 20, p. 2 and App. I. Roughly 83.8 percent of this traffic moved by rail, 16 percent by highway, and 0.2 percent by air and water.

[5] See Table 1 and Chart 1, pp. 30, 31, below. Routing procedures are explained below, pp. 25–30. Groups routed by the central routing authority in Washington were estimated to constitute between 50 and 60 percent of the total traffic moved on WD transportation requests.

that this military traffic accounted for 39.5 percent of the total passenger-miles accomplished.[6] In September 1943 the Office of Defense Transportation and the Office of War Information jointly released data indicating that, of the total number of passengers traveling on regularly scheduled trains and buses (that is, excluding special troop trains and buses), 20 percent consisted of servicemen and servicewomen in uniform traveling under orders or on leave. Of the remaining 80 percent, it was estimated that 55 percent represented essential civilian travel and 25 percent nonessential travel.[7]

Carefully worked out techniques and procedures were required to get the greatest possible use out of the rail and motor equipment available to the Army. Although considerable progress had been made with such techniques and procedures before the United States entered the war, much remained to be done to adapt them to the large and closely timed movements that then became frequent. The field maneuvers held in 1940 and 1941 gave the Army an opportunity to try out its own procedures and its working arrangements with the railroads, and also to determine how far commercial motor vehicles could be used for this purpose. The precipitate entry of the United States into a war involving action in both Atlantic and Pacific areas put these arrangements and procedures to the acid test. The results were gratifying, as General George C. Marshall, the Army Chief of Staff, later testified.[8] There remained, nevertheless, many features to be developed and refined in order for the Army to execute the heavy troop movements of 1943 and 1944 with smoothness and efficiency. As an indication of the size of this undertaking, the Chief of Transportation stated that during the period of heavy traffic in the spring of 1943 a special troop train was started for every six minutes in the twenty-four-hour day.[9]

The system under which troops were inducted and trained was expensive in terms of transportation. In World War I the typical draftee made three basic moves—from home to cantonment, from cantonment to specialized training camp, and thence to port of embarkation. In World War II he made at least five moves—from home to induction station, and thence to reception center, replacement training center, unit training center, and port of embarkation—and, in addition, most soldiers were moved to specialized training centers and to training maneuver areas. Induction stations, reception centers, and replacement training centers were numerous and scattered. Specialized training centers were widely dispersed, and some training was phased, with each phase taking place at a different station. Troops and their equipment frequently were transported all the way across the continent in order to meet the-

[6] Exhibit A-68, before ICC, *Ex parte 148,* October 23, 1944, reproduced as App. II in OCT HB Monograph 20. As the percentages indicate, the average haul for military passengers was longer than that for the traffic as a whole.

[7] ODT Press Release 349, 3 Sep 43, OCT HB Topic ODT. These figures were released in connection with the campaign for a voluntary reduction of nonessential travel.

[8] In the *Biennial Report of the Chief of Staff of the United States Army, July 1, 1941 to June 30, 1943* . . . , the Chief of Staff stated that the movement of almost 600,000 troops and their impedimenta by rail during the first five weeks of the war had been accomplished "in an extremely efficient manner." See also, Memo, Marshall for the President, 3 Mar 42, sub: Troop and Cargo Mvmts, WDCSA 370.5.

[9] Statement in NBC radio broadcast, based on data from Military Transportation Section AAR, reported in *Railway Age,* May 15, 1943.

ater requests for certain types of units promptly. The Passenger Branch in the Office of the Chief of Transportation estimated that men shipped overseas made on the average between six and seven moves at Army expense before sailing.[10]

Many criticisms were leveled at the Army because of what appeared to be excessive troop movements. These criticisms originated with other government agencies, railroad officials and shippers, and soldiers who wanted fewer moves and better travel accommodations. The Army defended its troop movements and system of training and, in the beginning, denied that unnecessary moves were made. Later, the Commanding General, Army Service Forces, and his Chief of Transportation became convinced that the number of moves could be reduced without military disadvantage and requested the commanders of the Army Ground Forces and the Army Air Forces to give the subject their attention.[11] The War Department also endeavored to eliminate unnecessary official travel by individuals and to reduce group meetings, in line with requests made to all government agencies by J. Monroe Johnson, the Director of Defense Transportation, and James F. Byrnes, the Director of War Mobilization.[12]

Several officials and divisions in the Office of the Chief of Transportation were concerned with passenger traffic. The Assistant Chief of Transportation for Operations, Brig. Gen. Robert H. Wylie, had an over-all co-ordinating responsibility. The Movements Division, headed first by Col. (later Brig. Gen.) Andrew F. McIntyre and then by Col. Donald E. Farr, was concerned especially with the movement of troops and troop equipment destined for oversea areas, and the co-ordination of inland transportation with staging arrangements at the ports of embarkation and with troop transport schedules. The Rail Division, headed for a time by Mr. Gustav Metzman, then by Col. (later Brig. Gen.) John A. Appleton, and finally by General McIntyre, represented the Chief of Transportation in his endeavor to help the railways meet their equipment and manpower problems so that adequate services could be maintained. The Highway Division, under the leadership first of Col. Frederick C. Horner and then Col. Lacey V. Murrow, performed a similar service for the bus operators. The Traffic Control Division was responsible for arrangements with the carriers regarding group and individual travel, for instructing transportation officers in the field concerning their responsibilities and assisting them when necessary, for the routing of organized movements of more than one carload, and for controlling special troop movements.

Under the Chief of Transportation the day-to-day task of arranging transportation for and supervising the movement of the Army's passenger traffic was charged to the Traffic Control Division, which was headed by Mr. (later Brig. Gen.) William J. Williamson. Under The Quartermaster

[10] Memo, CofT for C of Adm Svs SOS, 22 Jan 43, OCT 357 New Orleans; Memo, Sp Sv Div for CofT, 11 May 43. OCT 511; Memo, Col Edmund C. R. Lasher for Gross, 1 Sep 43; Interv with Col I. Sewell Morris, 15 Aug 50 (unless otherwise indicated, all interviews were conducted by the author); last two in OCT HB Traf Contl Div Pass.

[11] See Wardlow, *op. cit.*, p. 348. Memo, CG SOS for CofT, 20 Jan 43, sub: Use of Rail Trans, OCT 511 Co-ordination of Troop Mvmts; Memo, CG ASF for DCofS USA, 10 Aug 43; Memo, ACofS G-3 for DCofS, 10 Aug 43; last two in WDCSA 370.5.

[12] Memo, ODT to All Government Agencies, 20 May 44; WD Memo W 55-44, 27 May 44, sub: Reduction of Unnecessary Travel; Ltr, SW to Johnson, 19 Jul 44; Ltr, Actg SW to Byrnes, 1 Feb 45; Memo, TAG for CG ASF, 5 Feb 45, sub: Curtailment of Pass Traf; all in G-4 510.

General, who managed Army traffic during peacetime, this function had been performed by the Commercial Traffic Branch, headed by Capt. (later Col.) Edmund C. R. Lasher. When responsibility for transportation and traffic was transferred from The Quartermaster General to the Chief of Transportation in March 1942, the personnel of the Commercial Traffic Branch was also transferred and it became the foundation on which the Traffic Control Division was built. Lasher then became Williamson's deputy.[13]

Working Arrangements With the Carriers

The collaboration of the common carriers and the Army was an outstanding example of team work between private industry and government in a national emergency. It was especially noteworthy because, unlike many other industries that were wholly or partially withdrawn from the civilian field in order that their capacity might be devoted to war work, the carriers continued to meet an expanding civilian demand while also filling the military need. The carriers and the Army did not always see eye to eye in regard to operating and traffic matters, but in the major endeavor—moving troops and military supplies swiftly and safely to their destinations—they achieved a high degree of understanding and co-operation.

In his negotiations with the carriers on operating and traffic matters the Chief of Transportation dealt, so far as possible, with agencies representing the respective branches of the industry, rather than with the individual lines. This not only was advantageous from the standpoint of conducting negotiations and arriving at uniform agreements, but it also facilitated the pooling of the equipment of many carriers to meet the large military requirements.

Fortunately the railroads, which carried the bulk of the Army's passenger traffic, were well organized for this purpose. The Association of American Railroads, with headquarters in Washington, represented lines controlling 97.5 percent of the total railroad mileage. Its Car Service Division, with Warren C. Kendall as manager, exercised a broad influence over the distribution and employment of the passenger cars owned by those lines. The Military Transportation Section of the Car Service Division, managed during the greater part of the war by Arthur H. Gass and later by John J. Kelly, was designed to deal exclusively with the requirements of the armed forces, and during the war it was conveniently located adjacent to the Traffic Control Division in the Pentagon. In passenger traffic matters the railroads were represented by seven territorial passenger associations — New England, Trunk Line, Central, Southern, Southwestern, Western, and Transcontinental—and by the Interterritorial Military Committee on which each territorial association was represented. This committee, with Hugh W. Siddall as chairman, maintained headquarters in Chicago and was the channel through which most rate and traffic matters were handled between the Army and the railroads.[14]

The common carriers by bus were not as fully or effectively organized as the railroads since they constituted a much newer branch of the transportation industry and many small operators were concerned only with local business. The National

[13] Williamson had been general traffic manager of a large mail-order house and was one of a number of civilian experts who were brought into the TC organization to give it the benefit of their experience with transportation and traffic.

[14] Wardlow, *op. cit.*, pp. 312–14.

Association of Motor Bus Operators, with headquarters in Washington, and the National Bus Traffic Association and National Bus Military Bureau, located in Chicago, were convenient channels through which the Army could negotiate with the operators, but their memberships were limited and they were much less influential than the corresponding organizations in the rail field. The use of the commercial airlines for military passenger traffic was small enough that no special organizations to deal with such traffic were needed.[15]

The working arrangements regarding traffic by rail were incorporated in two basic agreements that were negotiated annually between the territorial passenger associations and the armed forces. The Joint Military Passenger Agreement was the more comprehensive. In addition to fare reductions (called allowances in the agreement), it covered arrangements relating to special cars and special trains, the transportation of military baggage and impedimenta, the transportation of the bodies of deceased military personnel, the use of baggage cars as kitchen cars for troop trains, and the routing of traffic. The Joint Military Passenger Equalization Agreement, which was effective concurrently with the Joint Military Passenger Agreement and considered a part of it, committed carriers that were not required by law to allow 50 percent land-grant deductions from commercial fares in favor of military passengers to allow equal deductions on corresponding routes, with specified exceptions.[16] The so-called land-grant rates, a much controverted subject, had their origin in the Land Grant Acts by which federal lands were ceded to the railroads during their developmental period. The allowances other than land-grant deductions, applicable to both land-grant and non-land-grant routes, were made by the carriers under Section 22 of the Interstate Commerce Act. A few coastwise steamship lines with which the railroads had through-booking arrangements were parties to both agreements.

The Joint Military Passenger Agreement included separate fare provisions for military traffic and nonmilitary traffic. Military traffic embraced chiefly commissioned officers, warrant officers, nurses, and enlisted personnel of the U.S. armed forces on active duty, and the allowance on such traffic was 5 percent from the commercial one-way fares for all classes of travel between points between which no land-grant deductions were applicable, and 3 percent from the one-way net fares on routes that were subject to land-grant deductions. Nonmilitary traffic included several categories of persons who were not on active military duty but whose transportation was paid entirely by the U.S. armed forces, and the allowance on such traffic was 5 percent from one-way commercial fares in all classes.

The several classes of transportation affected by the fare reductions accorded by the Joint Military Passenger Agreement were designated first class (standard sleeper and parlor car), intermediate class (tourist sleeper), coach class, and mixed class (combination of coach and sleeper). Since the Army's policy was to accomplish overnight troop movements in tourist sleepers rather than in standard sleepers,

[15] OCT HB Monograph 6, pp. 102, 197, 203, 265.

[16] The last agreements during the war were JMPA 22 and JMPEA 22, both effective 1 July 1945. For the historical background of these agreements, see Comments Prepared by Representatives of the War Department, Navy Department, and Marine Corps, October 15, 1930, on Senate Bill 4447, 71st Cong., 1st Sess., OCT HB Topic Mil Pass Agreements.

it benefited from the railroads' agreement to accept intermediate-class fares on many routes west of the Mississippi on which such fares were not ordinarily available. The railroads did not accept the intermediate-class fares east of the Mississippi, but collected the first-class fare for all troops moved in sleepers, standard or tourist, subject of course to the agreed allowances.[17]

One of the advantages that the railroads gained under the Joint Military Passenger Agreement was the privilege of suggesting the routes on which the traffic of the armed forces should move. This enabled them to distribute the traffic on a basis that the carriers accepted as equitable. The Joint Military Passenger Equalization Agreement enabled the territorial passenger associations, which were responsible for the satisfactory distribution of such traffic, to perform that function without the complications that would have arisen if it had been necessary to take land-grant and non-land-grant fares into consideration in working out each routing. The equalization agreement also eliminated the necessity of routing traffic on circuitous land-grant routes in order to meet the government's insistence on the lowest net fare, and in that respect was advantageous to both the carriers and the armed forces. To the carriers the routing privilege was an essential feature of the agreement, and they sometimes referred to it as the justification for the fare allowances that they made. The armed forces, however, had the right under the agreements to reject a suggested routing when it appeared to be unduly circuitous or otherwise disadvantageous from a military standpoint.[18]

Another important feature of the Joint Military Passenger Agreement from the standpoint of the railroads was the clause that defined the conditions under which the armed forces might use carriers other than those parties to the agreement. In peacetime and for a period after the United States began to rearm, this clause committed the armed forces to using the services of the railway and coastwise steamship lines for all movements except when those services were "inadequate to meet the military necessity of the Government." As long as this clause was in effect, the possibility of moving troops by commercial bus or air lines was exceedingly limited. Effective 1 July 1941, the clause was modified to permit the armed forces to use motor and air carriers whenever they were able, in the judgment of the officers arranging the transportation, to provide "more satisfactory service to meet the military requirements of the Government." But even under the modified clause the railroads were in a preferred position with respect to military traffic.[19]

Fare concessions were the key feature of the Joint Military Passenger Agreement from the Army's standpoint. The Army started negotiations for greater concessions from the railroads soon after the emergency began. Whereas the railroads always had contended that the routing privilege was the feature that justified fare concessions beyond the land-grant deductions, the Army traditionally had stressed the volume and character of its traffic as the justification for such concessions.

At a conference in December 1940, when the renewal of the agreement for the

[17] OCT HB Monograph 21, p. 27; WD CTB 6, 27 Jun 44, pars. 3, 4, 5, 6; JMPA 22, Sec. 7(4).

[18] JMPA 22, Sec. 27.

[19] JMPA 17, effective 1 Jul 40, Sec. 6, par. 3; JMPA 18, 1 Jul 41, corresponding par. See OCT HB Monograph 6, pp. 183–93, for circumstances leading to this change.

next fiscal year was being discussed, the Army representative requested an increase in the allowance on fares affected by land-grant deductions from 3 to 12 percent, and on other fares from 5 to 15 percent. The Army's arguments were that military traffic had increased many times since the beginning of the emergency, that this traffic came to the railroads without the usual expense of solicitation, and that troop movements permitted the use of railway cars with an intensity that was not possible in regular traffic. The carriers did not accede to this request. They contended that, while troop traffic permitted them some economies, it also entailed special arrangements and extraordinary expenses.[20]

The Chief of Transportation continued the effort to obtain greater fare allowances from the railroads to the end of the war, but without success. The last move in that direction—made in September 1945—was aimed at the situation east of the Mississippi, where the railroads collected first-class fares for troops moving in either tourist or standard sleepers and where land-grant deductions were applicable to only a limited number of lines. General Gross argued that the railroads should not get a greater revenue from a sleeper carrying soldiers than from one carrying civilians. He pointed out that, although the Army placed 40 to 50 percent more passengers in a car than was possible with civilian traffic, the reduction allowed to the Army under the Joint Military Passenger Agreement was only 5 percent. He accordingly instructed General Williamson to undertake a renegotiation of fares on the basis of that principle.[21] Williamson left the Army during the following month, and Gross retired at the end of November 1945, up to which time the fare allowances under the Joint Military Passenger Agreement remained unchanged. Before the end of 1945 Congress took action to abolish land-grant deductions, and an entirely new military rate agreement then had to be negotiated.

The abolition of land-grant rates came as the culmination of a struggle in which the War Department and the railroads were on opposite sides. The carriers long had contended that the government's grants of land to western and southern lines in the third quarter of the nineteenth century to encourage the extension of rail facilities and the settlement of new territories no longer justified the deduction of 50 percent from normal charges when government passengers and freight were hauled.[22] The War Department was reluctant to assume the added transportation expense that the discontinuance of the deductions would entail.[23] This attitude was reflected in the Transportation Act of 1940, which abolished land-grant deductions for other types of government traffic but retained them for "military or naval property of the United States moving for military or naval and not for civil use," and for "members of the military or naval forces . . . traveling on official duty."[24]

The question of total abolition of land-grant rates again came before Congress during the war, and again the War Department opposed such action. It cited

[20] OCT HB Monographs 6, pp. 204–07; and 21, pp. 28–31.

[21] Memo, CofT for Williamson, 5 Sep 45, sub: Passenger Rates for Mil Travel, OCT HB Gross Day File.

[22] For the railroads' position, see Robert S. Henry, "The Railroad Land Grant Legend in American History Texts," *Mississippi Valley Historical Review*, XXXII, September 1945, pp. 177–94.

[23] Ltr, Actg SW to Chm House Com on Interstate and Foreign Commerce, 11 Jun 38, G-4/24801-2.

[24] PL 785, 76th Cong., Title III, Pt. II, Sec. 321(a).

the favorable financial position of the carriers resulting from the heavy wartime traffic, as well as the huge additional cost to the Army, which the Chief of Transportation estimated would be about $200,000,000 on passenger and freight traffic during a war year. The War Department, however, indicated that "at another time and under other conditions" a different situation might obtain, and when the question came to a decision soon after the end of hostilities the department acquiesced.[25] The abolition of land-grant rates, effective 1 October 1946, considerably simplified the arrangements between the armed forces and the railroads regarding transportation charges, and in the Joint Military Passenger Agreement that became effective concurrently with the new law, the fare reduction allowed to the armed forces was 10 percent from commercial fares in all classes.[26]

Although the armed forces did not obtain greater percentage allowances on railroad passenger fares during the war, they were successful in adding to the categories of passengers eligible for the allowances.[27] The scope of the term "military traffic" was broadened to include enlisted reservists recalled to active duty, certain female personnel of the Medical Department of the Army, and members of the Women's Army Corps. The coverage of the term "nonmilitary traffic" was extended to include (when traveling on transportation requests of the armed forces) retired and discharged military personnel returning to their homes, personnel of the American Red Cross, officers of the Army Specialist Corps, student nurses (civilians), military personnel of nations receiving aid under the Lend-Lease Act, and alien enemies, prisoners of war, and other interned persons.[28]

The allowances granted under the Joint Military Passenger Agreement applied only to railroad fares, not to space rates in Pullman cars. The Pullman Company was not a party to this agreement but separately made certain concessions to the armed forces. It agreed to provide standard sleepers for group movements of enlisted men when no tourist sleepers were available and to accept tourist sleeper berth rates in such cases. It permitted tourist sleepers to operate and tourist berth rates to apply in the eastern and southeastern territories, even though there were no regular tourist sleeper services in those territorities. The Pullman Company permitted the drawing rooms of tourist sleepers to be occupied at the regular berth rates when the cars were being used for military movements. It also accepted the berth rate for the shortest route between two points when troops were routed over a longer route under the Joint Military Passenger Equalization Agreement.[29]

Since the Army aimed to move troops by special trains whenever practicable, the conditions under which such arrange-

[25] Ltrs, SW to Chm House Com on Interstate and Foreign Commerce and Chm Senate Com on Interstate Commerce, 6 Apr 44, AG 500 (6-2-37)(1) Trans by Rail; Memo, CofT for USW, 2 Aug 44, OCT HB Gross Day File; Senate Com on Interstate Commerce and House Com on Interstate and Foreign Commerce, *Hearings on HR 4184*, 78th Cong., 2d Sess., March 16–23, 1944; Ltr, SW to Chm Senate Com on Interstate Commerce, 3 Jul 45; Ltr, SW to Dir Bur of Budget, 6 Dec 45; last two in AG 500 (26 Mar 45)(1); PL 256, 79th Cong., approved 12 Dec 45.

[26] JMPA 23, 1 Oct 46, Sec. 6(1).

[27] OCT HB Monographs 6, p. 206; and 21, pp. 3–5. The voluminous correspondence regarding changes in JMPA is filed in OCT 551.1 JMPA.

[28] JMPA 22, Secs. 3, 4.

[29] OCT HB Monograph 21, p. 27; Ltr, DC of Traf Contl Div OCT to Pullman Co., 26 Jul 45, and reply, 2 Aug 45, both in OCT 510 Trans of Parties; WD CTB 6, revised 9 Jun 45, Sec. V.

ments would be made by the railroads were of considerable importance. At the beginning of the war the carriers' tariffs required a minimum of 100 first-class fares, or equivalent revenue, for the operation of a special train. This meant more than 100 fares when the troops were moving in coaches or tourist sleepers, and the Chief of Transportation sought a reduction. The result was that during the greater part of the war the minimum for a special train was 75 first-class fares where no land-grant deductions were involved, and 90 first-class fares on land-grant routes.[30]

Conditions relating to the furnishing of special cars on regular trains were not incorporated in the Joint Military Passenger Agreement but were covered by informal arrangements. The minimum requirement for special sleepers for military movements was fifteen passengers. The Army requested the railroads to make the same arrangement for special coaches and also sought to have this feature covered in the JMPA, but was only partially successful. The railroads declined to commit themselves without qualification to furnish special coaches; however, they agreed to do so for the handling of prisoners of war and internees for whom special coaches obviously were necessary and stated that they would furnish special coaches for troops to the extent of their ability. The minimum requirement for special coaches was fixed at twenty-two and a half fares.[31]

The arrangements concerning the movement of troop impedimenta were evolved in practice rather than fixed by agreement. The railroads agreed to equalize the land-grant freight rates so that impedimenta could move with troops at the lowest net freight charge, but no agreement was reached with regard to special trains for this purpose.[32] The Army found it advantageous when large units were moving to ship the personal baggage and the organizational equipment in advance by special freight trains and the troops in special troop trains, rather than to move both in mixed trains. But the Army did not accept the railroads' contention that the payment for a special impedimenta train should be on the same basis as for a mixed train—that is, a minimum number of passenger fares in addition to the appropriate freight charges. When negotiations became deadlocked, the Army announced that it no longer would request special trains for troop impedimenta but would allow the carriers to determine whether they could best handle the impedimenta in mixed trains with troops, or in regular freight trains for which only freight charges would be assessed.[33] As it worked out, most separate impedimenta trains moved as regular freight trains, and in emergency cases where the Army requested special freight train service, it paid the usual additional charge for such service.

The Army and the railroads also were at odds concerning liability for the personal effects of troops—principally barracks bags, bedrolls, and foot lockers—which were carried as baggage. When troops used regular trains, such baggage up to 150 pounds per person was checked in the usual manner and the railroads as-

[30] OCT HB Monograph 21, pp. 47–51; JMPA 22, Sec. 18(3).

[31] OCT HB Monograph 21, pp. 61–62; WD CTB 22, 29 June 44, Sec. 1.

[32] OQMG Cir Ltr 157, 16 Jul 41, sub: Equalization of Rates on Trans of Imped; Memo, IMC for CofT, *et al.*, 22 Jun 42, OCT 551.2 Mil Imped.

[33] Ltr, IMC to CofT, *et al.*, 29 Jun 43; Ltrs, OCT to IMC, 2 Sep 43 and 12 Oct 43; all in OCT 551.1 JMPA 20.

sumed the usual liability. When larger movements took place, the baggage was transported in bulk (unchecked) in unattended baggage cars, and in such instances the carriers objected to assuming full liability. They proposed that a clause be inserted in the Joint Military Passenger Agreement limiting their liability to $25.00 per person on unchecked baggage, with a total liability of $2,500 per baggage car, unless additional liability was assumed under an insurance arrangement. The Army refused to accept this tender, and no such limitation on the carriers' liability was included in the wartime agreements.[34]

Providing meals for troops traveling by rail gave rise to a number of problems after heavy movements began. The first problem involved the question whether troops using regular trains should be provided with cash or with tickets to cover their meals when rations in kind (food boxes) were not furnished. Both the carriers and the Traffic Control Division in Washington favored the use of tickets, since troops often spent the subsistence allowance in other ways and the railroads found that they had provided food for customers that did not appear. The War Department, while directing that tickets "ordinarily" would be used, nevertheless left it to the officer ordering each movement to determine whether tickets or cash should be provided, on the ground that there were occasions when it was inadvisable or impracticable to use meal tickets.[35] This meant that there was lack of uniformity in regard to movements originating with field installations, and the impractical method of giving troops a cash allowance to cover meals en route continued in use.

A more serious problem involved the decision whether troops would use the regular dining car service or would be fed from troop kitchen cars attached to regular trains. Although the subsistence of troops was a Quartermaster function and the subject was covered in the Quartermaster series of War Department regulations, the Chief of Transportation took an active interest because of the bearing that the question had on troop morale and discipline. In the early part of the war when the decision whether or not to attach troop kitchen cars to trains was left to the commanding officers of the installations originating the movements, it often happened that provision was not made for kitchen cars when large numbers of troops were moving and that the regular dining cars were unable to accommodate both civilians and soldiers. Under such circumstances there was likely to be a disorderly scramble for food at each stop along the route. The regulation accordingly was changed so that kitchen cars were required for all movements of 100 or more military personnel involving a journey of twenty-four hours or more duration. They might be used for movements of smaller size or shorter duration if the railroads could provide them.[36]

At the outset the Army had no special kitchen cars. The railroads therefore agreed to furnish without charge, for each 250 troops or fraction thereof (but not for less than 100), an empty baggage car in which the Army could install kitchen equipment. The early practice was to re-

[34] OCT HB Monograph 21, pp. 92–93; JMPA 22, Sec. 23.

[35] WD Cir 209, 6 Oct 41; AR 30-2215, 1 Feb 44, par. 2; OCT HB Monograph 6, pp. 256–68.

[36] AR 30-2215, 14 Jun 43, par. 2; AR 30-2215, 1 Feb 44, par. 2, and Changes 2, 27 Jul 45; OCT HB Monograph 21, pp. 81–83.

move the kitchen equipment at the end of each trip and ship it back to the station of origin and to return the car to the railroad. When troop movements became a constant operation, the installation and removal of kitchen equipment was found to be both time-consuming and costly, and the wear and tear on the cars was considerable. The establishment of a permanent pool of converted baggage cars was then proposed, but the need for cars in regular baggage service placed limits on the execution of the plan. The situation was relieved when the government began to acquire special troop kitchen cars. Nevertheless, baggage cars were needed for kitchen purposes to the end of the war, and the somewhat complicated arrangements concerning their employment were detailed in the Joint Military Passenger Agreement.[37]

Special arrangements were necessary in connection with the operation of the government-owned troop sleepers and troop kitchen cars that began to enter service late in 1943. The first order for 1,200 troop sleepers and 400 troop kitchen cars was placed by the Defense Plant Corporation in March 1943, and a duplicate order was placed in May 1945.[38] The troop sleepers provided berths for thirty persons, in ten tiers of three berths each, arranged crosswise. Although the cars were of simplified design and the facilities were utilitarian, the troop sleepers were adequate and they were far preferable to coaches for overnight travel. The troop kitchen cars also were of simplified design, but they were well equipped and were a great improvement over converted baggage cars. The underlying purpose in the construction of both types of cars was to provide additional troop train equipment with a minimum expenditure of scarce materials and production time.[39]

The operating arrangements pertaining to these government-owned cars were covered by interlocking contracts between the Defense Plant Corporation and the Pullman Company, and between the Association of American Railroads and the Pullman Company.[40] Briefly stated, the arrangements were as follows: The railroads paid a mileage rate and the Pullman Company paid a rental fee to the Defense Plant Corporation for the use of the cars. The Pullman Company operated and maintained the troop sleepers in much the same manner as it operated and maintained its owned equipment. The Pullman Company assigned the troop kitchen cars to service in accordance with the needs of the armed forces, and was responsible for their maintenance as railroad equipment at the expense of the Defense Plant Corporation; the armed forces provided and maintained the kitchen equipment, provided the kitchen supplies and mess crews, and were responsible for interior cleaning.

The principal traffic arrangements between the armed forces and the carriers regarding the use of troop sleepers and troop kitchen cars were included in a spe-

[37] WD Cir 181, 27 Aug 41, Sec. III; AR 55-135, 31 Aug 42, par. 2; JMPA 22, 1 Jul 45, Sec. 24; OCT HB Monograph 21, pp. 51–58.

[38] Circumstances leading to the placement of these orders are discussed in Wardlow, *op. cit.*, pp. 333–34.

[39] These special sleepers and kitchen cars were of all-steel construction, 54 feet-2 inches long over the bumpers, and had no vestibules. They had two 4-wheel high-speed trucks and were equipped for operation in regular passenger train service. For further technical details, see file OCT HB Rail Div Troop Sleepers and Kitchen Cars.

[40] Both contracts were published in a pamphlet, Special Troop Car Contracts, OCT HB Rail Div Troop Sleepers and Kitchen Cars.



SPECIALLY DESIGNED GOVERNMENT-OWNED TROOP SLEEPERS *and troop kitchen cars en route to a port.*

cial agreement published each year in connection with the Joint Military Passenger Agreement but not as a part of it.[41] For transportation in troop sleepers the armed forces paid the railroads fares equal to two thirds of the normal one-way first-class fares, except that when such fares were greater than the net military fares under JMPA the lesser fares were applicable.[42] For Pullman service the armed forces paid the Pullman Company a troop sleeper berth rate equal to one third of the sum of the lower and upper berth rates applicable to tourist sleeping cars. The agreement provided that the Pullman Company would assign troop sleepers only when tourist sleepers were not available, but because of the urgent need both types were continuously in use.

To cover the movement of kitchen cars, the armed forces paid the carriers (railroads and Pullman Company) a rate of six cents a mile regardless of whether the cars were moving in service or out of service. In addition, members of the military mess crews of kitchen cars paid fares according to the class of the cars in which they had passenger accommodations. Requests for the assignment of kitchen cars

[41] Joint Agreement T 3, 14 Apr 45, published with JMPA 22, embraced changes to date in original agreement of 11 March 1943.

[42] Troop sleeper railroad fares were applicable throughout the country, although tourist (intermediate) fares applied only west of the Mississippi.

were made to the Pullman Company by the several armed services when they arranged for coaches or sleepers to move their troops. An Army officer was detailed to the Pullman Company headquarters in Chicago to co-ordinate these requests and eliminate unnecessary deadhead mileage. By agreement among the armed services a deadhead movement of a kitchen car was charged to the service for which the last in-service movement of the car was made.[43]

During the war the Army built up a fleet of 320 hospital cars and 60 medical kitchen cars, and separate arrangements were made covering the operation of this equipment over the carriers' lines and the fares to be paid for the transportation of patients and attendants.[44] The terms that the Chief of Transportation accepted after long negotiation and after some of the hospital cars were already in service were not satisfactory to him, and he made repeated efforts to have them modified. He argued that the railroads should not get a greater revenue from the government-owned hospital cars than for moving patients in Pullman cars. The railroads were unwilling to meet his proposal that they either pay a mileage rate to the government or reduce the fares, but they finally agreed to assume certain routine servicing charges retroactively.[45] After the war special arrangements were made between the Army and the railroads concerning the use of 118 government-owned mortuary cars, which were employed for transporting the remains of World War II dead after repatriation from overseas.[46]

Early in the emergency the railroads, acting on their own initiative, granted reduced rates to members of the armed forces traveling at their own expense while on furlough, leave, or pass. Initially the reductions varied in the different territories and they were offered only for limited periods. The War Department urged the railroads to adopt uniform rates and to make the reductions effective for the entire war period. Eventually this was done.[47] A round-trip coach fare of one and a quarter cents a mile, good for thirty days from date of sale, was allowed to members of the armed forces traveling in uniform and holding furlough fare identification certificates. This fare was less than the average that the government paid for troops making official moves.[48] Several bills were introduced in Congress proposing greater reductions on furlough tickets, but they were not passed. The War Department considered the fares adopted voluntarily by the railroads to be equitable and did not favor forcing the carriers to furnish this service at a loss. The department also opposed a plan to have furloughees pay one cent a mile and the government pay the remainder of the tariff fares.[49]

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[43] OCT HB Monograph 21, pp. 32–36, 74–80. Concerning requests for assignment of kitchen cars, see Memo, CofT for 6th ZTO, 30 Jun 43, OCT 531.2 Troop Sleepers and Kitchen Cars.

[44] Wardlow, *op. cit.*, pp. 381–91; OCT HB Monograph 21, pp. 36–38; WD Memo W 55-33-43, 10 Aug 43, sub: Trans of Hosp Cars and Trains.

[45] Ltr, DC of Traf Contl Div to W. C. Kendall, Chm Car Service Div AAR, 31 Jul 43, OCT 080 AAR; Ltr, CofT to John J. Pelley, Pres AAR, 10 May 45, OCT 531.4 Hosp Train; Ltrs, C of Rail Div OCT for Charles H. Buford, Vice Pres AAR, 16 and 30 May 45, OCT 080 AAR; Ltr, AAR to C of Rail Div OCT, 30 Jun 45, OCT HB Rail Div Hosp Cars.

[46] Ltr, IMC to CofT, 3 Sep 47, OCT HB Rail Div Mortuary Cars.

[47] OCT HB Monograph 6, pp. 210–13.

[48] Ltr, SW to Sen H. Styles Bridges, 30 Jun 41; Ltr, Adm Asst to SW to Sen W. Lee O'Daniel, 1 Apr 42; both in OSW Trans 501–800; WD Cir 350, 28 Aug 44, Sec. VIII; WD Cir 103, 3 Apr 45, Sec. V.

[49] Ltr, SW to Rep Andrew J. May, 14 Jul 41; Ltr, SW to Sen Burton K. Wheeler, 10 Mar 42; both in OSW Trans 501–800.

The question was raised whether under Section 22 of the Interstate Commerce Act the railroads had authority to allow fare reductions to members of the armed forces when they were traveling at their own expense. This question was removed by an act of Congress, passed in September 1944, which authorized special furlough fares.[50]

The general policy of the bus lines was to allow special furlough fares, but there was no uniformity in the fares available in different sections of the country because of the varying rate structures. The War Department accordingly instructed servicemen and servicewomen to apply to local representatives of the motor carriers regarding the availability and the amount of furlough fares.[51]

The railroads transported most of the troops and the working arrangements between them and the armed forces were complicated; only the basic features have been mentioned. No simple set of rules could cover the many departures from regular tariffs and regular operating practices that were involved in the handling of military traffic. The arrangements also fluctuated because the underlying circumstances changed radically when the United States undertook a large rearmament program in 1940, and again when the nation became engaged in a global war. Although there were many disagreements between the carriers and the Army regarding terms and conditions, these disagreements did not affect the actual movement of military personnel. From that standpoint the Chief of Transportation, representing the Army, and the Military Transportation Section, representing the railroads, literally worked side by side and were in constant contact on all matters affecting movements, so that these matters were dealt with promptly, and in the great majority of cases satisfactorily for the Army.[52]

Army Policies and Procedures

The Army's policy regarding the management of its passenger traffic was essentially one of centralization. The regulations and instructions covering all aspects of this traffic were issued by the War Department, and they reflected chiefly the experience and doctrine of the Chief of Transportation. He was responsible for all negotiations with the carriers relating to services, charges, and other traffic arrangements. All agencies of the War Department in Washington were directed to apply to him for information on such matters and to avoid maintaining duplicate staffs.[53] All of the larger organized groups of Army personnel were routed under the supervision of the Chief of Transportation, and he arranged with the carriers for the necessary equipment and controlled the timing of the movements within limits allowed by the movement orders. This policy of centralization was maintained throughout the war despite objections in some quarters and proposals to modify it.

The efforts to alter the policy came from two sources. During the summer of 1942 a

[50] PL 436, 78th Cong., 27 Sep 44. Ltr, Armed Forces to IMC, 8 Nov 46, OCT 551.1 Furlough Fares, reviewed development of furlough fares and requested continuance.

[51] WD Cir 350, 28 Aug 44, Sec. VIII, par. 2.

[52] The methods of this collaboration and the major difficulties will be discussed in later sections of this chapter.

[53] AR 55-105, 29 Dec 42, par. 2. Essentially the same policy was followed concerning freight traffic, as will be seen in Ch. IV, below.

survey of the service commands, conducted by the Control Division of the Services of Supply headquarters, disclosed a sentiment in favor of delegating certain authorities from Washington to the field, including the authority to route group movements. The Chief of Transportation successfully opposed the decentralization of routing; he argued that central control was necessary to insure the economical use of the carriers' equipment, to obtain an equitable and practical distribution of traffic among the carriers, to facilitate the control and diversion of movements en route, and to permit a national program to be formulated and timely notice to be given to the carriers concerning prospective requirements for their services.[54] The Army Air Forces, which late in 1942 had obtained a delegation of authority from the Chief of Transportation to control its own domestic freight movements, suggested that a similar arrangement be made with regard to passenger traffic. This suggestion was made informally on a number of occasions to the Traffic Control Division, but it received no encouragement from that quarter and probably for that reason it was not put forward on a higher level.[55]

The regulation relating to the size of groups to be routed in Washington was changed several times during the emergency. Initially all groups of fifteen or more were routed by The Quartermaster General. When the Selective Service Act was passed in September 1940, it was foreseen that group travel would increase greatly. The regulation was therefore changed so that only groups numbering fifty or more would be routed in Washington. The primary purpose of this change was to remove the possibility of delay in the movement of the smaller groups while routings were being obtained from Washington, and to lighten the burden on The Quartermaster General. In January 1943 the regulation was changed again, and routings for groups of forty or more were thereafter provided by the Chief of Transportation, who in the meantime had taken over this responsibility from The Quartermaster General. Under the Army plan of berthing, up to thirty-nine passengers could be accommodated in a sleeping car, and the last change was prompted by the desire to have centralized routing for all movements involving more than one carload. When a group was not sufficiently large to require routing in Washington, the Army transportation officers at the originating stations made arrangements for the shipments with local representatives of the carriers.[56]

Routings provided by the Chief of Transportation were established by his Traffic Control Division on the basis of proposals made by the territorial passenger associations of the railroads. These associations had representatives in Washington attached to the Military Transportation Section of the Association of American Railroads. As has been indicated, the main purpose of the associations in proposing routings was to insure proper distribution of the traffic among the rail lines. When the Army regulation was

[54] Memo, CG SOS for CofT, 24 Jul 42, sub: Decentralization of Actions; Memo, C of Traf Contl Div OCT for CofT, 30 Jul 42; both in OCT 323.3 SvCs.

[55] Interv with Morris, 26 Jun 50, OCT HB Traf Contl Div Pass.

[56] AR 30-930, 6 Nov 30, par. 8; WD Cir 101, 12 Sep 40, Sec. II; AR 55-130, 28 Dec 42, par. 8; WD Cir 28, 22 Jan 43, Sec. IV. The commonest type of sleeper had twelve sections and one drawing room, and the total of thirty-nine resulted from placing three enlisted men in each section and three in the drawing room.

changed in September 1940 to permit the local routing of groups comprising up to forty-nine men, rather than up to fourteen, the railroads protested on the ground that permitting this considerable traffic to be routed by local Army transportation officers would result in an inequitable distribution of business. As a result of this protest, arrangements were made that, when moving groups of from fifteen to forty-nine, the local transportation officers would obtain suggested routings from designated representatives of the carriers located at or near their installations, who in turn would be governed by instructions from the responsible associations.[57] Frequently this representative was the nearest agent of a railroad serving the installation, but full-time agents of the territorial passenger associations were assigned to stations where traffic was especially heavy.

The arrangements under which the territorial passenger associations proposed routings for the larger group movements relieved the Chief of Transportation of a heavy responsibility, but they also created a problem. The Chief of Transportation could reject a proposed routing if he considered it unsatisfactory from the military standpoint, in which case the association concerned endeavored to meet his objection.[58] More often the objection originated with the Military Transportation Section because it anticipated difficulty in providing equipment. If the association resisted changing the route, the Traffic Control Division was placed in the cross fire of an argument between the two agencies of the railroads representing the operating and the traffic points of view. Col. I. Sewell Morris, who was in charge of the Passenger Branch of the Traffic Control Division during the greater part of the war, expressed the opinion that when such a situation arose the manager of the MTS should have had authority to decide the issue for the railroads, since the prompt execution of the movement was the primary consideration.[59]

Differences between the operating and traffic interests of the railroads came out in another connection. The Army stated as a general principle that passengers would be forwarded by the "most economical usually traveled routes." [60] The primary purpose was to insure that advantage would be taken of land-grant rates wherever they were applicable. In peacetime there was no occasion for deviation from the principle, but during the war there were times when the most economical routes were congested and other routes were more favorable to expeditious movement. The Military Transportation Section urged the avoidance of congested routes and the Chief of Transportation supported that view. The territorial passenger associations, on the other hand, favored the "usually traveled routes," partly because their plans for the distribution of traffic among the lines were worked out on the basis of such routings, and partly because the railroads could not collect higher fares from the government when they proposed other routes. Here again the Traffic Control Division contended that, when the operating and

[57] Ltr, OQMG to IMC, 28 Sep 40; Ltr, IMC to TQMG, 19 Oct 40; both in OCT 511 (AR 30-930).

[58] The associations did not always take such rejections without an argument. See Memo, Morris for Siddall, Chm IMC, 2 May 44, OCT 511; OCT HB Monograph 21, pp. 17, 18.

[59] See Colonel Morris' monograph, Adequacy of Transportation Facilities in the United States to Handle Troop Movements of the Military Establishment During a War Emergency, submitted to the Industrial College of the Armed Forces, 25 Feb 49, p. 52; hereafter cited as Morris monograph.

[60] AR 55-105, 29 Dec 42, par. 4*a*.

traffic interests of the carriers were in conflict, the operating point of view should govern.[61]

Decision as to the type of carrier to be used in moving military personnel was made by the routing authority—the Traffic Control Division for the larger groups, and post transportation officers for smaller groups and individuals. Guiding principles for such decisions were set forth in instructions issued by the War Department and the Chief of Transportation. In the summer of 1941 the railroads had reluctantly consented to the change in the agreement between the armed forces and the railroads that permitted greater use of the bus lines and airlines than had been possible previously. Afterwards they complained repeatedly when they had reason to believe that the new clause in the agreement was being misapplied to the advantage of the motor carriers. These complaints involved chiefly routings by local transportation officers, and late in 1941 railway representatives suggested that these officers be instructed to confer with the rail agents near their stations before using any other type of transportation. The Army transportation officials in Washington refused to go along with this suggestion, but they investigated each specific complaint made by the railroads and in general endeavored to see that the spirit of the agreement was carried out.[62]

The question of bus versus rail routing was particularly acute in connection with the transportation of selectees. Soon after the passage of the Selective Service Act in September 1940, the Army and the Selective Service System agreed that the latter agency would be responsible for the transportation of men from their homes or draft boards to the induction stations, while the Army through its regular transportation machinery would control subsequent movements.[63] The traffic into the induction stations consequently did not come under the Joint Military Passenger Agreement between the armed forces and the railroads. Buses were well adapted to handle it since the groups were small and the distances usually were short. Selective Service therefore entered into an agreement concerning such movements with the motor carriers through the National Bus Traffic Association. Meanwhile, to facilitate rail movements from induction stations to reception centers, the Interterritorial Military Committee of the railroads established blanket routings, which dispensed with the necessity of obtaining a routing for each group. Close collaboration between Army transportation officers and the Selective Service System was necessary in order to keep the selectees moving promptly through the induction stations. As a result of this collaboration, groups that the railroads believed should have been routed by rail were routed out of the stations by bus. In this case, as in others, the Chief of Transportation issued instructions designed to promote strict observance of the agreement with the rail carriers.[64]

The Army's use of commercial buses increased steadily after the United States entered the war. There were many points that were not served directly by rail. Moreover, routing by highway was en-

[61] Interv with Morris, 28 Jun 50, OCT HB Traf Contl Div Pass.

[62] OCT HB Monograph 21, pp. 13, 14, 16. See also Ltr, Western Mil Bur to CofT, 16 Feb 44, sub: Use of Buses versus RRs, and subsequent correspondence, OCT 511.

[63] See AR 615-500, 1 Sep 42, par. 12.

[64] OCT HB Monographs 6, pp. 264–69; 20, pp. 58–63; 21, pp. 20–25.

couraged by the Traffic Control Division when short hauls were involved because of the quicker delivery given by the motor carriers, their flexibility due to freedom from fixed terminals, and the limited supply of railroad passenger equipment. The use of buses for long trips and for large groups was not favored because of the lack of sleeping facilities, problems of messing en route when troop units were being moved, and the limited space available for baggage that accompanied the troops. It was the general policy that, except under emergency conditions, routings by highway would be limited to trips that started after 6:00 A.M. and ended before the following midnight.[65]

Use of commercial airlines for military travel was limited by the scarcity of space and by the requirement that the most economical route be used. More than half of the commercial aircraft in operation in the zone of interior when the United States entered the war were requisitioned by the Army, and the airlines discontinued a 5 percent reduction that they had been allowing to military personnel. The Army then made provision for the use of commercial aircraft, despite the higher fare, when time or other exigencies of the service did not permit travel by other means and military aircraft were not available or could not be used economically.[66] When the Army began returning requisitioned aircraft late in the war, some of the airlines reinstated fare reductions. Since air rates were fluctuating at that time and the reductions were not uniformly applicable, local transportation officers found it difficult, in cases not covered by the emergency provision, to determine when the air route was the most economical. To overcome this difficulty, the requirement that the most economical route be always used was temporarily lifted. Late in March 1945, with a view to the needs of the redeployment period, transportation officers were instructed that commercial air passage could be furnished if the cost to the government did not exceed the lowest airline tariff in effect on 1 March 1945 between the points involved.[67]

Of the total traffic moved on War Department transportation requests, for which data are available only for the period December 1941 through May 1943, 83.8 percent moved by rail, 16.0 percent by motor, and the remainder by air and water.[68] Of the traffic that moved in organized groups under routings provided by the central routing authority in Washington, data for which are available throughout the period December 1941–December 1945, 97.25 percent moved by rail and 2.75 percent by bus. *(Tables 1 and 2 and Chart 1)* The fact that travel by bus constituted a considerably larger percentage of the total traffic than of the organized group traffic routed in Washington reflects the policy of using buses only for travel by individuals and small parties and for the shorter trips.

The Army-owned motor vehicles included in the organic equipment of troop units were used in executing troop movements so far as practicable, but the relief that they afforded the commercial carriers was not great. Organic vehicles were trucks and hence not well adapted to

[65] OCT Cir 18, 12 Jun 42, par. 9*a*; WD Cir 358, 4 Sep 44, Sec. IV, par. 2*c*.

[66] AR 55-120, 26 Apr 43, sub: Trans of Indiv, par. 3*b*.

[67] Ltr, Fiscal Dir ASF to Comptroller Gen of the U.S., 22 Mar 43, AG 584.1 (24 Mar 45); WD Cir 95, 27 Mar 45, Sec. I; OCT HB Monograph 21, pp. 18–20.

[68] See n. 4, above.

TABLE 1—ARMY PASSENGERS MOVED BY COMMERCIAL RAIL AND BUS IN ORGANIZED GROUPS ON ROUTINGS PROVIDED BY THE CENTRAL ROUTING AUTHORITY IN WASHINGTON: DECEMBER 1941–DECEMBER 1945 [a]

Year	Total	Rail	Bus [b]
Total	35, 848, 700	34, 862, 600	986, 100
1941 (December only)	255, 300	250, 100	5, 200
1942	7, 237, 200	7, 056, 600	180, 600
1943	10, 121, 900	9, 912, 500	209, 400
1944	8, 527, 800	8, 301, 000	226, 800
1945	9, 706, 500	9, 342, 400	364, 100

[a] Up to January 1943 all groups of fifty or more were routed in Washington, thereafter groups of forty or more.

[b] Figures for bus traffic are number of passengers routed; the number actually moved was slightly less, but data are not available.

Source: Data originally compiled by Transport Economics Section, Traffic Control Division, OCT, and reworked for a statistical volume of this series, now in preparation.

TABLE 2—ANALYSIS OF ARMY PASSENGER TRAFFIC MOVED BY RAIL IN ORGANIZED GROUPS ON ROUTINGS PROVIDED BY CENTRAL ROUTING AUTHORITY IN WASHINGTON: DECEMBER 1941–DECEMBER 1945 [a]

Year	Number of Passengers	Number of Groups	Number of Cars Used [b]	Average Men Per Group	Average Men Per Car	Average Miles Per Man-Trip
Total	34, 862, 600	205, 675	824, 734	169	42	1, 104
1941 (December only)	250, 100	1, 125	5, 953	222	42	1, 241
1942	7, 056, 600	37, 561	175, 543	188	40	1, 129
1943	9, 912, 500	60, 511	238, 133	164	42	1, 127
1944	8, 301, 000	45, 606	197, 372	182	42	1, 096
1945	9, 342, 400	60, 872	207, 733	153	45	1, 065

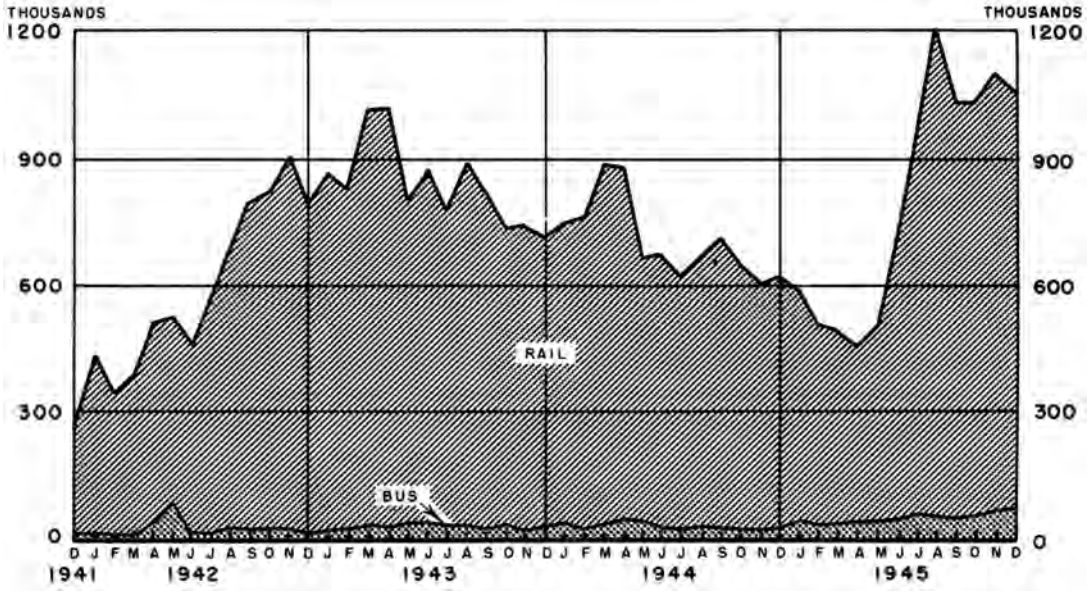
[a] Up to January 1943 all groups of fifty or more were routed in Washington, thereafter groups of forty or more.

[b] Includes only sleepers and coaches through June 1945; hospital cars are also included beginning in July 1945.

Source: Data originally compiled by Transport Economics Section, Traffic Control Division, OCT, and reworked for a statistical volume of this series, now in preparation.

long, continuous troop hauls. Problems of bivouac and messing were involved in making long trips by motor, and delays en route for these purposes made such movements slow compared with those accomplished by rail. When troops were being transferred without their equipment, the round trip of the vehicles, with empty backhaul, was an expensive mode of transportation. During the early part of the war Army regulations sanctioned the use of organic vehicles for movements up to 500 miles at the discretion of the agency initiating the movement order; in April 1943 the distance was reduced to 350 miles, but within a few months it was extended again to 500 miles for administrative movements and 600 miles for training movements in or out of maneuver areas. The latter action was taken in order to

CHART 1—ARMY PASSENGERS MOVED MONTHLY BY RAIL AND BUS IN ORGANIZED GROUPS ON ROUTINGS PROVIDED BY THE CENTRAL ROUTING AUTHORITY IN WASHINGTON: DECEMBER 1941–DECEMBER 1945*



* Up to January 1943 all groups of fifty or more were routed in Washington; thereafter groups of forty or more. Rail figures are passengers actually moved; bus figures are passengers routed, some of whom did not actually move.

Source: Data originally compiled by Traffic Control Division, OCT, and reworked for a statistical volume of this series, now in preparation.

afford as much relief as possible to the railroads.[69]

The many types of passengers moved under Army auspices necessitated rather elaborate regulations regarding the types of railway accommodations to be furnished. In brief, the following arrangements were in effect: standard sleeping car accommodations or parlor car seats (designated in the transportation requests as first class) were furnished to commissioned officers, noncommissioned officers of the first three grades, nurses, and dependents of military personnel making a permanent change of station; noncommissioned officers below the third grade and enlisted men were furnished tourist sleeping car accommodations (intermediate class) if the journey exceeded twelve hours and ended after midnight, otherwise they were furnished seats in day coaches (coach class).[70] Tourist cars were the older types of standard sleeping cars for which the same fare was charged as for coaches, plus a berth rate smaller than that for standard sleeping cars. The carriers did not

[69] WD Cir 193, 16 Jun 42, par. 2; WD Cir 102, 15 Apr 43, par. 2; WD Cir 189, 21 Aug 43, Sec. IV, par. 2. These regulations ostensibly applied also to movements by commercial buses, but in that respect the Traffic Control Division considered them in conflict with the Joint Military Passenger Agreement and did not give them effect. See Memo, Traf Contl Div for Adm Div OCT, 17 Feb 43, par. 6, OCT 511; WD Cir 233, 10 Jun 44, Sec. IV, par. 2; Interv with Morris, 20 Jul 50, OCT HB Traf Contl Div Pass.

[70] AR 55-125, 9 Jan 43, sub: Sleeping Car and Similar Accommodations, par. 2; WD TM 55-525, June 1945, Sleeping Car and Similar Accommodations.

make enough sleepers available to accommodate all the troops entitled to them under the regulations. When a shortage of sleepers occurred at a particular point, those available were assigned to the troops making the longer journeys.

Except under circumstances specified in the regulation, transportation requests were to call for through transportation for the entire journey directed in the travel orders. The purpose of this requirement was to prevent the "splitting" of transportation requests—issuing one request for coaches for the day portion and another for sleeping car accommodations for the night portion of the same trip—a practice that would have wasted transportation equipment. The railroads objected to the splitting of transportation requests also on the ground that it deprived them of revenue—that is, sleeping car rates for the entire journey.[71]

When groups of enlisted men traveled in tourist or standard sleeping cars, two men were assigned to each lower berth and one to each upper.[72] This in effect increased the capacity of a car by 50 percent as compared with regular traffic. The Navy assigned only one enlisted man to a lower berth during the greater part of the war, although an effort was made in the fall of 1942 to have it adopt the Army practice. After redeployment began and the need for sleeping accommodations for long hauls became exceptionally heavy, the Director of Defense Transportation proposed that four servicemen be assigned to each section. The Army declined to go along with this proposal on the ground that it was not "practical" to place two in every berth since double berthing was not satisfactory for large men. It objected also to the application of such a rule to the armed services while civilians were permitted to engage a berth for one person. The Army again appealed to the Navy to place two enlisted men in each lower berth, but the Navy again declined on grounds of "health, morals, and comfort." The issue between the Army and the Navy was resolved in July 1945, when the Office of Defense Transportation ordered that three men be assigned to each sleeping car section in all organized military movements.[73]

When groups of enlisted men were moved in day coaches, the Army used as many of the seats as was considered feasible. On day trips 90 percent of the seating capacity was used for passengers, the remainder being reserved for their personal equipment. In the beginning, when overnight trips were made in coaches, only one soldier was assigned to each double seat in order that the men might obtain as much rest as possible. Later, when the shortage of passenger cars became acute, the practice was changed and three men were assigned to two double seats. When coaches with reclining seats were made available for overnight trips, the 90-percent rule was applied. While as a general practice Army transportation officers and railroad officials were governed by these standards, heavier or lighter loading sometimes occurred when conditions required it.[74]

Individuals traveling first class at government expense were entitled, under an act of Congress, to transportation "not to

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[71] AR 55-110, 22 Jan 43, sub: Trans Requests, par. 10*a*; OCT HB Monograph 22, p. 44.

[72] AR 55-125, 9 Jan 43, par. 2*c*(1).

[73] OCT HB Monographs 20, p. 54; 22, p. 86; Ltr, ODT to USW, 30 Jun 45, and reply, 4 Jul 45, OCT HB Gross ODT; Ltr, SW to SN, 5 Jul 45, and reply, 13 Jul 45; both in G-4 510, Vol. III; Memo, Col Luke W. Finlay for Gross, 17 Jul 45, pp. 2, 3, OCT HB Gross Day File; ODT GO 56, 20 Jul 45.

[74] AR 55-130, 28 Dec 42, par 6*b*; Changes 1, 26 Apr 43; Ltr, Lasher to Buford, Vice Pres AAR, 18 Dec 43, OCT 511.

exceed the lowest first-class rate." The Comptroller General had interpreted this to limit accommodations to lower berths or parlor car seats on trains to which the standard first-class fare applied. During the war these requirements worked a hardship on officers who were traveling under closely planned schedules, since they either had to forego the use of extra-fare trains with consequent delays or had to pay the difference from their per diem allowance. To remedy this situation, the Army obtained from the Comptroller General a revised ruling that permitted the use of extra-fare trains when it was determined by the authority directing the travel that the mission could not be accomplished by the use of regular-fare trains. Officers using extra-fare trains were limited to lower berths when the trains offered such accommodations, or to the lowest cost accommodation on trains that offered only superior accommodations. Provision was made for couriers carrying secret documents as hand baggage to occupy superior accommodations when this was considered desirable from the standpoint of security.[75]

The problems connected with the transportation of Negro troops constitute a very broad subject, and no attempt will be made here to discuss them in detail.[76] It was an Army policy that there should be no discrimination between whites and Negroes, and the Chief of Transportation endeavored to enforce that policy to the extent of his ability. On special trains and buses operated under Army control enforcement was not difficult, but a different situation prevailed when the regularly scheduled services of the carriers were involved. In certain states the laws required segregation, and the Army took the attitude that such laws should be obeyed when military personnel used public conveyances for official or personal travel. Efforts by carriers' employees to enforce the laws, sometimes tempered by personal prejudices, created many unpleasant situations for Negro servicemen. Complaints received by the War Department, sometimes directly and sometimes through members of Congress or civic groups, were investigated carefully to ascertain the facts and to correct abuses. The railroads were requested to use special care to supply Negro troops with equal accommodations. Service commanders were requested to see that equal treatment was provided by bus operators serving Army installations and were informed that vehicles would be made available from the Transportation Corps' bus pool to assist them. These and other measures only partially met the situation since the Army had no means of offsetting the segregation laws or of counteracting sectional attitudes.[77]

The railroads were committed to providing special sleepers whenever a group

[75] AR 55-105, 29 Dec 42, par. 8*a*; Changes 12, 2 May 44; Changes 14, 15 Dec 44. Documents relating to Army efforts before and during the war to change the "lowest first-class rate" rule are in AG 500 (6-2-37)(1) and AG 510 (1 Dec 42). See also OCT HB Monograph 20, pp. 46–48.

[76] Problems connected with transportation of Negro troops are dealt with in Maj. Ulysses G. Lee, Jr., The Employment of Negro Troops in World War II, a volume in preparation for this series.

[77] An indication of the relation of the Transportation Corps to this subject is given in the following: Ltr, Gross to Joseph B. Eastman, ODT, 23 Nov 42, OCT HB Gross Day File; Memo, Finlay for Gross, 13 Aug 42, sub: "Jim Crow" Laws; Memo, Gross for ASW, 19 Jul 43, sub: Trans Facilities for Negroes; Ltr, Gross to Pelley, Pres AAR, 19 Jul 43, and reply, 21 Jul 43; last four in OCT 531.7 Discrimination; Memo, Maj Gen George Grunert for Somervell, 19 Jul 43; Ltr, CofT for CG 4th SvC, 30 Jul 43 (and similar ltrs to other SvCs); last two in OCT 510 Negro; Memo, Maj Gen Wilhelm D. Styer for CofT, 13 Apr 44, sub: Trans Facilities for Negro Troops, and related correspondence, OCT 511.

of fifteen or more soldiers was to be moved. As a measure of economy in the use of transportation the Army endeavored to ask for special cars only when all berths could be filled. The Chief of Transportation preferred movements in special cars to movements in cars that were available to the public and encouraged post transportation officers to combine small groups whenever possible so that special cars would be justified. Similarly, movements by special trains were preferred to movements by special cars attached to regular trains. When special troop cars were added to regular trains the public facilities were likely to be overcrowded, especially the dining cars, and this situation was a source of dissatisfaction and disorder. Also, the assignment of administrative and medical staffs to special troop trains and the use of troop kitchen cars simplified the problems of control and discipline. Special trains, moreover, could be routed from Army post to Army post, whereas when troops were moved by regular trains the Army was obliged either to furnish motor transportation to and from the railway terminals or to pay switching charges for the transfer of special cars between Army posts and railway terminals.[78]

Procedures within the War Department for the accomplishment of troop movements involved a number of agencies. The authority to initiate movement orders was different for different types of moves. Domestic movements necessitated by permanent changes of station might be ordered by the Operations Division of the War Department General Staff or by the commanding generals of the Army Ground Forces, the Army Air Forces, or the Army Service Forces for troops of their respective commands. Domestic movements called for by temporary changes of station might be ordered by OPD, by the commanding generals of the AGF, the AAF, the ASF, and the defense commands, or by subordinate elements of those commands acting within policies established by the respective commanders. Orders for movements to ports of embarkation for shipment overseas always originated in OPD, which acted in accordance with strategic decisions of the Joint Chiefs of Staff and in collaboration with the AGF, the AAF, and the ASF. The Mobilization Division of ASF headquarters, in addition to preparing movement orders for ASF troops, prepared the supply and transportation sections of movement orders relating to AGF and AAF troops. The Mobilization Division also acted as a co-ordinating agency between OPD, the commanders of the forces, and the Chief of Transportation with regard to the actual movement of troops and their equipment.[79] The Chief of Transportation, however, maintained direct contact with all these agencies from the earliest stages of their planning in order to advise them on transportation matters and to obtain information on impending movements as far in advance as possible.

The transportation officers at Army posts where troop movements originated had an exacting role, and the Chief of Transportation saw to it that they were fully instructed.[80] They obtained routings

[78] AR 55-125, 9 Jan 43, sub: Sleeping Car and Similar Accommodations, par. 2*a*(2); Interv with Morris, 4 Aug 50, OCT HB Traf Contl Div Pass.

[79] WD Cir 102, 15 Apr 43, par. 1; WD Cir 358, 4 Sep 44, Sec. IV; ASF Manual M 301, 31 Jan 44, Sec. 201.04 Mob Div.

[80] For appointments and duties of local transportation officers, see AR 55-105, 29 Dec 42, par. 3, and Changes 13, 22 May 44, and 14, 15 Dec 44; AR 55-5, 5 Oct 42, par. 5; WD Cir 229, 24 Sep 43, par. 6.

and ordered transportation equipment for individuals and small groups traveling from their posts, and they administered the arrangements made by the Chief of Transportation for the movement of larger groups, thus working closely with local railway officials and bus operators. They collaborated with the transportation officers of the units to be moved to insure that both personnel and impedimenta were ready for shipment and loaded according to plan. They were responsible for providing adequate tracks, ramps, and other transportation facilities at their stations. In addition to the War Department regulations and circulars pertaining to passenger traffic, the Chief of Transportation prepared a "commercial traffic bulletin," which was issued from time to time "by order of the Secretary of War," to provide detailed instructions for local transportation officers.[81] He also endeavored through field conferences conducted by his Traffic Control Division and frequent visits by representatives of his zone transportation offices to keep the post transportation officers fully informed regarding the detailed instructions emanating from Washington and the reasons for the procedures prescribed.

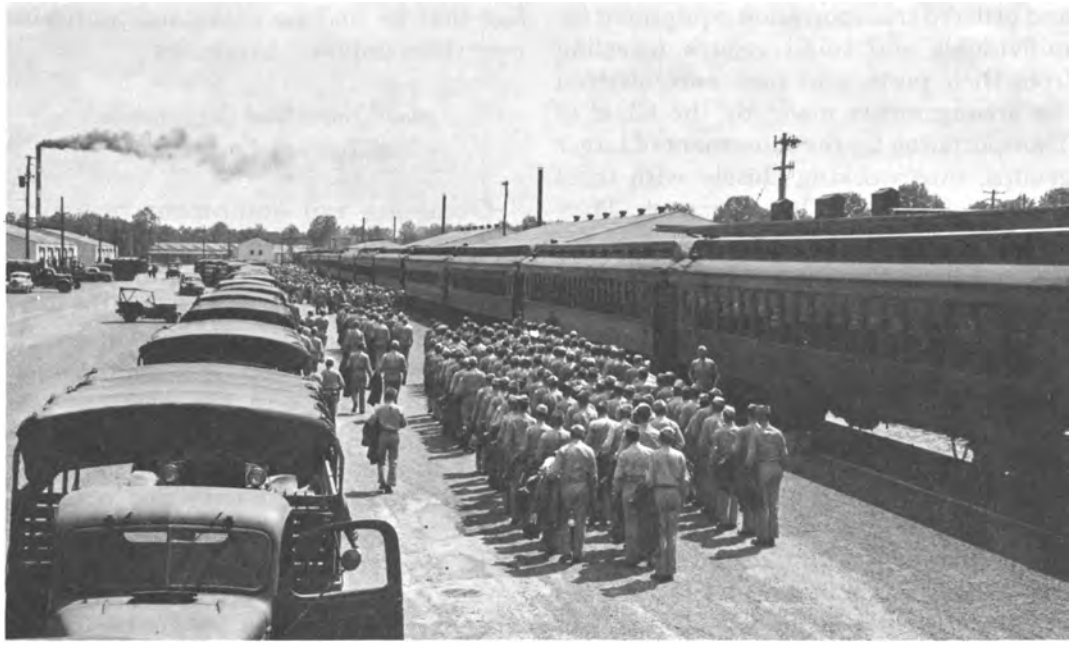
The policies and procedures pertaining to Army passenger traffic were necessarily complex. Throughout the war the Chief of Transportation despite some opposition was able to maintain the key policy—that of centralized control over the routing and movements of groups of more than one carload. The Chief of Transportation also had a good measure of success in the basic task of obtaining a high level of performance from the many local transportation officers, although lack of experience on the part of some of those officers and the fact that he had no command authority over them imposed handicaps.

Mobilization and Conservation of Railroad Equipment

Obtaining rail equipment promptly and using it in the most effective manner were basic problems that confronted the Transportation Corps throughout the war. Obviously these were matters in which thorough co-operation between the military authorities and the carriers was necessary.

When troops were moved in small groups in regular train service or in special cars attached to regular trains, the railroads' task of providing the necessary equipment was relatively simple, but when large movements were to be accomplished a different situation obtained. Large movements were made in special trains and the troops' organic equipment was usually transferred at the same time, so that in addition to sleeping cars and coaches, baggage cars, kitchen cars, and freight cars were required. In divisional movements hundreds of cars of all types had to be assembled at the station of origin, and this sometimes meant drawing on numerous railroads and deadheading the cars for considerable distances. When heavy troop movements suddenly became necessary following the attack on Pearl Harbor, one of the railroads' biggest problems was that of gathering the required equipment at the training camps promptly. Many of the camps were far removed from railway centers where cars

[81] The bulletin was discontinued for a period for economy reasons but was reinstated by WD Cir 305, 22 Nov 43, Sec. II. WD TM 55-205, 25 Aug 44, sub: Trans in ZI, was primarily for the guidance of local transportation officers.



80TH DIVISION TROOPS ARRIVING AT CAMP FORREST, *Tennessee, June 1942.*

usually were accumulated for commercial purposes. As the war progressed ways had to be found of solving this problem.

The number of cars required for divisional movements varied according to the type of the division and the circumstances under which the move was made. In the summer of 1942 the following equipment was used in moving a triangular infantry division: 442 tourist sleepers, 48 standard sleepers, 89 baggage cars, 90 kitchen cars, 1,124 flatcars, and 89 boxcars. The total of 1,882 cars moved in 63 trains. At about the same time, the equipment needed for moving an armored division embraced 382 tourist sleepers, 23 standard sleepers, 1 baggage car, 67 kitchen cars, and 1,748 flatcars. These 2,221 cars moved in 69 trains.[82] It is obvious even to the layman that the assembling of so many cars and the required number of locomotives, as well as the prompt loading and orderly movement of so many trains to a single destination, was a feat that required careful planning and meticulous execution.

Divisional movements, although many of them were made during the war, were not an everyday occurrence. Most movements by special train involved smaller troop units or groups of replacements, and many such movements were started each day of the war. As already stated, during the spring of 1943, when organized troop movements were especially heavy, the Chief of Transportation reported that special troop trains were departing from their loading points at intervals of about six minutes throughout the twenty-four-hour day. More significant, perhaps, are the

[82] See author's Memo, 6 Aug 42, sub: Rail Equip for Moving a Division, OCT HB Traf Contl Div Pass.

TABLE 3—RAILROAD CARS USED BY THE ARMY IN MOVING ORGANIZED GROUPS AND THEIR IMPEDIMENTA ROUTED BY THE CENTRAL ROUTING AUTHORITY IN WASHINGTON: DECEMBER 1941–DECEMBER 1945 [a]

Period	Total Cars	Sleepers [b]	Coaches	Baggage Cars	Flatcars	Boxcars	Other
Total (49 Months)	1,173,098	520,903	296,025	132,996	[c] 128,650	[c] 20,966	73,558
1941							
December Only	27,452	4,329	1,624	600	17,439	2,613	847
1942							
Total for Year	268,900	121,349	54,194	31,271	50,025	6,798	5,263
Monthly Average	22,408	10,112	4,516	2,606	4,169	566	439
Peak Monthly Total	34,114	. . . .	. . . .	. . . .	. . . .	. . . .	. . .
1943							
Total for Year	345,790	140,498	97,635	45,444	47,454	7,464	7,295
Monthly Average	28,815	11,708	8,136	3,787	3,954	622	608
Peak Monthly Total	36,598	. . . .	. . . .	. . . .	. . . .	. . . .	. . .
1944							
Total for Year	274,046	141,385	55,987	37,612	13,732	2,830	[d] 22,500
Monthly Average	22,837	11,782	4,666	3,134	1,144	236	1,875
Peak Monthly Total	29,062	. . . .	. . . .	. . . .	. . . .	. . . .	. . .
1945							
Total for Year	256,910	113,342	86,585	18,069	(c)	[c] 1,261	[d] 37,653
Monthly Average	21,409	9,445	7,215	1,506	(c)	[c] 105	3,138
Peak Monthly Total	31,861	. . . .	. . . .	. . . .	. . . .	. . . .	. . .

[a] Up to January 1943 groups of fifty or more were routed in Washington; thereafter forty or more. Figures are estimated through August 1942.

[b] Includes standard sleepers, tourist sleepers, and government-owned troop sleepers.

[c] Flatcars were lumped with boxcars in 1945.

[d] Indicates increased use of hospital cars and kitchen cars.

Source: Data originally compiled by Traffic Control Division, OCT, from reports of Association of American Railroads, and reworked for a statistical volume of this series, now in preparation.

figures given in Table 3, which indicate that in one month (April 1943) a total of 36,598 passenger and freight cars were used by the Army in special troop trains or as special cars attached to regular trains, and that the monthly average during 1943 was 28,815 cars. These figures, it should be noted, do not comprehend troop movements made in regular train service or troops traveling on furlough, leave, or pass and do not include personnel of the other armed services.

The amount of equipment at the disposal of the carriers to meet the military need and the heavy civilian demand was relatively constant throughout the war. Although a special effort was made to keep all cars in serviceable condition, some had to be retired, and the ordering of new equipment was severely limited by

TABLE 4—PASSENGER TRAIN CARS OWNED OR LEASED BY THE CARRIERS AT THE END OF EACH YEAR: 1940–1945

Year	Total Cars	Owned by Class I Railroads				Owned or Leased by Pullman Company
		Total	Passenger [a]	Baggage, Express, and Others	Mail	
1940	44,727	37,817	22,594	13,394	1,829	6,910
1941	44,956	37,897	22,576	13,524	1,797	7,059
1942	45,185	38,051	22,681	13,631	1,739	7,134
1943	[b] 45,764	37,940	22,714	13,513	1,713	[b] 7,824
1944	[b] 46,588	37,837	22,523	13,582	1,732	[b] 8,751
1945	[b] 46,863	38,273	22,681	13,891	1,701	[b] 8,590

[a] Includes coaches, combination coaches, parlor, sleeping, dining, club, lounge, and observation cars.

[b] Includes government-owned special troop sleepers and kitchen cars, as well as standard and tourist sleepers and parlor cars.

Source: Association of American Railroads, *Railroad Transport, A Statistical Record, 1911–1948* (Washington, November 1948), p. 21.

the demand that the military program made on steel and other strategic materials. Under these circumstances the increase in the total number of passenger cars, including those built for the government, was modest indeed. *(Table 4)* Steps were taken to eliminate some of the less essential travel. The carriers themselves combined or "pooled" certain of their services to resort areas in order to release equipment for other purposes. They converted more than 800 lounge and parlor cars into the more necessary sleepers and coaches. The Office of Defense Transportation stopped the operation of special trains for conventions and sporting events and limited the operation of extra trains and extra sections on the heavily traveled routes.[83] A campaign was undertaken to encourage the voluntary curtailment of unnecessary travel. Despite these measures the increase in traffic far outstripped the increase in passenger accommodations, and the wartime demand was met chiefly through a concerted effort for the more efficient and intensive employment of the equipment on hand.

Responsibility for assigning adequate railway equipment to troop movements and for enforcing economy in its use rested primarily with two agencies representing the Army and the railroads respectively. The Army's interests were the responsibility of the Traffic Control Division in the Office of the Chief of Transportation, and more particularly the Passenger Branch of that division. While the chief of the division and his deputy dealt with matters of policy and participated in conferences relating to especially large movements, the Passenger Branch handled the day-to-day arrangements. It maintained contact with the carriers, gave them information regarding contemplated troop movements and the numbers and types of cars required, and checked to insure that the proper equipment was promptly provided. It dealt with local Army transportation officers to insure that arrangements were made for the prompt entrainment and detrainment of troops and that the cars

[83] For a summary of these controls, see Office of Defense Transportation, *Civilian War Transport* (Washington, 1948), pp. 81–86.

were fully loaded and eventually turned back to the railroads in good condition. In the fall of 1942 the Car Service Section was established in the Passenger Branch to review all prospective troop movements and prepare co-ordinated plans that would avoid deadheading equipment so far as possible. The staff of this section consisted of specialists who had been employed by the Pullman Company or the railroads.[84]

The Military Transportation Section, Car Service Division, Association of American Railroads, represented the rail carriers in these matters. All requests for equipment and train schedules, as well as complaints regarding the railroads' handling of movements, were channeled through it. The fact that the MTS office was located adjacent to the Traffic Control Division in the Pentagon facilitated the constant interchange of information and the joint planning in which the two agencies engaged. While the MTS dealt directly with the individual railroads to a large extent, it was aided in the performance of its functions by thirteen district offices of the Car Service Division whose jurisdictions covered the entire United States.

Although the Military Transportation Section had no direct authority over the employment of the carriers' passenger equipment, the railroads followed its instructions because those instructions were based on military requirements. For the same reason the Pullman Company endeavored to provide the cars requested by the MTS. This voluntary co-operation worked satisfactorily until the redeployment of troops began after the surrender of Germany. Then, because it was evident that much heavier demands would have to be made on the carriers in order to satisfy the military need, the Office of Defense Transportation assumed control over the employment of all passenger, baggage, and express cars of the railroads. W. C. Kendall, chairman of the AAR Car Service Division, was appointed agent to administer this control, subject to the general supervision of the Director of the ODT Railway Transport Department.[85]

The co-operation of the Pullman Company in supplying equipment remained on a voluntary basis. Control over the distribution of its equipment was exercised by a superintendent of car service at the company's headquarters in Chicago. He was aided by branch offices scattered throughout the country, which kept him informed of the location of equipment and the prospective demand in their localities. The Military Transportation Section made daily reports to the Pullman Company regarding the future needs of the armed forces for sleeping cars in the various districts. On the basis of these reports, Pullman equipment was assigned to six regional distribution points, which controlled its further assignment. In July 1945, in view of the extraordinarily heavy demand for sleepers on the Atlantic seaboard for troops being redeployed and repatriated from Europe, the car service superintendent of the Pullman Company placed a representative in the office of the MTS to obtain information regarding requirements as early as possible and to co-ordinate the actual assignment of equipment.

The usual procedure by which equipment was obtained for a troop movement was as follows: As soon as the Traffic Control Division had definite advice that a group was to be moved, it obtained full information regarding the composition of

[84] OCT HB Monograph 22, pp. 33–36, 81–84.
[85] ODT GO 55, effective 17 Jul 45.

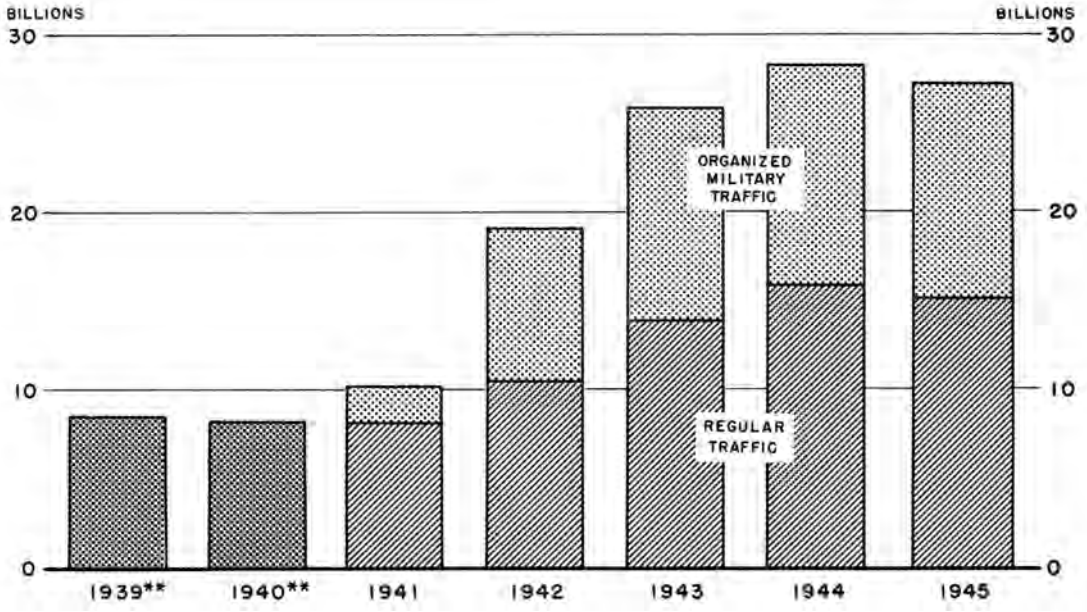
the group from the Army transportation officer at the station of origin. This information included the unit designations, the number of officers and enlisted men involved, the weight and measurement of the impedimenta, the anticipated time and place of entrainment, and the types of rolling stock desired.[86] After the route had been established, in the manner already described, the Traffic Control Division requested the Military Transportation Section to arrange for the execution of the movement. The MTS notified the Car Service Division manager in the district in which the movement was to originate and also the originating railroad. The rail line then began assembling the required coaches, baggage cars, and freight cars and notified the appropriate Pullman Company representative of the number of sleepers needed. If the required number of sleepers was not provided, the rail line undertook to provide coaches instead. If the railroad found it difficult to obtain sufficient equipment to meet the need, the district manager of the Car Service Division was called on for help. If he was unable to overcome the difficulty, he asked for aid from the MTS, which could bring heavier pressure to bear on the carriers serving the area.[87]

A special procedure was adopted by the Traffic Control Division when an exceptionally large port-bound movement—a division or an equivalent number of troops—was to be made. The assembling of so much equipment inevitably posed a difficult problem for the carriers, and strict compliance with schedules was of great importance. In such instances the Traffic Control Division sent a representative to the station of origin, where all arrangements for the movement were worked out in conference. This conference was attended, as circumstances required, by representatives of the post transportation officer, the commander of the port of destination, the G-4 of the division to be moved, the Military Transportation Section, the Car Service Division district office, the territorial passenger association, the Pullman Company, and the railroads involved. The conference took place soon after the movement order was issued, usually several weeks in advance of the departure date. The requirements for passenger and freight equipment were studied, the sources of the equipment were agreed on, the make-up and loading schedules of the several trains were planned, and train schedules from point of origin to destination were established. These arrangements were considered tentative, but changes did not often become necessary.[88]

Despite the close co-operation of all parties and the measures taken by the Army to ease the carriers' problems, there were delays in furnishing equipment. During the greater part of the war about 25 percent of the railroads' 14,000 line-haul coaches were in military service, and after redeployment began the percentage was larger. The railroads understandably endeavored to protect the regular services that the Office of Defense Transportation permitted them to maintain, while at the same time trying to meet the military requirements. The demand for coaches being what it was, this policy called for exceedingly close calculation and careful management, and sometimes the available equipment could not be made to meet all needs promptly. When the departure of movements was advanced by the Army

[86] AR 55-130, 28 Dec 42, par. 8*b*.
[87] OCT HB Monograph 22, pp. 38–46.
[88] *Ibid.*, pp. 48–50.

CHART 2—REVENUE PASSENGER-MILES ACCOMPLISHED IN PULLMAN-OPERATED SLEEPING CARS AND PARLOR CARS: 1939–1945*



* Military traffic includes the personnel of all armed forces moved in organized groups in special cars and special trains; regular traffic includes civilian and military personnel who traveled in regularly scheduled trains. Includes traffic hauled in government-owned, Pullman-operated troop sleepers.

** Distribution between regular and troop traffic not available for 1939 and 1940.

Source: Annual Reports, Pullman, Incorporated.

ahead of the time originally contemplated, the problem was intensified.

The Pullman Company frequently failed to supply the sleepers required by the Army. Beginning early in the war all of its tourist sleepers—about 2,200 in number—were regularly assigned to movements of the armed forces, and a varying number of its 4,000 standard sleepers were so utilized. Late in 1943 the new government-owned troop sleepers began to enter its fleet. At the end of 1944 the Pullman Company indicated that about half of its sleeping car equipment had been steadily engaged in troop transportation. A few days before Germany surrendered, the company stated that since Pearl Harbor it had transported more than 26,000,000 members of the armed forces in organized groups.[89] Yet in each year the passenger-miles accomplished in regular Pullman services (sleeping car and parlor car) exceeded the mileage accomplished in handling organized movements for the armed forces. *(Chart 2)* Like the railroads, the Pullman Company endeavored to protect its regular services while complying with requests from the military authorities.

It was understood that if the Pullman Company could not supply sleepers as requested, the railroads and the Traffic Control Division would be notified not later

[89] Annual Rpts, Pullman Incorporated, 1944, p. 5; 1945, p. 6; AAR, Interesting Facts About the Railroads, 3 May 45; all in OCT HB Topic Pullman Company.

than 5:00 P. M. on the second day before the contemplated departure. In such a case, the originating railroad undertook, with the aid of the Association of American Railroads when necessary, to provide coaches in substitution for sleepers. If it was found that coaches could not be made available, such information was to be given to the Traffic Control Division not later than noon of the day preceding the movement. In this event, the division in consultation with the military authority that had ordered the movement determined whether that movement should be postponed or the equipment obtained by deferring another movement of lower priority.[90] The Traffic Control Division impressed upon the carriers, however, that it would not be satisfied simply with notification that sleepers or coaches were not available. It took the position that, while postponements might become necessary, there should be relatively few and that the carriers should make extraordinary efforts to avoid this necessity.

No purpose would be served by presenting in detail the many complaints registered by the Chief of Transportation because sleepers or coaches were not supplied as requested or by reviewing the explanations offered by the carriers. General Gross and his staff sometimes felt that the carriers had been negligent, either in not providing equipment or in not giving sufficient advance notice that requests for cars could not be met. In most cases the carriers believed that there were justifying circumstances.[91]

While pressing the carriers to meet its requests for equipment fully and promptly, the Army undertook to improve its own procedures and so alleviate the shortage of cars. One of the problems during the early part of the war was the short notice given the Chief of Transportation by the commands ordering troop movements and the consequent short time allowed the carriers to assemble cars. An inquiry covering a period of ninety days showed that in about 56 percent of the cases the notice was less than forty-eight hours ahead of actual starting time.[92] Beginning early in 1943 corrective measures were taken, under which the Chief of Transportation was informed regarding prospective movements as soon as the plans began to take definite shape and was notified of actually ordered movements at least seventy-two hours in advance in all except emergency cases.[93]

Through frequent contacts with the agencies that issued troop movement orders, the Passenger Branch was able to gather information that enabled it to visualize the requirements for railroad equipment far ahead. When sizable movements—regiments or larger—were being planned, the branch was given an opportunity to look over the equipment situation and the progress of movements already scheduled, and then to indicate to the

[90] See WD CTB 35, 10 Jul 45, sub: Troop Mvmts—RR Equip.

[91] The following documents illustrate the complaints filed by the Chief of Transportation: Ltr, Morris to Gass, 7 Dec 43, OCT 511 Main 64884; Ltr, Morris to Gass, 19 Feb 44, OCT 511; Ltr, Morris to Gass, 27 Apr 44, OCT 511 Rail and Motor Mvmts; Ltr, Morris to Trunk Line-Central Pass Assn, 30 Aug 44, OCT 511 Fort Meade (Main 20363); Ltr, Morris to Western Mil Bur, 30 Sep 44, OCT 511; Ltr, Lt. Col Bert E. White to Pullman Co., 27 Feb 45, OCT 531.7 Train Service.

[92] Army Service Forces Monthly Progress Report (hereafter cited as ASF MPR), May 43, p. 60. Such short notice was more likely to occur with the smaller than with the larger units.

[93] Memo, CG SOS for CGs All SvCs, COs All Posts, *et al.*, 8 Dec 42, sub: Co-ordination of Troop Mvmts, AG 370.5 (11-24-42); WD Cir 102, 15 Apr 43, par. 2*b*(4); WD Cir 358, 4 Sep 44, Sec. IV, par. 2*b*(1); OCT HB Monograph 22, pp. 71–81.

commands concerned on what dates additional movements could be best handled. As soon as such movements were tentatively fixed, they were posted on a control board in the Passenger Branch from which the branch worked in its endeavor to avoid scheduling too much traffic from a particular area during a particular period. This board sometimes showed divisional movements six months in advance of their departure.[94]

Another important Army measure affecting the employment of rail equipment was the investing of the Chief of Transportation with authority to change the departure time of troop movements when the equipment situation warranted. Such authority was given his office in April 1943 for movements routed in Washington—that is, groups of forty or more—and the same authority was soon given to post transportation officers in regard to the smaller groups that they routed.[95] Emergency movements naturally were excepted from these arrangements. Under this procedure the orders covering nonemergency movements gave approximate dates of departure or dates between which the movements should be made, and the Chief of Transportation or the post transportation officers could advance or retard the time of departure within the limits stated. Thus a movement destined for a particular installation could be put forward or delayed so that the same equipment could be used for a movement leaving the same or a nearby installation. The ability to adjust the time of departure also facilitated the consolidation of small groups to insure the full utilization of car space.

The advance information received by the Chief of Transportation regarding contemplated movements and his authority to advance or retard the actual time of departure brought very substantial results in the conservation of railway equipment. The most spectacular example was the utilization of the same railway equipment to move seven divisions from seven different installations with only a small amount of deadhead mileage. The Car Service Section of the Passenger Branch, on the basis of its day-to-day planning to improve the utilization of passenger cars, calculated that between the time of its establishment in November 1942 and the end of hostilities it enabled 41,000 sleeping cars to make trips that otherwise could not have been made. This meant additional berths for at least 1,400,000 soldiers.[96]

The Army also undertook to eliminate practices at camps and other installations that were wasteful of car time. Before the United States entered the war, post transportation officers frequently called in railroad equipment as soon as a unit received warning of an impending move. This gave the carriers opportunity to draw equipment from sources where it could be most readily spared and also enabled the post transportation officer and the commander of troops to inspect the cars thoroughly and to entrain at their convenience. During the war this leisurely method of using equipment could not be permitted. Soon after Pearl Harbor all agencies issuing warning orders were directed to include in such orders a stipulation that delivery of

[94] Interv with Morris, 16 Aug 50, OCT HB Traf Contl Div Pass.

[95] Memo, CofT for ACofS for Opns ASF, 19 Mar 43, sub: Change in WD Cir 193; Memo, C of Traf Contl Div for C of Adm Div OCT, 29 Jul 43; both in OCT 511; WD Cir 102, 15 Apr 43, par. 2*b*; WD Cir 229, 24 Sep 43, pars. 1 and 2.

[96] Morris monograph, cited above, p. 40; Interv with Morris, 16 Aug 50, OCT HB Traf Contl Div Pass.

railroad cars would not be requested until the actual time for departure had been fixed.[97] Cancellations of movement orders or deferments of movements shortly before departure time also were wasteful of equipment, since the assigned cars were kept idle until they could be reassigned. The Chief of Transportation undertook to impress upon military authorities the necessity of avoiding last-minute changes in movement orders so far as possible.[98]

In its efforts to improve the utilization of railway equipment and bring about closer co-ordination in handling military movements, the Traffic Control Division supplemented the written instructions to the field with regional conferences. Following the inauguration of new procedures for troop movements in the spring of 1943, Colonel Morris, as chief of the Passenger Branch, held a series of conferences throughout the country, which were attended by the transportation officers of Army installations and representatives of the Association of American Railroads, the territorial passenger associations, and the individual rail lines. Regional conferences held in the headquarters cities of the nine service commands and at San Francisco in February and March 1944 were attended by Colonels Williamson and Lasher, chief and deputy chief of the Traffic Control Division, and by the heads of their traffic branches. Army transportation officers and railroad representatives were informed explicitly concerning the performance that was expected in the accomplishment of troops movements. They were given full opportunity to ask questions, make complaints, or otherwise present their problems. Similar "field forums" were held at later dates. The consensus was that excellent results were achieved in this way—results affecting not only troop movements but other aspects of the Traffic Control Division's work as well.[99]

Although the efficient employment of passenger cars was the chief problem, attention also had to be given to the economical use of freight cars in moving troop impedimenta. This was true particularly of flatcars, which were required for many large items, such as trucks, tanks, and artillery. Early in the war the Chief of Transportation put forward the idea that a considerable saving of freight cars could be accomplished by permanently assigning heavy organic equipment to training centers instead of moving this equipment each time a unit was moved. The system was tried first with motor vehicles and later with other equipment. It not only saved railway cars but also spared the government heavy freight costs. In April 1943, Lt. Gen. Lesley J. McNair, commanding the Army Ground Forces, reported that, in moving four armored divisions, two motorized divisions, and one infantry division, the new system had reduced the requirement for rail equipment by 8,743 cars and had saved the government more than $2,500,000 in transportation charges. He also reported substantial savings in the movement of smaller units.[100]

At some Army training camps the inadequacy of rail facilities on the reservations and the limited capacity of the connecting rail lines hindered dispatch of

[97] Memo, ACofS G-4 for ACofS G-3, 9 Jan 42, sub: Ordering RR Equip, G-4/33739-5.

[98] Memo, CofT for TAG, 23 May 44, sub: Mvmt of Units, OCT 511 Rail and Motor Mvmts.

[99] Memo, CofT for CG AAF, 15 Jun 43; Memo, Williamson for CofT, 16 Jun 43, sub: Confs at SvC Hq; both in OCT 511; ASF Cir 167, 29 Dec 43, sub: Conf, Mvmt of Troops, Etc; Rpt, Traf Contl Conf, 3 Feb–6 Mar 44, OCT HB Traf Contl Div Misc; Rpt, Traf Contl Div, FY 1944, pp. 4–5, OCT HB Traf Contl Div Rpts.

[100] Ltr, Gen McNair to CG ASF, 6 Apr 43, sub: Saving Rail Trans, OCT 511 Co-ordination Mvmts.



PLANNING ROUTINGS AND ASSIGNMENTS OF RAIL EQUIPMENT. *(From left) Col. Edmund C. R. Lasher, Col. William J. Williamson, and Col. I. Sewell Morris of the Traffic Control Division, with Arthur H. Gass of the Association of American Railroads.*

passenger and freight cars and caused a loss of car time. This was often true of new installations that were built early in the emergency without due regard to transportation requirements.[101] The situation at the California-Arizona Maneuver Area, located in a remote region on branch rail lines, was an outstanding example of the difficulty, and at one time the accumulation of cars became so heavy that a four-day stop order was placed on further shipments into the area. Soon after the United States entered the war a general survey of Army installations was made to determine whether additional trackage, loading ramps, or other facilities were necessary to insure prompt dispatch of railway cars, and later similar action was taken whenever the movement of traffic at an installation was found to be sluggish.[102]

The combined efforts of the Transportation Corps and the carriers to utilize

[101] Wardlow, *op. cit.*, pp. 316–17; Morris monograph, p. 49.

[102] Memo, ACofS G-4 for CofE and OQMG, 17 Jan 42, sub: Rail Facilities, G-4/33821; Memo, CG SOS for CofT, 31 Aug 42, sub: Rail Facilities for Emergency Mvmts; Memo, C of Rail Div OCT for CofT, 8 Oct 42; last two in OCT 531.7 Gen.

railway passenger equipment with utmost effectiveness met with a large measure of success. Yet there were occasions when the numbers of cars or the desired types were not provided as requested by the Army. While late requests sometimes were responsible, failures were attributable chiefly to the endeavor of the carriers—the railroads and the Pullman Company—to maintain their regular services as fully as possible while also meeting the demands of the armed forces. No urgent troop movements were postponed for lack of equipment, but the Chief of Transportation protested any delay that in his judgment could have been avoided. He also protested the failure to provide sleeping cars and the consequent transportation of troops in day coaches on long trips, and he felt that both the Pullman Company and the Office of Defense Transportation were at fault in not withdrawing more sleepers from regular services. The situation became especially acute after redeployment began, even though much larger numbers of both sleepers and coaches were placed in military service.[103]

Special Troop Trains

The troop train was not merely a mode of transportation, it was an institution. Extensive planning preceded its departure, and thorough organization and careful control were necessary throughout. Its punctual departure and arrival were matters on which the Chief of Transportation placed great stress. Each train was given a "main" number, or symbol, and until it had delivered its load at the destination it was as much a military entity as the installation from which it started. This was true whether the train carried troops only or was a mixed train of troops and impedimenta. Special troop cars attached to regular passenger trains also received main numbers and were closely controlled, but for obvious reasons the control could not be as broad as in the case of the special troop train moving on its own schedule.

The war brought changes in the size and make-up of troop trains. While maximum length was desirable from the standpoint of conserving locomotives and train crews, it was necessary to avoid making trains so long that they created operating problems and delays. Early in the emergency the Army rescinded a regulation limiting mixed trains to twenty-five cars, and took the position that when it became necessary from a military standpoint to disregard certain state laws limiting the length of trains this should be done.[104] The Army authorized the railroads to consolidate trains en route provided no delay or compromise of military security was involved. It also authorized the railroads to operate long trains from points of origin and to split them en route, on the condition that the military authorities were informed in advance so that when the trains were cut each section would be self-sustaining.[105] The arrangement of cars in a train was determined finally by railroad officials, but the desires of the military authorities were complied with as far as possible.[106]

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[103] See below, Ch. III.

[104] WD Cir 130, 5 Nov 40, Sec. II; Wardlow, *op. cit.*, p. 349. A typical troop train consisted of 12 to 15 coaches or sleepers, 2 baggage cars, and 2 kitchen cars. A typical mixed train consisted of 6 to 8 coaches or sleepers, 1 or 2 baggage cars, 1 kitchen car, and 25 to 30 freight cars.

[105] Memo, Morris for MTS, 16 Sep 42, sub: Consolidations; Ltr, Morris to IMC, 15 Jan 44; both in OCT 511.

[106] OCT HB Monograph 22, pp. 90–94.

The Army imposed various safety requirements with respect to troop trains. In view of the shortage of equipment it was not feasible to insist on all-steel cars, so that cars with wooden bodies on steel frames were accepted, but all cars were required to be in good operating condition, with secure platforms and steps. Passageways between cars were to be guarded by diaphragms or safety chains. The Chief of Transportation accepted chains only as a temporary expedient and urged the installation of diaphragms as promptly as possible. Troop train commanders were directed to issue orders before departure forbidding troops to ride on platforms or on the tops of cars, to move from car to car unnecessarily, or to leave the train without specific authority. The commanders were also instructed to take whatever additional steps might be essential to safety.

A peacetime prohibition against the shipment of explosives in the same train with troops had to be lifted during the war, but any such shipments were subject to strict regulation. Explosives, excluding small arms ammunition, in addition to being handled in accordance with the safety regulations of the Interstate Commerce Commission, were placed in cars at the rear of the trains and were separated from troops by at least one "buffer" car.[107] Cars bearing explosives were sealed and were under guard at all train stops.

As soon as rail equipment was delivered to an installation from which troops were to be moved, it was inspected by the post transportation officer, the troop train commander, and a representative of the originating railroad.[108] The inspections dealt with the structural condition of the cars and with their cleanliness. The intensity with which the cars were used and the shortage of labor in railroad shops and yards made careful inspection necessary. No record has been found of the number of cars rejected after inspection, but it is obvious that with equipment scarce and with every effort being made to avoid delays a considerable tolerance had to be exercised. Thus it was that during the demobilization period, when the shortage of equipment was being most severely felt, the commander of the San Francisco Port of Embarkation authorized certain officers of his organization to reject cars that they considered unfit, but at the same time he cautioned them that in so doing they should consider not only the types and condition of the cars and the length of the journey but also the backlog of troops waiting to be moved out of the port and the scheduled arrival of additional troops from overseas.[109]

At the end of a trip troop train equipment was again inspected by the troop train commander and by representatives of the railroad and the Pullman Company. This inspection had the dual purpose of determining how satisfactory the service rendered by the carriers had been and whether the carriers had a claim against the government because of damage inflicted on their property by the troops.[110]

The Chief of Transportation was especially concerned about the condition of

[107] 2d Ind, TQMG for 8th Corps Area, 3 Feb 41, OCT 435 Steel Pass Equip; AR 55-145, 30 Sep 42, par. 14*e*, and Changes 1, 19 Dec 42; Memo, Pass Br OCT for MTS, 28 Oct 45, sub: Kitchen-Baggage Cars, OCT 080 AAR.

[108] AR 55-145, 30 Sep 42, par. 4.

[109] Memo, CG SFPE for COs Camp Stoneman, Camp Knight, *et al.*, 16 Nov 45, sub: Rail Equip for Main Trains, OCT 511.

[110] AR 55-145, 30 Sep 42, par. 14*l*; Ltrs, Lasher to Buford, 22 Jan 44 and 29 Apr 44, OCT 511 (AR 55-145).

railway cars used in moving troops to the ports for oversea shipment since this had a bearing on morale. In the spring of 1944 he directed the commanders of the New York and San Francisco Ports of Embarkation to appoint inspectors to examine all trains arriving at the staging areas under their control during June and to report on both the condition of the rail equipment and the service rendered en route. Such reports were to be entirely independent of those rendered by the troop train commanders. Out of the 250 trains inspected, unsanitary conditions were found in twenty cases and in a few instances the supply of drinking water had been insufficient. On the basis of this information, the continuance of these inspections was ordered. The inspectors were instructed not to concern themselves too much with the absence of up-to-date facilities, although this might cause some inconvenience to the troops, but to deal chiefly with conditions that were likely to affect soldier morale.[111]

Since all requests for rail equipment for troops routed in Washington were made to the Military Transportation Section, all complaints by the Army regarding such equipment were channeled through that office, with copies to the respective territorial passenger associations, and to the Pullman Company when its equipment was involved.[112] Such complaints were usually based on reports by the train commander or the staging area inspector, but they sometimes originated with the troops themselves. Each complaint was investigated by the carriers concerned, who reported the circumstances through the MTS to the Chief of Transportation. As has been indicated, there was not much that could be done to avoid the employment of old or badly used cars. In his response to one complaint the manager of the MTS stated: "I am convinced that the best available equipment was furnished for this main, but it is obvious that the best was none too good."[113] The Chief of Transportation understood the situation, but he filed his protests nevertheless to insure that the carriers did not let down in their efforts to provide the best cars available. Complaints regarding poor service—lack of cleanliness, water, or heat, for example—were in a different category. The Chief of Transportation felt that these were conditions that could and should be avoided.[114]

While pressing the carriers to fulfill their responsibilities, the Chief of Transportation recognized that the military authorities on trains often were lax in enforcing sanitation regulations. As late as the summer of 1944 following a discussion of the situation with his field representatives, General Gross reported to General Somervell: "This condition is not only a discredit to the Army, but also reflects on the railroad companies."[115] He recommended that renewed and emphatic instructions be issued to all branches of the service, and this was done promptly. Train commanders were directed to give special

[111] OCT HB Monograph 22, pp. 99–100; ASF MPR, Jun 44, Sec. 3, p. 56.

[112] Memo, DC of Traf Contl Div for C of Pass Br, 28 Nov 44, sub: Complaints, OCT 531.7.

[113] Ltr, Gass to C of Traf Contl Div, 6 Jan 44, sub: Main 56123, OCT 080 AAR.

[114] The following documents illustrate complaints: Ltr, Lasher to Western Mil Bur, 24 Mar 44, and reply, 29 Mar 44; Ltr, Morris to IMC, 13 Jul 44, and reply, 22 Sep 44; Ltr, AAR to Lasher, 25 Sep 44, and reply, 6 Oct 44; all in OCT 531.7 Unsanitary Conditions on Trains.

[115] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, Mtg of Port and Zone Trans Offs, 7 Jul 44, pp. 4, 5, OCT HB PE Gen Port Comdrs Conf; Memo, Gross for Somervell, 13 Jul 44, sub: Unsanitary RR Equip, OCT 531.7 Unsanitary Conditions on Trains; WD Cir 334, 16 Aug 44, Sec. III.

attention to the matter and to enlist the co-operation of all personnel under their control. Despite these efforts, however, maintaining sanitary conditions on troop trains remained a constant and annoying problem. The psychology of the troops, manpower shortages on the railroads, and the intensity with which the cars were used were the principal contributing factors.

The loading of a troop train was an operation for which the post transportation officer and the commander of troops shared responsibility. The post transportation officer, having established the rail equipment required for the move, checked to see that the equipment actually provided conformed to the requirements, prepared transportation requests upon the carriers covering the troops and bills of lading for the freight, and endeavored to adjust any differences that arose between the commander of troops and the representatives of the railroads. The commander of troops appointed an entrainment officer, who planned the loading and supervised the operation to insure that it was accomplished promptly and correctly. The entrainments at training camps during the weeks immediately following Pearl Harbor revealed a lack of familiarity on the part of transportation and entrainment officers with the problems involved, and this led to mistakes and delays. Units of the field forces in the zone of interior were therefore directed to prepare loading plans and have them ready at all times and to hold practice entrainments for both personnel and impedimenta.[116]

A train commander, who was usually assigned by the commander of the unit being moved, was in charge of each troop train.[117] His command began with the departure of the train and ended with the delivery of the troops and their impedimenta to the commander of the new station. Broadly stated, the train commander's mission was to insure that the personnel and property placed in his charge were moved safely and in an orderly manner. As commander of the troops on the train he was responsible for their discipline and for the maintenance of sanitary conditions en route. He controlled the relationship between the military personnel and the representatives of the railroad and the Pullman Company on board. Sometimes he was outranked by other officers on the train, in which case tact was necessary in asserting his authority. The troop train commander had under his supervision a train transportation officer, who handled the passenger requests and bills of lading and prepared such other papers and reports as were necessary; a train medical officer, who looked after the health of the troops and the sanitary condition of the train; a train quartermaster, who was responsible for the kitchen cars and the adequacy of their equipment and supplies; a train mess officer, who supervised the preparation and serving of meals; and a baggage officer when needed. In addition, there was a car commander in each sleeper or coach to maintain order and discipline.

Within this broad field the duties of the troop train commander were varied and exacting. In most instances an officer served in this capacity only once and hence took up his responsibilities without

[116] Memo, Lasher for C of Trans Div OQMG, 14 Dec 41, sub: Troop Mvmts from Fort Bliss, G-4/33700; Memo, TAG for CGs All Armies, *et al.*, 19 Dec 41, sub: Troop Mvmts (Rail); Memo, TAG for CG Field Forces, 24 Dec 41, sub: Troop Mvmts by Rail; last two in AG 370.5 (9-10-41), Sec. 1.

[117] AR 55-145, 30 Sep 42, par. 14.

previous experience. Usually the time available for studying the regulations and preparing for the task was short. The regulations were scattered and were inadequate in some respects. Under these circumstances and because of the pressure under which the carriers were working, conditions aboard troop trains often fell short of the standards that the Chief of Transportation desired. Some improvement was achieved by assembling the regulations and instructions in two pamphlets, making them more accessible and understandable.[118] During redeployment and repatriation it was possible to appoint commanders to serve regularly on troop trains operating between the ports of debarkation and the reception stations, and these officers gained competence through experience.

The feeding of troops from converted baggage cars and from the new government-owned kitchen cars presented numerous problems. The baggage-kitchen cars were makeshifts, and aside from the fact that the railroads could not spare enough of them to meet the Army's need, they were difficult to keep in sanitary condition and lacked adequate refrigeration. Consequently, when it was decided to build government-owned troop sleepers in the spring of 1943, the advisability of constructing specially designed troop kitchen cars at the same time was apparent. Four hundred such cars were ordered by the Defense Plant Corporation at that time and four hundred were ordered two years later. These kitchen cars, although simply designed and faulty in some respects, were a great improvement over the baggage-kitchen cars because the kitchen equipment was more nearly complete and more suitable as well as permanently installed.[119] Even with better equipment, the problem of keeping kitchen cars clean remained. The crews, which were newly assigned for each trip, were often careless in using the facilities and disposing of waste, and, unless very closely supervised, tended to shirk the work of putting the cars in order before releasing them to other movements. Sometimes the cars had to be released so quickly that there was not time for proper cleaning.[120]

In the early part of the war troops fed from kitchen cars were given the regular garrison ration, but later they were provided with a special troop train ration better adapted to their inactive life while traveling. Since the supplies placed in kitchen cars at the beginning of trips often proved inadequate and the railroads were able to provide only limited quantities, a chain of emergency supply points was established at Army installations along the principal routes.[121] Thereafter the railroads were called upon only for ice. Although the subsistence of troops was a function of the Quartermaster Corps, the Chief of Transportation took an active interest in it and in all other arrangements affecting the welfare of troops en route.

[118] WD Pamphlet 20-7, 14 Mar 44, and second edition, 20 Oct 44; WD Pamphlet 20-14, 16 Apr 45.

[119] WD Memo W 30-7-42, 21 Oct 42, sub: Supplies for Kitchen Cars; OCT HB Monograph 22, pp. 108–19; Morris monograph, pp. 54–55; Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, afternoon session, 7 Jul 44, pp. 4, 5, OCT HB PE Gen Port Comdrs Conf.

[120] E.g., see: Memo, 3d SvC for CofT, 21 Feb 44; Ltr, Morris to Gass, 25 Mar 44, and reply, 29 Mar 44; Ltr, Pullman Co. to Morris, 29 Mar 44; Ltr, IMC to AAR, 2 May 44, and incl; Memo, CofT for BuPers, 6 Jul 44; Ltr, Defense Plant Corporation to Morris, 24 Aug 44; all in OCT 531.3 Kitchen Cars.

[121] WD Cir 31, 2 Feb 42, Sec. IV; WD Cir 219, 20 Sep 43; WD Cir 341, 29 Dec 43; WD Cir 400, 11 Oct 44; WD SB 10-63, 4 May 44; TC Pamphlet 22, 27 Sep 44.

Discipline on troop trains was essentially a problem of command, just as it was at an Army post. The responsibility rested with the train commander and the car commanders serving under him, and railroad personnel called upon them when lack of discipline threatened damage to railroad property or interference with train operation. Since the entrainment usually took place at an Army installation, there was slight opportunity for the troops to carry liquor on the trains; every effort was made to prevent them from obtaining it en route, for it frequently was the cause of unruliness and insubordination. Disciplinary problems were intensified when troop trains were sidetracked for long periods while other trains passed through, and when troops making long trips in day coaches came alongside other passengers ensconced in the comforts of Pullman cars.[122] Yet the enforcement of discipline was simpler on special troop trains, where there was adequate military authority, than on regular trains when individual servicemen were traveling in large numbers.[123]

A railroad escort was assigned to each troop train by the originating carrier in addition to the conductor and other members of the train crew and the Pullman conductor and porters. The escort had no operating duties. He was a seasoned railroader who had usually had experience with troop traffic and was therefore able to be of considerable assistance to the train commander. When friction arose between troops and railroad officials, as it did on numerous occasions, the escort might provide the word or the act to calm the situation. Troops were sometimes boisterous, dissatisfied with their accommodations, careless of railroad property, and disrespectful of railroad authority. Conductors, with a regard for the interests of their employers and sometimes with impatience bred of long hours of continuous service, might be short-tempered. There frequently was need for a diplomatic but firm intermediary, and the escort played that role. The Chief of Transportation described the escorts as "indispensable," yet toward the end of the war when the manpower shortage made it difficult for the railroads to place such officials on all trains, he had no alternative but to agree to their omission on the shorter daylight trips.[124]

The railroads were responsible for the maintenance of train schedules, but the Chief of Transportation kept this matter under close observation. Train commanders were required to telegraph the Traffic Control Division the time of departure, the time of arrival at destination, and any unusual delays or incidents en route. The railroads telegraphed similar information to the Military Transportation Section and also reported each time a troop train passed an interchange point—that is, passed from the tracks of one railroad to those of another. If a train fell seriously behind schedule, these agencies were in a position to act, but the initial action frequently came from the train commander. When a delay occurred his first step was to approach the train escort or the train conductor in an effort to correct the situation. In the early part of the war if this course failed to get the desired results, the

[122] See SFPE, Summary of Problems Handled by Troop Train Comdrs, 8 Oct 45; NYPE, Summary of Troop Train Comdrs Rpts—Camp Kilmer, 12 Oct 45; both in OCT HB Traf Contl Div Pass.

[123] See below, pp. 67–70.

[124] Ltr, to Richard C. Morse, Vice Pres Penn RR, 31 May 44, OCT 531.7 PRR Sp Train Sv; OCT HB Monograph 22, p. 104.



PREPARING FOOD IN A CONVERTED BAGGAGE-KITCHEN CAR



NEW TROOP KITCHEN CAR EQUIPPED WITH MODERN FACILITIES

train commander communicated with the division superintendent of the railroad. This procedure did not work out satisfactorily for the Army, and the train commanders were directed to telegraph a report to the Traffic Control Division, which then sought the aid of the Military Transportation Section in overcoming the delay.[125]

During the early part of the emergency the railroads complained that their efforts to maintain train schedules were sometimes thwarted by requests of the train commanders for unscheduled stops to enable troops to get rest or exercise. The carriers pointed out that most of the schedules requested by the Army made no provision for such stops, although they were recognized as necessary on long trips. An attempt to correct this situation by warning the officers concerned to be realistic in arranging schedules failed to overcome the difficulty. Soon after the United States entered the war, therefore, train commanders and other officers in the field were forbidden to approach the railroads regarding unscheduled stops and were required to direct their requests to The Quartermaster General, who at that time had general responsibility for the routing and delivery of troops, or to the Western Defense Command when trains were destined for points in that area.[126] After the techniques of arranging and executing troop movements had been perfected through practice, the demand for unscheduled stops ceased to be a problem.

Departures from schedule attributable to the railroads required the attention of the Chief of Transportation throughout the war. When trains arrived at Army installations ahead of or behind schedule, arrangements for the reception and accommodation of the troops were upset, and sometimes seriously so. Delays might also disturb plans for using the cars in other troop movements. Early arrivals were not common, but they occurred; late arrivals were more frequent. Operating conditions became more difficult for the carriers as the traffic increased without commensurate increases in facilities and personnel. Recognizing this the Chief of Transportation allowed the railroads some latitude, but he maintained a firm attitude toward what appeared to be excessive or unnecessary delays. This was particularly true of trains destined for staging areas at the ports of embarkation, and such trains were placed under special controls.[127]

When objectionable delays occurred, the facts as reported to the Traffic Control Division were placed before the Military Transportation Section, which in turn obtained the railroads' side of the story. In some cases it was apparent that the carriers concerned had not exercised sufficient care or foresight, and in such cases the MTS took further steps to emphasize the necessity of maintaining schedules. In other cases, the MTS believed that the criticisms of the Traffic Control Division were unduly harsh, since in the handling of long movements under difficult operating conditions situations were likely to arise that could not be foreseen or prevented. Nevertheless, the division was unrelenting. It recognized that on the whole the railroads were giving the Army excellent service, but it also knew that the railroads were under heavy pressure with

[125] AR 55-145, 30 Sep 42, par. 14*d*, and Changes 5, 14 Mar 44; OCT HB Monograph 22, pp. 57–59.

[126] Ltr, IMC to TQMG, 4 Apr 41, AG 511 (11-3-34) AR 30-945; WD Cir 149, 24 Jul 41, Sec. I; WD Cir 273, 31 Dec 41, Sec. II.

[127] See below, Ch. II.

regular trains frequently running behind schedule, and the division's tactics were designed to keep the carriers constantly alert to the Army's requirements and their responsibility for putting military traffic through promptly.[128]

Maintaining secrecy regarding troop train movements was a constant and difficult problem. Secrecy was important because of the danger of sabotage on the railroads and because the movement of large troop units into a port was indication of an impending movement by ship from the port—information of value to enemy U-boats. Yet the possibilities for "leaks" were numerous. The troops themselves found a prospective move interesting news to pass on to their relatives and friends. Certain information had to pass between home stations, the Traffic Control Division, the stations of destination, and the carriers in order that the movements might be properly executed, and there was always danger that the messages would get into unauthorized hands or that some one who had received the information properly would use it carelessly. Three months after Pearl Harbor G-2 reported that leaks had been traced to institutions that provided free rest rooms to servicemen, civic organizations and telegraph companies that sent representatives to meet troop trains, police radios reporting the movement of military motor convoys, and crowds assembled in railroad yards when troop trains were passing through.[129]

The problem of secrecy was encountered during the prewar emergency and a tightening of the regulations was begun. Military personnel were warned against making public any information relating to troop movements. Instructions were issued requiring that all identification markings placed on passenger and freight cars, such as those indicating the unit moving or the destination, be removed before the departure of the cars from the military reservation. Movements were classified as secret, confidential, or restricted, and all communications and information pertaining to such movements had to be classified in the same way. Commanding officers were reminded of their responsibility for making all personnel under their control familiar with security regulations.[130] Despite these steps, violations of security continued even after the United States became an active belligerent. Fortunately there were no untoward events traceable to this lack of secrecy, and, with the added measures taken by the Army, the situation gradually improved.

After Pearl Harbor steps were taken to increase troop train security. Explicit instructions were issued to transportation officers in the field and to the personnel of the Traffic Control Division regarding the handling of messages relating to routings. In the case of secret and confidential movements, coded messages by teletype, telegraph, or radio were to be used when time permitted; when there was not sufficient time for such communications and telephone or uncoded telegraph communications were necessary, the movements

[128] AR 55-155, 27 Nov 42, par. 1. For typical complaints, see Memo, C of Traf Contl Div for CofT, 7 Aug 42, sub: Late Arrivals at Camp Shelby, OCT 511; Ltr, Morris to Gass, 5 Apr 44, and reply, 20 Apr 44, OCT 511 Rail and Motor Mvmts; Ltr, Maj Samuel N. Farley to Mr. Kelly, 24 Oct 45, and reply, 15 Nov 45, OCT 531.7 Train Av.

[129] Memo, G-2 for CofS, 3 Mar 42, sub: Compromise of Mil Info; Memo, TAG for CG AAF, *et al.*, 13 Mar 42; both in AG 350.05 (3-3-42)(3).

[130] AR 380-5, 18 Jun 41, Sec. VIII; WD Cir 198, 22 Sep 41, Sec. I; WD Cir 242, 22 Nov 41, Sec. V.

were to be identified only by reference to the movement orders, and information as to the date, size, origin, and destination was to be omitted.[131] The railroads were required to make sure that information regarding troop movements became available only to employees requiring it, that only the information necessary to the performance of their duties was given, and that the employees were carefully instructed in safeguarding such information.[132] The Traffic Control Division, while pressing the railroads to use utmost care, opposed suggestions that the carriers be required to put all communications regarding secret movements in code or to send them by registered mail, since such restrictions would have interfered with their operating efficiency.[133]

In the effort to limit the opportunity for improper dissemination of information, a broad prohibition was set up against giving information regarding troop movements to representatives of nonmilitary agencies and against permitting visitors to go aboard troop trains. The Army declined to authorize the Association of American Railroads to give regular information to the Office of Defense Transportation regarding troop movements, contending that this should be done only when a military purpose could be shown.[134] Representatives of foreign governments were denied such information, except certain officers who were working with the Combined Staff Planners.[135] News agents, vendors of merchandise, and representatives of charitable organizations were not to be given advance information regarding the arrival of special troop trains or to be permitted to board such trains, and this prohibition was interpreted as applying to the American Red Cross despite the good work it was doing on behalf of troop comfort and morale.[136] Railroads were not permitted to use secret or confidential trains for deadheading railroad personnel who were not performing duties on those trains.[137]

Military security as well as rapidity of transmission would have been improved if all communications regarding troop movements could have been sent over Army-controlled cryptographic teletype equipment. Late in 1942 the Chief of Transportation recommended the installation of such connections between his office and all Army installations concerned with troop movements. The proposal was approved by Services of Supply headquarters, but not enough equipment could be obtained to carry it out. Private teletype communications were established only between the Traffic Control Division, the ports of embarkation, and the Army regulating stations on the transcontinen-

[131] Memo, Morris for All Routing Personnel, 7 Jun 42, sub: Telephone Conv—Classified Troop Mvmts, OCT 000.72 Gen; AR 55-130, 4 Jun 43, Changes 2, par. 8*b*(1).

[132] Memo, Lasher for Gass, 13 Dec 41, OCT 080 AAR; Memos, Gass to All RRs, 14 Dec 41, and 12 Jan 42; Memo, Gass for Lasher, 22 Jan 42; last three in OCT 370.5 Secrecy; WD Cir 193, 16 Jun 42, par. 4; Ltr, Williamson to Western Mil Bur, 20 Jul 42, OCT 511.

[133] 1st Ind, CofT for Army Regulating Off, El Paso, Tex., 15 Apr 42, OCT 000.72 Gen; Memo, Traf Contl Div for Mvmts Div OCT, 15 Feb 43, sub: Safeguarding Mil Info, OCT 370.5 Secrecy.

[134] Ltr, Gross to Eastman, ODT, 26 Apr 42, OCT 511.

[135] The Combined Staff Planners was the committee primarily responsible for assisting the Combined Chiefs of Staff in planning the strategic conduct of the war. It consisted of three British officers, Army, Navy, and Air, and four U.S. officers, Army, Navy, Army Air, and Navy Air.

[136] WD Cir 191, 15 Jun 42, Sec. V; Ltr, Lasher to MTS, 11 Jul 42, OCT 080 AAR; Ltr, Morris to Western Mil Bur, 11 Mar 44, OCT 531.7 Gen; WD Cir 314, 26 Jul 44, Sec. VI.

[137] 1st Ind, CofT for PMG, 1 Nov 43, OCT 511 Rail and Motor Mvmts.

tal rail lines. Consequently, commercial teletypes and telephones were used extensively, necessitating the restriction on the content of messages.[138]

Although an Army regulation of September 1942 appeared to favor the use of mixed trains, the Chief of Transportation did not. The inclusion of both passenger and freight cars in the same trains subjected the passenger equipment to hard treatment and necessitated more frequent lay-ups for repairs. Mixed trains moved more slowly than passenger trains, a fact that meant a loss of service from the passenger cars. The decision on using mixed trains, however, was left largely to the commanders of troops, and in many instances they adhered to the old doctrine that troops and their organic equipment should not be separated. The procedures that were developed during World War II for separate movements of troops and their impedimenta and the fact that the country was in no danger of invasion after the early weeks of the war invalidated this doctrine, yet the use of mixed trains continued.[139]

When impedimenta were moved separately from the troops to which they pertained, either in solid trains or in cars attached to through freight trains, the shipments were given MI (military impedimenta) numbers, were moved from origin to destination with the least possible delay, and were controlled en route in the same manner as troop trains. Such shipments were exempt from the diversion orders of an agent of the Interstate Commerce Commission who had authority to reroute transcontinental freight traffic when he found this necessary to keep the principal railroad gateways free from congestion. Markings on troop equipment destined for oversea areas that might reveal the identity of the unit, its destination, or the ship on which it was to be transported were forbidden. Guards were provided for equipment in transit whenever the unit commanders considered them necessary.[140]

The close attention that the Chief of Transportation gave to the operation of troop trains and the importance that he attached to the observance of schedules and the maintenance of order and cleanliness were based on sound military principles. The carriers sometimes felt that his insistence on the observance of schedules went beyond the point of military necessity, but unquestionably delays en route magnified the problems of troop train administration, and late arrivals were disturbing to the installations of destination. There were some, including military men, who believed that the Army's requirements of secrecy in connection with train movements were stricter than the circumstances warranted, but the rules were dictated by consideration of the heavy cost that might result from less strict security measures. Within the limits of practicality, the Chief of Transportation acted on the theory that a troop train was a military installation pro tem, and should be operated with corresponding regard for schedules, discipline, sanitation, and security. Although the results often fell below his expectations, for reasons that have been stated, these standards were achieved in large measure.

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[138] OCT HB Monograph 22, pp. 64–65.

[139] AR 55-145, 30 Sep 42, par. 1*b*(2)(d); Interv with Morris, 24 May 43, OCT HB Traf Contl Div Pass; Morris monograph, pp. 53–54.

[140] OCT HB Monograph 22, pp. 51–57, 63; Memo, TAG for CG Field Forces, *et al.*, 20 Jan 42, AG 370.5 (12-20-41), and Memo TAG for CG Field Forces, *et al.*, 28 Jan 42, AG 370.5 (1-25-42).

Official and Furlough Travel on Regular Trains

While troops moving in special trains constituted the most important element from a military standpoint, the other types of Army passenger traffic added up to a considerable volume and involved certain unique problems. Chief among these types were military personnel and civilian employees traveling on War Department transportation requests, either as small groups or as individuals, and military personnel traveling at their own expense while on furlough, leave, or pass. This traffic was handled by regular train and bus services, which also handled the heavy traffic of civilians traveling on private business missions or for pleasure. The mingling of military and civilian passengers and the crowded conditions of the trains, buses, and terminals gave rise to many of the passenger traffic problems with which General Gross and his Traffic Control Division had to deal.

As has been indicated, persons traveling on War Department transportation requests (official travel) were routed by the Traffic Control Division when they numbered forty or more, regardless of the point of origin, while local Army transportation officers routed smaller groups and individuals traveling from their respective stations. The problems involved in the issuance of transportation requests for such traffic and the fulfillment of financial arrangements between the carriers and the government were numerous and sometimes vexatious. These administrative details are not dealt with in this discussion, which is confined to the strictly transportation aspects.[141]

The necessity of utilizing railroad equipment with utmost economy gave rise to two arrangements, mentioned earlier, affecting the official travel of individuals and small groups. At the request of the railroads, the Army had agreed that local Army transportation officers would consult local railroad representatives before routing parties of from fifteen to thirty-nine, inclusive. This procedure enabled the railroads not only to work out the routing of this considerable traffic so as to use their equipment to best advantage but also to make an equitable division of the business among the several rail lines. Upon the recommendation of the Chief of Transportation, local transportation officers, in order to utilize railway cars as they became available and thus reduce deadheading, were authorized to advance or delay the departure of troops that they had routed. These arrangements complemented each other and aided the Army transportation officers and the railroads in their joint effort to avoid idle car time and wasted car space.

Army personnel engaging accommodations in Pullman cars were not subject to the usual rules regarding the reservation and surrender of space. For many years Army regulations had provided that transportation requests for Pullman space would be surrendered after boarding the train, rather than exchanged for tickets before boarding as in the case of requests for rail transportation. This arrangement was convenient for officers and enlisted men whose time of departure was subject to sudden change, but it also meant that reservations could be held until train time

[141] The administrative rules are covered in AR 55-110, 22 Jan 43, sub: Trans Requests; AR 55-120, 26 Apr 43, sub: Trans of Indiv; AR 55-125, 9 Jan 43, sub: Sleeping Car and Similar Accommodations; ARs of the 35 series, 4810 through 4895. For a discussion of administrative problems, see OCT HB Monographs 6, pp. 232, 259–61; 20, pp. 6, 7, 30–57.

and then not be used, and it permitted the holding of reservations on a number of trains simultaneously. In an effort to check the waste of Pullman space, the Office of Defense Transportation early in the war requested the Army and other federal agencies to change their procedures to conform to the rules applicable to the public at large.[142]

The Chief of Transportation did not agree to the proposal since it would have hampered officers in performing duties involving travel, but in September 1942 he entered into an agreement with the Pullman Company that brought considerable improvement to the situation. Under this agreement Pullman space that had been reserved forty-eight hours or more in advance was held for military passengers until twenty-four hours before train time, or it was held until train time if the reservations had been made within forty-eight hours of departure. To meet the problem encountered by officers whose travel orders were changed just before departure, the Pullman Company permitted those who had already exchanged their transportation requests for Pullman tickets to use those tickets on other trains, and when the tickets could not be used at all, refund was made.[143]

When a party of troops required only part of a sleeping car, the Army practice was to use as many lower berths as were required, placing two men in each lower berth and using upper berths only if there was an odd man in the party or after all lowers had been filled. The railroads complained that this practice was inconsiderate of other passengers who might travel in the same car and proposed that the Army assign its personnel section by section as the Navy did, thus leaving more lower berths available for civilians or members of the other armed services. The Chief of Transportation rejected this proposal and the Army practice remained unchanged. He pointed out that the Navy placed only one man in a lower berth (up to July 1945), and that the Army's method of using Pullman space actually was the more economical.[144]

Furlough travel—a term covering the travel of soldiers on furlough, leave, or pass—created special problems because soldiers used the same facilities as civilians and because the peaks of furlough and civilian travel—week ends and major holiday periods—tended to coincide. No actual count of furlough tickets was made, but the railroads estimated that from 1 January 1942 through 31 December 1945 approximately 200,000,000 reduced-rate furlough tickets were sold to men and women of the armed services.[145]

Early efforts were made to hold furlough travel within limits because of the strain under which the carriers were working. Furlough travel was in competition with official military movements for transportation equipment, and overcrowded trains were conducive to disorder. Against these practical reasons for limiting furlough travel, the Army had to

[142] Concerning loss of space due to commercial and governmental practices, see Senate Special Committee Investigating the National Defense Program, *Third Annual Report* (Washington, March 4, 1944), pp. 116–17.

[143] Ltr, Pullman Co. to CofT, *et al.*, 17 Jun 42; Ltr, ODT to Gross, 4 Jul 42; Ltr, Lasher to Pullman Co., 13 Jul 42; Ltr, Brig Gen Theodore H. Dillon, OCT, to ODT, 17 Jul 42; Ltr, Pullman Co. to OCT, 29 Sep 42; all in OCT 531.2; AR 55-110, 22 Jan 43, sub: Trans Reqmts, par. 4*b*; OCT HB Monograph 20, pp. 32–35.

[144] AR 55-125, 9 Jan 43, par. 2*c*; Ltr, Lasher to IMC, 8 Apr 43, OCT 531.2 (AR 55-125).

[145] Ltr, Earl B. Padrick, Chm IMC, to author, 8 Dec 50, OCT HB Traf Contl Div Pass.

weigh both the popular argument that men in training for oversea duty should be afforded an opportunity to visit their homes as often as the training schedule would permit and the morale value of such visits.

In the fall of 1941 the prospect of heavy furlough travel during the Christmas holiday season caused anxiety to the railroads, The Quartermaster General, and G-4. Not only had the size of the Army greatly increased since the preceding holiday season, but permission had been given to commanding officers to authorize furloughs up to 50 percent of their enlisted personnel at any one time during this period, rather than the usual 15 percent.[146] The railroads proposed among other things that holiday furloughs begin not later than 12 December; that the War Department establish schedules so as to spread the traffic more evenly over the entire period; that the railroads be given advance notice of the numbers scheduled to move each day; and that official troop movements be suspended between 12 December and 14 January, except in case of extreme emergency.[147] The War Department accepted these proposals in principle, but the Japanese attack on our Pacific bases and the ensuing declarations of war against Japan and Germany necessitated a complete change of arrangements. Limitations on official troop movements could not be observed. Furloughs were first limited to 25 percent of unit strength and then restricted to cases of emergency and cases where the railroads could give assurance to camp commanders that official troop movements would not be affected.[148]

In April 1942, in order to lighten the pressure on the carriers over week ends, commanders of Army installations were directed to arrange so far as practicable for furloughs to start and end on Tuesday, Wednesday, or Thursday. Commanders were also directed to schedule furloughs throughout the year and to avoid concentrating them in certain months.[149] The Christmas–New Year holiday period at the end of 1942 threatened to produce unusually heavy travel, and explicit instructions covering furloughs granted between 12 December and 12 January were issued limiting the number to 10 percent of the strength of the post, camp, or station; passes issued for shorter periods were also restricted. Post commanders were instructed to co-operate with local railroad officials in deciding how much furlough travel could be moved from their commands and when it could be most readily handled.[150] When information reached the Chief of Transportation that some commanders were not observing these instructions, he sent messages to all service commands requesting that measures be taken to enforce them. The Office of Defense Transportation, which had been deeply concerned over the prospective congestion at this period, reported that

[146] WD Cir 200, 25 Sep 41.

[147] Memo, TQMG for ACofS G-4, 16 Oct 41, sub: Christmas Furloughs; and subsequent correspondence leading up to issuance of Memo, TAG for CGs All Armies, *et al.*, 7 Nov 41; all in AG 220.71 (12-28-39) AR 615-275; Memo, TAG for CGs All Armies, *et al.*, 4 Nov 41, sub: Curtailment of Troop Mvmts, AG 370.5 (10-27-41); Memo, TAG for CofS GHQ, *et al.*, 5 Nov 41, sub: Induction of Men During Holidays, AG 324.71 (9-23-41); Memo, TAG for CGs Corps Areas, *et al.*, 10 Nov 41, sub: Curtailment of Repl Tng, AG 324.71 (11-4-41).

[148] Memo, TAG for CofS GHQ, *et al.*, 8 Dec 41, sub: Furlough Travel; Memo, TAG for CGs All Armies, *et al.*, 24 Dec 41, sub: Curtailment of Leaves and Furloughs; both in AG 220.71 (12-28-39) AR 615-275.

[149] Memo, TAG for CG AGF, *et al.*, 30 Apr 42, sub: Annual Leaves, Furloughs, and Vacations, AG 230.54 (4-24-42).

[150] Memo, Gross for Somervell, 6 Oct 42, OCT HB Gross Day File; WD Cir 348, 19 Oct 42, Sec. II.

the measures taken by the Army with regard to furlough travel had enabled the carriers to handle the seasonal traffic smoothly.[151]

While the holiday seasons presented the greatest difficulty, the Chief of Transportation emphasized that excessive furlough travel was a year-round problem. In July 1943, speaking before a service commanders' conference, General Gross argued against the tendency of post commanders to grant furloughs every time enlisted men changed stations and expressed the view that a visit home about once every six months would meet morale needs. He also urged greater restraint in issuing passes to visit nearby places since local rail and bus services were overwhelmed.[152]

Simultaneously the Traffic Control Division proposed a revision of the basic Army regulations on furloughs, making the number of furloughs and passes issued at any post dependent at all times on the availability of commercial transportation equipment, and requiring post commanders to reduce their quotas of furloughs and passes whenever transportation considerations dictated. Army Service Forces headquarters approved the revision as it related to passes but not with respect to furloughs, contending that furloughed Army personnel should not be penalized while there was no restriction on travel by personnel of other governmental agencies or by the public at large. G-1 opposed even the limitation on passes, because it affected Army personnel only and because of the difficulty of equitable enforcement. The entire proposal accordingly was dropped.[153] Special instructions regarding travel during the Christmas–New Year holiday season were issued in the fall of 1943, as in earlier years.[154]

Complaints regarding the inadequacy of transportation available to men on furlough and the crowded condition of trains and buses led to the introduction of a bill in the U.S. House of Representatives in June 1944 to direct the Secretary of War and the Secretary of the Navy to give priority to furlough traffic. The War Department opposed the bill on the ground that furlough travel would be given precedence over organized troop movements regardless of the urgency of the latter. In placing itself on record against this measure the War Department expressed the belief that arrangements recently made with the railroads for handling furloughees in special trains, together with the reduction in furlough travel resulting from the reduction in the number of soldiers remaining in the zone of interior, would bring about an appreciable improvement in the transportation situation. The proposed bill was not enacted into law.[155]

The arrangement to move furloughees on special trains was an extension of a plan that had been in effect earlier. Under Army regulations a large percentage of the troops shipped to oversea replacement depots and ports of embarkation were entitled to furloughs before sailing

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[151] Rads, 15 Dec 42, OCT 551.1 Furlough Fares; Ltr, Eastman to Gross, 1 Jan 43, OCT HB Traf Contl Div Pass.

[152] Remarks by Gen Gross at SvC Conf, Chicago, 22–24 Jul 43, p. 113, JAGO Library.

[153] Memo, OCT for CG ASF, 17 Jul 43, sub: Regulating Furloughs, OCT HB Traf Contl Div Pass; Memo, Mil Pers Div ASF for CG ASF, 19 Aug 43; Memo, ACofS G-1 for CofS USA, 29 Sep 43, sub: Travel on Pass; last two in AG 220.71 (12-28-39) AR 615-275; OCT HB Monograph 20, pp. 117–18.

[154] WD Cir 215, 16 Sep 43, Sec. VI.

[155] HR 5116, 78th Cong., 2d Sess., 23 Jun 44; Ltr, SW to Rep Andrew J. May, Chm House Com on Mil Affairs, 24 Aug 44, OCT 511 Priorities for Servicemen.

overseas, and the transportation lines serving the training centers frequently were unable to accommodate this traffic. To relieve the situation, commanders of training centers were instructed to provide the men with official transportation on special troop trains to their new stations, and to allow those who would benefit by such an arrangement to leave the trains at convenient gateways and proceed to their homes at their own expense. When their furloughs were over, they returned to the gateways and boarded special troop trains for the completion of their journeys. Under this arrangement the furlough trip was shorter than it would have been if the soldiers had purchased furlough tickets from their stations to their homes and back again. Thus a considerable saving of transportation was effected and, in addition, the men were relieved of the necessity of making long journeys on crowded regular trains. In the summer of 1944 this plan was extended so that whenever a carload of men traveling on furlough tickets from a training center or other installation could be routed through the same gateway, they were moved in a special car to the gateway, from which point they dispersed to their homes. The operation was repeated in reverse when the men returned to their stations.[156] During the last half of 1944 about 216,000 troops on furlough were moved as organized groups in special cars, and during 1945 about 329,000 were so transported.[157]

This method of handling furlough traffic, while it had definite advantages, required very careful administration at the stations from which the troops were moving, and gave rise to numerous complaints from the railroads. The difficulties arose from the fact that the number of furloughees leaving their stations by rail often was less than the number for which cars had been ordered and from the failure of all men to return to the gateways in time to take the special cars that were to carry them back to their stations.[158]

The armed forces proposed in the summer of 1944 that servicemen and servicewomen in uniform be allowed to pass through the gates at railway terminals or board trains in advance of civilian travelers. The primary purpose was to facilitate the travel of furloughees who held coach tickets; they had limited time for their journeys and often were delayed in getting aboard trains because of the volume of nonessential civilian traffic. In response to this proposal, the railroads stated that many of them already were following the practice at stations where there were facilities for controlling traffic and where the granting of preference was considered expedient, and they did not favor the adoption of the plan as a general rule.[159]

It often happened that enlisted men who were entitled to a furlough before going overseas were without funds with which to purchase transportation. The Army Emergency Relief and the Red Cross had found it necessary to limit loans to servicemen to cases of sickness or death

[156] AR 615-275, Changes 3, 20 May 43, and Changes 5, 30 Sep 43; Memo, CofT for CG AGF, 3 Jul 44, OCT 511 Furlough Travel; WD CTB 25, 10 Aug 44; OCT HB Monograph 20, pp. 139–41.

[157] Data originally compiled by Transport Economics Section, Traffic Control Division, OCT, to be published in a statistical volume of this series, now in preparation.

[158] Ltr, Siddall to CofT, 11 Aug 44; Ltr, Morris to Siddall, 19 Aug 44; both in OCT 511 Furlough Travel; Memo, CofT for CG AGF, 29 Sep 44; Ltr, White to Siddall, 5 Jan 45; Memo, Gass for White, 10 Feb 45; last three in OCT 511 Furlough or Delay En Route.

[159] Ltr, Armed Forces to AAR and IMC, 11 Aug 44, and reply, 24 Aug 44, OCT 510 Trans of 15 or Less.

at home. The Army accordingly arranged with the railroads and the bus lines for the issuance of official transportation requests for round-trip furlough tickets in such instances, with the understanding that the cost of this transportation would be charged against the account of the enlisted man and would in no case be borne by the government.[160]

In addition to the other measures he took to improve travel conditions for military personnel using regular trains, the Chief of Transportation assisted in obtaining reservations for sleepers, parlor cars, and reserved-seat coaches. The difficulty that members of the armed forces experienced in obtaining reserved space led first to the establishment of government reservation bureaus (GRB's) operated by the railroads, and later to the establishment of Army reservation bureaus (ARB's) to complement these special railroad offices.

Government reservation bureaus were the outgrowth of an arrangement between the Passenger Branch in the Office of the Chief of Transportation and certain of the railroads that operated trains out of Washington, under which a limited amount of space was held at the disposal of the branch to meet its emergency needs. The arrangement proved so helpful that the Passenger Branch proposed that it be extended to other cities. The railroads were agreeable, and the approval of the Office of Defense Transportation was given with the provision that the space held by the railroads should be available to all of the armed services and also to the War Production Board and the Office of Price Administration. Organized on this basis, the first GRB began functioning in Washington late in June 1942. Space was sold to the several government agencies in the order of application, and any space not taken up by these agencies within the time set by the railroads was made available to the public.

Plans for the extension of this arrangement to other cities were worked out at meetings between representatives of the government agencies and the railroads in the fall of 1942. Recommendations for the establishment of additional GRB's usually originated with the Passenger Branch, but the decision as to their actual establishment rested with a committee representing the major rail lines. The operation of each bureau was the responsibility of a committee of local railroad representatives. The government agencies authorized to use the GRB's were required to designate a single office in each city through which all requests for reservations would be made.[161] The offices that the Army designated for this purpose became known as Army reservations bureaus.[162]

The scope of this activity was steadily increased. Although it was part of the original plan that reservations would be requested only for individuals on official travel and not for groups, the rule was modified, against considerable railroad opposition, to permit the ARB's to make reservations for groups up to fourteen.[163] The railroads and the Office of Defense Transportation also objected to the exten-

[160] OCT HB Monograph 20, pp. 145–46; WD Cir 22, 18 Jan 45, Sec. II.

[161] OCT HB Monograph 20, pp. 83–85; Memo, Lasher to Wylie, 10 Nov 42, OCT 531.8 GRBs; WD Cir 40, 4 Feb 43, Sec. I; Standard Operating Procedure for GRBs issued by CofT, undated, OCT HB TZ Gen ARB.

[162] Memo, Lasher for CofT, 2 Aug 43, sub: GRB Status Rpt, OCT 531.2 GRBs.

[163] Ltr, Armed Forces to AAR and IMC, 11 Aug 44, and replies, 24 Aug 44 and 11 Sep 44, OCT 510 Trans of 15 or Less.

sion of the arrangement so that the reservation bureaus could serve personnel traveling on furlough and leave, but eventually both accepted the Army's recommendation. The carriers also agreed to set aside space in their larger terminals so that the Army reservation bureaus located at Army installations in those cities could operate branches in locations more readily accessible to transient service personnel. At the end of hostilities the Army had forty-four reservation bureaus and they, in turn, maintained a total of forty-eight branches. General supervision of these offices was a responsibility of the Traffic Control Division. More detailed supervision was given by the zone transportation officers, who also negotiated with the railroads regarding increased allotments of reserved space to the government reservation bureaus in their respective territories.[164]

The chief problem in the operation of Army reservation bureaus was to get the carriers to allocate sufficient space on trains to the government reservation bureaus to meet the military need. The Chief of Transportation kept pressing for larger allocations and some lines responded, but others evidently were reluctant to hold back large blocks of space from the general public.[165] Although the Army emphasized that the reservation bureaus were operated solely as a convenience to military personnel and did not imply any priority in favor of military over civilian travelers, the fact remained that while space was under allocation to the GRB's it was not available to the public. On the Army's side it could be pointed out that civilians could and did make reservations far in advance, whereas this frequently was not possible with military personnel, and that some large business concerns bought up blocks of space on important trains and never relinquished it even though some of the accommodations might not be used.

Despite the competition for reserved space, the results obtained by the Army reservation bureaus were substantial. During the early months of operation the percentage of requests that could not be filled was high, reaching a peak of 13.3 percent in August 1943, but rapid improvement followed. In several later months the percentage of failures was as low as 2.1. Activities of the ARB's from their inception in April 1943 through 1945 are summarized in Table 5.

The Chief of Transportation considered this traffic so important that in order to supplement the regular sleeper services he assigned to it a considerable number of the cars that had been allotted to handle organized troop movements. These cars were placed on routes where the travel of military personnel on official business and on furlough was especially heavy, and they were designated military sleeping car lines. When the need became apparent to the Traffic Control Division, the division requested the railroad concerned and the Pullman Company to study the situation and to arrange for the operation of such a line. When on days of peak travel the traffic exceeded the capacity of regular sleeper services and the military sleeping car line, the officer in charge of

[164] OCT HB Monograph 20, pp. 77–82, 85–98; WD Memo W 55-40-43, 24 Aug 43; WD Cir 396, 7 Oct 44, Sec. I; WD CTB 23, 8 May 45, includes a list of ARB's and their branches and the rules governing their operation.

[165] Ltr, Gross to Maj Gen Sanderford Jarman, 23 Jul 43, OCT 531.8 GRBs; Ltr, Morris to IMC, 17 Aug 44, OCT 531.2 SF; 1st Ind, 8th ZTO for CofT, 1 Jan 45, and related correspondence, OCT 531.2 New Orleans.

TABLE 5—ARMY RESERVATION BUREAU ACTIVITY: APRIL 1943–DECEMBER 1945

Year	Reservations Requested	Reservations Obtained	Reservations Not Obtained	Percentage of Failures
1943 (April–December)	823,388	753,521	69,867	8.5
1944	1,754,048	1,687,369	66,679	3.8
1945	4,312,524	4,184,282	128,242	3.0

Source: Data based on Army Reservation Bureau Activity Report, received by Traffic Control Division, OCT, compiled for publication in a statistical volume of this series, now in preparation.

an Army reservation bureau was authorized to arrange with the carriers for the assignment of overflow sleeping cars. These also were to be taken from the military allotment. Since the establishment of military sleeping car lines meant that so much less equipment was available for organized troop movements, the Traffic Control Division weighed very carefully the circumstances affecting each case. While these lines were intended primarily for military personnel for whom reservations had been made by the ARB's, any space not sold by the release time was made available to the public. In May 1945 there were seventy-six such lines in operation.[166]

Although the Army reservation bureaus initially served only Army personnel, their services eventually were made available to personnel of the Navy, the Marine Corps, and the Coast Guard. The Navy also set up a number of reservation bureaus that could be used by personnel of all of the armed services. Toward the close of the war both the Army and the Navy reservation bureaus were advertised as military reservation bureaus, but in most places the management continued to be by the Army or by the Navy. Early in 1945 the ARB's at San Francisco, Los Angeles, and Seattle became joint bureaus and were operated under the control of committees representing all of the armed services.[167]

As soon as hostilities were over the carriers undertook to terminate the operation of both government reservation bureaus and military sleeping car lines promptly. In this they had the support of Mr. Johnson, Director of Defense Transportation, who on 4 September 1945 informed the armed forces that overflow sleeping cars would be discontinued at once, and that the GRB's would be canceled on 15 October "in order that sleeping cars may be made available for commercial use on a parity with government travel." General Gross and his colleagues in the other branches of the military establishment immediately entered a protest against this action, pointing out that the military population of the country would be large for many months to come and that military personnel returning from overseas would be in special need of these services. The protest was successful. The government reservation bureaus were continued, on a diminishing scale, until August 1946. While some military sleeping car lines were discontinued, others were inaugu-

[166] OCT HB Monograph 20, pp. 97–100; WD CTB 23, 8 May 45, p. 12.

[167] Memo, CofT for 9th ZTO, 28 Oct 44, OCT 531.8 GRBs; Interv with Col Morris, 11 Oct 50, OCT HB TZ Gen ARB.



SPECIAL RESERVATION BUREAU FOR MILITARY PERSONNEL *in the station concourse, New Orleans, Louisiana.*

rated during the period of heavy demobilization.[168]

The number of officers passing through Washington to domestic and oversea assignments was large, and the Chief of Transportation provided a complete travel service for their benefit. This service, established in November 1942, replaced similar services set up by The Adjutant General and by other agencies of the War Department. Operated as a section of the Passenger Branch, Traffic Control Division, the travel bureau had its main office in the Pentagon and a branch in the Munitions Building. Complementing the activities of the Army reservation bureau (formally set up in April 1943), the travel bureau rendered assistance in preparing mileage and expense vouchers, aided in filing applications for pay allotments and insurance, gave advice on obtaining

[168] Ltr, Gross to Johnson, 21 Aug 45; Ltr, Johnson to Gross, 4 Sep 45; Ltr, Armed Forces to Johnson, 5 Sep 45; Ltr, Johnson to Armed Forces, 10 Sep 45; Memo, McIntyre for Gross, 12 Sep 45; Ltr, Johnson to Gross, 20 Sep 45; all in OCT HB Gross ODT; Ltr, IMC to Johnson, 8 Jan 46, OCT 531.7 Sleeping Car Lines.

financial assistance and making wills, issued transportation requests upon presentation of travel orders, prepared itineraries, provided information regarding conditions in foreign countries, processed applications for passports and visas, made reservations for air and rail travel, and obtained hotel accommodations in other cities. Consolidated ticket offices maintained by the rail, bus, and airlines were domiciled with the travel bureau. The bureau's services were available to both the civilian and the military personnel of the Army, and for group as well as individual travel. After the war its activities were transferred to the Military District of Washington.[169]

Although the commanders of Army installations in the zone of interior were also instructed to establish travel information booths to enable officers and enlisted men to complete arrangements without having to visit the crowded ticket offices of the carriers, the travel bureau established in Washington was unique both in size and in scope. The nature and extent of its principal activities are indicated in the following summary of services performed during the fiscal year ending 30 June 1945: [170]

Services	*Number*
Military travel orders issued	19,262
Civilian travel orders issued	4,967
Transportation requests issued	116,640
Mileage vouchers prepared	23,608
Pullman reservations made	164,251
Air reservations made	44,654
Hotel reservations made	10,533
Passports obtained	6,680
Visas obtained	8,363

The value of ticket sales for the fiscal year 1945 were as follows: [171]

Railway	$3,370,774
Airline	853,884
Bus	12,750

The hotel reservation service performed by the Chief of Transportation's travel bureau was based on an arrangement made with the American Hotel Association early in 1943 under which members of the Association agreed to reserve rooms, against letters of recommendation written by the travel bureau, either in their own hotels or in others of similar class. Travelers presented copies of these letters when claiming their accommodations. The success of the plan led to its extension to some of the Army reservation bureaus in the field. The travel bureau in Washington and the ARB's made only out-of-town reservations. Late in the war the service commands set up bureaus in the principal cities that made hotel reservations only in their respective localities. Then it was arranged that when any of the Chief of Transportation's bureaus wanted to make reservations in cities in which there were service command bureaus, they would do so through the latter bureaus rather than directly with the hotels.[172]

Discipline of military personnel traveling on regular trains became a problem as soon as the build-up of the armed forces began in 1940. Train officials were reluctant to exercise the same authority over soldiers that they did over civilians, military authority was frequently lacking, and

[169] OCT HB Monograph 20, pp. 102-14; SOS Adm Memo 65, 9 Nov 42, sub: Discontinuance of Travel Assistance Functions; SOS Memo, 13 Nov 42, sub: New Location of Travel Offices; WD Memo 55-45, 22 Oct 45, sub: Estab of Oversea Travel Office, MDW; ASF Cir 128, 24 May 46, Sec. VI.

[170] WD Cir 77, 17 Mar 43, Sec. IV; Annual Rpt, Traf Contl Div, FY 1945, p. 31, OCT HB Traf Contl Div Rpts.

[171] *Ibid.*

[172] OCT HB Monograph 20, pp. 114-114*b*; ASF Cir 77, 2 Mar 45, Sec. II; ASF Cir 174, 17 May 45, Sec. I.

young men temporarily relieved from the restraints of the military reservation were often guilty of rowdyism and irresponsible acts. Complaints made by passengers and train officials indicated that the excessive use of liquor was a contributing factor in many cases. The railroads therefore inquired whether it was the desire of the Army that they refuse to sell liquor to service personnel. The Adjutant General replied in the negative, stating that discrimination against service personnel on public trains was undesirable and that enlisted men who were drunken or disorderly were subject to trial and punishment by court-martial under the Articles of War.[173]

Although the commanding officers of camps and other installations were directed to enforce the regulations strictly and to co-operate with railroad officials in dealing with disciplinary problems, the complaints against misconduct continued. The carriers then proposed that the Army place its representatives on trains carrying large numbers of furloughees to enforce discipline. The Army at first rejected this proposal, in part because of the lack of appropriations, but later accepted it when the railroads offered free transportation for such representatives. In September 1941 station commanders were authorized to designate military police to ride such trains when the railroads requested them to do so.[174]

After the United States entered the war and travel by servicemen on regular trains increased, further measures were required. As a first step, post commanders were again directed to deal vigorously with cases of misbehavior on trains, but the need for more effective control was soon evident.[175] The next step was to assign to the commanders of corps areas (later redesignated service commands) full responsibility for placing military police on regular passenger trains whenever large numbers of military personnel were being carried.[176] In the beginning this arrangement was not wholly successful because many of the men assigned as military police were inadequately trained and were not always assigned to the trains where they were most needed. In November 1942 General Marshall, the Chief of Staff, complained that the control of discipline on trains was not effective, and the Provost Marshal General then appointed thirty inspectors to make investigations throughout the country and to coach military police in the proper performance of their duties.[177]

The effectiveness of the military police increased steadily after these measures were taken. As the reports of difficulty became less frequent some of the service commands, in view of the growing scarcity of military police, began withdrawing them from certain trains. In the summer

[173] Ltrs, IMC to TQMG and Other Armed Forces, 4 Mar 40, and 29 Jun 40; Ltr, IMC for TQMG, 31 Jul 40; Ltr, TAG to IMC, 5 Aug 40; all in OCT 250.1 Misconduct of Mil Pers, Vol. I.

[174] Memo, IMC for TQMG, *et al.*, 26 Feb 41; Memo, TAG to CGs Corps Areas, *et al.*, 1 May 41, sub: Conduct of Mil Pers on Trains; Ltr, IMC to TAG, 12 May 41; Ltr, TAG to IMC, 10 Jun 41; Ltr, IMC to TAG, 15 Jul 41; Memo, TAG to CGs Corps Areas, *et al.*, 26 Sep 41, sub: MP on Furlough Trains; Ltr, TAG to IMC, 4 Nov 41; all in AG 250.1 (2-26-41)(1).

[175] Memo, TAG for CG AGF, *et al.*, 12 Apr 42, sub: Conduct of Mil Pers on Pub Carriers, AG 250.1 (3-25-42).

[176] Memo, TAG for CG AGF, etc., 21 Jul 42, sub: Misconduct on Pub Carriers, AG 250.1 (7-14-42); SOS Memo S 190-1-42, 24 Sep 42, sub: MPs Assigned to Pub Carriers. Concerning general responsibility of service commands for conduct of military personnel, see WD Cir 77, 17 Mar 43, Secs. I and III.

[177] Memos, CofS for PMG, 4 and 17 Nov 42; Memo PMG for CofS, 23 Nov 42; Memo, PMG for CGs of SvCs, 1 Dec 42; all in PMG 250.1; WD Memo W 190-1-43, 5 Jan 43, sub: Size and Composition of MP Details on Carriers; WD Memo, W 190-2-43, 13 Sep 43, sub: Assignment of MPs to Extra Sections; ASF Cir 224, 18 Jul 44, Sec. III.

of 1943 the railroads protested vigorously against this action and the Chief of Transportation supported their position. As a result, ASF headquarters reminded the service commands of their responsibilities and directed them not to withdraw military police from trains unless a careful survey showed their services were not needed.[178]

In addition to quelling disturbances and performing other duties of a disciplinary nature, military police checked the papers of each soldier to make sure that he was traveling with proper authority and that he was on the right train. At the end of July 1945, out of a total of 10,640 military police engaged in the enforcement of discipline in the United States, 3,401 were policing railroad stations and trains.[179]

In the early months of the war the Army's military policemen and the Navy's shore patrolmen devoted their attention entirely to men of their respective services. Later, under an agreement made in 1942, they were authorized to take corrective measures against servicemen of any of the armed services when their actions were reprehensible. Military police and members of the shore patrol frequently served on joint missions.[180] One disadvantage of the joint patrols, as the Provost Marshal General pointed out, was that shore patrolmen were all petty officers while only a small proportion of the military police held comparable grades.[181]

The matter of serving liquor to Army personnel on regular trains came up recurrently. The railroads desired a definite statement of policy from the Army, and the Army apparently hesitated to take a positive stand. Eventually, in September 1943, the railroads were informed that responsibility for this matter had been assigned to the Chief of Transportation and that certain steps had been decided on. Railroad employees were requested to refuse to sell liquor to soldiers whose actions indicated that an additional drink might result in disorderly conduct. The serving of liquor in dining cars was to be stopped whenever such sale interfered with the expeditious serving of meals. At the same time the extensive conversion of lounge and club cars into coaches already had greatly reduced the opportunity for soldiers to obtain liquor on the trains.[182] The policy was therefore one of regulation rather than of prohibition.

Transportation of members of the Women's Army Corps (WAC) and enlisted men in separate cars was favored by WAC headquarters. The Chief of Transportation agreed that this should be done when practicable but pointed out that complete segregation could not be assured in view of the shortage of railway equipment. Segregation was easily accomplished when enough servicewomen to fill a car were traveling, but when smaller groups were involved they were often placed in the same cars with servicemen to avoid wasting space. This procedure was in keeping with the commercial practice, and no unusual difficulties were experienced. Each group of Wacs had a leader with disciplinary responsibilities, as did the enlisted men.[183]

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[178] Memo, ASF Hq for CGs of SvCs, 2 Sep 43, OCT 531.7 MP on Trains.

[179] PMGO monograph, Military Policy Division, Provost Marshal General's Office, 1 Sep 45, p. 44, OCMH; WD press release, 7 Nov 46.

[180] WD Cir 380, 24 Nov 42.

[181] PMGO monograph, cited n. 179.

[182] Ltr, Wylie to Siddall, Western Mil Bur, 15 Sep 43, and preceding correspondence in OCT 531.7 Sale of Liquor on Trains.

[183] Memo, CofT for CG ASF, 17 Dec 43; WD Cir 154, 18 Apr 44, Sec. III; Memo, CofT for CG 7th SvC, 19 Jun 45; all in OCT 511 Mixed Groups of Enlisted Men and Women; Interv with Morris, 26 Jun 50, OCT HB Traf Contl Div Pass.

The problems that arose when military personnel used regular transportation services were different from those encountered when they moved by special troop train, and in some respects they were more difficult to handle. The sources of difficulty were the mingling of civilians and soldiers, the overcrowding of trains and buses, and the lack of military control over the facilities and of command authority over the men. The Chief of Transportation did much to relieve the uncertainties and inconveniences of travel by providing the reservation bureaus, the military sleeping car lines, and through other measures. As to discipline, such measures were taken as were considered feasible and the situation improved, but it never became wholly satisfactory. The need for military police on all trains carrying substantial numbers of servicemen was clearly demonstrated.

Movement of Patients

In moving patients, as in moving troops, all suitable means of transportation were used—the railways, air transport, and motor ambulances.[184] The employment of aircraft developed gradually and ambulances were used chiefly for short hauls, so that the railways were the major factor. It was with the rail movements that the Transportation Corps was primarily concerned.

In peacetime the small numbers of patients that had to be moved by rail were transported by regular train service using sleepers, parlor cars, or coaches according to the condition of the patients and the length of the journeys. During the war the Army found it advisable to build up a fleet of specially constructed hospital cars to handle the rapidly growing traffic, particularly the more serious cases, but the railroads' regular services and equipment still were required.

Movements of patients fell into two general categories. In the first category were movements of patients being transferred to or between medical facilities in the zone of interior. Such movements were regulated by The Surgeon General, who took into account the medical needs of the patients and bed vacancies in the respective hospitals. In the second category were movements from the water ports and aerial ports where patients were landed after evacuation from the oversea theaters. These movements followed a prearranged pattern. In general, they were governed by bed credits that the ports held at so-called debarkation hospitals located near the seaboard. Usually the patients remained at the debarkation hospitals only a few days pending determination of the institutions to which they would be sent for further treatment or for convalescence. While there was a certain amount of traffic involving patients stationed in the zone of interior, the heavier movements resulted from oversea evacuations, and the volume was therefore on an ascending scale throughout the war, reaching its peak soon after the German surrender when evacuation from the European theater was being pressed.

Close collaboration obviously was necessary between The Surgeon General, who controlled the direction of the traffic and supervised the medical services rendered en route, and the Chief of Transportation, who had over-all responsibility for providing the means of transportation. General

[184] See Clarence McKittrick Smith, *The Medical Department: Hospitalization and Evacuation, Zone of Interior,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1956), Chs. XIX–XXIV, for a detailed discussion of the handling of patients, including their transportation.

TABLE 6—OPERATIONS OF ARMY HOSPITAL CARS AND MEDICAL KITCHEN CARS: 1944–1946

Type	1944	1945	1946
Hospital Cars			
Smallest Number in Service	111	134	100
Largest Number in Operation	129	320	241
Car-Miles in Service	4,089,666	13,116,094	2,775,330
Deadhead Car-Miles	3,162,388	8,391,457	1,959,931
Medical Kitchen Cars			
Smallest Number in Service	1	38	18
Largest Number in Service	40	60	45
Car-Miles in Service	1,434,124	3,514,057	518,906

Source: Records of Passenger Branch, Traffic Control Division, OCT; monthly data from these records will be published in a statistical volume of this series, now in preparation.

co-ordination was provided by the Hospitalization and Evacuation Branch of ASF headquarters, but that was not enough; direct collaboration was necessary on the many details relating to the proper movement and adequate care of patients. This was undertaken in the beginning through the assignment of a medical liaison officer to the Chief of Transportation, and later by the attachment of a medical regulating unit to the Chief of Transportation's Movements Division. This unit dealt with the movement of patients from the theaters and their handling at the ports, as well as with their subsequent transportation inland.[185]

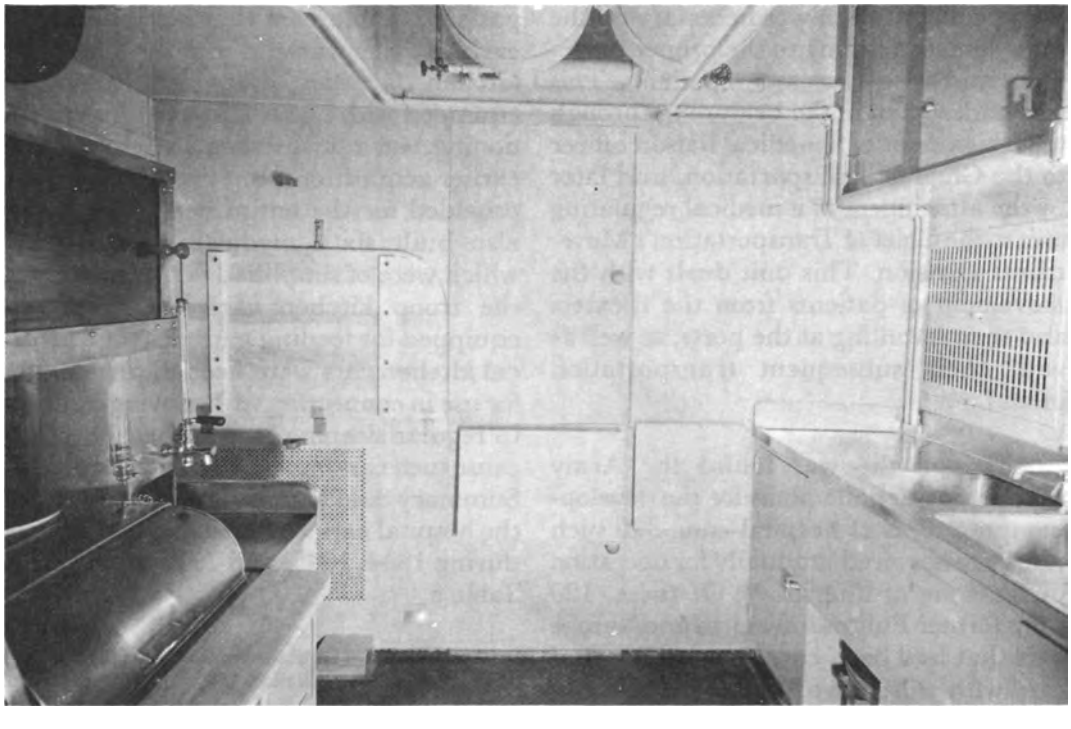
Although the war found the Army without any definite plans for the development of a fleet of hospital cars, 320 such cars were acquired gradually for operation in the zone of interior.[186] Of these, 120 were former Pullman sleepers and lounge cars that had been converted to hospital cars with thirty-two berths arranged in two tiers. The remaining 200 had been designed and built as hospital cars with accommodations for thirty-six persons in three-tier berths. All cars had large side doors to facilitate the handling of litter patients. Some cars that were acquired early in the war did not at first have kitchen facilities, but later all were equipped with buffet kitchens. Air conditioning was not installed in some of the earlier acquisitions, but eventually it was provided for the entire fleet. The Army also built sixty medical kitchen cars, which were of simplified design similar to the troop kitchen cars but especially equipped for feeding patients. The medical kitchen cars were needed principally for use in connection with moving patients in regular sleeping cars and coaches, because such cars had no kitchen equipment. Summary data regarding the operation of the hospital cars and medical kitchen cars during 1944, 1945, and 1946 are given in Table 6.

[185] The medical regulating unit will be discussed in connection with evacuation by water. See below, p. 213.

[186] On the build-up of this fleet, see Wardlow, *op. cit.*, pp. 385–89.



NEW SELF-CONTAINED ARMY HOSPITAL CAR. *Three-tier berths accommodating thirty-six patients (above); the kitchen (below).*



Since hospital cars served as both medical facilities and transportation facilities and were staffed and supplied by the Army, responsibility for their construction, maintenance, and operation was divided among several Army agencies. These responsibilities were worked out after the United States entered the war, and for a time the division of authority was not entirely clear. But by the time the movement of patients became heavy, responsibilities had been clarified.[187] The Surgeon General and the Chief of Transportation collaborated in establishing car designs that would meet both medical and transportation requirements. The Chief of Transportation supervised the maintenance of the cars as railroad equipment—such maintenance was provided by the railroads—assigned them to the service commands in accordance with the requirements of the respective areas, made general arrangements with the carriers for the movement of the cars over their lines, and in certain cases provided routings. The Surgeon General supervised the maintenance of the medical equipment and the staffing of the cars with medical personnel. The service commands were directly responsible for staffing, supplying, and cleaning the cars and for their assignment to load at ports of embarkation and hospitals in accordance with the number of patients to be moved from the respective installations.

The Army policy was to move as many patients as possible in hospital cars, since they were more satisfactory from the standpoint of facilities than regular passenger equipment and the latter was sorely needed for civilian and troop traffic. It was necessary, nevertheless, to call on the carriers for many sleepers for litter patients and their attendants as well as for parlor cars and coaches to accommodate ambulant patients. Because The Surgeon General desired that litter patients be moved in air-conditioned cars, the sleepers assigned to this traffic were mostly of the standard type rather than tourist-class cars. The special Army troop sleepers were not used for patients because of the lack of air conditioning and other refinements.[188]

In the early part of the war the Chief of Transportation had less control over the routing of movements of patients and the ordering of equipment from the railroads than he had over troop movements, but his control increased as the war progressed. Under instructions issued by SOS headquarters in the summer of 1942, the service commands were authorized to deal directly with the railroads regarding sleepers, coaches, and dining cars for the transfer of patients, as well as routings, when the movements were wholly within their territorial jurisdictions.[189] This procedure continued until June 1943, when it was changed to conform to the policy already in effect for other traffic—groups of forty or more would be moved under arrangements made by the Chief of Transportation.[190] In the spring of 1945 in anticipation of heavy patient traffic at the end of the war in Europe and the consequent desirability of consolidating movements as much as possible in order to conserve rail equipment, the Chief of Transportation

[187] SOS Pamphlet, Military Hospitalization and Evacuation of Patients, 15 Sep 42, in OCT HB Rail Div Hosp Cars; WD Cir 316, 6 Dec 43.

[188] Morris monograph, p. 56; Memo, SG for CofT, 6 Dec 43; Memo, CofT for GAO, 1 Oct 45, par. 6; last two in OCT 531.4 Hosp Train.

[189] Memo, CG SOS for CGs SvCs, 26 Aug 42, sub: Control of Hosp Trains, par. 4, OCT 531.4 Hosp Trains; SOS Pamphlet, Military Hospitalization and Evacuation of Patients, cited n. 187.

[190] AR 55-130, 28 Dec 42, par. 8*b*, and Changes 2, 4 Jun 43.

requested authority to control all movements involving fifteen or more patients and attendants. This authority was granted in June 1945. Smaller movements were arranged for by local transportation officers through representatives of the railroads attached to their installations.[191]

The Chief of Transportation also increased his control over the utilization of Army hospital cars as the patient traffic became heavier. Because of his close contacts with The Surgeon General and the railroads, as well as his control over routings, he was able to avoid deadheading and other uneconomical practices much more effectively than the service commands. Consequently, early in 1944 the Chief of Transportation's Traffic Control Division began to assign hospital cars to specific movements, request railroad equipment for integration into hospital trains, establish schedules, and determine what stopovers and diversions could be made en route. Similar supervision was exercised over the employment of the medical kitchen cars. In December 1943, with this increased control in prospect, the Passenger Branch had established an evacuation unit to deal exclusively with the movement of patients. This unit was responsible for advance planning as well as day-to-day operations.[192]

The evacuation unit kept each movement of patients under observation and complained to the railroads whenever their services did not appear satisfactory. It emphasized the importance of the smooth handling of hospital trains and cars and requested that buffer cars always be placed between locomotives and cars occupied by patients.[193] The apparent inclination of some lines to handle hospital movements "at their leisure," with resulting poor connections at junction points and long delays for the patients, was strongly criticized.[194] As in the case of complaints regarding troop trains, the Military Transportation Section transmitted the reported failures to the individual rail lines and eventually relayed the lines' explanations to the Chief of Transportation.

Despite the effort to move patients in groups of a carload or greater, it frequently was not possible to do so, and arrangements for the transportation of individuals and small groups on regular trains were necessary. Although such arrangements were made by the local transportation officers, the Chief of Transportation used his close relations with the railroads to insure prompt handling. The principal problem was to obtain accommodations without delay. Patients traveling on regular trains usually required room space, and such space generally was sold or reserved far in advance. Sometimes travelers who held space could be persuaded to relinquish it in favor of patients whose cases were urgent, but this was not always true. The railroads were requested, and they agreed, to have such situations referred to their general passenger offices,

[191] WD Cir 234, 12 Jun 44; Ltr, Morris to IMC, 2 Aug 44, and reply, 31 Aug 44, OCT 511; WD Cir 405, 14 Oct 44; Ltr, IMC to CofT, 9 Feb 45; Memo, CofT for SG, 14 Feb 45, sub: Routing Hosp Train Travel, par. 3; last two in OCT 531.4 Hosp Cars; Memo, CofT for ACofS G-4, 16 May 45, OCT 511 (AR 55-130); WD Cir 177, 15 Jun 45, Sec. II.

[192] Rpt, Traf Contl Div, FY 1944, pp. 23-24, OCT HB Traf Contl Div Rpts; ASF Cir 328, 30 Sep 44, Sec. VIII.

[193] Ltr, Morris to MTS, 13 Nov 44; Ltr, AAR to Morris, 20 Nov 44, and atchd instruction to RRs; both in OCT 510 Patients.

[194] See Memos, White to MTS, 21 Apr 45, OCT 531.4 Hospital, and 9 Aug 45, OCT 511 Starke Gen Hosp.

which usually held some accommodations in reserve. Unfortunately, this procedure did not fully meet the need. The next step was a more formal arrangement between the Army and the railroads under which Class I patients—those requiring immediate transportation—were certified in writing by the responsible medical officers and the carriers designated special officers to deal with these cases.[195]

In June 1944 the Office of Defense Transportation, recognizing the difficulties of the situation, requested the Interstate Commerce Commission (ICC) to direct the carriers to cancel reservations and, if necessary, to require regular passengers to vacate accommodations that were needed for patients of the armed forces and the merchant marine.[196] The ICC service order that was issued in response to this request specifically named the railroad passenger agents and the train conductors concerned with each case as its agents for enforcing the priority arrangement. The Chief of Transportation refused to recognize a narrow interpretation of this order and maintained that, when the necessity of evicting regular passengers was certified by an authorized Army officer, all agents of the carriers, including the Military Transportation Section, were obligated to take any action within their competence to obtain the desired accommodations.[197] Both the Chief of Transportation and the railroads agreed, however, that eviction should be resorted to only when other means of accommodating patients had failed, and in practice such evictions were rarely necessary.

Providing meals for patients traveling on regular trains was a problem for the railroads from the beginning of heavy movements. One of the reasons was that there were not sufficient dining cars for all such trains. When large movements were started from ports and general hospitals in hospital trains, dining cars—or medical kitchen cars after they became available—were assigned, but frequently these trains were broken up en route and the cars bearing patients were attached to a number of regular trains for the onward journey. If the regular trains did not customarily carry diners, the railroads were confronted with two alternatives: they could attach special diners, which was difficult because of their scarcity, or they could serve box meals, which The Surgeon General did not consider satisfactory for patients.[198]

In trying to solve the problem, the railroads requested the Chief of Transportation to notify them at the time hospital movements were routed of the specific trains for which they would be expected to provide dining cars. The Chief of Transportation did not feel that this was necessary and took the position that, when a route had been established showing the initial, intermediate, and terminal carriers, he had done all that he reasonably could to forewarn the railroads, and that the responsibility for meeting dining car re-

[195] WD Cir 234, 12 Jun 44; WD Cir 405, 14 Oct 44; OCT HB Monograph 20, pp. 63–67.

[196] ODT, *Civilian War Transport*, p. 84; Ltr, ODT to CofT, 19 Jun 44, and reply, 20 Jun 44, OCT HB Traf Contl Div Pass; ICC Sv Order 213, effective 27 Jun 44; WD Cir 405, 14 Oct 44, par. 5.

[197] Memo, Gass for Morris, 7 Oct 44, and reply, 10 Oct 44, OCT 510 Patients.

[198] Memo, MTS for McIntyre, OCT, 7 Apr 44, OCT 453.9 Hosp Cars; Memo, IMC for CofT, 18 Sep 44, and reply, 27 Sep 44, OCT 531.7 Train Service.

quirements then rested with the carriers. It was the consideration of this problem, as well as the preference for meals prepared under medical supervision over those served from regular dining cars, that led to the inclusion of buffet kitchens in the 200 new hospital cars built by the Army and the eventual installation of buffet kitchens in the converted cars.[199]

Hospital cars and hospital trains were staffed by the service commands to which they were assigned, and the instructions regarding the composition and responsibilities of the medical staffs were issued by those commands, subject to the approval of The Surgeon General.[200] A senior medical officer, who had over-all responsibility for administration, messing, discipline, sanitation, and care of patients, was in charge of each hospital train. The grades and numbers of medical personnel on hospital cars moving in regular train service depended on the type of patients and the length of the journey. Close co-ordination obviously was necessary between the service command personnel and the Medical Corps and Transportation Corps officers in Washington and at the ports who were concerned with the movement of patients. In anticipation of heavy evacuation from overseas, meetings of such officers were held on the east and west coasts in 1945 to discuss problems and to review and refine the procedures.[201]

Data are available only for patients routed by the Office of the Chief of Transportation. Throughout the war individuals and small groups were routed locally, and during the early part of the war some larger groups were so routed. The first recorded routings by the OCT were for the month of December 1942, when the groups totaled 375 patients and attendants. During the next four years the totals were as follows:[202]

Year	*Patients and Attendants*
1943	85,705
1944	165,121
1945	440,864
1946	50,767

The peak month was May 1945, when concentrated efforts were being made to evacuate the sick and wounded from the European theater, and in that month more than 58,000 patients and attendants were routed by rail.

The demand for cars to transport patients was heavy not only because of the number of patients to be moved but also because of the length of the journeys. The long trips resulted from the necessity of sending patients to distant hospitals for specialized treatment and the policy of placing patients in hospitals as near their homes as possible. Patients landed at west coast ports were likely to make especially long trips because the majority of the hospitals were in the east. In planning patient movements and the utilization of hospital cars, The Surgeon General and the Chief of Transportation naturally gave attention to shortening the trips whenever pos-

[199] WD Cir 480, 22 Dec 44, Sec. I, gave comprehensive instructions regarding subsistence on Army hospital cars and trains.

[200] See Ltr, Col Edgar S. Linthicum, 1st SvC, to Col Harry D. Offutt, SGO, 22 Jul 43, and atchd SOP, OCT 531.4 Hospital.

[201] Hospital Train Conf, Miller Field, New York, 15–18 Feb 45; Hospital Train Unit Commanders Conf, San Francisco, Calif., 10–13 July 45; both in Hist Div SGO. During repatriation Navy patients were transported in Army hospital cars in emergencies, and railroad cars with Navy patients were attached to Army hospital trains. For procedures, see ASF Cir 441, 11 Dec 45, Sec. V.

[202] Data from reports prepared by Transport Economics Section, Traffic Control Division, OCT, compiled for publication in a statistical volume of this series, now in preparation.

sible and reducing deadhead mileage. Incident to the study of the transportation of patients from the ports to hospitals of definitive treatment during the latter part of the war, the following data were compiled on the utilization of rail equipment in such movements:[203]

Debarkation Port	*Average Miles Per Trip*	*Number of Round Trips Per Car Per Month*
Boston	1,175	3.4
New York	1,058	4.0
Hampton Roads	1,105	3.6
Charleston	1,145	3.5
Los Angeles	2,320	1.7
San Francisco	2,409	1.7
Seattle	2,630	1.5

In reviewing the Army's experience with the movement of patients by rail during the war, two facts are noteworthy from the standpoint of the Chief of Transportation. First, although such movements were accomplished without serious delay or inconvenience, the situation would have been improved by earlier decision as to the number of hospital cars to be procured. The Pullman cars used when hospital cars were not available were not as satisfactory as the hospital cars from the medical standpoint, and they had to be taken out of other services where they were constantly needed. The last 100 hospital cars were not ordered until January 1945, and some of them had not yet entered service when the war ended. The delay was occasioned chiefly by the difficulty of estimating the extent of battle casualties and the incidence of disease in a war being waged in many widely scattered areas and under a great variety of conditions. Uncertainty concerning the evacuation policy on removal of patients from the theaters to the zone of interior was another factor in the delay. Second, the original plan of delegating a large measure of authority to the service commands for routing groups of patients and for utilizing hospital cars and regular railroad equipment proved unsatisfactory. The Chief of Transportation's authority in these matters was therefore considerably broadened as the traffic became heavier. Thus the experience with the movement of patients confirmed the position that the Chief of Transportation had consistently taken with respect to troop movements—that centralized control was necessary in order to obtain the most efficient utilization of equipment and a proper distribution of traffic.

Prisoners of War and Enemy Aliens

The transportation of more than 400,000 prisoners of war (POW's), evacuated from the theaters to the zone of interior, was an unwelcome responsibility added to those already resting on the Chief of Transportation and the railroads. This traffic was difficult to handle not only because of the over-all shortage of passenger equipment, but because security requirements dictated that prisoners of war be removed from the seaboard areas as promptly as possible; ship arrivals could not be predicted precisely; advance information regarding the size and composition of POW shipments was sometimes inadequate or inaccurate; the railway cars used for handling this traffic had to be specially prepared for the purpose; and the internment camps were scattered throughout the country. When large

[203] History, Medical Liaison Office to OCT and Medical Regulating Service SGO, section on hospital trains, in OCT HB Mvmts Div Med Reg Sv, cited hereafter as Hist Med Liaison Off. The period to which the data apply is not stated, but the context indicates the latter part of the war.

groups of prisoners of war arrived at U.S. ports, the railroads were hard put to meet the requirements for equipment in addition to the other demands regularly made on them, and it was sometimes necessary to delay other military movements of low priority in order to move prisoners of war to internment camps without delay.[204]

Prisoners of war received in the United States were mostly Germans and Italians captured in North Africa and in Europe. At the end of May 1945 there were 371,000 Germans and 50,000 Italians in our internment camps, while at the end of the hostilities in the Pacific there were only 5,400 Japanese prisoners of war in the United States.[205] The burden, therefore, fell largely upon the eastern ports and the eastern rail lines. In 1943, when the handling of POW's from the Mediterranean was adversely affecting military movements along the Atlantic seaboard, the War Department considered the advisability of setting up staging areas near the ports for the temporary detention of new arrivals, in order that the flow from the ports to the internment camps might be leveled off and the carriers relieved of the necessity of assigning so much equipment to this traffic at one time. The inadvisability of holding prisoners in heavily populated seaboard areas argued against the proposal, and sufficient success was achieved in co-ordinating the water and the land movements to cause the project to be dropped.[206]

The railroads still found this a difficult and undesirable traffic. In the fall of 1944, after wrestling with the problem for more than a year and with heavy additional shipments from Europe in prospect, the Association of American Railroads recommended that no further prisoners of war be brought to the United States. In response, General Gross was able to inform the AAR that the Army already had instructed the European theater to that effect.[207]

The restraint was only temporary, however, for in the spring of 1945 further large shipments of German prisoners were received. In the beginning the purpose of removing prisoners of war from the theaters was to relieve the theater commanders of the burden of housing, feeding, and guarding them, and this argument remained a strong one from the theater standpoint. As the war progressed, the growing labor shortage in the United States and the success with which POW's were being employed in industry and agriculture created another persuasive argument for bringing captured Germans to the zone of interior.

From the time prisoners of war were placed aboard trains at the ports where they landed they were in the custody of the Provost Marshal General. His office and that of the Chief of Transportation kept in close touch regarding prospective arrivals at the ports and subsequent transfers. In matters affecting the inland transportation, internment, and employment of POW's, the Provost Marshal General's authority was largely delegated to the service commands. When groups of forty or more were to be transferred from ports or internment camps, the service com-

[204] Memo, Gass for Morris, 2 Sep 43, OCT 511 Rail and Motor Mvmts.

[205] PMGO monograph, Prisoner of War Operations, Feb 46, pp. 31–35, copy in OCMH. This monograph covers many aspects of the subject that cannot be treated here.

[206] Ltr, SW to SN, 27 Sep 43, OSW 453 (9-8-43)(1).

[207] Ltr, Buford to Gross, 30 Oct 44, and reply, 1 Nov 44, OCT HB Gross Rail.

mands passed this information to the Chief of Transportation, who arranged for the railroads to execute the movements. When smaller groups were transferred, the transportation arrangements were made by the commanders of the ports or the internment camps from which the movements started. The service command in which a movement originated was responsible for providing escorts, mess personnel, and medical attendants, as well as for furnishing the supplies required by the prisoners en route.[208]

The utmost effort was made to move prisoners of war in special trains and special cars, rather than in regular train service where they might be brought in contact with the public. It frequently happened that this was not possible because of the wide distribution of the internment camps. At the end of August 1945 there were about 155 base camps and over 500 branch camps for prisoners of war located in forty-five states. The dispersion of camps was necessary to serve the many areas in which POW labor was used. Transfers between camps were numerous because of fluctuations in the demand for this type of labor, particularly the seasonal demand for agricultural workers. Under an agreement between the War Department and the War Manpower Commission, all requests for the assignment of POW's to industrial or agricultural employment were channeled through the War Manpower Commission, which had a broad view of the labor situation throughout the nation.[209]

As with other types of passenger traffic, data are not available for prisoner-of-war movements routed in the field but only for groups for which transportation arrangements were made by the Traffic Control Division in the Office of the Chief of Transportation. From the time when prisoners began arriving in the United States from North Africa until the bulk of the repatriation movement was accomplished, the annual totals of POW's and guards routed by the division were as follows:[210]

Year	*POW's and Guards*
1942 (December only)	1,975
1943	216,651
1944	487,270
1945	546,052
1946 (Seven months)	378,298

Prisoners of war were transported in the lowest-class transportation available—that is, coaches—except in certain cases. Generals were furnished accommodations in sleepers or parlor cars upon request of the Provost Marshal General to the service command making the transfer. Prisoners who were physically or mentally disabled were moved in sleepers or hospital cars. When it was more economical, because of the smallness of the group, to move prisoners of war in regular train service than to engage a special coach, they were accommodated in enclosed space (compartment, drawing room, and so forth) so that they could be more readily guarded.[211] When sleepers were required in special POW trains, tourist-class cars or troop sleepers were used; in regu-

[208] For summary of responsibilities, see ASF Memo S 580-1-43, 13 Jul 43, sub: SOP for Transfer of POW; see also instructions from the Provost Marshal General to the service commands regarding numerous transfers in OCT 383.6 (1943).

[209] PMGO monograph, cited n. 205, pp. 59, 102.

[210] Data from reports prepared by Transport Economics Section, Traffic Control Division, OCT, compiled for a statistical volume of this series, now in preparation.

[211] WD Cir 471, 15 Dec 44; WD Cir 222, 23 Jul 45.

lar trains they might be standard, tourist, or troop sleepers. When a special car for prisoners of war was included in a regular train, it was placed ahead of other cars so that there would be no contact between prisoners and other passengers.

The coaches in which prisoners of war were transported were specially prepared for this service by the railroads in accordance with instructions issued by the War Department.[212] Such cars were to contain no partitions that would obstruct the view of the guard in one vestibule to the guard in the vestibule at the other end. The doors of washrooms and other enclosures were to be removed, and windows were to be blocked to prevent their being open more than eight inches.[213] Cabinets containing fire-fighting equipment were to be covered. As further safeguards the officers arranging transfers were directed to notify the railroads that the movements should be expedited in every way possible, and the railroads were requested to notify the train commanders in advance of any known or probable stops. The Chief of Transportation consummated agreements with the carriers covering charges for the preparation and restoration of cars for the transfer of POW's and charges for transportation and sleeping car accommodations.[214] Specially prepared cars were not required for the transfer of captured Italians who had volunteered to join Italian Service Units and hence had acquired a special status.[215]

Despite the effort made to consolidate small movements of prisoners of war into carloads so as to avoid the use of enclosed spaces in regular cars, there was public criticism of any use of superior accommodations for such passengers. In July 1945, following a much publicized incident in which U.S. soldiers making a long trip in coaches were reported to have passed a sleeper in which prisoners of war were accommodated, Army Service Forces headquarters issued instructions that thereafter the transportation of prisoners of war would be confined to day coaches, except in the case of litter patients, and that motor transportation should be used to transport prisoners within service commands to permit consolidation of small movements into carload shipments.[216]

The Army arranged for some movements of enemy aliens—that is, citizens of enemy countries residing in the United States when the war began—but they were not extensive. The largest movement of that nature was the evacuation of persons of Japanese ancestry from strategic areas on the Pacific coast, pursuant to Executive Order 9066, 19 February 1942. Approximately 110,000 Japanese and Japanese-Americans were moved in trains and bus convoys from exclusion areas to nearby assembly centers, and thence to relocation centers farther inland. The Chief of Transportation arranged with the carriers for the initial movements, but this function was soon taken over by the Western Defense Command, which had general charge of the relocation project.

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[212] WD Cir 420, 26 Oct 44.

[213] Windows of Pullman cars and Army hospital cars transporting POW patients were not blocked unless the service commander specifically requested it; see Ltr, Maj Darrell T. Lane, OCT, to Gass, 5 Feb 45, OCT 383.6 Special Preparation of Cars.

[214] WD Memo 55-38-43, 21 Aug 43, sub: Trans of POW; WD CTB 6, 27 Jun 44, par. 10.

[215] WD Cir 195, 18 May 44, Sec. VI.

[216] Memo, DCofS for SvCs ASF for PMG, CofT, *et al.*, 9 Jul 45, OCT HB Traf Contl Div Pass. Further details regarding this incident are given in Ch. III, below.

Throughout the operation Lt. Col. Victor E. Maston of the Traffic Control Division was detailed by the Chief of Transportation to the Western Defense Command to advise Lt. Gen. John L. DeWitt on transportation matters.[217]

The Chief of Transportation and the railroads would have welcomed relief from the necessity of moving prisoners of war. The policy of evacuating such prisoners from the North African, Mediterranean, and European theaters was dictated by other considerations, however, and transportation had to be provided even though this increased the general stringency in railroad equipment. After procedures had been established and tested, POW movements were accomplished without difficulty beyond that incident to the provision of the necessary railroad equipment. There were only a few threats of disturbance by prisoners being transported, and they were quickly quieted by the guards.

A Job Well Done

Although Army traffic on the common carriers included several other types of passengers, the movement of troops was the basic responsibility. This responsibility was carried out far better in World War II than in World War I, despite the fact that the military traffic was much greater and the railroads had fewer units of passenger equipment. Heavy troop movements between training stations and to the seaboard were for the most part handled in a prompt and orderly manner. There was no serious congestion at the inland gateways or the ports of embarkation to tie up cars and waste their work potential. There were few instances of light loading with wasted car space. The results, in brief, gave evidence of careful planning and a close control over operations.

Credit for this achievement belongs to both the carriers and the Army. The Association of American Railroads, established in 1934, had a much broader influence over the distribution and utilization of railway equipment than the corresponding organization in World War I. The industry was therefore better integrated and more readily responsive to military needs. Although the railroads had fewer units of equipment than in the previous war, those units were larger and capable of more work. The Army also had centralized control from the beginning over the routing and movement of all but the smaller groups and so was in a position to plan its traffic carefully on a nationwide basis and to spread the load. The hand-in-glove manner in which the Army Transportation Corps and the Association of American Railroads collaborated in both the planning and execution of troop movements indicated that they regarded these movements as joint undertakings.

This does not imply that the Chief of Transportation and his staff were always satisfied with what the carriers did or the way in which they did it. These officers believed that the railroads sometimes held equipment in regular service when it should have been made available for military movements. They protested because the Pullman Company failed to withdraw

[217] For full account of this evacuation, see General DeWitt's final report to the Secretary of War, *Japanese Evacuation from the West Coast, 1942* (Washington, 1943), pp. vii–x, 77–79, 356–62.

more sleepers from overnight commercial runs, with the result that many soldiers made long trips in coaches. They complained because at times the carriers appeared negligent in allowing troop trains to fall behind schedule. They also believed that the railroads should have given the Army greater fare reductions and other concessions, in view of the volume of the military traffic. But despite these criticisms, the Chief of Transportation and his associates recognized that in their over-all performance the railroads gave the Army excellent service, and they said so on numerous occasions.

The reasons for the divergent views of the Chief of Transportation and the railroads were obvious and understandable. The Chief of Transportation had a single objective—to move troops according to War Department plans. The railroads' situation was not so simple. They recognized their obligation to meet the requirements of the armed forces, but they also wanted to maintain their regular services as fully as possible. Because of this fact, and also because of the limitation on the construction of new railroad equipment and other operating difficulties that the carriers encountered during the war, it was inevitable that the service given the Army should have fallen short of the Chief of Transportation's expectations on some occasions. As to fares, the lean years through which the railroads had passed just before World War II undoubtedly strengthened their resistance to requests for larger concessions on wartime military traffic, and that was especially true of those lines whose revenues were already reduced by the land-grant deductions.

With increases in railroad equipment and operating personnel severely limited by other wartime demands, the only way to relieve the pressure under which the railroads were working and to assure the armed forces that all troop movements would be executed as they desired was to further curtail the regular services. The Chief of Transportation believed that such curtailment should have been carried further than it was, and he made his opinion known to the Director of Defense Transportation, who had the requisite authority. A considerable percentage of the civilian travel was admittedly unnecessary. But the Director of Defense Transportation evidently believed that the military needs were being adequately met, and it was not until the repatriation of troops from Europe was well under way that he yielded to requests for further cuts in the regular services. The additional problems that arose, after Japan had surrendered and the repatriation of troops from the Pacific had begun, involved the line-haul capacity of the western railroads, as well as the amount of equipment assigned to military service.

It is noteworthy that in addition to his efforts to make effective arrangements for the movement of troops, patients, prisoners of war, and other passengers who moved on War Department transportation requests, the Chief of Transportation did much to ease the problems of military personnel who traveled as regular passengers while off duty. Such traffic was heavy, and the difficulties encountered in getting reservations and utilizing overcrowded trains had a direct bearing on soldier morale. The fact that the Chief of Transportation was willing to have railroad equipment assigned to the so-called military sleeping car lines, which were used by men on furlough or leave as well as in-

dividuals traveling on official business, indicates the importance that the Army attached to this traffic, for there never was a time when the equipment could not have been used advantageously to accomplish organized troop movements.

The motor carriers moved a relatively small percentage of the total military passenger traffic, but they performed an essential service. Their capacity was limited when compared with that of the railroads, and they could not offer some of the features—notably sleeping and messing facilities—that were considered essential in moving large numbers of troops over long distances. But for the transportation of individuals and small groups over the shorter distances, the motor carriers had distinct advantages, and the Chief of Transportation saw to it that their services were used whenever they met the Army requirements. The movement of troops by motorbus had the added virtue of relieving the hard-pressed railroads.

CHAPTER II

Troop Movements to the Oversea Commands

Since all combat areas were overseas, efficiency in the execution of transoceanic troop movements was of primary importance to the military authorities. From that fact sprang the significance of the problems involved in such movements, and these problems were magnified by the proportions that the war assumed from the outset, far exceeding anything contemplated in prewar planning.

Lack of preparation for heavy troop movements was evident from the day the Japanese attacked Pearl Harbor and plunged the United States into a two-ocean war. The Army ports of embarkation on the west coast had neither the facilities nor the personnel required for the prompt and orderly transshipment of the troops and supplies that had to be rushed to our Pacific outposts. There were not enough ships to meet all requirements and a satisfactory procedure had not yet been worked out for allocating the nation's vessels to the uses for which the need was most urgent. Adequate arrangements had not yet been adopted by the Army and the Navy for the joint use of troopships and joint troop-priority lists. Within the Army itself the procedures governing the shipment of troops and their organizational equipment from home stations to the ports of embarkation had not yet been fully adapted to wartime requirements. The procedures for handling troops at the port staging areas still needed refinement. Progress toward the solution of these and related problems had only begun when the Army installed a Chief of Transportation as the head of the new transportation service in March 1942.

Ocean transportation entered vitally into military planning from the inception of each undertaking since it was a persistent limiting factor. When President Franklin D. Roosevelt and Prime Minister Winston S. Churchill were projecting the broad lines of Allied strategy, they necessarily took into account the shipping resources that would likely be available. When the Combined Chiefs of Staff, the British-American military co-ordinating agency, and the Joint Chiefs of Staff, the corresponding agency for the United States, undertook to implement the strategic plans with arrangements for the deployment of Allied military forces, the availability of sufficient troop and cargo vessels was a basic consideration. The Army's Chief of Transportation maintained an active Planning Division, headed during the greater part of the war by Col. Marcus B. Stokes, Jr., and con-

tributed heavily to the long-range estimates of shipping capability upon which such decisions turned.[1]

A number of transportation agencies were involved in the actual movement of troops to the theaters, and co-ordination was therefore one of the Chief of Transportation's major functions. The Army operated few vessels of its own and most troopships were obtained from the U.S. War Shipping Administration, the U.S. Navy, and the British Ministry of War Transport (BMWT). Troops were moved from their home stations to the seaboard by commercial carriers. The transshipment of the men and their impedimenta from the inland to the ocean carriers took place at Army ports of embarkation, which were military stations under the direct supervision of the Chief of Transportation. Each phase of a movement had to be co-ordinated with every other phase, and each movement had to be kept in conformity with the general plan incorporated in the movement order. The coordinating responsibility rested ultimately with the Assistant Chief of Transportation for Operations, General Wylie, and his deputy, Col. Richard D. Meyer. A large share of this responsibility was delegated to the Movements Division, which worked closely with the Operations Division of the General Staff, the appropriate elements of ASF headquarters, the Traffic Control and Water Divisions in the Office of the Chief of Transportation, and the ports of embarkation.[2]

The ports of embarkation had a key role, as the ensuing discussion will show. Linking the inland and ocean carriers, they had to function with speed and precision in order to avoid congestion, confusion, and delay. The port commanders specified the time when each movement should reach the seaboard. They provided accommodations for troops during periods ranging from a few days to a few weeks, and during this interval gave both the men and their personal equipment a thorough processing to prepare them for service overseas. They stored, processed, and repaired organizational equipment before dispatching it to the theaters. They were responsible for the prompt and orderly embarkation of troops and for the proper equipping, staffing, and administration of troopships. The Chief of Transportation recognized that the success of the entire troop movement program could be disrupted by failure at the ports of embarkation, and he therefore selected the port commanders with care and kept their operations under close observation.

While the Chief of Transportation was concerned principally with the movement of Army combat and service troops, other types of passengers were accommodated on the troopships. Naval personnel were moved on vessels sailing under Army control, just as Army troops were moved on the Navy's vessels. Numerous special missions, which were nonmilitary in nature but usually embraced both military and civilian personnel, were transported to oversea areas. Employees of contractors engaged in the construction of military facilities overseas sailed on Army transports. Some military personnel of Allied

[1] Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, pp. 18–22, discusses long-range planning.

[2] For more detailed description of the functions of the Movements Division and its relations with other offices, see OCT Pamphlet 1, Organizational Manual; Memo, Farr for Ocean Traffic Br, Water Div, 1 Aug 44, sub: Projected Troop Moves; Min of Junior Officers' Meetings, 27 Sep 44, 4 and 11 Oct 44; and Memo, C of Mvmts Div for C of Hist Unit OCT, 20 Jun 45, sub: History of Mvmts Div; last five in OCT HB Mvmts Div Gen.

nations were moved on these vessels, and representatives of various American and Allied civilian agencies, including members of the diplomatic corps, were transported under Army auspices. In 1944 the Army began to send prisoners of war back to their native lands, and soon after the fighting was over the Army transported dependents overseas to join military personnel stationed there.

Of a total of 7,639,491 persons embarked by the Army from December 1941 through December 1945, 7,157,966 (93.7 percent) were troops of the Army, 261,525 were personnel of the U.S. Navy, and 220,000 were in other categories. Of the last figure, 93,301 were prisoners of war shipped from the United States in 1944 and 1945.[3] While the great bulk of this traffic moved from U.S. ports, some passengers were embarked at Canadian ports.

Categories of Troops Moved

The troops transported to the theaters fell into several categories, each of which involved peculiar transportation problems. First, there were troops moving as units (prescribed military organizations) or detachments therefrom. Second, there were replacements, or individual soldiers, needed by the theater commanders to replace men lost from units because of battle casualties, sickness, accidents, or transfers. Third, there were fillers required by the theater commanders to complete the personnel of units that had been understrength when they were dispatched from the zone of interior. Fourth, there was rotational personnel, or soldiers traveling pursuant to the Army's policy that men who had seen lengthy service abroad—especially those who had served in isolated or unhealthy areas—should be returned to the zone of interior and other personnel sent overseas to take their places. Finally, there were so-called temporary-duty groups that were returned to the United States for short periods and eventually sent back to their stations overseas. The last category included men traveling on leave or furlough obtained for personal reasons and men sent back by their commanders for rest and recuperation.

The troop units moved overseas ranged in size from divisions downward, and the problems encountered varied according to the size, type, and maturity of the organization, as well as to the completeness of its training and equipment. The movement of a division, involving up to 14,000 men and great quantities of matériel, required meticulous planning and detailed supervision throughout. The most spectacular achievement in moving large units was the transfer of thirty-six divisions to Europe between August 1944 and February 1945. Twenty-five were infantry divisions, nine were armored divisions, and two were airborne divisions. These organizations, aggregating 458,416 officers and men, were embarked at the New York and Boston Ports of Embarkation in 126 troopships, using most but not all of the space. Their organic equipment and initial supplies totaled more than 1,500,000 measurement tons and required the major part of the capacity of 260 large cargo vessels.[4] The last two divisions, dispatched

[3] Figures for the period December 1941 through December 1944 are from ASF *Statistical Review, World War II* (Washington, 1946), pp. 121–22; figures for 1945 are from reports by the ports of embarkation to Movements Division, OCT, all reworked for statistical volume of this series, now in preparation.

[4] Summary, Divisions—ETO, prepared by Maj Welman H. Ouderkirk, Mvmts Div OCT, 30 Jun 45, in binder, European Divisions, OCT HB Mvmts Div Gen. See also Rad, SHAEF London to WD, 9 Aug 44, S 57189, and Rad, Marshall to Eisenhower, 11 Aug 44, WAR 79344.

in February 1945, had been earmarked for the Pacific, but when plans were changed they were rushed across the United States by rail and embarked at New York on fast ships to bolster General of the Army Dwight D. Eisenhower's forces in the final drive against Germany.[5]

During the early part of 1943, replacements and fillers constituted about 20 percent of the total outbound troop movement, but beginning in the fall of that year the percentage showed a marked increase.[6] The number of replacements sent to Europe during the heavy fighting that followed the invasion of the Continent raised this traffic to a new high level in July 1944. That level was exceeded, however, during the following winter. December 1944 found General Eisenhower's combat divisions badly depleted, and the German counteroffensive in the Ardennes brought the situation to a crisis. Expedited movements were arranged from replacement training centers and replacement depots to the ports; the troops were embarked without delay and upon arrival at French ports were entrained immediately for the advanced areas. In January 1945, replacements and fillers constituted more than 40 percent of the total troop movement to the theaters. In March, when the movement of units to the European Theater of Operations, U.S. Army (ETOUSA), had been virtually stopped, replacements and fillers made up over 60 percent of the total. The effect of the impending German collapse on the proportion of troops shipped as units, fillers, and replacements, as well as the effect of the realignment of forces after the German surrender, is reflected in Table 7.[7]

Although rotational personnel and temporary-duty groups never constituted a large percentage of the total outbound movement—usually well under 10 percent—they were nevertheless a matter of concern to the Chief of Transportation. The more such passengers he had to accommodate on transports, the less space he had for units, replacements, and fillers. Early in the war General Gross urged that the rotational policy be kept within limits because of the tight shipping situation, and he continued to urge this point of view.[8] Late in 1943 the War Department presented to the Joint Chiefs of Staff a proposal for the conversion of twenty-four cargo vessels, in addition to those already being converted to troopships, to provide space for rotational traffic. This proposal was predicated on a policy of returning 1 percent of the total troop strength each month from the South Pacific, the Southwest Pacific, and the China-Burma-India theaters. The JCS requested the Maritime Commission to convert sufficient vessels to provide 34,000 additional troop spaces.[9] These vessels after conversion were absorbed in the Army troopship pool; they were not operated exclusively for rotational troop traffic since that would have involved a waste of ship space. The rotational policy was also applied to other

[5] *Biennial Report of the Chief of Staff of the United States Army, July 1, 1943 to June 30, 1945* (Washington, 1 September 1945), p. 106.

[6] ASF MPR, Jul 44, Sec. 3, p. 30.

[7] For a discussion of the replacement crisis in the ETO, see Report of Activities, Army Ground Forces, 10 Jan 46, pp. 10, 11. Concerning the AGF's problem in providing replacements, see Kent Roberts Greenfield, Robert R. Palmer, and Bell I. Wiley, *The Organization of Ground Combat Troops*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1947) pp. 246–51, and Maj William R. Keast, Provision of Enlisted Replacements, Study 7, Historical Section AGF, 1946, pp. 16–19, 28–36.

[8] Memo, Gross for C of Pers Div SOS, 22 Mar 42, sub: Regular Relief of Pers at Oversea Sta, OCT HB Wylie Staybacks; Memo, Gross for Somervell, 22 Jun 44, ASF Hq Shipping 1944.

[9] JCS 595, 2 Dec 43, and subsequent reports and correspondence; Ltr, JCS to Mar Com, 22 Mar 44; all in OPD ABC 322 (2 Dec 42).

TABLE 7—CLASSIFICATION OF TROOPS EMBARKED AT U.S. PORTS OF EMBARKATION FOR OVERSEA COMMANDS: MAY 1944–DECEMBER 1945

Month and Year	Total Troops	Units	Replacements	Fillers	Rotation	Temporary Duty
1944						
May	211,715	104,998	72,369	17,228	14,972	2,148
June	174,095	86,502	66,924	11,364	7,029	2,276
July	269,384	155,774	90,648	16,339	4,442	2,181
August	238,160	156,148	51,251	16,039	12,550	2,172
September	235,115	164,830	46,021	9,813	12,317	2,134
October	268,858	210,419	31,713	12,811	11,860	2,055
November	234,568	147,915	46,649	20,212	16,200	3,592
December	225,020	139,686	54,406	12,151	14,043	4,734
1945						
January	278,852	144,967	104,528	8,055	14,417	6,885
February	225,562	119,047	74,880	8,626	11,723	11,286
March	199,660	54,118	116,318	10,496	11,106	7,622
April	134,803	35,921	70,698	9,420	9,632	9,132
May	88,519	22,385	50,493	8,567	6,310	764
June	115,981	47,589	29,423	31,313	7,428	228
July	79,619	22,721	24,090	27,099	5,367	342
August	158,843	47,510	68,565	41,329	1,159	280
September	60,891	4,017	36,546	19,674	563	91
October	79,209	1,589	61,458	15,848	266	48
November	67,780	379	36,324	29,639	1,385	53
December	47,423	1,152	20,543	22,948	2,745	35

Source: Data based on reports from ports of embarkation to Movements Division, OCT, compiled for publication in statistical volume of this series, now in preparation. A breakdown for earlier months is not available.

theaters. Initially the number of men returned to the zone of interior had depended on the requests of theater commanders and the availability of transportation to move replacements, but later the War Department established monthly quotas.[10]

The problem of moving personnel to oversea areas was always accompanied by the problem of moving equipment and supplies. Troop units had to have their organizational equipment and initial supplies when they arrived in the theater or they were virtually useless. Thereafter a steady flow of maintenance supplies was necessary so that the men would be properly fed and clothed and adequately provided with ammunition and other expendable military items. Early in the war it was recognized that the maximum force that could be sent to a particular theater was the force the War Department could confidently expect to maintain there.[11] This doctrine, which was the

[10] Unnumbered WD Cir, 28 Jun 43, sub: Rotation and Return of Mil Pers as Individuals; Rad, OPD to SWPA and SOPAC, 12 Nov 43, CM-OUT 5527, paraphrase in OCT 000-370.5 POA; WD Cir 58, 9 Feb 44; WD Cir 8, 6 Jan 45.

[11] Memo, Gross for Somervell, 21 Dec 41, sub: Estimate of Shipping Available, p. 4, OCT HB Gross Day File.

TABLE 8—PERCENTAGE OF TROOPS EMBARKED FROM U.S. PORTS IN VESSELS UNDER BRITISH AND U.S. CONTROL: MAY 1944–DECEMBER 1945

Operating Arrangement	May–December 1944	1945
Total	100.0	100.0
Vessels Under U.S. Control	71.8	88.9
Army transports owned or chartered by the Army	11.9	9.7
Naval transports and combatant vessels	20.6	34.5
WSA vessels operated by WSA agents on Army schedules	29.8	24.0
WSA vessels operated by the Navy on Army schedules	9.4	19.1
WSA vessels operated by WSA agents in commercial services	0.1	1.6
Vessels Under British Control	28.2	11.1

Source: Movements Division, OCT, Outbound Classification Summary, Pt. A, reworked for publication in a statistical volume for this series, now in preparation. Data for earlier period not available.

opposite of that followed in sending the American Expeditionary Forces to France in 1917–18, developed logically from the fact that troops in most oversea areas would have to be equipped and supplied entirely or almost entirely from the zone of interior and that shipping would be a limiting factor. A corollary of this doctrine was the necessity of maintaining a balance between troopship capacity and cargo-ship capacity—a matter that required the constant attention of the Chief of Transportation.[12]

The larger units naturally presented a greater challenge from the standpoint of providing adequate facilities for their movement, of maintaining the integrity of the organizations en route, and of delivering the troops and their equipment overseas at the times and places that would permit them to be brought together without great delay. From the standpoint of administration and control, however, the smaller units and detachments and the replacements and other individuals traveling in temporary groups posed a greater variety of problems for the Transportation Corps because of their less adequate organization and leadership.[13]

Troopships and Sailing Schedules

The ships used in transporting Army personnel to the theaters were obtained from various sources and were operated by various agencies. Broadly speaking, they were under either American or British control. The British group, which included many vessels under the registry of other friendly nations, was integrated into one fleet under the operational control of the British Ministry of War Transport. The operating arrangements relating to the vessels of the American group, which also included some of foreign registry, cannot be so simply stated. Table 8 shows the several types of operating arrangements and the percentage of troops em-

[12] Wardlow, *op. cit.*, pp. 161–62.

[13] These problems will be discussed later in this chapter in the sections, Troop Staging at the Ports, Embarkation Procedures, and Troop Ship Administration.

barked at U.S. ports on vessels of each category during the latter part of the war.

The vessels on which American troops were moved to the theaters were of many types, for the extreme need of troop lift necessitated the use of all available passenger ships and many freighters. An important element of the troopship fleet consisted of the prewar passenger liners that had been requisitioned and converted to increase their capacities. Notable among these vessels were the British liners *Aquitania, Britannic, Empress of Scotland, Mauretania, Queen Elizabeth,* and *Queen Mary;* the French liners *Ile de France* and *Pasteur;* the Dutch liner *Nieuw Amsterdam;* and the American ships *Argentina, Brazil, Edmund B. Alexander, George Washington, Hermitage, Matsonia, Monterey, Monticello, Mount Vernon, President Coolidge, Uruguay, Wakefield,* and *West Point.* Two of the American vessels, the Army transports *Edmund B. Alexander* and *George Washington,* were built before World War I and carried many U.S. troops to Europe in 1917–18, but they also served well in World War II after extensive reconditioning. All of the above foreign-flag vessels and some of those of American registry had sufficient speed to enable them to proceed independently of convoys. The troop capacities ranged from about 2,000 to 15,000—the latter number being the capacity of the "Queens" in favorable weather.[14]

Only a limited number of ships designed expressly as passenger carriers was built during the war because of the length of time required for construction; instead, a policy of converting the more quickly constructed cargo types to troopships was followed. Nineteen vessels of the U.S. Maritime Commission's wartime passenger design (P-2) were completed, named after generals and admirals, and operated by the Navy on Army schedules. These were vessels of about 17,800 gross tons and 19 knots speed, with accommodations for well over 5,000 troops. Thirty of the Maritime Commission's largest standard cargo type (C-4) were converted to troop carriers and operated by the Navy on Army schedules. These vessels, also named after generals, were of about 13,000 gross tons and 17 knots speed and had troop capacities ranging from about 3,000 to 4,000. Cargo vessels of the other standard types (C-1, C-2, and C-3) were converted to troopships and operated by agents of the War Shipping Administration, mostly on Army schedules. Notable among such troopships were the "Marine" series (C-4's), the "Sea" series (C-3's), and the "Cape" series (C-1's). The principal wartime cargo design, the Liberty ship, also was used as a troop carrier to meet emergency requirements.[15]

While all luxuries and many comforts had to be omitted from vessels in wartime service in order to obtain the maximum troop capacity, the only type that gave rise to serious criticism was the converted Liberty. This was an emergency cargo type of 11 knots speed. It was designed for quick construction and the shipyards made deliveries rapidly. Accordingly, when it became necessary to move large numbers of prisoners of war from North Africa to the United States in the spring of 1943, the Army decided to install temporary facilities in about 250 Liberty ships and to use them for this purpose. Some were equipped to accommodate 300 prisoners of war, and others 500. Late in the

[14] For a description of the ships and an account of their service, see Roland W. Charles, *Troopships of World War II* (Washington, 1947). On a few trips the Queens carried more than 15,000 troops.

[15] On cargo ship conversions, see Wardlow, *op. cit.,* pp. 300–301.

summer the need for additional troop lift to the Mediterranean became acute, and OPD authorized the use of these vessels to meet the situation with the understanding that the accommodations would be improved.[16] This action was subsequently brought before the Combined Chiefs of Staff and approved by that agency as an emergency measure.[17]

Many cargo ships normally had accommodations for a limited number of passengers and these were used whenever possible.[18] In the spring of 1942 British and American military representatives discussed this subject, and the Joint Military Transportation Committee initiated a proposal to install accommodations for fifty or more passengers on a large number of the cargo vessels then being built, including Liberty ships. Execution of the proposal was delayed, however, because of the failure of the War Shipping Administration, the Army, and the Navy to agree on plans and the WSA's insistence on having Presidential authority before undertaking such installations. The project was dropped in the summer of 1943, for by that time the program of converting standard cargo vessels to troop carriers and of installing temporary passenger accommodations on Liberty ships had deprived the earlier proposal of its importance.[19] Nevertheless, all available passenger space on freighters of both the British and the American pools was used when required, and such space was particularly valuable in moving reinforcements to the European theater during the critical winter of 1944–45.[20]

The transportation of troops on freighters brought up the question of moving personnel and explosives on the same vessel. After a heavy loss of life in the sinking of a Liberty ship carrying both, large quantities of explosives were no longer placed in ships carrying troops, and the loading of small quantities was subject to the approval of the Operations Division of the War Department General Staff.[21]

The vessels converted to combat loaders—attack transports (APA's)—for operation by the Navy had troop occommodations that, when utilized on voyages from U.S. ports to the theaters, added appreciably to the outbound troop lift. In order to utilize these accommodations to best advantage, the Army proposed late in 1942 that combat loaders thereafter be assigned to particular operations by the JCS, rather than by the Navy, so that the Army would be informed regarding their movements.[22] In accepting this proposal, the Navy stated that it had always obtained the concurrence of the Army before deciding upon the operation of combat loaders and pointed out that such vessels

[16] The problems that resulted from this makeshift arrangement are discussed below, pp. 145–48.

[17] CCS 121st Mtg, 1 Oct 43. For further documentation, see notes 179 and 180 below.

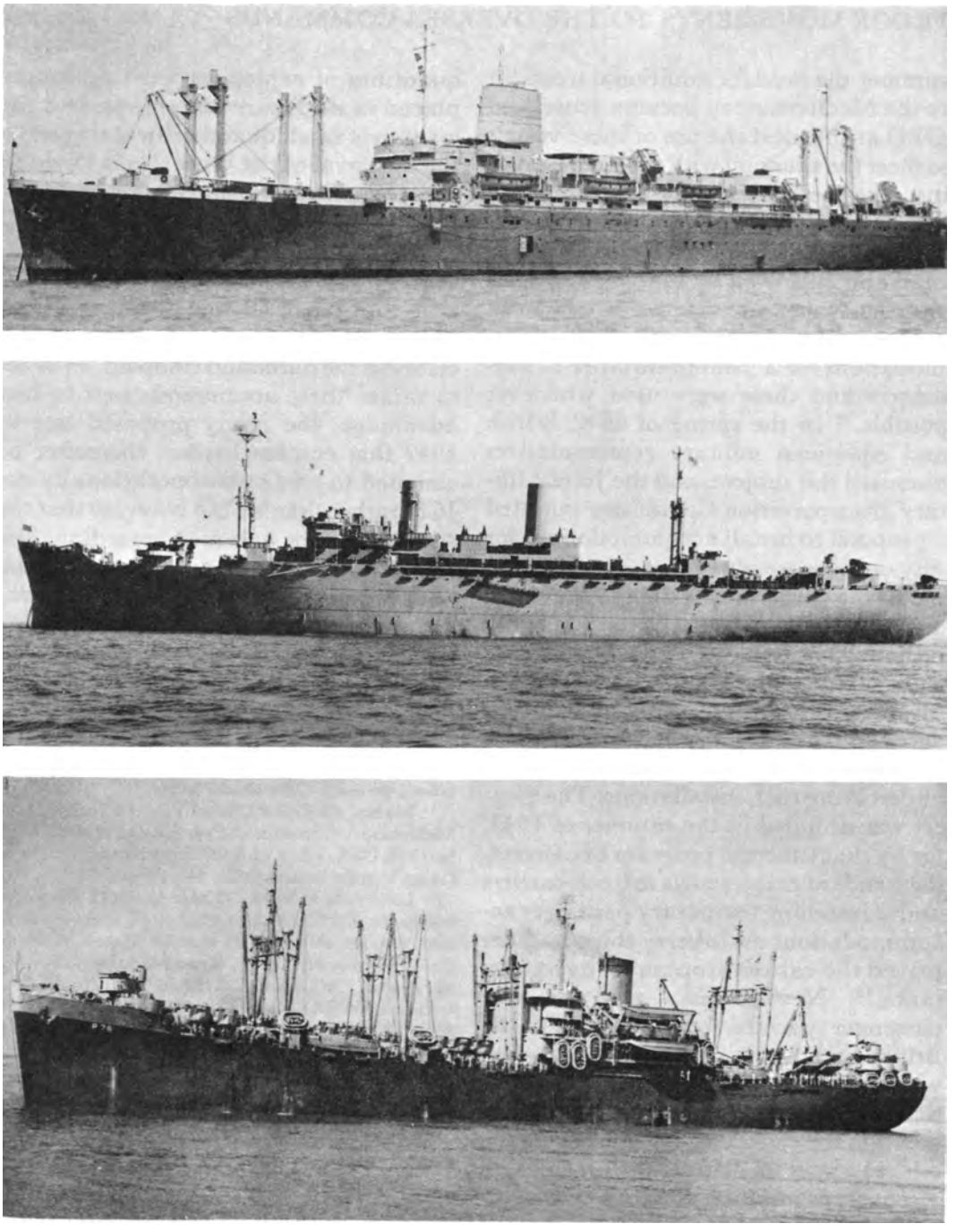
[18] Memo, CofT for CGs of PEs, 10 Jun 42, sub: Maximum Utilization of Pass Space; Memo, CofT for CofS USA, 4 Sep 42, sub: Transport of Troops on Cargo Vessels; both in OCT 541.1 Small Groups.

[19] Ltr, Wylie to WSA, 30 Mar 42, OCT HB Wylie Staybacks; JMTC 8th Mtg, 23 Apr 42, and occasional mtgs through 34th Mtg, 25 Mar 43; Memo, Wylie for CofT, 18 May 42; Memo, Gross for Somervell, 2 Sep 42; Memo, CofT for CofS USA, 4 Sep 42, sub: Conversion of WSA Cargo Ships to Carry 50 Troops or More; last three in OCT HB Gross Troops on Cargo Ships.

[20] Memo, CofT for ACofS OPD, 30 Jan 45, OCT HB Farr Staybacks; Memo, Maj Ouderkirk for Capt Robert L. Zellman, 11 Apr 45, par. 6, bound in Mvmts Div Hist, Mar 1945, OCT HB Mvmts Div Gen.

[21] Memo, Farr for Gross, 27 Apr 44, OCT HB Farr Staybacks; Memo, Gross for Somervell, 15 May 44, ASF Hq Trans 1944; Memo, CofT for OPD, 31 May 44, sub: Pass Shipts on Cargo Vessels, OCT 370.5.

[22] Memo, CG SOS for CofS USA, 26 Nov 42, OPD 370 (3-6-42) Army Transports; JCS 158/2, 14 Dec 42; JCS 46th Mtg, 15 Dec 42, Item 2.



THREE TYPES OF TROOP TRANSPORTS. *The* James Parker, *a converted prewar passenger liner (top); the Maritime Commission's P-2 type, designed and built as a troopship (middle); a naval transport, combat loaded for the assault on Sicily (bottom).*

were required by the Navy for amphibious training as well as for actual assault operations. In September 1943 the Chief of Transportation, acting on a report that a combat loader had sailed from San Diego with naval personnel of low priority, instructed the Army port commanders to make sure that the agreed arrangement was fully carried out at the ports under their respective jurisdictions.[23] The Army also sought to have any passenger space that might be available on aircraft carriers, LST's (landing ships, tank), or other combatant vessels sailing from the United States utilized for personnel on the joint troop-priority list.

With the variety of types of ships used in moving troops it would be interesting to know what percentage of the total movement traveled on vessels of various capacities. Unfortunately such an analysis is available only for the month of December 1943, but that was a period of heavy outbound traffic and the data are therefore significant. The total of over 273,000 passengers (mostly troops) embarked on 312 vessels was distributed as follows:[24]

Size of Shipment	*Number of Ships Used*	*Percentage of Total Passengers*
Total	312	100.0
Up to 199	178	2.1
200–999	64	10.3
1,000–1,999	23	13.2
2,000–4,999	33	37.9
5,000 and over	14	36.5

The allocation of troopships to serve particular oversea areas depended on strategic decisions arrived at by the President and the Prime Minister at their occasional conferences, by the Combined Chiefs of Staff when inter-Allied relations were involved, and by the Joint Chiefs of Staff when only the U.S. armed forces were concerned. The deployment of shipping to implement these strategic decisions was planned and supervised by the Combined Military Transportation Committee on the international level and by the Joint Military Transportation Committee on the American level. The allocation and reallocation of specific ships, however, were normally matters for direct dealing between the Office of the Chief of Transportation on the one hand and the Naval Transportation Service, or the War Shipping Administration, or the British Ministry of War Transport on the other. Negotiations with the British usually resulted in quick understanding regarding the employment of troopships, and the rate attained in moving American soldiers to the European theater was possible only because of the use of the large British liners.[25] The troopships operated by agents of the War Shipping Administration were committed to military service and hence were deployed in accordance with decisions of the military authorities. The task of allocating and reallocating American troopships therefore rested largely with the Army and the Navy, and they sometimes found it difficult to agree.

The basic cause of disagreement stemmed from the fact that the Navy's chief interest was in the Pacific, whereas the Army's principal effort was in the Mediterranean and European theaters. Under the Allies' plan of strategy the Mediterranean Theater of Operations (MTO) and the European Theater of Op-

[23] Min of Port Comdrs Conf, Boston, 30 Aug–1 Sep 43, pp. 113–14, OCT HB PE Gen Port Comdrs Conf.

[24] Memo, Finlay for Gross, 21 Feb 44, OCT HB Gross Troops on Cargo Ships.

[25] Agreement concerning the use of British ships became more difficult after V-E Day. On the general subject, see Wardlow, *op. cit.*, pp. 220–27.

erations (ETO) were to have priority over the Pacific areas until Germany had been defeated. The disagreements, which were particularly acute with respect to the employment of the large, fast troopships operated under charter by the Navy, came to a head in the late summer of 1943, when the Army protested vigorously against the unilateral action of the Navy in transferring certain of these vessels to the Pacific.[26] About this time it became necessary to decide upon the allocation of the new troop carriers then being constructed by the Maritime Commission. As a result, the Joint Military Transportation Committee appointed a troopship subcommittee consisting of representatives of the Office of the Chief of Transportation, the Naval Transportation Service, and the War Shipping Administration to assign transports by name to the various theaters and to major areas within the theaters.[27] The OCT representatives were General Wylie and Colonel Farr. Following the appointment of this subcommittee, allocations were made in a more orderly manner after careful study, and the problem itself was lessened somewhat by the delivery of new troopships and the temporary conversion of Liberty ships to carry troops. Nevertheless, the differences between Army and Navy interests remained, and the difficulty of reaching agreement regarding the employment of troopships was never entirely removed.[28]

The procedures for scheduling troopships—that is, fixing loading berths and sailing dates for specific voyages—were not the same in the Atlantic as in the Pacific. Since the Army's interest predominated in areas served from U.S. Atlantic ports, sailings from those ports were scheduled by the Movements Division in the Office of the Chief of Transportation, subject to arrangements with the Convoy and Routing Section of the Navy Department and the policies of the British Ministry of War Transport regarding vessels under its control. A different method was used in scheduling sailings from Pacific coast ports. There were a number of reasons for this—the large requirements of the Navy for troop lift, the length of the transpacific voyages, the frequent detention of vessels overseas for intratheater operation, the unusual delays at home ports on account of repairs, the fact that most vessels sailed independently rather than in convoy, and the distance of Pacific coast ports from headquarters in Washington. Because of these circumstances the troopships in the Pacific were considered a pool for the joint use of the Army and the Navy, and their utilization was governed by joint committees with headquarters at San Francisco. This decentralization of control over troopships and troop movements was an expedient that the Chief of Transportation accepted reluctantly.[29]

Close collaboration between the Office of the Chief of Transportation and the

[26] Memo, Styer for Marshall, 9 Aug 43, sub: Employment of Troop Lift in Atlantic and Pacific, OCS 570; Memo, Meyer for CofT, 13 Sep 43, sub: Use of Navy-Controlled Unescortees in Atlantic, OCT HB Meyer Staybacks.

[27] Memo, Dir NTS for CofT, 18 Sep 43, sub: Transport Assignment to Ocean Areas, and reply, 28 Sep 43; both in OCT HB Meyer Staybacks; JMTC 51st Mtg, 14 Oct 43, Item 2.

[28] Memo, Vice Adm Frederick J. Horne for Lt Gen Joseph T. McNarney, 19 Nov 43, sub: Trans of Army Engineers to India, and related documents in OPD 560 (24 Jan 44); Ltrs, Farr to Stokes, 19 and 21 Nov 43 (Stokes was then attending the inter-Allied conference in Cairo); Memo, CofT for Brig Gen Carl A. Russell, OPD, 24 Aug 44; last three in OCT HB Farr Staybacks.

[29] See below, pp. 161–62.

Operations Division of the War Department General Staff was essential to the co-ordination of ship movement and troop movement plans. On the basis of estimates of theater troop requirements obtained from OPD, corresponding data obtained from the Navy, and forecasts of troopships likely to be available, the Movements Division prepared a statement of the potential troop lift to each theater for each six-month period. A revised statement was prepared at the beginning of every month.[30] The OCT frequently indicated to OPD how adjustments could be made in the plans for troop movements to the respective theaters to make better use of the available vessels.[31] When emergency troop shipments were necessary, the OCT calculated how they could be accomplished with the least disturbance to movement plans and ship schedules already set up.[32]

Changes in troop movement plans necessitating adjustments in shipping schedules created serious problems for the Chief of Transportation. Cargo-ship schedules as well as troopship programs often had to be adjusted. When such changes were occasioned by strategic developments or were ordered by the President as the result of top-level decisions or international agreements, there was no cure for the difficulty. But the Chief of Transportation believed that the shuffling of movements by "higher echelons" of the War and Navy Departments went beyond that which was necessary and indicated a lack of foresight and a failure to appreciate the shipping problem involved. He also objected to efforts by superior headquarters to have specific vessels assigned to specific movements or particular areas. This was a matter, he felt, that should be left entirely to the transportation organization if waste of troop lift was to be avoided.[33] As the strategic situation became more stabilized and planning procedures were improved, changes in movement programs were less frequent, but in view of the scope and nature of the war some such adjustments were inevitable.

The Chief of Transportation believed that the obvious advantages of thorough co-ordination between troop movement plans, as developed by OPD, and troopship movements, as planned by his office, could best be accomplished by direct collaboration between these offices. He therefore protested against any intervention by the Mobilization Division, ASF, and refused to allow that division to influence his plans for the employment of vessels, which he believed to be based on the best available information and expert technical knowledge. The primary function of the Mobilization Division was to co-ordinate supply and troop movements, and it was expected to follow developments to insure that such movements were effectively executed. Close collaboration between the Chief of Transportation's staff and the Mobilization Division obviously was necessary, but General Gross considered inadmissible any intrusion of the

[30] See Memo, CofT for OPD, 4 Apr 43, sub: Forecast of Shipping; Memo, CofT for OPD, 26 Nov 43, sub: Six-Month Requirements; both in OCT HB Farr Staybacks; Memo, CofT for Dir Plans and Opns ASF, 8 Dec 44, and other dates, OCT 370.5. Copies of these statements were furnished to ASF headquarters as well as to OPD.

[31] Memo, CofT for OPD, 8 Jun 43, sub: Troop Lift to India, OCT 370.5 India; Memo, CofT for OPD, 13 Nov 43, sub: Effect on Shipping of Proposed Movement to Pacific, OCT 000-370.5 POA.

[32] Memo, Wylie for Gross, 13 May 42, sub: Paratroopers, OCT 000-900 *Queen Elizabeth*.

[33] Memo, CofT for CofS for Opns SOS, 23 Jan 43, sub: Issuance of Mvmt Orders; Memo, CofT for Dir NTS, 10 Aug 43, sub: Troop Deployment Program; both in OCT HB Meyer Staybacks.

Mobilization Division into transportation operations or into the relationship between the OCT and OPD. During 1943 there was sharp disagreement on the subject between General Gross and General Lutes, Director of Operations, ASF, under whose direction the Mobilization Division functioned. General Gross did not relax his position, and General Lutes' proposal to establish a transportation co-ordination section in the Mobilization Division was not carried out. While opposing the extension of the division's activities to transportation, the Chief of Transportation gave it warm praise as a movements co-ordinating agency.[34]

Since Colonel Farr as chief of the Movements Division had a central role in the effort to fit troop movement plans and ship movements neatly together, his views on the mission of the Chief of Transportation in this matter are of interest. Farr found that the several Army staff agencies concerned with programming oversea movements did not always agree, nor did the Army and the Navy. When these authorities were at odds on what troops *should* be moved, the Chief of Transportation felt that it was his duty to tell them what *could* be moved—that is, what deployment of troops would accomplish the most effective use of the available troop lift. This procedure gave rise to the accusation that the Chief of Transportation was endeavoring to determine strategy. On the contrary, Farr maintained, the Chief of Transportation's purpose was to serve the higher authorities of the War Department and the theater commanders, and the Chief of Transportation believed that he was performing such a service when he indicated how the limited shipping resources could be used to obtain maximum results.[35]

The need for getting the maximum service from troopships dictated a policy of turning them around at the ports as rapidly as possible. This policy was a major consideration with the Movements Division in preparing schedules for the Atlantic. It frequently met with opposition from the operators of the vessels, who desired more time for repairing, storing, and fueling the ships, even though the pressure for delivery of troops to the theaters was a compelling argument. The Army ports of embarkation and the War Shipping Administration usually could be persuaded to accept the Movements Division's schedules with respect to the vessels under their control, but the Navy held more rigidly to its operating standards. The Movements Division, as has been stated, did not have the same control over the dispatch of vessels from west coast ports, and it often complained about the time taken to complete repairs on troopships employed in the Pacific. There were several explanations for the extensive lay-ups—the long periods that the ships spent away from their home ports, the lack of repair facilities at most ports in the Pacific areas, and the fact that west coast repair yards were heavily engaged with naval work of top priority—but their effect on the execution of planned troop movements is obvious.[36]

[34] Memo, Lutes for CofT, 26 Mar 43, OPD 381 (120-140); Memo, CofT for Lutes, 3 Apr 43, OCT HB Meyer Staybacks; ASF Cir 23, 28 Apr 43, sub: Troop Mvmt Co-ordinating Center; Memo, Lutes for CG ASF, 22 Oct 43; Memo, Finlay for Wylie, 26 Oct 43; last two in OCT HB Ex Co-ordination with Staff Agencies ASF; ASF Adm Memo S-96, 20 Nov 43, sub: Mvmt Co-ordinating Center; Memo, Gross for Lutes, 16 Mar 44, OCT HB Mvmts Div Gen.

[35] Ltr, Farr to author, 15 Nov 49, OCT HB Mvmts Div Gen.

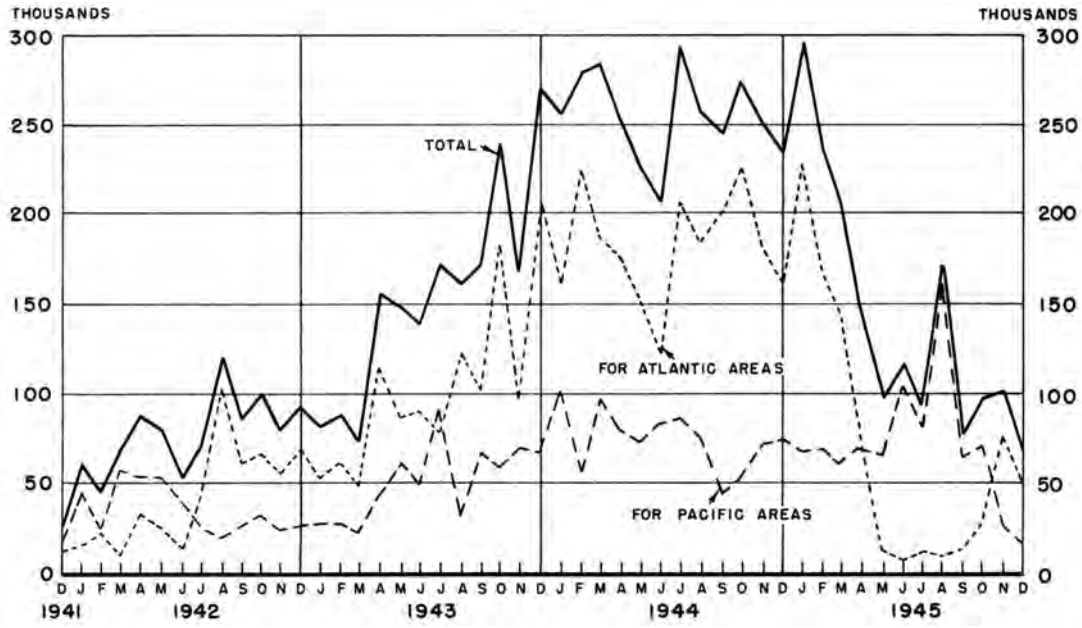
[36] Memo, Farr for Wylie, 16 Mar 45, sub: Utilization of Troopships, OCT HB Water Div Ship Repair and Conversion; Memo, CofT for Mil Pers Div ASF, 13 May 45, OCT HB Mvmts Div Ouderkirk Staybacks; Interv with Farr, 28 Apr 51, OCT HB Mvmts Div Gen; Wardlow, *op. cit.*, pp. 183–84.

The Movements Division kept account of the status of all vessels carrying or committed to carry U.S. troops or their equipment. During the latter part of the war these records embraced upwards of a thousand troopships and freighters. A type of record was needed that would disclose at all times the locations of the vessels, their speeds and capacities, and their prospective sailing dates, destinations, and arrival dates. The first such record, known informally as "slipstick," was a set of flexline sheets on which the vessels were posted according to routes or convoys. These sheets could be changed readily as new information was received and photographed for distribution to all concerned as often as circumstances required. The effectiveness of this device as a basis for planning troop movements was dependent on the adequacy and the accuracy of the information received from the oversea commands. Time was required to bring theater commanders to an appreciation of the need for this information, and advices concerning ship movements in the Pacific were inadequate during the greater part of the war. By early 1945, however, the receipt of ship movement reports had improved to a point that justified the erection of an electrically controlled position board, which by the operation of switches could be made to show the location of a particular ship or the ships in a particular port. This visual aid was supplemented by a set of vessel cards giving full information on the ships themselves, their capacities, and their movements. The system, though not used until late in the war, proved of value in controlling the huge fleet on which troops were transported during the redeployment and repatriation periods.[37]

Although advance planning was necessarily tentative because of the constantly changing troop requirements and the uncertainty of ship movements, the Chief of Transportation considered it essential to his task of making the best possible use of the ships. One phase of this planning was the six-month estimate of troop lift on the several routes that was furnished by the Chief of Transportation to OPD and ASF headquarters. Beginning early in 1944 these estimates, prepared under the supervision of General Wylie, Assistant Chief of Transportation for Operations, were elaborated in charts called transportation operational projections. The primary purpose of these projections was "to provide the key planning and operating personnel of the Transportation Corps with graphic data reflecting the future movement of troops and cargo between U.S. ports and oversea theaters, and with the measure of achievement in meeting forecasts." The basic charts showed for each theater, for each month of the past six months, the number of troops made ready to move during the month in accordance with theater priorities and the number carried forward as a backlog from the preceding month. The sum of these constituted the "effective target" for the month, against which were set the actual embarkations. A continuation of these charts reflected the estimated embarkations for each of the ensuing six months. Supplementary diagrams were prepared to show the fluctuations in the advance estimates of troop requirements prepared by OPD, and how

[37] Memo, Opns Div OCT for Water Div OCT, 4 May 42, sub: Slipstick Plan, OCT HB Meyer Staybacks; Ltr, Farr to CofT ETOUSA, 5 Oct 43; Memo, Lt Col Carl E. Berzelius, Mvmts Div OCT, for Wylie, 16 Mar 45, sub: Problems in POA and SWPA; Memo, Farr for C of Contl Div OCT, 14 Jan 46; last three in OCT HB Farr Staybacks; Ltr, Farr to author, 14 Feb 50, OCT HB Mvmts Div Gen. Copies of slipstick in OCT HB Ex File.

CHART 3—PASSENGERS EMBARKED MONTHLY BY THE ARMY AT U.S. PORTS FOR OVERSEA DESTINATIONS: DECEMBER 1941–DECEMBER 1945*



* Atlantic areas include North and Latin America, Greenland, Iceland, United Kingdom, continental Europe, Mediterranean, Africa, and the Middle East. Pacific areas include western Canada, Alaska, Central Pacific, South Pacific, Southwest Pacific, western Pacific, India, Burma, Japan, and Korea.

Source: Monthly reports by ports of embarkation to Movements Division, OCT, reworked for statistical volume of this series, now in preparation.

actual embarkations compared with these estimated requirements and with the number of troops on the theater priority list that were ready to move. The charts gave the Office of the Chief of Transportation a basis for studying the results of planning and operations during preceding months and for drawing conclusions for guidance in the future. There were similar charts for the shipment of Army cargo to the theaters.[38]

The growth of the Army's troop lift is illustrated by the fact that G-4, a few days after Pearl Harbor, estimated the capacity of the ships then available for Army troop service to be about 65,000 troops, whereas at the end of hostilities the troop capacity of the vessels serving the Army was ten times that figure.[39] The Army embarkations in December 1941 totaled 29,800 passengers, while in January 1945, when the outbound movement reached a peak, 295,100 were embarked. *(Chart 3)* The increase was brought about through the exploitation of all practicable means—increasing the capacity of existing passenger vessels, building new troopships, converting cargo ships, using the limited pas-

[38] Copies of the transportation operational projections for August and September 1944 are in OCT HB Dir of Opns.

[39] Study, Trans Br G-4 WDGS, 10 Dec 41, sub: Analysis of Passenger Shipping, OCT HB Gross Day File; ASF MPR, Aug 45, p. 50.

senger accommodations on unconverted cargo ships, and employing British and other foreign troopships. Yet from the standpoint of the military authorities concerned with planning strategy, the troop lift never was large enough. The Chief of Transportation, moreover, repeatedly found that embarkations fell somewhat short of the target he had helped to set. The latter fact is explained chiefly by delay in the work of converting cargo ships on which the Chief of Transportation counted heavily in his planning.[40] The unforeseen retention of vessels in the theaters and the extensive repairs required by vessels returning to U.S. ports, particularly those returning from long voyages in the Pacific, also upset the forecasts.

The statement that the troop lift was never large enough requires some qualification with respect to the period from June 1944 onward. The build-up of forces in the United Kingdom for the invasion of the Continent, the pressure of the campaign in the Mediterranean, and the effort to increase troop strength in the Pacific and Asiatic theaters as rapidly as possible kept the demand for troop lift strong on both Atlantic and Pacific coasts until after the invasion of France had been launched. Then, because battle casualties and the demand for replacements were not as high as had been expected, the troop shipping situation in the North Atlantic became perceptibly easier. This made it possible to release some of the temporarily converted Liberty ships from troop service, to release part of the space on British ships, and to relax somewhat the practice of "overloading" transports—that is, loading them beyond the normal troop capacity. The troop lift deficit continued in the Pacific, but the Chief of Transportation decided against transferring vessels from the Atlantic because an early end of the war against Germany was anticipated and maximum capacity would then be required for redeploying troops from Europe. The decision was fortunate, because with the launching of the German counteroffensive in December 1944 the movement of troops to Europe again became heavy and all available space was required. This stringency was soon over, however, and from February 1945 until redeployment began there was a surplus of troop lift in the Atlantic. The commitment of so many additional troops in Europe in the winter of 1944–45 reduced the number available for the Pacific and relieved somewhat the demand for troop lift at west coast ports.[41]

The Ports of Embarkation

The long-range planning and the day-to-day adjustments in projected oversea troop movements and ship movements, which were accomplished in Washington, were carried into effect by the ports of embarkation. The port commanders controlled the movement of troops and their equipment from home stations to the seaboard, inspected and processed both troops and equipment to insure that they were ready for oversea service, prepared

[40] Wardlow, *op. cit.*, pp. 207–08, 305–07; Memo, CofT for PEs, 26 Aug 43, sub: Vessels Repair Info, and atchd rad to oversea commanders; Memo, Farr for Wylie, 4 Oct 43; last two inOCT HB Farr Staybacks; Memo, Farr for Maj Gen John M. Franklin, 14 Mar 44, OCT 564 Troop Transports.

[41] Memo, Somervell for Marshall, 22 Jun 44, sub: Ship Capabilities, ASF Hq Shipping 1944; Min of OCT Opns Mtg, 13 Jul 44, p. 3, OCT HB Dir of Opns; Memo, Farr for Wylie, 1 Aug 44, sub: Troop Mvmt Trends, OCT HB Farr Staybacks; Memo, Wylie for Somervell, 20 Dec 44, sub: Troop Transport Position, OCT HB Meyer Staybacks; Memo, Farr for Gross, 17 Jan 45, sub: Briefing; Memo, CofT for Traf Div AAF, 27 Feb 45; last two in OCT 370.5.

TABLE 9—PASSENGERS EMBARKED BY THE PRINCIPAL ARMY PORTS: DECEMBER 1941–DECEMBER 1945 [a]

Port	Total	1941 (December Only)	1942	1943	1944	1945
All Ports	7,639,491	29,839	955,302	1,871,120	3,072,127	1,711,103
Boston [b]	768,898	0	26,747	116,476	456,651	169,024
New York [c]	3,273,009	3,399	421,756	910,658	1,400,486	536,710
Hampton Roads [d]	764,839	1,135	55,489	234,872	372,368	100,975
Charleston [e]	36,654	1,981	25,556	2,069	447	6,601
New Orleans [f]	174,651	6,172	58,139	41,069	42,470	26,801
Los Angeles [g]	217,886	0	1,940	46,418	74,782	94,746
San Francisco [h]	1,745,989	15,084	289,637	456,998	534,018	450,252
Seattle [i]	579,209	2,068	75,491	49,777	178,760	273,113
Portland [j]	47,194	0	0	0	0	47,194
Prince Rupert [k]	31,162	0	547	12,783	12,145	5,687

[a] Figures include military personnel of the Army, Navy, and Allied nations, civilians, and prisoners of war. Embarkations by cargo ports and subports on the Atlantic and Gulf coasts are combined with embarkations at the ports of embarkation to which they were subordinate. When embarkations at these subordinate ports were reported separately, they are stated in footnotes, but such figures may not be complete.

[b] Number of passengers embarked at Halifax, a subport of Boston, is not available. Boston was a subport of New York until July 1942.

[c] Includes 225 passengers embarked at the Philadelphia cargo port in 1943, and 250 in 1944.

[d] Includes 295 passengers embarked at the Baltimore cargo port in 1942, 1,044 in 1943, 84 in 1944, and 11 in 1945. Hampton Roads was a subport of New York until June 1942.

[e] Charleston was a subport of New York until January 1942.

[f] Includes 751 passengers embarked during 1942 at Miami, Key West, and Galveston.

[g] Los Angeles was a subport of San Francisco until October 1943.

[h] Includes 17,048 passengers embarked at Portland, as a subport of San Francisco, through August 1944.

[i] Includes 4,838 passengers embarked at Portland, as a subport of Seattle, September–December 1944. Seattle was a subport of San Francisco until January 1942.

[j] See notes *h* and *i* concerning embarkations prior to 1945. Portland continued as a subport of Seattle during 1945, although its embarkations are shown separately.

[k] Prince Rupert was a subport of Seattle.

Source: Monthly reports of ports of embarkations to Movements Division, OCT, reworked for statistical volume of this series, now in preparation.

billeting plans for the transports, moved the troops from staging areas to shipside and embarked them, and provided for their comfort, control, and entertainment on board.[42]

Each port of embarkation was assigned primary responsibility for one or a few oversea areas, but also made shipments to other areas, so that the over-all pattern of movements was complex. Moreover, the port responsibilities were subject to adjustment as conditions changed. In the latter part of the war the port of embarkation at Boston served the North Atlantic bases and northern Europe; New York was concerned principally with movements to northern Europe and the Mediterranean; Hampton Roads shipped chiefly to Africa and the Mediterranean; Charleston embarked troops to various destinations but served principally as the

[42] AR 55-390, 16 Dec 42, par. 10, gives a broad outline of port commanders' duties. See also Memo, CG SOS for Dirs and Cs of Staff Divs, *et al.*, 1 Jul 42, sub: Procedures for Booking Individuals and Small Groups, OCT 541.1 Small Groups.

TABLE 10—PASSENGERS EMBARKED BY THE ARMY FOR THE SEVERAL OVERSEA AREAS: DECEMBER 1941–DECEMBER 1945 [a]

Destination Areas	Total	1941 (December Only)	1942	1943	1944	1945
All Areas	7,639,491	29,839	955,302	1,871,120	3,072,127	1,711,103
Atlantic Areas	4,791,237	12,687	522,667	1,250,275	2,179,319	826,289
North America [b]	214,026	1,243	14,601	15,326	7,512	30,564
Latin America [c]		9,071	74,267	32,475	28,967	
Mediterranean [d]	1,116,047	0	102,860	491,399	342,615	104,918
Central Africa and Middle East [e]		327	41,794	32,134		
European [f]	3,461,164	2,046	289,145	678,941	1,800,225	690,807
Pacific Areas	2,848,254	17,152	432,635	620,845	892,308	884,814
North America [g]	250,501	2,068	82,054	100,335	46,831	19,213
Central Pacific [h]	1,213,684	15,084	109,300	115,494	398,375	380,407
South Pacific [h]		0	77,936	117,088		
Southwest Pacific [i]	1,124,868	0	149,494	194,286	341,566	439,522
Asiatic [j]	259,201	0	13,851	93,642	106,036	45,672

[a] The grouping into Atlantic and Pacific areas indicates that the passengers were embarked mainly but not exclusively at Atlantic and Gulf ports or at Pacific ports.

[b] Includes bases in Canada, Newfoundland, Greenland, and Bermuda.

[c] Includes Panama Canal Zone, Caribbean, South America, and South Atlantic.

[d] Includes North Africa, Sicily, and Italy.

[e] Middle East includes Egypt, Red Sea, and Iran.

[f] Includes Iceland, United Kingdom, and continental Europe.

[g] Includes Alaska and western Canada.

[h] Central and South Pacific were combined into Pacific Ocean Areas in 1944.

[i] Includes embarkations for western Pacific, Japan, and Korea after those areas were occupied by U.S. forces.

[j] Includes India, Burma, and China.

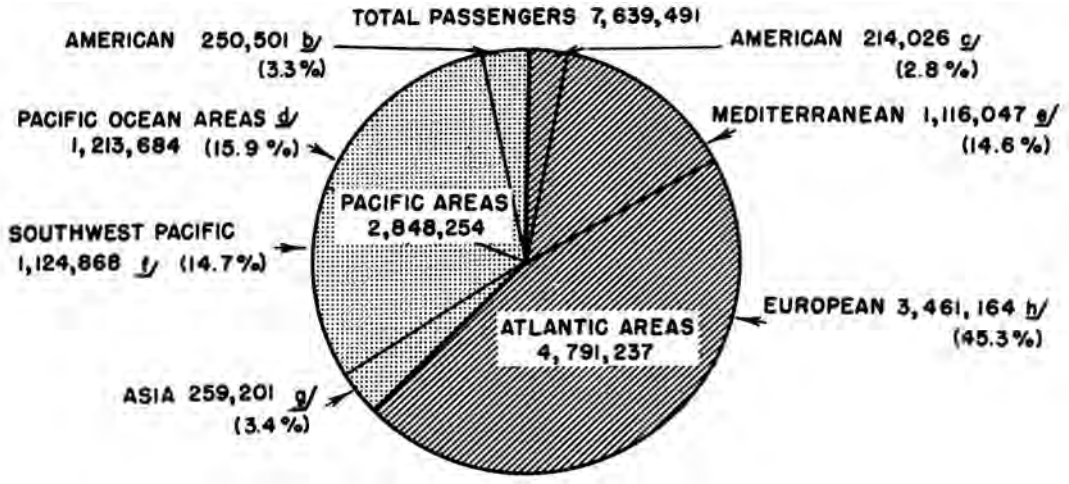
Source: Monthly reports by ports of embarkation to Movements Division, OCT, reworked for statistical volume of this series, now in preparation.

home port for Army hospital ships assigned to the Atlantic; New Orleans handled troop traffic to the Panama Canal, Latin America, and the Pacific bases; San Francisco was a transshipment point for troops proceeding to all of the Pacific areas; Los Angeles served the Asiatic and Pacific theaters; and the Seattle Port of Embarkation was responsible for shipments to Alaska and western Canada and also served the Central Pacific.[43] The numbers of troops shipped from the subports and the cargo ports, each of which functioned under the control of a port of embarkation, were relatively small. More than 45 percent of the passengers embarked by the Army during the war period were destined for the European theater, and more than 42 percent were embarked under the jurisdiction of the New York Port of Embarkation. *(Tables 9 and 10, and Chart 4)*

The ports of embarkation were advised by the Chief of Transportation as far in advance as possible concerning the troops

[43] ASF MPR, Jan 44, Sec. 3, p. 46, graphically shows "troop relationships" of U.S. ports and theaters, October–December 1943.

CHART 4—PASSENGERS EMBARKED BY THE ARMY AT U.S. PORTS FOR THE SEVERAL OVERSEA AREAS: DECEMBER 1941–DECEMBER 1945 [a]



[a] Includes a small number of passengers embarked in Canada.
[b] Includes Alaska and Canadian Pacific ports.
[c] Includes North, Central, and South America, Greenland, Bermuda, and South Atlantic islands.
[d] Includes South and Central Pacific.
[e] Includes North and Central Africa, Sicily, Italy, Red Sea, and Persian Gulf.
[f] Includes western Pacific.
[g] Includes troops for China, Burma, India.
[h] Includes Iceland, United Kingdom, northern Continent, southern France.

Source: Reports from ports of embarkation to Movements Division, OCT, reworked for a statistical volume of this series, now in preparation.

and organizational equipment that they would be expected to embark during succeeding months. In the beginning such information was irregular, but later a definite procedure was followed. The first advices, usually given six months in advance, included an estimate of the troop spaces to be available during each month and the types of troops to be moved. These estimates enabled the port commanders to enlarge or reduce their staffs and their facilities according to the prospective load. Frequent changes in the forecasts were necessary as theater priority lists were revised and as firmer estimates of the shipping situation became possible. When movement orders for specific units, replacements, or fillers were issued indicating the ports through which they were to move and the dates on which they were to be ready to leave their home stations, copies were sent to the port commanders. As rapidly as specific ships could be named to sail on specific dates, the ports were notified. The troops and their equipment were then called forward by the port commanders in accordance with the priority lists, the ability of the port facilities to accommodate them, and the availability of ships to move them.[44]

[44] Memo, CofT for HRPE and SFPE, 16 Apr 43, sub: Priorities for Late April, OCT 370.5 South Pacific; Msg, CofT to NYPE and HRPE, 11 Jul 43; Memo, CofT for BPE and NYPE, 26 Jan 44, sub: Vessel Allocations; Ltr, Gross to CG NYPE, 1 Jul 44, summarizing procedures; last three in OCT HB Farr Staybacks.

The port commanders were responsible for notifying the theater commanders when troops were shipped overseas. The Operations Division of the General Staff kept the theaters informed regarding War Department actions on their priority lists, but such advices dealt only with types of units and tentative departure dates. The first advice from a port of embarkation to a theater of destination was the "loading cable," which was dispatched about a week or ten days before the sailing. The loading cable identified the troops that were expected to be embarked on a particular ship for sailing on a particular day. From such messages the theaters were able to make preparations for the handling of the ships and the disposition of the troops and their equipment. As soon as possible after a ship or convoy had sailed, the port sent a "sailing cable," which gave the actual time of departure. Passenger lists and cargo manifests were forwarded to the theaters by air mail in order to arrive in advance of the vessels. Because of the unusually heavy movements to the European theater and the careful planning that was necessary in advance of the troops' arrival, that theater was notified in the sailing cable of any changes that had been made in the troop list after the loading cable had been dispatched. In the early part of the war the theaters complained of the failure of the ports of embarkation to give them full and prompt advices, but the system was steadily improved. This improvement was facilitated by frequent exchanges, between ports of embarkation and the theaters they served, of liaison officers for short tours of duty.[45]

The preparation of the loading plan, showing the troops that were to be embarked on a particular ship, was usually left to the port commander, who was governed by the approved priority list for the theater concerned. But sometimes when the sailings to an oversea area were infrequent, or when the theater's requirements were especially urgent, the Chief of Transportation indicated that certain units were to sail on certain vessels.[46] Loading plans were often upset by late changes in priorities. In some instances units for which movement orders had been issued were not able to pass inspection by the scheduled readiness dates because of shortages of personnel or equipment or deficiencies in training. In this situation OPD designated other units of the same type if they were available, or, as was often the case, the port commander substituted troops that were already at the port staging area, following the theater priority list as nearly as possible. Every effort was made to avoid letting a ship sail with empty spaces when the theater was in need of troops.

The organizations at the port for handling troop movements were not uniform. Early in 1944 the Chief of Transportation issued a "typical organization chart" for the ports and requested them to follow it so far as practicable, but because of different conditions in the several localities and personal preferences on the part of the port commanders organizational differences persisted.[47] There were, however, several groups of related functions to be

[45] Memo, C of Trans Br G-4 for CGs of PEs, 12 Jan 42, sub: Sailing Info to Oversea Comdrs, G-4/29717-114; Ltr, Col Frank S. Ross, CofT ETOUSA, to Wylie, 15 Aug 42, OCT 319.1 England; Memo, CG SFPE for CofT, 18 Sep 45, sub: Accomplishments and Handicaps, OCT HB SFPE Gen.

[46] Memo, CofT for CG SFPE, 2 Jan 43, sub: Sailing of *West Point* for Middle East, OCT 353.01-400.93 Middle East; Memo, CofT for CG CPE, NYPE, etc., 15 Aug 43, sub: Priorities for Asiatic Theater, etc., OCT 370.5.

[47] Wardlow, *op. cit.*, pp. 100–102.

performed at all ports. The ships had to be made ready for the embarkation of troops and their impedimenta. Arrangements had to be made for the transportation of troops and impedimenta into and within the port area. The enforcement of theater priorities and War Department movement orders, the calling of troops to the ports, and the planning of embarkations constituted another group of related activities. Control of the movement, processing, and loading of the equipment and supplies that accompanied troops, or were marked for particular units though moving separately, made up another functional field. In addition, the port commanders were responsible for regulating the flow of maintenance supplies for the support of troops after their arrival overseas. In the typical plan issued by the Chief of Transportation, these five groups of functions were assigned to five divisions, designated Water Division, Port Transportation Division, Troop Movement Division, Initial Troop Equipment Division, and Oversea Supply Division. This five-division organization was actually employed only at New York; at other ports movements of troops and equipment were supervised by the same division, and there were other departures from the typical plan.

Because of the close co-operation that was necessary between the Office of the Chief of Transportation, the ports of embarkation in the zone of interior, and the oversea theaters, the communication systems by which these agencies were linked were of utmost importance. Exchanges of information and adjustments in programs had to be made quickly as sailing dates approached, and the transmission of messages had to be secret as well as fast. Both teletype and telephone connections were used. Maj. Gen. Homer M. Groninger, who commanded the New York Port of Embarkation until V-E Day and then became commander of the San Francisco Port of Embarkation, remarked that the daily teletype conferences that the ports held with the chiefs of transportation in the theaters were of "inestimable value." Colonel Farr, expressing the view of the Office of the Chief of Transportation, corroborated that opinion. To emphasize the point, he stated that during the redeployment period the information received from the European theater was unsatisfactory because the theater did not permit its port commanders to communicate directly with the zone of interior, and that there were usually omissions and delays when messages regarding troops sailing from European ports had to be relayed through the theater headquarters.[48]

Maintaining secrecy in communications between the Office of the Chief of Transportation and the ports was a constant problem. Messages transmitted over the Transportation Corps teletypewriter network were coded and hence were considered safe, but urgent business could be transacted much more satisfactorily by telephone. Although telephone conversations were "scrambled," the Intelligence Division (G-2) of the General Staff did not regard this as providing adequate security. Accordingly, the transmission by telephone of certain information such as sailing dates, names of vessels, identification

[48] Memo, CofT for All PEs, *et al.*, 9 Aug 42, sub: Secret Communications, OCT HB Mvmts Div Gen; Memo, CG SFPE for CofT, 18 Sep 45, sub: Accomplishments and Handicaps, par. 6, OCT HB SFPE Gen; Memo, Farr for Finlay, 19 Sep 45, sub: Lessons Learned, p. 2, OCT HB Mvmts Div Gen.

of units, and destinations was forbidden.[49] Breaches of these security rules were sometimes risked in order to get business of great urgency transacted. Such breaches when detected by G-2 caused embarrassment to the officers involved, but there is no evidence that the enemy was ever benefited.

Movement to the Ports

Preparations for the movement of troops to the ports began with instructions issued by OPD to the AGF, the AAF, or the ASF, directing that necessary steps be taken to prepare specific types of troops for shipment to stated oversea theaters, and setting approximate dates on which the troops were to be ready to leave their home stations. These instructions normally were issued about six weeks before actual movement. Specific units, or groups of replacements, were designated and alerted as soon as possible. As the date approached for the departure of a unit from its home station, a movement order was issued by The Adjutant General at the request of the AGF, the AAF, or the ASF, giving complete instructions regarding the strength of the unit, authorized equipment and supplies, the port for which the movement was destined, and the latest date for arrival at the port. The movement order included a shipment number that was used thereafter in identifying the troops and their impedimenta in order to obviate reference to their military designations. The movement order also included any special instructions required by the unit commander or the commander of the port at which the troops were to be staged and embarked. These instructions were issued only after a careful study had been made of theater requirements, shipping capabilities, the training status of troops, and the readiness of equipment. Such study represented the combined efforts of the Operations Division of the General Staff, the Operations Division of Army Service Forces headquarters, The Inspector General, and the Chief of Transportation.[50]

The process of making troops ready for shipment to the theaters and moving the men and their impedimenta to the ports in an orderly and timely manner involved a number of Army agencies—the major commands (AGF, AAF, and ASF) to which the troops belonged, the corps areas (later service commands), the commanders of home stations, the unit commanders, the chiefs of technical services who provided equipment and supplies, and the ports of embarkation. During 1940 and 1941 it became increasingly apparent that co-ordination between these agencies lacked effectiveness and that more adequate definition of the duties of each was necessary. Late in 1941, at the request of the Chief of Staff, The Inspector General

[49] OCT Adm Memo 116, 7 Oct 42, Sec. 1; Memo, CofT for Agencies Listed, 30 Jan 43, sub: TC Priority Teletype, OCT 676.2; TC Cir 45-6, 24 Jul 44, sub: Communications Security; Memo, CofT for PEs, 5 Aug 44, sub: Communications Security Course, OCT 000.72/TC Misc; TC Cir 50-14, revised 31 Jan 45, sub: Ships' Port Serial Numbers.

[50] Procedures and responsibilities for priority lists and movement orders are dealt with in the following: Memo, TAG for CG AGF, *et al.*, 5 Jan 43, sub: Org, Tng, and Equip of Units, AG 320.2 (1-2-43); Memo, DCofS USA for ACofS G-1, G-3, G-4, OPD, 5 Aug 43, sub; Mvmts to Theaters; Memo, ACofS OPD for Theater Group, *et al.*, 12 Aug 43, sub: OPD Co-ordination of Pers, Troop and Matériel Matters; Memo, OPD for DCofS, 10 Nov 43, sub: Troop Mvmt Projection; last three in WDCSA 370.5 (Secret); WD Pamphlet 29-3, 24 Oct 44, Oversea Travel Orders for Casuals, Replacements, and Individuals (short title, OTO).

made a study of the problem in connection with troops moving through the ports of embarkation at New York, San Francisco, and Seattle, and his report provided a basis for corrective action.[51] This action was spurred by the outbreak of war with Germany and Japan and the prospect of vastly increased troop shipments. It took the form of more explicit instructions in the movement orders and the issuance of separate instructions covering standard procedures that could be referred to in movement orders.

The separate instructions, eventually published in pamphlet form, became the "bible" of officers concerned with troop movements. The basic document, entitled Preparation for Overseas Movement (short title, POM), was issued first in February 1943 and was later greatly expanded and reissued as experience accumulated. It was supplemented by pamphlets entitled Additional Preparation for Overseas Movement for AAF Units (short title, AIR-POM), Identification of Organizational Impedimenta (short title, IOI), and Preparation for Overseas Movement of Individual Replacements (short title, POR).[52] The publication of standard procedures was a great boon to the Chief of Transportation, whose headquarters was responsible for all transportation arrangements, and whose port organizations had ultimate responsibility for the condition of troops and impedimenta when they were dispatched overseas. His staff naturally had played an important role in formulating these procedures.

Detailed instructions regarding the preparation of troops at home stations before their movement to the ports were included in POM. In general, the objective was to have units at full strength, completely trained and equipped, before entrainment, and to establish a complete understanding between the unit commander and the port commander regarding the personnel and the matériel being shipped. The periods normally allowed between the dates when units were alerted and the dates when they were to be ready to move were theoretically adequate to allow shortages of personnel and equipment and deficiencies in training to be overcome, but frequently this proved not to be the case. Especially during the early part of the war, when the production of equipment and supplies was slow and training programs were lagging, the port commanders were obliged to assume exceedingly heavy burdens in correcting such deficiencies at the staging areas. The Chief of Transportation, while encouraging his port commanders to take all possible measures to meet the responsibility, kept up a constant campaign for more complete compliance with the provisions of POM on preparations at home stations, but his effort was only partly successful.[53]

It was logical that the movement of both troops and impedimenta from home stations to ports of embarkation should be controlled by the port commanders. They were in possession of approved priority lists and of movement orders indicating the dates when specific units were to be ready to go forward; they also knew more accurately than anyone else when the staging areas would be able to receive additional troops and when the ships

[51] Memo, TIG for CofS, 19 Nov 41, sub: Supply and Mvmt of Units, G-4/33098.

[52] Author's Memo, 22 Feb 44, sub: Instructions Regarding Preparation of Troops and Impedimenta for Movement Overseas, summarizing actions taken, with documents attached, OCT HB PE Gen Troop Mvmts to Port.

[53] See below, pp. 117–19.

would be ready for loading.[54] The control authority vested in the port commanders applied to replacements as well as to troop units. As a general practice the port commander's summons, which became known as a call, was issued at least five days before the troops were expected to entrain. It stated the staging area to which the troops were to be delivered and the date of their arrival.[55] The Chief of Transportation received a copy of each call, and his Traffic Control Division took immediate steps to establish a rail routing for the shipment and to arrange for rail equipment to be available at the home station on the departure date.[56]

The actual date of departure from the home station frequently differed from the date contemplated when the movement was initiated. Changes in the priority lists approved by OPD and adverse reports by The Inspector General on the condition of units often caused movements to be delayed. Usually such delays were counterbalanced by the advancement of other movements. The port commanders sometimes called troops to the staging areas slightly ahead of their readiness dates. Such advancements might be the consequence of other units being deferred or of adjustments in the sailing schedules for troop transports. In either case the units advanced were needed to fill available ship space. Because such advancements sometimes drew protests from the major commands concerned, the Chief of Transportation arranged that, in cases where a major command decided that a unit was not in condition to comply with the port call and there were no other units on the priority list suitable for substitution, the facts would be presented to OPD for a decision that would, if possible, avoid a waste of ship space.[57]

When port commanders were not able to call troops by the readiness dates given in the movement orders, they were expected to propose new readiness dates as promptly as possible. But the port commanders were instructed to keep departures from readiness dates, whether advancements or deferments, to a minimum.[58] To assist port commanders in determining when calls should be issued, the Chief of Transportation supplied them with data regarding the time in transit to be allowed from the respective service commands to the respective ports for troop trains, freight trains, and mixed trains.[59]

The movement of troop impedimenta to the ports gave rise to special problems because the shipments flowed from many sources. A considerable part of the equipment and supplies was not shipped from home stations but from technical service depots and from manufacturing plants. Matching these numerous shipments with the troops for which they were intended was an intricate problem at the ports. Although the instructions on the subject were explicit, information furnished the port commanders concerning such shipments was often inadequate or arrived too late to

[54] Memo, ACofS G-4 for TAG, 1 Jan 42, sub: Entrainment of Troops, G-4/33700; Memo, TAG for CofAAF, *et al.*, 2 Jan 42, AG 370.5 (1-1-42); Memo, TQMG for Trans Br G-4, 12 Jan 42, sub: Overseas Troop Mvmts, G-4/33700.

[55] In the beginning some ports referred to these calls as movement orders, but this was stopped because of confusion with movement orders issued by TAG; see Memo, Dir of Plng ASF for CofT, 28 Oct 43, sub: Call Issued by PEs, OCT 523.06 Follow-up of Shipments.

[56] TC Cir 100-6, 5 Oct 44, sub: POM, and changes, concerning distribution of copies of calls.

[57] Memo, CofT for CG AGF, 25 Jan 43, OCT 370.5 Readiness Dates.

[58] Msg, CofT to Port Comdrs, 10 Aug 43, OCT HB Farr Staybacks.

[59] TC Cir 100-4, 20 Jun 44, sub: Troop and/or Impedimenta Mvmt by Rail to Ports.

be of service.[60] Shipments of impedimenta were usually called to move from home stations ahead of the troops because of the longer period required en route. Both the AGF and the ASF complained that not enough time was allowed to prepare equipment for shipment, and the port commanders were instructed to issue calls as early as possible. However, the port commanders were limited in this respect by conditions at the ports and by the fact that many units were not cleared by The Inspector General until near their readiness dates. To meet the latter situation, the Chief of Transportation arranged with OPD that when the readiness date for a unit drew near and the port commander had not yet received clearance on the training status of the troops, he might nevertheless call the unit's equipment forward, since there was reasonable assurance that the troops would be cleared soon.[61]

Troops usually were unacquainted with the ports through which they were to move and the procedures they were likely to encounter there. Several measures were adopted to offset this unfamiliarity. Each port commander issued a pamphlet containing information for the guidance of incoming troops, which described the facilities of the port and its staging areas, the organization of the port commander's staff, and the practices relating to the staging and embarkation of troops, the processing of equipment, and port security. These pamphlets were intended to be of service to unit commanders both before and after arrival at the staging areas.[62]

Whenever a large unit was scheduled for movement overseas, an advance detail was sent to the port of embarkation to coordinate matters relating to the handling of troops and equipment. The larger the unit the more time was required for this advance work. The port commanders encouraged the early arrival of such details and the assignment of adequate personnel, but unit commanders did not always make satisfactory arrangements. When especially large units were to be moved, the port commanders sent their representatives to home stations to assist the units with their planning. As a further aid to unit commanders, the New York Port of Embarkation prepared a motion picture portraying the execution of important procedures prescribed in POM.

The bulk of the troops arriving at the staging areas traveled by rail because the railways afforded the most satisfactory service for large groups making long journeys and simplified the problem of enforcing discipline and security regulations.[63] The railway terminals at the larger staging areas were capable of accommodating eight to twelve troop trains at the same time. Some troops were transported to the ports from nearby stations by motor, but the number was small compared with the total delivered by rail. Individuals and small groups sometimes were dispatched to the ports by air in order not to miss the ships on which they were scheduled to sail,

[60] Memo, TAG for Supply Arms and Services, 17 Jan 42, sub: Shipments to PEs, AG 523.01 (1-17-42); Memo, CofT for PEs, 28 Nov 42, sub: Task Force Shortages; Memo, CofT for ACofS for Opns SOS, 14 Dec 42; last two in OCT 400.61 Shortages 1943.

[61] Memo, CofT for Col Calvin DeWitt, Jr., NYPE, 18 Apr 43, sub: Release of Org Equip; Memo of Record by Col Farr, 26 Apr 43; both in OCT HB Farr Staybacks. The problem of getting impedimenta shipped so as to be available to the troops soon after their arrival overseas had many facets. See below, pp. 148–61.

[62] Memo, CofT for CG ASF, 17 May 43, sub: Info Concerning PEs, OCT 370.5 POM 1942–43; Procedures for Overseas Movement Through the New York Port of Embarkation (short title, NYPE POM), 1 Jan 44, OCT HB NYPE Troop Mvmts to Port.

[63] Wardlow, *op. cit.*, pp. 357–58.

but here again the percentage of the total was slight.

During the early months of the war there was some speculation as to the feasibility of moving troops from their home stations directly to shipside rather than sending them to port staging areas for periods of from one to several weeks before embarkation. To develop information on this subject, the Chief of Transportation requested The Inspector General to send representatives to observe the movement of several units through the Charleston Port of Embarkation. The reports of the observers indicated that the proposed procedure was feasible under certain conditions but also disclosed that there were formidable problems in getting troops and their equipment fully ready for shipment overseas before they left their home stations.[64] By the time the investigation was finished and the reports studied—summer of 1942—experience had established that the port staging areas had an intricate and indispensable mission to perform, and the question of eliminating them from the standard troop movement procedure was never again given serious consideration.

During a period of heavy troop movement through a particular port it was advantageous to have some of the larger and better organized units staged at their home stations and moved from there either to shipside or to a staging area for an overnight stop before embarkation. In such cases the port commanders sent processing teams to the home stations. Also, some groups of replacements were staged at replacement depots. But the bulk of the troops received their final processing at port staging areas. In all cases the essential point of doctrine—that movements to the ports should be made only on call of the port commanders—was observed.

Troop Staging at the Ports

The staging areas at the ports of embarkation served a dual purpose. The basic conception was that they should serve as temporary stations where troops destined for shipment overseas could be assembled and organized so that they could be embarked as soon as the transports were ready to receive them. Since there was a critical shortage of ships and many troop transports moved in convoys with closely calculated departure dates, it was important that vessels not be held in port waiting for troops to arrive from inland stations. The second conception of the staging area was that of a station where troops could be processed—that is, given the final attention necessary to make them ready for oversea service. The processing included bringing units to authorized strength and correcting deficiencies relating to the physical condition, the personal equipment, and the training status of the individual soldiers.[65] The latter role proved to be highly significant and more time consuming than had been foreseen. It was intended, of course, that troops returning from overseas would pass through the staging areas for some of the processing that was necessary in connection with their repatriation. In addition to processing U.S. Army personnel, including nurses and Wacs, the staging areas carried out whatever processing was necessary for personnel of the U.S. Navy, troops of

[64] Memo, TIG for Trans Div SOS, 3 Jun 42, sub: Mvmt of Task Forces, OCT 370.5 POM 1942-43; Interv with Col Farr, 18 Feb 44, sub: Troop Mvmts Overseas, OCT HB PE Gen St Area Procedures.

[65] TC Pamphlet 7, Guide for Org and Opn of Staging Areas, 7 Feb 44, and revision, 16 Dec 46, deal with mission, functions, and organization. See also appropriate sections of PE Org Manuals, in OCT HB files for respective ports.

Allied nations, and civilians who were sailing on troopships.

In peacetime somewhat similar functions had been performed by the oversea discharge and replacement depots located at the ports, but in wartime much more extensive and complete facilities were required. This need was felt during 1941, and the ports of embarkation then in operation arranged for the assignment of space for troop staging at nearby Army installations. It was recognized, however, that the space procurable in this way was limited and that entirely new staging areas would have to be constructed if the United States should enter the war. Another consideration was that some of the established installations available for staging purposes were located at considerable distances from the ports, whereas the port commanders found it advantageous to have such facilities near to, though not within, the port areas. Plans for the construction of staging areas were initiated late in 1941, and during the month following the Pearl Harbor attack new facilities in the vicinity of New York, New Orleans, and San Francisco were authorized. Later in 1942 approval was given to the construction of staging facilities near Boston, Charleston, Hampton Roads, Los Angeles, and Seattle, as well as a second large staging area near New York. Eventually staging facilities were constructed at Portland, Oregon, and Prince Rupert, British Columbia.[66]

The Chief of Transportation and his port commanders kept the staging capability under constant review in the light of projected troop movements to insure that it would be adequate for the needs as they arose. The specially designed staging areas were more satisfactory for staging troops than other Army installations, and the policy was to make them adequate to handle the bulk of the movement. However, several of the older stations were used for staging purposes throughout the war. The fluctuation in theater requirements, the convoy system in the Atlantic, and delayed ship movements made the flow of troops through the ports uneven, and the staging facilities had to be capable of handling the peak load.[67]

Higher headquarters did not always agree with the Chief of Transportation's estimate of staging area requirements, and he found it necessary to resist efforts to radically reduce the physical capacity of the staging areas as well as the station complements. He succeeded in maintaining what he considered an adequate staging capability by emphasizing that the determining factor was the possible peak load and by pointing out the role that these installations would have in repatriation and demobilization. Nevertheless, the staging capacity was considerably reduced as the war progressed and the prospective need could be more clearly foreseen.[68]

The ability of the staging areas to handle peak movements naturally depended on the intensity with which the facilities were used. For a time the usual

[66] OCT HB Monograph 8, pp. 35–44.

[67] Memo, CofT for Dir of Opns ASF, 11 Sep 43, sub: St Area Reqmts; reply, 23 Sep 43; Memo, ACofT for Mob Div ASF, 10 Oct 43; Chart, St Area Loading Forecast NYPE and BPE, Sep 43–Apr 44; all in OCT 680–900 NY 1943.

[68] Memo, Farr for McIntyre, 4 Nov 43, sub: St Area Work Load Analysis, OCT HB Farr Staybacks; Memo, CofT for CG ASF, 29 Jan 44, sub: Utilization of Posts, Camps, and Stations, AG 323.3 Trans Gen; Memo, ACofT for PEs, 24 Jun 44; Memo, CofT for Dir Mob Div ASF, 28 Jun 44; last two in OCT HB Meyer Staybacks; Memo, Dir Plans and Opns ASF for CofT, 18 Aug 44, sub: Closing Certain St Areas; 1st Ind, CofT for CG ASF, 23 Aug 44; last two in OCT 323.3 Utilization of Comd Facilities.

allowance of sixty square feet of floor space per enlisted man was cut to forty square feet, but this was found undesirable as a permanent arrangement.[69] Various means were used to avoid holding troops for excessive periods in the staging areas, not only because a slow turnover reduced the number that could be handled over a given period but also because it adversely affected morale and increased the security problem. The port commanders closely co-ordinated the movement of troops to the staging areas with troopship schedules. Home stations were admonished to do a more complete job of processing and training troops so as to lighten the task of the ports. For a time the port commanders were required to report any units which, because of changed priorities or other circumstances beyond their control, remained at the staging areas more than forty-five days so that steps could be taken to have them removed.[70]

Early in the war when theater requirements were uncertain and priorities subject to frequent change, units were sometimes held at the staging areas for many weeks. This situation improved during 1942, and early in 1943 the War Department instructed the port commanders to avoid so far as possible holding units at the staging areas more than two weeks.[71] While that objective could not be attained in all instances, a good measure of success was achieved. Data are not available to show the over-all result, but the figures given in Table 11 for troops staged by the New York Port of Embarkation during 1944 indicate that, during the six months for which the data are available, well over 75 percent of the troops that sailed had spent less than fourteen days at the staging areas, and that in each month of the year the average was well below that figure. The exceptionally low average for the month of May 1944 must be viewed in the light of the extraordinary effort made at that time to get troops to Europe before the invasion of the Continent began.

The rated capacity for staging intransit troops fluctuated greatly. These fluctuations were due to the acquisition or release by the port commanders of staging space at training camps or other stations not normally under the control of the port commanders, the construction of new barracks or the diversion of housing to other uses, and changes in the amount of floor space allotted to an individual. The largest recorded capacity for staging intransit troops was 248,653 in May 1943. At that time several installations that would soon be released because of the completion of new facilities were still listed as staging areas, and the allotment of space per enlisted man had been reduced to forty square feet. During the first seven months of 1944, when the invasion of Normandy was the primary military consideration, the staging capacity averaged 224,000 and the peak number of troops on hand was 187,000. In August 1944 the allotment of space per enlisted man was again placed at sixty square feet, and this together with other adjustments reduced the rated capacity considerably. During the last year of the war the capacity figure fluctuated between 131,000 and 141,000. Dur-

[69] Memo, CofT for CG ASF, 7 Jan 44, OCT HB Wylie Staybacks; Memo, CofT for CG ASF, 29 Jan 44, par. 2*a*, AG 323.3 Trans Gen; WD Cir 321, 3 Aug 44, Sec. V.

[70] Memo, AGF Comd Gp, Fort Dix, for CG ASF, 20 Feb 43; 3d Ind by CG NYPE, 3 Mar 43; 8th Ind by CofT, 1 Apr 43; all in OCT 322 Ord Cos; TC Cir 50-55, 9 Oct 44, sub: Units in St Areas Over 45 Days.

[71] Memo, TAG for CGs AGF, AAF, SOS, *et al.*, 5 Jan 43, sub: Org, Tng, and Equip of Units for Oversea Sv, AG 320.2 (1-3-43).

TABLE 11—TIME SPENT AT THE STAGING AREAS BY TROOPS EMBARKED AT NEW YORK DURING 1944 [a]

Month	Total Troops Departing From Staging Areas	Troops Departing Within 14 Days of Arrival	Percentage Departing Within 14 Days of Arrival	Average Days Spent at Staging Areas
January	104,759	72,492	69.2	11.7
February	145,711	118,241	81.1	9.8
March	99,157	69,175	69.8	10.5
April	94,224	84,791	90.0	8.2
May	95,579	87,411	91.5	5.9
June	89,478	62,316	69.6	8.8
July	103,624	(b)	(b)	8.7
August	139,391	(b)	(b)	7.1
September	128,888	(b)	(b)	9.2
October	174,225	(b)	(b)	7.2
November	127,913	(b)	(b)	9.0
December	96,644	(b)	(b)	7.7

[a] Includes units and casuals staged at Camp Kilmer, Camp Shanks, Fort Slocum, and Fort Hamilton.
[b] Data not available.

Source: January–June figures are from Rpt, NYPE Progress and Activities, for respective months; July–December figures submitted with Ltr, NYPE to Mil Plng & Int Div OCT, 31 Oct 52, OCT HB NYPE St Areas Gen.

ing December 1944 and January 1945, when the outbound troop movement was especially heavy because of the military situation in Europe, the peak number of troops on hand at some staging areas exceeded the rated capacity, but the excess was readily absorbed. In view of these fluctuations, no month can be considered typical. Table 12 gives a spot picture of the staging situation in January 1945, which witnessed the heaviest outbound movement of any month of the war.[72]

The staging areas were under the command of the port commanders throughout the war, but vigorous action on the part of the Chief of Transportation was necessary to keep them in that status. When the service commands were established in July 1942 as successors to the corps areas, there was a strong sentiment in SOS headquarters for the transfer of staging areas to the service commands, and an organizational manual was drafted on that basis. This sentiment was predicated on the fact that the equipping and training of troops, which were important aspects of the staging process, as well as housekeeping at the staging facilities were normal functions of the service commands, whereas the ports of embarkation were essentially transportation agencies.

General Gross attacked the proposal from many angles and won General Somervell's decision to leave the staging areas as they were.[73] The basic argument against the proposed change was the advantage of continuity in the control of troops from

[72] ASF MPR, Sec. 3, gives an analysis of staging each month, based on weekly reports from port commanders.

[73] Memo, Opns Off OCT for Gross, 26 Jul 42, and atchd papers, OCT HB PE Gen St Area Facilities; Min of Conf of CGs SOS, 30 Jul 42, App. to record of afternoon session, Question 40, OCT HB Ex Files.

TABLE 12—CAPACITIES OF TROOP STAGING AREAS AND INTRANSIT TROOPS STAGED: 1–28 JANUARY 1945 [a]

Staging Areas	Rated Gross Capacity [b]	Rated Staging Capacity [c]	Intransit Troops Staged		
			Troops Arrived [d]	Troops Departed [e]	Peak Number on Hand [f]
All Areas	194,636	139,405	258,042	273,211	147,598
Boston:					
Camp Myles Standish [g]	23,464	17,917	46,141	57,729	28,523
New York:					
Camp Shanks [g]	34,686	25,501	64,295	63,240	29,745
Camp Kilmer [g]	37,550	28,006	61,957	54,237	30,786
Fort Hamilton [h]	5,729	1,017	1,560	1,338	512
Hampton Roads:					
Camp Patrick Henry [g]	24,137	17,815	10,577	24,426	17,464
New Orleans:					
Jackson Barracks [h]	5,940	2,622	4,589	4,943	2,085
Los Angeles:					
Camp Anza [g]	7,636	6,020	10,966	11,569	8,923
San Francisco:					
Camp Stoneman [g]	30,677	23,424	20,527	24,470	13,934
Fort McDowell [h]	3,661	2,507	7,368	7,986	2,878
Seattle:					
Fort Lawton [h]	12,524	9,476	28,078	21,277	10,738
Portland:					
Vancouver Barracks [h]	5,964	3,345	1,978	1,983	1,999
Prince Rupert:					
Prince Rupert Staging Area [g]	2,668	1,755	6	13	11

[a] Table does not include a number of facilities used for staging earlier in the war.

[b] Rated gross capacity based on allowance of 60 square feet per enlisted man and 120 square feet per commissioned officer in housing in active status at end of month.

[c] Rated staging capacity was gross capacity less space required for station complement, troops in training at the port, and other non-staging purposes.

[d] Total troops arrived includes 225,446 destined overseas and 32,596 returned from overseas.

[e] Total troops departed includes 238,872 embarked for overseas and 34,339 shipped to stations in the zone of interior.

[f] When peak number exceeded rated staging capacity, the excess was accommodated by reducing the space allowance or by using tents.

[g] These were entirely new facilities. The new staging area built at New Orleans (Camp Plauché) was being used entirely for training. The new staging area at Charleston was no longer required because that port was being used almost entirely for receiving patients from overseas.

[h] These were Regular Army installations improved or enlarged to provide staging facilities.

Source: ASF Monthly Progress Report, January 1945, Sec. 3, p. 16.

their arrival at the seaboard until they had been embarked. Throughout this period the closest possible co-ordination was necessary to insure that the troops were fully processed by the scheduled embarkation dates, that last-minute changes in priorities were accomplished without delay to the vessels or waste of ship space, and that organic equipment was processed and shipped at the proper time. As long as the port commander had direct control of all of these operations he was in

a position to deal with problems as they arose through command decisions. If he should have to negotiate with the service commanders in such matters, the directness and speed of command decisions would be lost. Mutual understanding between the officers in charge of the staging areas, the ships, and the embarkation operation was necessary, and the Chief of Transportation was convinced that this could be best achieved if they were all under one command.

Although the port commanders' control of the operation of the staging areas was thus established, uncertainty still existed regarding the command of troops while they were being staged. The AGF and the AAF wanted to retain command of troops while they were at the staging areas, particularly because of the training that might have to be carried on there and the disciplinary problems that arose, and G-3 concurred in this view. The Operations Division and SOS headquarters supported the view of the Chief of Transportation that such an arrangement would create confusion and hamper the port commanders in their task of processing the troops. The latter view prevailed and in September 1942 the Chief of Staff issued appropriate instructions. Under these instructions all units upon arrival in the staging areas were to pass to the command of the port commanders and of their representatives, the commanders of the staging areas. The Chief of Transportation was to establish at each staging area separate "small permanent command groups" for the AGF, the AAF, and the SOS to assist in controlling units smaller than divisions with respect to discipline, security, and training. These command groups were to provide liaison between the major command headquarters and the troops being staged; it was clearly stated in the instructions, however, that they were not independent of the port commanders but were included among the command echelons through which the port commanders exercised control.[74]

The issues at stake were not entirely resolved by the establishment of command groups. The AGF continued to express dissatisfaction with the command setup, although the complaints abated as the number of units held at the staging areas for abnormally long periods decreased and the training facilities and methods were improved.[75] The AAF alleged that the command groups were being restrained by the port commanders from communicating with their headquarters and so were not fulfilling their purpose. As late as July 1943 some staging areas had not been provided with command groups. The Director of Military Training, ASF, accordingly instructed the Chief of Transportation to take immediate measures to insure that such groups were established in all staging areas requiring them and that liaison between the groups and the major command headquarters was not obstructed.[76]

The Chief of Transportation endeavored to enforce this policy, although it was not

[74] Memo, ACofS OPD for CofS, 4 Sep 42, sub: Comd of Units Ordered Overseas; Memo, CofS for AGF, AAF, and SOS, 12 Sep 42, sub: Control of Units in St Areas; both in WDCSA 370.5 (Secret); Memo, CG SOS for CofT, 21 Sep 42; Memo, CG AGF for Subordinate Comds, 5 Oct 42; Memo, CofT for Port Comdrs, 20 Oct 42; last three in OCT 370.5 Control of Units of St Areas.

[75] Robert R. Palmer, Bell I. Wiley, and William R. Keast, *The Procurement and Training of Ground Combat Troops*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1948), pp. 573–77.

[76] Memo, Dir Mil Tng ASF for CofT, 21 Jul 43, OCT HB Mvmts Div St Area Policies and Procedures.

popular with either his Movements Division or his port commanders. They believed, on the one hand, that the staging area complements were able to provide adequately for the training and other needs of troops during their short stay at the ports before embarkation and that the command groups were therefore unnecessary. They found, on the other hand, that there was a tendency among the command groups to communicate with their headquarters regarding matters that were strictly the responsibility of the port commanders, and that these activities resulted in "a great deal of minor aggravation" and some interference with the processing of troops.[77]

The problems obviously stemmed from an overlapping of interests. The major commands had a natural interest in what happened to their units up to the time they left the zone of interior. The port commanders were anxious to avoid any developments that would cause confusion or delay in the final processing of troops for oversea service since this processing was usually done under great pressure and with deadlines established by convoy or ship sailing dates. The basic difficulty was one of establishing a clear understanding with the command groups regarding the matters that they should take up directly with the port commanders and those on which they should maintain liaison with their command headquarters. In September 1945, the War Department made a final effort to clarify the situation by defining in detail the functions of the groups—then redesignated liaison sections—and re-emphasizing that although these sections were under the command of the port commanders the liaison with their respective headquarters should not be impaired.[78]

When troops detrained at a staging area they were immediately taken in charge by the billeting officer. He was prepared with a billeting plan, based on advance information from the unit commander regarding the composition of the unit and a study of the housing available. In most cases enlisted men were accommodated in mobilization type or theater of operations type barracks, but in the early part of the war when staging was done at permanent Army installations, the use of tents sometimes was necessary. The larger staging areas were divided for administrative purposes into regimental areas, each of which accommodated about 3,000 men and was served by a billeting team. So far as possible units were billeted in adjacent barracks, since that arrangement facilitated processing and aided morale and discipline. White and Negro troops were separated. Enlisted men with their personal equipment were conducted from the train to their quarters by members of the billeting team. Under ordinary circumstances processing was started almost immediately.[79]

The processing of troops at staging areas required attention to many details, and it was an especially onerous task because of the frequent failure of home stations to fully prepare the men for oversea service. There were many reasons for such failures during the early part of the war including

[77] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 62, OCT HB PE Gen Port Comdrs Conf; Memo, Farr for Finlay, 19 Sep 45, sub: Lessons Learned, par. 10, OCT HB Mvmts Div Gen.

[78] WD Cir 193, 16 May 44, Sec. I; WD Cir 270, 8 Sep 45, Sec. V; Memo, CG AGF for AGF Liaison Off SPE, 14 Sep 45, sub: WD Cir on Port Liaison Secs, OCT HB Ex PE—AGF Liaison.

[79] On staging area operations, see lecture by Col Cecil L. Rutledge, comdr of Camp Kilmer, NYPE, at Atlantic Coast TC Off Tng Sch, undated but probably 1943, in OCT HB Fort Slocum Lectures.

shortages of equipment, shortages of training personnel, confusion as to command and supply responsibilities, insufficient time between the receipt of alert notices and the movement dates, and failure of commanding officers of units to follow the prescribed procedures.[80] Efforts to improve the situation included issuing POM and related procedural instructions during 1943, and emphasizing the preparation of complete and accurate unit status reports showing the condition of personnel, training, and equipment before units left home stations.[81]

The responsibility of the staging area for the medical processing of troops was threefold. First, it was required to weed out those individuals who were unfit for oversea service when unfitness was disclosed by the physical inspection made to detect infectious or contagious diseases, by the report of the individual on sick call, or by reports of commanding officers. Second, it was expected to provide treatment to qualify individuals for oversea shipment with their units, if possible, including medical and surgical attention, the correction of dental defects, and the provision of eyeglasses. In addition, the staging area completed the inoculations required for oversea service.[82]

In September 1943 the Chief of Transportation reported that over a period of sixteen months the average number of individuals withheld from oversea shipments by the port commanders because of physical defects had been one half of one percent.[83] The survey on which this report was based disclosed that 10 percent of the troops required dental treatment on arrival at the staging areas, and that 1 percent had defects that would have caused their detention in the zone of interior unless corrected. While he desired that the staging areas deal with such defects as fully as their personnel and facilities would permit, the Chief of Transportation emphasized that the responsibility for the physical condition of troops rested primarily with the home stations. When he learned that some ports in their zeal to correct defects were giving thorough physical examinations to troops upon their arrival at the staging areas and again shortly before embarkation, he directed them to discontinue the first examination, which was not required by War Department instructions and was not necessary when home stations fulfilled their responsibilities.[84]

The port commanders were responsible for bringing units to full strength before they left the staging areas for oversea service. Movement orders usually stated that all vacancies were to be filled before the units left their home stations, but that frequently was not accomplished.[85] In addition, there were the vacancies caused by the withdrawal of men from units at the staging areas for medical reasons. Not infrequently enlisted men went AWOL during the staging period and hence were lost to their units. In order to fill such vacancies the port commanders maintained replacement pools at the staging areas, to which they assigned soldiers who had not been permitted to sail with their units because they needed medical attention, returned AWOL's, and fillers who had failed to arrive in time to sail with

[80] Memo, TIG for CofS, 7 Dec 42, WDCSA 370.5 (Secret).

[81] Memo, ACof S OPD for AGF, AAF, and SOS, 4 Feb 43, WDCSA 370.5 (Secret).

[82] Memo, CofT for PEs, 29 Dec 43, sub: Medical Processing, OCT 370.5 POM 1944; TC Cir 120-3, Changes 1, 1 Feb 44.

[83] Memo, CofT for Contl Div ASF, 25 Sep 43, OCT HB Farr Staybacks.

[84] Memo, CofT for PEs, 21 Mar 44, sub: Physical Exam and Insp at Ports, OCT 370.5 POM 1944.

[85] See POM, pars. 9 and 30*a*.

their units. When these replacement pools did not provide the classes of personnel required, the port commanders called on the AGF, the AAF, and the ASF for fillers. In the early part of the war it was necessary to permit some units to sail understrength and to dispatch fillers on subsequent sailings, but as the replacement pools at the ports were built up and the replacement systems of the major commands were improved, this became unnecessary except on rare occasions when certain types of specialists were in short supply.[86]

It was War Department policy that troops not be sent to the staging areas until they had completed training and had fired the course of marksmanship prescribed for the weapon with which they were armed.[87] These requirements were not always met, however, and the deficiencies had to be made up at the ports. Also, it was considered desirable to continue active training while troops were at the staging areas as a means of preventing deterioration of physical condition and morale. Training personnel and training aids were provided by the port commanders, and when suitable arrangements could not be made for the use of firing ranges at nearby installations such facilities were constructed at the staging areas.[88]

In March 1945, with the demand for troops for the European theater abated, the War Department increased the minimum period of training required before embarkation from thirteen to eighteen weeks. At that time the port commanders were relieved of responsibility for enforcing this requirement except in cases where troops had received their basic training at the ports.[89] Training activities to keep the troops in good physical and mental condition were continued, however, as was instruction in fields that fell peculiarly within the province of the staging areas, such as conduct on transports and abandon-ship procedures. Troops also were instructed in tactics for evasion, escape, and resisting enemy interrogation. The Chief of Transportation objected to the inclusion of the latter type of training in the port commanders' responsibility because he believed that the staging process should be lightened as much as practicable, but his objection was overruled.[90]

Probably the most troublesome part of processing was the completion of the individual equipment of the troops. The staging areas normally supplied certain items, such as gas masks and impregnated clothing, but by far the greater task was providing equipment that the troops should have had when they arrived. Each of the technical services maintained a staff and a considerable stock of supplies at

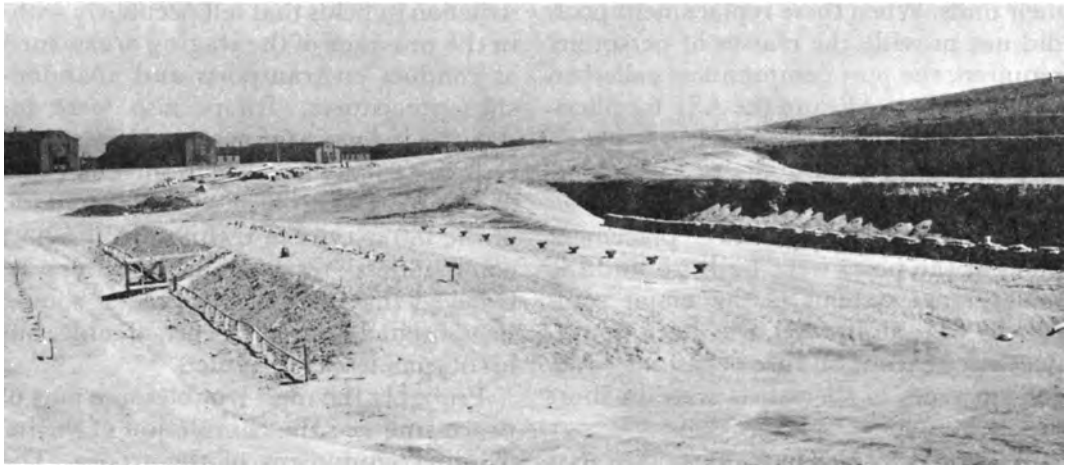
[86] Memo, CofT for TAG, 2 Apr 42, sub: Repl Pools at PEs, OCT 320.2 Gen Trans; Memo, CofT for Mil Pers Div ASF, 10 Apr 43, sub: PE Repl Pools, OCT HB Farr Staybacks; WD Memo W 600-72-43, 23 Aug 43, sub: Overseas Repl System; unsigned article, "Classification and Assignment at a Staging Area," *A.G. School Bulletin*, April 1943, p. 24.

[87] Memo, TAG for CGs AGF, AAF, SOS, *et al.*, 5 Jan 43, sub: Org, Tng, and Equip of Units for Oversea Sv, par. 9, OCT 370.5 POM 1942–43; Memo, CG SOS for CGs SvCs and Tech Svs, 4 Mar 43, sub: Basic Tng for SOS Units, SPX 353 (2-26-43); Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 60, OCT HB PE Gen Port Comdrs Conf.

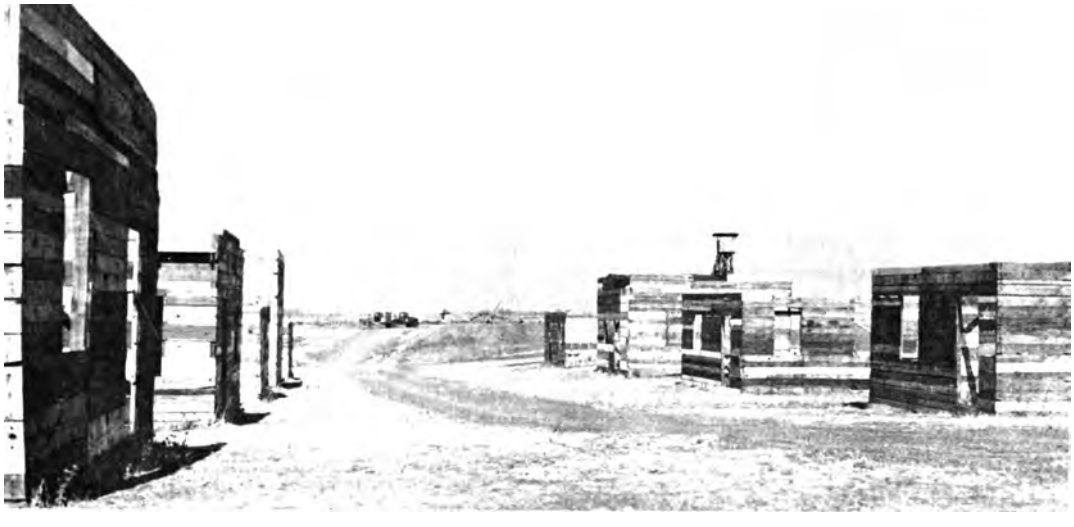
[88] Memo, CofT for PEs, 26 Jan 43, sub: Training Aids; Memo, CofT for Dir Tng Div SOS, 26 Feb 43, sub: Rifle Range; both in OCT HB PE Gen St Areas Facilities; Memo, ACofS G-3 for CG ASF, 9 Apr 43, OCT 370.5 Contl of Units in St Areas. For the types and extent of training at staging areas of the NYPE, see monthly rpt, Progress and Activities, OCT HB NYPE Gen.

[89] Memo by Overseas Troop Br of Mvmts Div, 9 Mar 45, in Mvmts Div Histories for Feb 45, OCT HB Mvmts Div Gen.

[90] Memo, G-2 for CofT, 4 May 44; 1st Ind, CofT for CG ASF, 7 Jun 44; 3d Ind, CofT for G-2, 23 Jun 44; all in OCT HB Meyer Staybacks; Memo, CG ASF for Dir Int ASF and CofT, 12 Jul 44, OCT 370.5 POM 1944.



TRAINING FACILITIES AT CAMP STONEMAN, *staging area of the San Francisco Port of Embarkation. Rifle range (above) and mock village for practice in street fighting (below).*



each staging area; also, facilities were maintained for repairing equipment that arrived in bad condition.

Some of the reasons for the failure of home stations to provide troops with full equipment and to have it in good repair have already been noted. Many items were in short supply, especially during the early part of the war, and the depots could not make shipments promptly upon receipt of requisitions. Often the interval between the alerting of a unit and its departure from the home station was brief. Unit commanders, home station commanders, corps area commanders, and the chiefs of the technical services all had responsibilities in connection with the supply of troops destined for oversea areas, and co-ordination was sometimes faulty. Unit commanders were expected to report

shortages to the technical services as soon as possible, and the technical services were expected to report to the port commanders which items would be shipped to the ports and when they would arrive. Frequently this information was not received at the ports, but they nevertheless had to make up all deficiencies before the troops embarked. Sometimes this was accomplished only by drawing heavily on the port reserves that were maintained to meet emergency requests from oversea commanders.[91]

As a result of the efforts of the responsible agencies and the Mobilization Division in ASF headquarters, there was gradual improvement in the equipping of troops at home stations. The Chief of Transportation employed various measures to secure this improvement. Early in the war he directed his port commanders to set up co-ordinating agencies at the staging areas for the specific purpose of maintaining close liaison with the unit commanders and the chiefs of technical services on supply matters.[92] He also urged that the commanders of home stations be held responsible for positive action to insure that unit commanders gave proper attention to the equipment of their troops, since the former had an opportunity to learn from experience whereas the latter prepared for oversea movement only once.[93] A provision to that effect was included in the second edition of POM, which was issued in August 1943.

When the situation did not improve as rapidly as he had hoped, the Chief of Transportation in conjunction with The Inspector General established a procedure for reporting and tabulating the items of clothing and other equipment issued to soldiers at the staging areas in order to determine how far the respective home stations were falling short of their responsibility. A summary, based on data for the period 15 May–31 August 1944 and listing the home stations individually, was published by ASF in October and circulated to all concerned with the advice that although some improvement had been achieved the situation was still far from satisfactory.[94] Similar data for the period 16 September–13 December 1944 again showed improvement, but not enough to indicate a satisfactory supply performance at home stations. During that period 729,060 troops arrived at the staging areas whose authorized supplies and personal equipment included 42,304,956 items, excluding those that were normally supplied at the ports. The summary showed that 2,325,056 (5.5 percent) of these items were missing and that 1,248,068 (2.9 percent) were not in order for combat service. The total deficiency therefore was 8.4 percent.[95]

At one time during the period when

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[91] Memo, Somervell for Lutes, 17 May 42, ASF Hq Opns Div 1942–43; Memo, Wylie for Gross, 9 Oct 42, sub: Supply of Troops Going Overseas; 1st Ind, Lutes for CofT, 4 Dec 42; Memo, CofT for PEs, 11 Dec 42, sub: List of Items Shipped to Ports; Interv with Col Farr, 4 Sep 46, sub: Troop Mvmts, p. 5; last four in OCT HB PE Gen St Area Procedures; Memo, CofT for ACofS for Opns SOS, 14 Dec 42, sub: Task Force Shortages, OCT 400.61 Shortages 1943.

[92] Memo, CofT for CG NYPE, 12 Aug 42, sub: Rpts on Status of Equip; Memo, CG ASF for Cs of Tech Svs, 3 Oct 42, sub: Supply of Troops at PE; both in OCT HB PE Gen St Area Procedures.

[93] 5th Ind, CofT for CG SOS, 4 Nov 42; Memo, CofT for DCofS for SvCs ASF, 31 Jul 43; both in OCT HB Mvmts Div St Area Policies.

[94] Memo, Lutes for Dir Plans and Opns ASF, 19 Jul 44, ASF Hq Dir of Plans and Opns; Memo, CG ASF for Home Sta Comdrs and Agencies Issuing Mvmt Orders, 31 Oct 44, sub: Processing Deficiencies of Troops at St Areas, OCT 370.5 POM 1944.

[95] Extract from Memo, TIG for DCofS, 8 Jan 45, sub: Readiness of Units for Mvmt Overseas, OCT 370.5 Processing Deficiencies 1945.

constant pressure was being exerted to have troops provided with full equipment before they started for the staging areas, a strong sentiment developed for eliminating the showdown inspection at home stations and placing the responsibility for this inspection, as well as for making up the shortages that it disclosed, solely on the ports of embarkation. Representatives of the service commands attending a meeting held in November 1943 made a definite recommendation to that effect, pointing out the difficulties that home stations and technical services were experiencing in carrying out the existing regulation and the advantages that would accrue from concentrating the responsibility at the ports. The Chief of Transportation was willing to assume the added burden, but he indicated that it would involve a substantial increase in personnel and warehouse space at the staging areas. The proposal was therefore dropped.[96]

Despite the showdown inspections at home stations, the port commanders held similar inspections as soon as possible after the troops arrived at the staging areas in order to establish definitely what items were missing and what were in bad condition. The soldiers spread out their personal equipment before an inspection team, usually in their barracks, and the members of the team immediately took steps to correct the deficiencies. Late in the war, with supplies more readily procurable by home stations and with larger stocks on hand at oversea bases, a revision of the procedure for noncontrolled items became possible. The change was made late in 1944 and was incorporated in the third edition of POM, issued in February 1945. The port commanders no longer were responsible for conducting showdown inspections, and the technical services ceased shipping noncontrolled supplies to the ports earmarked for particular units. The unit commanders conducted the final showdown inspections at the staging areas and informed the port commanders what items were needed to fill shortages and replace unserviceable equipment. The port commanders provided these items so far as possible by withdrawals from their own stocks or by calling on nearby depots. Requisitions for items not supplied before the sailing date were canceled, and the unit commanders submitted new requisitions for these items after arrival in the theaters.[97] Controlled items—those supplied in accordance with the priorities assigned to the respective troop units—continued to be shipped to home stations or ports according to the circumstances.

In addition to the larger tasks of overcoming deficiencies in personnel, training, and equipment, the staging areas had many other responsibilities in connection with the final preparation of troops for departure overseas. Assistance was given in handling such personal matters as insurance, pay allotments, purchase of savings bonds, taxes, wills, powers of attorney, and various aspects of domestic relations. Service records were checked and brought up to date. Payrolls were prepared and wages were paid in full unless already paid as of the last payday.[98] Considerable

[96] Memo, Dir of Supply ASF for Dir of Plans and Opns ASF, 13 Nov 43, sub: Suggested Revision of POM; Memo, CofT for Brig Gen Frank A. Heileman, Dir of Supply ASF, 30 Jan 44, sub: T/E 21 Showdown Inspection; both in OCT 370.5 POM 1944.

[97] See Memos, CofT for PEs, 22 Nov 44 and 23 Feb 45, sub: Proposed Supply Procedure, OCT 370.5 POM.

[98] Uncertainty as to the necessity of and the port's responsibility for seeing that troops received their pay before sailing was removed by WD Cir 106, 4 Apr 45, Sec. III, and TC Cir 50-57, 10 Apr 45.

attention was given to "special service" activities, which included athletics, theatricals, motion pictures, concerts, libraries, and clubs for the entertainment of the soldier, and lectures and discussions for his orientation to the life that lay ahead. Each of the larger staging areas published a newspaper devoted chiefly to news of the camp. The division of responsibility between the port commanders and the service commanders led to misunderstanding and delay in providing facilities for special service activities at certain ports, but a vigorous directive from General Somervell and a close follow-up by the Chief of Transportation corrected this situation.[99]

Other aspects of the staging operation were given close attention because of their bearing on morale. The staging period was a trying one for many soldiers, particularly those with family responsibilities. Much depended on the condition of the unit when it arrived and the character of its leadership, but in any case the staging area had an important role in keeping the soldiers' spirits up and holding disciplinary problems down.

With this in mind, the Chief of Transportation insisted that the staging installations be kept clean and operated in an orderly and efficient manner. In line with this policy, he directed late in 1943 that the commanding officer at Camp Patrick Henry, staging area of the Hampton Roads Port of Embarkation, be relieved, although he conceded that that officer had been handicapped by physical conditions at the camp and too close supervision by the port commander. An officer who had proved his qualification at another staging area was assigned to the post.[100]

Constant attention was given to staging-area messes as factors affecting morale. The Chief of Transportation wanted these messes to provide "the best food in the Army," but he found that in some instances they fell far short of that ideal. Early in 1944 he arranged for the assignment of a food service specialist from the Quartermaster Corps to aid him in correcting deficiencies by making regular inspections and recommending improvements. The aim was to have the messes operated entirely by the staging area complements, and port commanders were under instruction to assign transient troops to mess details only in emergencies.[101]

The processing of replacements was similar to the processing of troop units, although it differed in some respects. In 1943 the growth in demand for replacements for the active theaters necessitated a clear definition of the oversea replacement system.[102] Replacement training centers were established by the AGF, the AAF, and the ASF, and these commands also set up replacement depots near the seaboard where replacement troops were received for classification, checking of

[99] ASF Cir 77, 14 Sep 43, Sec. IV; Memo, Somervell for Gross, 15 Jun 43, with Ind, Gross to NYPE, OCT HB Gross St Areas; Ltr, Farr for Col James K. Herbert, CO LAPE, 20 Feb 45, Oct HB Farr Staybacks; Remarks by Gen Groninger, CG NYPE, in Min of Port Comdrs Conf, Boston, 30 Aug–1 Sep 43, p. 39, OCT HB PE Gen Port Comdrs Conf.

[100] Ltr, Gross to Brig Gen John R. Kilpatrick, CG HRPE, 21 Dec 43, and related documents, in OCT HB Gross St Areas. On the general subject see other documents in this file; also ASF Staff Conf, 25 May 43, p. 2.

[101] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 93–94, OCT HB PE Gen Port Comdrs Conf; TC Cir 120-3, 1 Jan 44, Sec. III; Memo, ACofT for CG NOPE, 22 Jan 45, OCT HB Wylie Staybacks.

[102] WD Memo W 600-31-43, 26 Mar 43, sub: Oversea Repl System; WD Memo W 600-72-43, 23 Aug 43, same sub. For a general discussion of the replacement system, see Palmer, Wiley, and Keast, *op. cit.*, pp. 169–239.



STAGING AREA RECREATIONAL FACILITIES *for New York Port of Embarkation. An entertainment program is presented at the amphitheater, Camp Kilmer, New Jersey (above); the library at Camp Shanks, New York (below).*



qualifications, and formation into casual detachments or companies for shipment overseas.[103] While the replacement system was being developed, the question arose whether replacement depots could be located at the ports as had been the case during peacetime. The Chief of Transportation opposed any such plan because he foresaw that the movement of replacements would be heavy and that all available facilities at the staging areas would be needed for the regular staging operation.[104] Although the replacement depots were responsible for the full processing of replacement troops, the port commanders nevertheless were required to make up any deficiencies that existed when the troops reached the staging areas.[105]

The casual detachments or companies formed by the commanders of replacement depots were placed under the command and supervision of commissioned and noncommissioned officer replacements who were part of the same shipment. This command arrangement continued while the troops were at the staging areas and until they arrived at their oversea destinations. The staging areas found that casual officers sometimes felt little responsibility for control of the men under them, thus throwing an unusual burden of administration and discipline on the staging area personnel. To rectify this situation, the War Department stipulated that when shipments of replacements numbered more than 200 enlisted men, the commanders of replacement depots would assign officers from their station complements to act as escorts for the shipments and assist with the processing and administration of the troops throughout the journey overseas.[106]

Although they did not always complete the job, the replacement depots relieved the staging areas of much of the processing that would have been necessary if the troops had moved directly from replacement training centers to the ports. In some instances, when requests for replacements received from overseas commanders called for quick dispatch, the port commanders sent processing teams to the replacement depots to aid in the preparation of the troops so that they could be moved to shipside without passing through the staging areas.[107]

The problems of maintaining secrecy in troop movements was intensified while the troops were at the staging areas. The troops knew that they were on their way overseas and speculation was rife regarding sailing dates and destinations. Sometimes details from secret orders were carelessly allowed to get into the hands of persons who were not authorized to receive such information. Many measures were employed to make soldiers realize the importance of not giving out information that might be of value to the enemy, but complete censorship could not be imposed. Because of the effect on morale, it was not considered advisable to hold troops incommunicado between the time

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[103] WD Memo W 600-35-43, 12 Apr 43, sub: Opn of ZI Pers Repl Depots; Changes 1, 11 May 43; Changes 2, 7 Sep 43.

[104] Min of Port Comdrs Conf, Boston, 30 Aug–1 Sep 43, pp. 232–33, OCT HB PE Gen Port Comdrs Conf.

[105] Memo, CG ASF for CofT, 9 Aug 43, OCT HB Farr Staybacks; POR, 1 Oct 43, par. 3*b*.

[106] Memo, Cof T for Mil Pers Div ASF, 18 Sep 43, OCT 322 Activation of Units; Memo, TAG for AGF, 27 Sep 43, sub: Org of Casuals Prior to Staging, AG 320.2 (18 Sep 43); Wd Memo W 600-72-43, Changes 2, 12 Nov 43; WD Cir 317, 31 Jul 44, par. 6.

[107] 2d Ind. CofT for CG NYPE, 9 Sep 43, OCT HB Farr Staybacks; Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, Mtg of Port Opn, Troop Mvmt, and Equip Representatives, 8 Jul 44, p. 13, OCT HB PE Gen Port Comdrs Conf.

of their arrival at the staging area and the date they were alerted for embarkation.[108] Yet their conversation in public places, their local and long-distance telephone calls, their letters to friends and families, and the visits of friends to the staging installations furnished constant opportunity for the leakage of information on the time and direction of prospective movements. Information in the hands of the station complements at the staging areas, which included both military and civilian personnel, also had to be guarded. The many aspects of this problem commanded the constant attention of the intelligence officers at the ports, the Intelligence and Security Division of the Office of the Chief of Transportation, The Inspector General, and G-2 of the General Staff.[109]

The emotional state of troops about to move overseas was conducive to irresponsible acts and disorder. Group disturbances were most likely to involve Negro troops since Negroes comprised the largest group subject to racial tensions.[110] Although the Chief of Transportation tried to forestall trouble by insisting that there be no discrimination between races in the assignment of barracks, mess halls, and recreation facilities, the possibility of disorder was always present. Contributing causes were lack of leadership on the part of some unit commanders and the limited number of military police available. Following two disturbances that occurred at staging areas in 1944—one at Fort Lawton, Washington, and the other at Camp Patrick Henry, Virginia—General Gross instituted special measures for preventing and handling such situations.[111] He emphasized that the port commanders and staging area commanders had primary responsibility, and that they could not delegate that responsibility to others. Adequate officer supervision of troops being staged was to be assured at all times. Daily inspections were to be made and any evidences of racial tension promptly reported. The commanding officers of staging areas were to go immediately to the scene of any serious disorder and personally take charge of the effort to quell it. Immediate and thorough investigations were to be made to apprehend the instigators and the participants, and appropriate disciplinary action was to be taken against such persons "without exception." These measures were effective, and no further disturbances of consequence occurred at the staging areas during the war.[112]

The port commanders made regular reports to the Chief of Transportation on staging area operations, and they in turn

[108] Memo, CofT for PEs, 3 Nov 42, sub: Measures for Enforcing Secrecy, OCT HB PE Gen St Area Procedures.

[109] The extent of the problem is indicated in the following: Memo, G-2 WDGS for Int Br OCT, 5 Feb 43, sub: Revealing Mil Info, and incls, OCT 370.5 Secrecy; Memo, CO Camp Myles Standish for CG BPE, 28 Oct 43, sub: Censorship Violations at St Area, OCT 000.900 Camp Myles Standish 1943; Memo, CG ASF for CofT, 6 Mar 44, sub: Censorship Instructions at St Areas, and atchd SOP for Censorship Contl Off at St Areas; Rpt of Base Censorship at PEs, source not shown, for weeks in late 1943 and early 1944; last two in OCT 000.73, 1943–45; Memo, CO Camp Myles Standish for CofT, 14 Oct 44, sub: Violations of Security, OCT 000.72 TC Misc.

[110] On the general question of disturbances involving Negroes, see Lee, The Employment of Negro Troops in World War II, Chs. XIV, XV.

[111] Lack of preparation and alertness at Fort Lawton were indicated in Memo, Asst IG SPE for CG SPE, 28 Aug 44, sub: Prelim Rpt on Negro-Italian Riot, 14 Aug 44, and later rpts; 2d Ind, CofT for CG SPE, 7 Nov 44; all in OCT 291.2 Ft Lawton; for resulting directive see Memo, CofT for Port Comdrs, 16 Nov 44, sub: Handling of Racial Disturbances, OCT HB Ex Staybacks.

[112] The nature of the problems and the measures adopted at Camp Kilmer are illustrated in Rpt, Special Committee to CG ASF, 12 Jan 45, sub: Insp of Facilities for and Problems Relating to Negro Pers, OCT 331.1 Camp Kilmer.

obtained the reactions of the commanders of units being staged. In the fall of 1944 the Chief of Transportation directed that a report be obtained from each unit commander just before he sailed. For this purpose a single-page form was provided, on which the unit commander was to place a check opposite each of the listed activities to indicate whether he considered the performance excellent, satisfactory, or unsatisfactory.[113] Although it was recognized that this report would give the impressions of an officer who had witnessed only a small part of the staging operation and had little knowledge of the conditions under which that operation was carried out, the Chief of Transportation believed that a comparison of the reports would provide a useful guide in working out further improvements in personnel, facilities, and procedures. The Chief of Transportation sent a chart summarizing the reports pertaining to each staging area to each port commander monthly.[114] Although some unit commanders indicated that they considered certain activities unsatisfactory, the preponderance of checks in the "excellent" and "satisfactory" columns brought a strong commendation from General Somervell for the over-all success of the staging operation.[115]

This was the judgment on staging areas late in the war. Earlier there had been frequent and sometimes severe criticism, and the Chief of Transportation had been well aware of the need for improvement not only in the mechanics of staging but also in maintaining morale and discipline.[116] The complexity of the staging operation, the mental state of the troops, and the pressure under which staging usually was done combined to make this phase of the transportation task an especially difficult one. In his efforts toward improvement the Chief of Transportation was aided on the one hand by the emphasis that his superiors placed on the importance of the activity, and on the other hand by the close attention that the port commanders gave the subject.

Embarkation Procedures

Preparation for embarkation began at the staging area twenty-four to seventy-two hours in advance of the troops' departure. This preparation involved coordination between the Troop Movement Division of the port, staging area officials, and the commanders of the units or casual groups involved. It included the formulation of a detailed plan covering the movements of the troops from the time they left the staging area until they had been installed in their quarters on the ship. The passenger list, initially prepared at the staging area with names arranged alphabetically, was the key document. From it groups were set up and schedules were established for transporting the troops to the pier and for embarking and billeting them. The usual practice was to chalk on the soldier's helmet the number that appeared opposite his name on the passenger list. This was done as soon as the unit was alerted and the number indicated his place in all movements that took place subsequently. While the bulk of the troops and their TAT (to accompany troops) equipment were being organized for em-

[113] TC Cir 50-55, 9 Oct 44, sub: Units in St Areas Over 45 Days; OCT Misc Ltr 14, 13 Jan 45, sub: Unit Comdrs Rpt, OCT HB PE Gen St Area Procedures. Completed reports filed under OCT 370.5 grouped by staging areas.

[114] See Memo, CofT for CG SPE, 30 May 45, and incl, OCT 319.1 Ft Lawton.

[115] Ltr, Gross to Kilpatrick, CG HRPE, 5 Sep 45, OCT HB Gross Day File.

[116] See Memo, CofT for CG ASF, 20 Jan 44, sub: Current and Anticipated Problems, problems 16 and 17, OCT 319.1.



INDIVIDUAL EQUIPMENT READY TO BE CARRIED *by soldiers en route to the San Francisco Port of Embarkation, May 1942.*

barkation, an advance party was already on the ship preparing for their arrival. This party included a loading detail, a guard detail, a mess detail, and a medical detail.[117]

Although organizational equipment was shipped separately, the soldier was accompanied on his journey overseas by his individual equipment, the greater part of which was placed in two barracks bags. Usually the "A" bag remained in his possession throughout the voyage, while the "B" bag was stowed in the ship's baggage or cargo spaces. In addition to the A bag, the soldier carried his weapon, helmet, gas mask, and pack—all together a heavy load. When barracks bags were inspected at the staging areas an effort was made to eliminate from the A bag any equipment that would not be required during the voyage, but the tendency among enlisted men was to put as much as possible in the A bag, and they often encumbered themselves further with musical instruments and other personal possessions. Many officers complained about the heavy burden the men had to carry whenever they moved and about the congestion that the A bags created in the limited sleeping quarters

[117] Considerable information used in this section has been taken from an address, "Troop Movement Embarkation," by Lt. Col. Leo J. Meyer, Troop Movement Officer, NYPE, at the Atlantic Coast TC Officers Training School, Fort Slocum, N.Y., during the spring of 1943, filed in OCT HB Fort Slocum Lectures. Although practices differed somewhat at the different ports, they followed the same general pattern.

on the troopships, but no substantial reduction was made in the load. The barracks bag was redesigned during the war with the intention of making it more manageable. There were differences of opinion, however, as to whether the new bag was an improvement over the old one from that standpoint. In some instances, when conditions at the oversea port of debarkation were favorable, both barracks bags were stowed in the ship's hold and the soldier carried something similar to a small laundry bag, but this was not a general practice.[118]

The movement from the staging area to the pier was arranged by the port transportation officer. The Traffic Control Division in the Office of the Chief of Transportation did not undertake to route this traffic when it involved only a short haul between two stations under the same port commander. The movement was made by rail, motor, or small boat according to the circumstances, and sometimes by a combination of carriers. At New York, troops leaving Camp Kilmer or Camp Shanks usually were transported by rail to Jersey City, where they were transferred to ferry boats that discharged them at the river end of the pier where the transport was docked. Late in the war the San Francisco Port of Embarkation experimented with docking a Liberty ship at Camp Stoneman and embarking troops there, but this did not become a practice because of navigational difficulties.[119] The location of most staging areas rendered this procedure either impossible or impracticable. Throughout the journey from the staging area to the transport the troops remained in passenger-list order, according to the numbers on their helmets.

The same order was maintained after arrival at the pier. Generally there was a short pause while units that had arrived earlier were being checked at the gangway. During this interval refreshments were served by Red Cross workers. When a unit's turn came, the troops approached the embarkation desk in single file and in passenger-list order. In addition to the personnel team, which was present to check the men against the passenger list and the service records, the unit commander or some other officer was there to identify each individual. When a soldier's name was called, he responded, received his compartment number, and immediately boarded the ship. When no one responded to the name read, that name was scratched from the passenger list and the corresponding service record was withdrawn. Steps then were taken to account for the individual's absence, and the information obtained was entered on the list and the record. Usually absences were due to late withdrawals of men from units on account of physical or mental illness. Although the number of men who went AWOL while at the staging area constituted a considerable problem, there was little opportunity for this to occur after the unit had been alerted for embarkation. Company grade officers usually followed their men into the ship immediately so as to observe their billeting. Field grade officers usually went aboard later.

The entire embarkation program was timed so as to move the troops through one phase to another with as little delay as possible. As experience was gained the ports succeeded in executing embarkations with remarkable precision. This pre-

[118] Remarks by Col Robert R. Litehiser at Mtg of Port Opn, Troop Mvmt, and Equip Representatives, 8 Jul 44, in Min of Port and Zone Conf, OCT HB PE Gen Port Comdrs Conf.

[119] Ltr, SFPE to author, 9 Feb 51, OCT HB SFPE Camp Stoneman.



ARMY NURSES ENTRAINING AT CAMP KILMER *for the New York Port of Embarkation.*

cision was especially necessary in moving troops along the pier and into the ship, because they all passed over one or two gangways and there was a consequent threat of congestion in the narrow passageways on the vessel. The danger that this last phase of embarkation might become a bottleneck was reduced by careful scheduling and by thorough instruction of the loading and the guard details, which had arrived in advance of the troops. In the case of the British troopships *Queen Mary* and *Queen Elizabeth,* which sometimes embarked as many as 15,000 soldiers on a single voyage, the loading was accomplished in as little as five hours from the time of arrival of the first troops at the pier to the passing of the last man over the gangway. When the U.S. Army began using the Queens for moving troops to England in 1942, the embarkations were slowed by differences in British and American practices, but these differences were soon adjusted through close co-operation between representatives of the British Ministry of War Transport in New York and the New York Port of Embarkation.[120]

As soon as embarking troops crossed the gangway they were taken in charge by members of the loading detail and guided to their quarters.[121] Upon arrival at his compartment the soldier was instructed to

[120] Interv with Lt Col Leo J. Meyer, 31 Jan 51, OCT HB PE Gen Troop Embarkations.

[121] For instructions to loading officers, see Ship's Regulations, USAT *George Washington,* 25 Jun 43, par. 17, OCT 232–900 *George Washington.*



TROOPS LEAVING CAMP MYLES STANDISH *for the Boston Port of Embarkation.*

arrange his equipment as snugly as possible in the limited space assigned to him and then to get into his bunk and remain there until announcement was made that the embarkation had been completed. Usually the men were glad to avail themselves of the opportunity to rest, and this was particularly true when embarkations were made late at night. Such movements as were necessary were closely controlled by the guard detail. These controls were necessary because, if the troops already on board had been permitted to move about, the billeting of those arriving later in the crowded compartments would have been impeded.

The billeting plan was worked out in advance by the port's embarkation staff and was checked with the actual accommodations after the ship arrived in port.[122] Since this plan was co-ordinated with the transportation plan under which the troops were moved from staging area to shipside, last minute changes in billeting were kept to a minimum. In billeting enlisted men the basic objective was to keep units together, since that arrangement aided the exercise of command and the control of movement. To the same end noncommissioned officers were billeted with the enlisted men, and commissioned officers of company grade were placed in

[122] WD FM 55-105, Water Trans, Ocean-going Vessels, 25 Sep 44, p. 43. The billeting plan for the large British transports was worked out in conjunction with representatives of the BMWT and the master.

staterooms as near their men as possible.[123] Officers normally were assigned to staterooms by the port commanders in accordance with their military rank. An AAF proposal that length of combat service also be considered in making such assignments was rejected by the Chief of Transportation as "impracticable."[124]

The transport commander was authorized to consider complaints regarding billeting and to take corrective action when the objections were valid and changes were possible. Such complaints were inevitable despite the care generally used in preparing the billeting plan, and the plan was not always above criticism.[125] The tactful transport commander usually could appease dissatisfied officers by arranging an exchange of accommodations or explaining why this could not be done. On a heavily booked transport changes in the berthing of enlisted men were virtually impossible.

The number of troops placed on a transport depended on the facilities that the vessel provided, the urgency of oversea requirements, the season, and the length of the voyage. Three capacities were established for each vessel—normal load, overload, and maximum load.[126] The normal load was reckoned from the number of berths normally available. Overloading required that two men use the same bunk alternately, and might involve the installation of additional temporary bunks. Maximum loading was overloading carried to the practicable limit. The assignment of two soldiers to the same bunk—generally referred to as double bunking—did not mean that twice the normal load could be carried, for the maximum load was usually determined by the capacity of the messing facilities or by the extent of the deck spaces and public rooms available for recreation and other activities.[127] In all cases the total number of passengers and crewmen was kept within the capacity of the lifesaving equipment, and the ports complied with other rules pertaining to the safety of passengers established by the Navy and the Coast Guard.[128]

Overloading is necessary when large forces must be moved overseas because the normal shipping capacity does not equal the emergency requirements. It is unavoidable in wartime and when properly controlled does not impose a serious hardship on the soldiers.[129] The Transportation

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[123] Memo, CofT for CG NYPE, 18 Jul 42, sub: Rpt of Investigation, *Queen Elizabeth*, OCT HB Meyer Staybacks; Memo, CofT for PEs, 27 Dec 43, sub: Combat Crews, OCT HB Farr Staybacks.

[124] Memo, CofT for CG AAF, 19 Aug 44, sub: Treatment of Crew Pers Returning from ETO, OCT HB Farr Staybacks.

[125] To illustrate, see Memo, British Army Staff for WD, 10 Jul 43, and CofT's reply, 20 Jul 43, sub: Asgmt of Off; both in OCT 524-541.1 N.Y.; Memo, Col M. Cordero for TAG, 19 Oct 44, and Memo, CofT for CO LAPE, 10 Apr 45, sub: Shipt 2086; both in OCT 333.7 *General A. F. Anderson.*

[126] Memo, Mvmts Div for Water Div OCT, 17 May 43, sub: Capacity of Troopships, OCT HB Farr Staybacks; TC Cir 80-12, 22 Jan 44, sub: Capacity of Pers Transports, and atchd OCT Form 46, OCT HB PE Gen Transport Capacity.

[127] Ltr, Farr to author, 14 Feb 50, OCT HB Mvmts Div Gen. The first double bunking in World War II was on the *Siboney*, the *Thomas H. Barry*, and the *Arthur Murray*, which sailed from the NYPE for the United Kingdom on 31 May 1942; Memo, Opns Off for Water Div OCT, 15 May 42, sub: Increased Troop Capacities; Memo, CofT for CG NYPE, 20 May 42; Memo, Col Claude E. Stadtman for CG NYPE, 9 Jun 42, sub: Overloading of *Siboney;* last three in OCT HB Meyer Staybacks; Rpt, 11 Jun 42, by Lt Col Peter C. Hains, CO of Troops, *Thomas H. Barry*, OCT HB PE Gen Troop Embarkation.

[128] Memo, CofT for PEs, 17 Aug 42, sub: Maximum Allowable Number of Passengers, and atchd Memo, DCofS US Fleet for Dir Convoy and Routing Sec USN, 15 Aug 42, sub: Limitations on Number of Passengers, OCT 541.1 Small Groups.

[129] Memo, TIG for CofS, 9 Sep 42, sub: Overseas Mvmts, WDCSA 370.5 (Secret).

Corps adapted the practice to the various types of vessels, recognizing that some of them were more suitable for overloading than others. It took cognizance of the fact that soldiers could endure conditions on the shorter and cooler North Atlantic voyages that would become intolerable in the tropics or on the long transpacific routes. Cold or stormy weather, which made it impossible to quarter troops on the decks, necessitated limiting the load to the number that could be properly accommodated within the superstructure and below deck, where the capacity of the ventilating system often was a limiting factor.

From a medical standpoint it was preferable to limit troopship loads during the winter months to the normal capacity, but such a policy could not be applied uniformly since it would have seriously retarded the build-up of military strength overseas.[130] When the demand for troops in the European theater eased somewhat during the late winter of 1944–45, the Chief of Transportation authorized the port commanders to avoid overloading so far as possible and to distribute the troops to be moved among the scheduled vessels in such a way as to obtain maximum comfort.[131] During the summer and fall of 1945 overloading was again resorted to as a means of redeploying and repatriating troops as rapidly as possible.

Since troopship capacity usually was less than the military authorities desired, every effort was made to see that ships did not sail with empty passenger spaces, but full loading could not be uniformly accomplished. Late changes in priorities and the failure of some troops to arrive at the ports sufficiently early were among the reasons for allowing ships to sail with empty passenger spaces. The port commanders frequently had troops on hand that could be substituted in such contingencies, but this was not always the case. A ship sailing to several oversea ports with small numbers of troops to be delivered at each might sail with some of its bunks unoccupied. Cargo vessels, with limited passenger capacities, often were destined for ports where no troops were needed. A study of 187 ships that sailed from American ports under Army auspices in May 1944 produced some interesting data. These data must be viewed with some reservations because of the short period covered and the elasticity of the rated capacities—it must be assumed that normal capacities are referred to—but they nevertheless are significant. The troopships with spaces for more than 2,000 men were loaded to 99 percent of capacity. Vessels capable of carrying not over 500 passengers were loaded to only 49 percent of capacity. Taking the group as a whole, the loading was 88 percent of capacity.[132]

Secrecy with regard to troop embarkations obviously was necessary, but there were different opinions as to the measures required to insure it. Some aspects of security pertaining to troops en route to the ports and at the staging areas have already been mentioned.[133] The primary purpose of secrecy was to avoid disclosing sailing dates and unit designations. During the early months of the war instructions were issued to insure that information pertaining to prospective troop movements and ship sailings was restricted to the smallest practical numbers of persons,

[130] Memo, Port Surgeon for CG HRPE, 13 Dec 43, sub: Overloads in Winter; 1st Ind, CG HRPE for CofT, 14 Dec 43; both in OCT HB Farr Staybacks.

[131] Msg, CofT for CGs NYPE and BPE, 13 Mar 45, OCT HB Farr Staybacks.

[132] ASF MPR, Jul 44, Sec. 3, p. 44.

[133] See above, pp. 123–24.

both in the War Department and at the ports.[134] Some months later the Chief of Transportation announced that it would be standard operating procedure at all ports for embarkation to take place under cover of darkness.[135] But provision was made for exceptions and the exceptions were numerous, since it was recognized that nighttime embarkation had limited security value. Moreover, many ships that were loaded at night sailed in broad daylight.

The Army regulation on security of information effective in 1942 provided for the exclusion of persons not having official business from the piers and forbade the playing of bands at embarkations. In April 1943 the latter prohibition was withdrawn and port commanders were permitted to use bands when they believed security would not be jeopardized.[136] There was sharp difference of opinion in the War Department on the application of security rules to the use of bands and Red Cross personnel. The Chief of Transportation believed that to have a band playing while troops were entraining at the staging areas and while they were embarking at the ports was an excellent means of bolstering morale.[137] He also favored permitting members of the American Red Cross to distribute food to troops while they were on the piers waiting to embark. These views were concurred in by General Somervell, OPD, and G-1, but G-2 took an opposite stand.[138]

The matter came to a head in the summer of 1943, when the British Chiefs of Staff entered a protest with the Combined Chiefs of Staff against bands and Red Cross activities on the piers so far as they affected the larger British vessels, and also against the admission of press representatives to the piers during embarkations.[139] The Inspector General was directed to investigate the matter and his conclusion was that the use of bands and Red Cross activities did not constitute a breach of security.[140] General Marshall then reported to the CCS that the presence of the press at the embarkation that gave rise to the British protest had been a special occasion arranged by the Acting Secretary of War and that newspaper stories had not been published until after the ship had reached its oversea destination. General Marshall further stated that the use of bands and the admission of Red Cross workers to the piers would be continued but that they would be strictly controlled.[141] This was the policy followed for the remainder of the war.

Not all port commanders were agreed on the practical value of dispensing food on the piers, but the majority favored the practice.[142] There was general agreement among them regarding the value of bands, which they believed not only buoyed the

[134] Memo, ACofS G-4 for CofS, 11 Feb 42, sub: Dissemination of Info; Memos, C of Trans Br G-4 for PEs, 14 and 25 Feb 42; all in G-4/29717-118.

[135] Memo, CofT for PEs, 1 May 42, sub: Security and Secrecy Measures, OCT 000.72.

[136] AR 380-5, 28 Sep 42, par. 65*a* and *b*, and Changes 10, 20 Apr 43.

[137] Memo, CofT for Col Fremont B. Hodson and other officers of OCT, 3 Oct 42, OCT HB Gross Day File.

[138] Memo, ACofS G-1 for CofS, 12 Apr 43, sub: Use of Bands, WDCSA 370.5 (Secret); Memo, G-2 for CG ASF, 16 Jul 43, sub: Activities at PEs, CCS 371.2 (7-8-43).

[139] CCS 273, 8 Jul 43; CCS 273/1, 28 Jul 43.

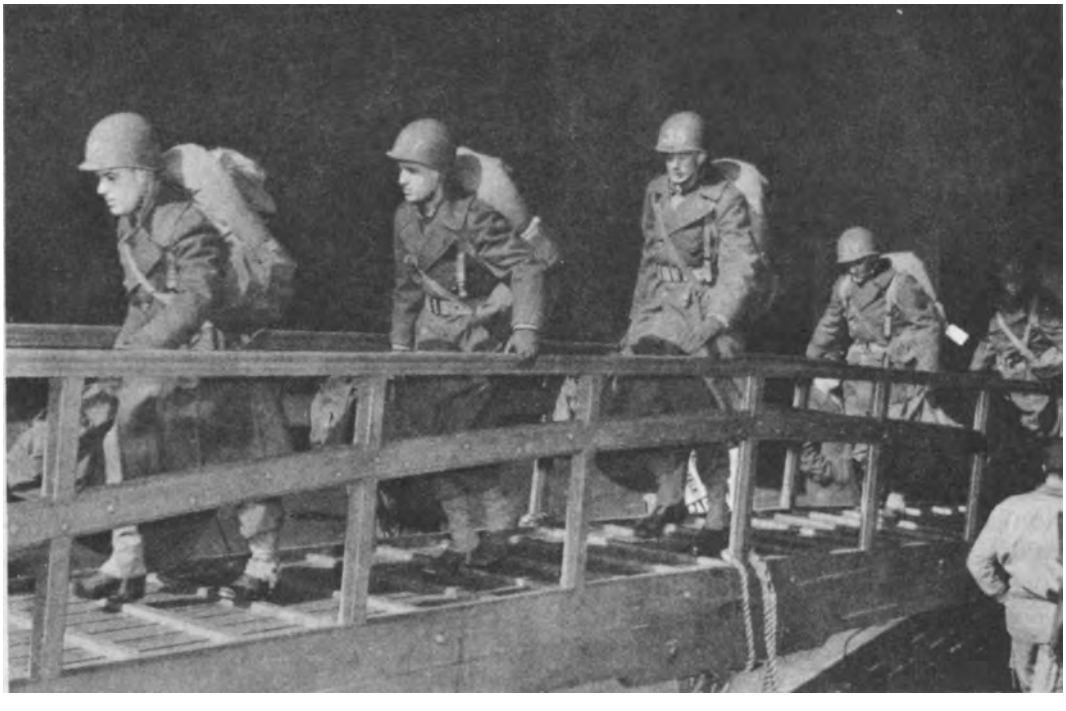
[140] Memo, TIG for CG ASF, 21 Jul 43, sub: Security Arrangements During Emb, ASF Hq Somervell File 1943.

[141] CCS 105th Mtg, 6 Aug 43, Item 8; Memo, CofT for CG ASF, 11 Aug 43, OCT 370.5 Agencies at Ports; Memo, CofT for PEs, 7 Oct 43, OCT HB Farr Staybacks.

[142] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 90–91, OCT HB PE Gen Port Comdrs Conf.



NIGHT EMBARKATION. *Troops are checked with the passenger list at the embarkation desk (above), and file over the gangway in numerical order (below).*





RED CROSS WORKERS WAVING TO TROOPS *aboard an Army transport leaving the Boston Port of Embarkation.*

morale of the troops but helped the embarkation officers to keep them in proper order and moving briskly.

Immediately after each troopship departure the port of embarkation made a full report to the War Department. Copies of passenger lists as corrected at the gangway were sent to the Chief of Transportation and The Adjutant General, and copies, of course, were given to the transport commanders. Various summaries were required by the Chief of Transportation showing the passengers according to shipment numbers, types of personnel (units, replacements, fillers, and so forth), and arms and services. The summaries also showed the control status of each ship—that is, whether it was under control of the Army, the Navy, and War Shipping Administration, or a foreign nation.[143]

Because of the submarine menace it was considered desirable to notify relatives as soon as soldiers arrived overseas. This was accomplished in the beginning by having "safe arrival cards" prepared before the ship sailed, and mailing them from the port of embarkation as soon as a message was received that the vessel had arrived at its destination. Early in 1943 the style of

[143] AR 55-385, 31 Dec 42; TC Cir 50-8, revised, 10 Apr 44, sub: Passenger Lists and Passenger Summaries; TC Cir 50-23, 27 Apr 44, sub: Classification of Outbound Passengers.

card was changed so that reference to safe arrival was omitted and only the Army Post Office (APO) number and the cable address were given. Later in the same year the procedure was again changed and a V-mail form was provided. The V-mail form was filled out at the port of embarkation or on the ship but was not mailed until after the soldier had arrived overseas and his APO number and cable address had been definitely established. This procedure prevented the large amount of misdirected mail that had resulted from the use of tentative APO numbers.[144]

In 1942 when many National Guard units were being sent overseas, General Marshall made it a practice to send personal letters of notification to the governors of the respective states as soon as the arrival of the ships at destination had been reported. While he intended that the governors, through means at their disposal, should notify relatives of the members of the units, General Marshall pointed out that the code of wartime practices would not permit the publication of this information in the press.[145]

The great majority of the troops sent overseas were not expected to land against opposition and were therefore embarked according to the regular procedures. When task forces were embarked to assault hostile shores, the embarkation requirements were somewhat different. In that case the entire personnel constituted a combat team and their billeting was governed by that fact. Also, so far as possible the organizational equipment and supplies were loaded in the same ship with the troops and were stowed in such a way that they could be put ashore quickly and in the order in which they would be needed. The vessels in such operations were said to be combat loaded; they were small or medium types and were specially equipped for the purpose. The billeting of troops and the stowing of the impedimenta were determined by the force commander, although he usually made his plans in consultation with the port commander.[146]

Although most amphibious assaults were mounted in the theaters, a few were mounted at home ports. The first large assault force loaded at a U.S. port during the war was the Western Task Force, commanded by Maj. Gen. George S. Patton, Jr., which participated in the invasion of North Africa. The major elements were loaded at the Hampton Roads Port of Embarkation in October 1942. The time for planning had been short and ideas regarding matériel requirements varied greatly. There was considerable confusion at the port because of the lack of established procedures and the difficulty of achieving complete co-ordination between the task force commander, the port commander, and the naval officer who commanded the expedition afloat. Through attention to lessons learned from this experience, the embarkation of Maj. Gen. Troy H. Middleton's force for the invasion of Sicily, accomplished at Hampton Roads in June 1943, proceeded much more smoothly.[147] The same may be said

[144] WD Cir 191, 15 Jun 42, Sec. VII; WD Cir 36, 2 Feb 43, Sec. IV; WD Cir 197, 2 Sep 43, Sec. III; Memo, Dir Army Postal Sv for AGO, 1 Jun 43, AG 311.1 (1-6-43) WD Cir 36.

[145] See file WDCSA 370.5 (Secret) for correspondence with governors.

[146] AR 55-390, 16 Dec 42, par. 10*c*.

[147] Richard M. Leighton and Robert W. Coakley, *Global Logistics and Strategy: 1940-1943,* UNITED STATES ARMY IN WORLD WAR II (Washington, 1955), Ch. XVI; OCT HB Monograph 13, pp. 50–59. See also articles by Brig Gen John R. Kilpatrick, CG HRPE, "Task Force A" and "Task Force B," *Army Transportation Journal,* II, 6–8 (September 1946) and 26–28 (October 1946).

for the forces sent against Attu and Kiska, which were loaded on the west coast in April and July 1943.

The key to smooth embarkation was thorough planning and procedures that were fully developed and completely understood by all concerned; improvization had to be reduced to a minimum. Such procedures were fairly well worked out during the first year of the war so far as regular embarkations were concerned by close co-ordination of the activities of the staging areas and the several operating divisions of the ports of embarkation, all functioning under the supervision of the port commanders. There were not enough embarkations of assault forces at U.S. ports to enable procedures to be developed to anything approaching the same degree of refinement, and the problem was complicated by the fact that the interests of the task force commanders and the naval commanders, as well as those of the port commanders, had to be taken into account.

Troopship Administration

The administration of a troop transport was complicated by problems that did not exist in other military commands. One reason for this was the crowded and abnormal conditions under which the troops lived while on board. Another was the variety of passengers carried—uniformed men and women of all of the American armed forces, and usually military personnel of our Allies and some civilians. Yet another reason lay in the fact that three independent authorities were exercised side by side—that of the master, who had full responsibility for the ship; that of the transport commander, who was solely responsible for the passengers; and that of the commander of the naval armed guard or gun crew. Administration was further complicated by the fact that the transports were operated under the control and according to the standards of the U.S. Navy, the War Shipping Administration, and the British Ministry of War Transport, in addition to the Army.

The transport commander was in command of all personnel on board except the ship's crew and the naval armed guard. He was the chief of the permanent military complement on the vessel, and in matters affecting the administration of the ship his authority was superior to that of the officers who were traveling as passengers, even though they might outrank him. His relationship with the unit commanders was that of a station commander to the commanders of units bivouacked at his station. During peacetime the chief of the permanent military complement, then known as the commanding officer of troops, had been required to yield his command whenever a line officer of superior rank was on board and to serve as a member of that officer's staff. The arrangement was found to be impracticable after troop movements by water became large, and in 1942 the position of transport commander was created.[148] Most unit commanders had no experience in dealing with the wartime problems of troopship administration, and some of them, upon assuming command of the personnel on board, tried to revise the established procedures according to their own ideas. The confusion that ensued emphasized the need for transport commanders who would

[148] AR 30-1130, 23 Jul 32, par. 1; WD Cir 109, 6 Jun 41, Sec. IV; AR 55-320, 7 Dec 42, Sec. I, and Changes 1, 26 Jan 43; AR 55-315, 11 Nov 44.

serve continuously in that office with unbroken authority.[149]

The transport commander was assigned by, and exercised his authority as a representative of, an Army port commander. In the beginning port commanders were required to select line officers as transport commanders, but because of the difficulty of obtaining qualified men the limitation was lifted and officers of the supply services assigned to duty with the Transportation Corps could be selected.[150] The ports of embarkation maintained offices through which the transport commanders received their instructions and filed their voyage reports and recommendations. The importance of the post and the need for uniform instruction and over-all supervision caused the Movements Division to recommend in January 1944 that it be granted personnel for the establishment of a new branch to deal especially with transport commanders and transport complements. Such a unit was not activated, however, until May 1945, and uniform instructions for transport commanders were not published by the Office of the Chief of Transportation until after the war had ended.[151]

The duties of the transport commander were varied and exacting. Before each voyage he made a thorough inspection of his ship and prepared a plan for utilizing the facilities in a way that would best serve the troops and other passengers who were scheduled to embark. It was necessary to have instructions applicable to the passengers ready for distribution and guard details ready to enforce them when embarkation began, otherwise confusion would ensue. The location of billeting areas, mess halls, recreation areas, latrines, and passageways were charted. Emergency abandon-ship stations were assigned to the troops in each billeting area, and regulations covering fire and boat drills and blackouts were posted. A plan was prepared for feeding the troops, which in the larger ships involved continuous operation of the galleys and mess halls. The location of guard posts to control traffic, protect stores, and insure discipline were determined. Orders were issued relating to dress, general conduct, and sanitation. Plans were laid for the recreation, instruction, and training of the troops. Off limits and smoking areas were defined. Provisions were made for the administration and security of the sales commissary. The requirements for work details to be provided by unit commanders were determined, including details for the operation of the messes, the handling of stores, and the performance of guard and general police duty. Throughout the voyage the transport commander had to be constantly alert to insure that all general and special orders he had issued were enforced.[152]

The military complement, which functioned under the supervision of the trans-

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[149] Interv with Col Herbert S. Duncombe, 26 Feb 51, OCT HB PE Gen Transport Complement. Colonel Duncombe served as both commanding officer of troops and transport commander, sailing out of New York.

[150] AR 600-20, 1 Jun 42, par. 3*a*; Memo, CG NYPE for CofT, 2 Dec 42; Memo, CG SOS for ACofS G-1, 22 Mar 43; last two in AG 210.72 (4-1-42) AR 600-20; AR 600-20, Changes 2, 26 Jan 43, and Changes 3, 9 Apr 43.

[151] Memo, Farr for Wylie, 31 Jan 44, OCT HB Farr Staybacks; Memo by Lt Col Richard C. Marshall, 20 Jun 45, incorporated in Mvmt Div Hist, OCT HB Mvmts Div Gen; TC Pamphlet 44, Transport Comdrs Guide, Mar 46.

[152] AR 55-430, 19 Sep 42, sub: Conduct of Passengers; AR 55-435, 1 Sep 42, sub: Routine of Passengers; TC Pamphlet 44, cited n. 151; NYPE, Instructions for Transport Comdrs, 1 May 43, OCT HB NYPE Transport Comdrs; Maj F. H. Mayne, Duties of a Transport Commander, address at Atlantic Coast TC Offs Tng School, OCT HB Fort Slocum Lectures; SFPE Transport Comdrs Manual, May 45, OCT HB PE Gen Transport Complements.

port commander, varied in size according to the troop capacity of the vessel, and eventually the number of members and their ranks were specified by the Chief of Transportation.[153] This complement comprised personnel assigned to the office of the transport commander, the office of the transport surgeon, the office of the chaplain, and the signal section. The total authorized personnel of these offices ranged from four on vessels capable of carrying 50 to 100 troops to thirty-two on transports carrying 6,000 or more. In addition, the transport commander supervised the ship transportation officer (initially called cargo security officer), whose function was to prevent the mishandling or pilferage of Army cargo, and the ship transportation agent (civilian), who administered supplies and funds on vessels operated by the Army.[154] All members of troopship complements were selected and assigned by the Army port commanders under whose jurisdictions the respective vessels were placed by the Chief of Transportation.[155]

In order to forestall jurisdictional disputes, the duties and relationships of the masters of Army-operated transports, the transport commanders, and the commanders of units traveling on such vessels were clearly defined in Army regulations.[156] These regulations sufficed also for vessels operated by agents of the War Shipping Administration and allocated to the Army. A more complex problem of jurisdiction developed when large numbers of Army personnel began traveling on transports operated by the Navy and on WSA transports allocated to the Navy. On such vessels the naval commanding officers insisted on paramount authority with respect to all passengers. There were frequent misunderstandings until a set of rules was worked out by the Chief of Transportation and the Naval Transportation Service that removed the principal causes of discord.[157] After these rules were issued in the spring of 1944, no Army transport commanders were placed on troopships that were under Navy control, and the military complements that supervised the Army personnel traveling on such vessels were subordinate to the ranking naval officers on board. A corresponding relationship was established with respect to naval personnel traveling on vessels under the control of the Army.

Under arrangements with the British Army Staff and the British Ministry of War Transport, American military complements, headed by transport commanders, were placed on the larger British vessels that carried U.S. troops regularly.[158] The British Army also placed military complements on these vessels, and the British officers in charge had authority over the American staffs. Although their methods were different, harmonious relationships prevailed between the two groups, and during the period when U.S. troops were utilizing most of the space on these vessels, the British complements were

[153] TC Pamphlet 24, Ships' Complements and Cargo Security Officers, 29 May 45, Sec. I and Tables A and B.

[154] AR 55-320, 11 Nov 44; WD Cir 141, 12 May 45, Sec. II.

[155] Memo. CofT for PEs, 7 Mar 44, Ports of Assignment of WSA Vessels, OCT 320.2, 1944 Gen.

[156] AR 30-1130, 23 Jul 32; WD Cir 109, 6 Jun 41; Sec. IV; AR 55-320, 7 Dec 42.

[157] Memo, HRPE for CofT, 23 Feb 44, and 1st Ind by CofT, 10 Mar 44, OCT 560.11 Hampton Roads; Wardlow, *op. cit.*, p. 208; WD Cir 167, 29 Apr 44; WD Memo 55-44, 22 May 45, sub: Principles Governing Jurisdiction and Operating Procedure Aboard Army, Navy, and Allocated Troop Transports.

[158] Memo, Wylie for Styer, 22 Sep 42, ASF Hq CofS Trans; Memo, CofT for CofT ETO, 22 Apr 44; 1st Ind, CofT for CofT ETO, 22 Jun 44; last two in OCT 320.2 ETO.

greatly reduced and the American transport commanders were permitted to follow their own procedures. When considerable numbers of Canadian troops were being carried, the Canadian Army also placed transport commanders on board.

The principal problems encountered in moving American troops on British vessels stemmed from differences in facilities, services, and food. The capacities of the British vessels had been greatly increased when they entered U.S. troop service, and in some respects the facilities had not been increased and improved correspondingly, because of the scarcity of equipment and the quick dispatch that the vessels were given in British ports. When these deficiencies came to light in the prevoyage inspection to which all troopships, American and foreign, were subjected by the U.S. Army port commanders, immediate steps were taken to correct them. British troops traveling on U.S. vessels also complained about the facilities and the food. It was not practicable to undertake to eliminate all difference in standards, but an agreement was reached regarding the minimum standards to be provided on British and American troopships, respectively.[159]

The crowded condition of the ships, even when only the normal load was being carried, invariably involved inconvenience and discomfort for the passengers, particularly the enlisted men. In severe winter weather and in the tropics additional hardships were encountered. The efforts to offset these conditions by entertainment and exercise were handicapped by limited space. All that the transport commander could do was to make the best possible use of the facilities that were available. To this end he made a daily inspection of the vessel, accompanied by other members of his complement and by one of the ship's officers, to determine that the ventilating and sanitary systems were working, that the galleys and mess halls were being operated properly, that the medical department was fulfilling its responsibilities, and that cleanliness and order were being maintained throughout. During these inspections the transport commander noted repairs and replacements that should be made on the next call at the home port and also the improvements or additions to the facilities that were needed. His recommendations on these points were submitted to the home port commander with his voyage report.[160]

As an aid to morale the Chief of Transportation endeavored to bring the messes on troop transports to as high a standard as could be attained with the limited space available for galleys and mess halls and the large number of passengers to be fed. Notwithstanding this effort, the food service sometimes was unsatisfactory, particularly on ships that were just entering service and those making long voyages through the tropics. During a considerable part of the war troops bound overseas were given two full meals each day, which was considered adequate in view of the relatively inactive life that the men were compelled to lead while at sea. Even then the troop messes on some ships had to be in continuous operation throughout the day in order to take care of the numerous shifts into which the men were divided. Late in the war this policy was modified so that two and one-half meals were served—that is, full meals in

[159] Concerning this agreement, see Wardlow, *op. cit.*, p. 225.

[160] See NYPE, General Instructions for Transport Comdrs, 1 May 43.



CROWDED ACCOMMODATIONS ABOARD A TROOP TRANSPORT

the morning and in the evening, and a light meal at noon.[161]

During 1943 there was some improvement in troopship messes resulting from an ASF program to better the food service throughout the Army.[162] The special mess adviser assigned by the Chief of Transportation to this task early in 1944 got good results, but he was limited to vessels operated by the Army and by WSA agents and had no jurisdiction over the messes on troopships operated by the U.S. Navy or the British. The Navy provided messes comparable in general to those on Army transports. As a rule, the American soldier did not like the food on British troopships, and when large numbers of U.S. troops were traveling on British vessels, as was the case between New York and the United Kingdom, the Transportation Corps supplied the U.S. Army ration for those troops and also provided American personnel to supplement the British galley crews.

Because of the large number of troops to be fed, it was necessary to serve them, dispose of the remaining food, and clean the utensils as rapidly as possible. The service was cafeteria style and the Army's first plan was to have the soldier use his field

[161] Memo, CofT for PEs, 13 May 44, sub: Orientation Course in Transport Messing, OCT HB PE Gen Transport Complements and Services; TC Cir 80-17, 25 Jan 45, sub: Troop Messing Aboard Vessels.

[162] Wardlow, *op. cit.*, pp. 243–45.

mess kit, eat while standing, and clean his own equipment. This plan was adopted early in the war because of the difficulty in obtaining satisfactory compartmented trays and the machinery for cleaning and sterilizing them. The Navy on the other hand favored the use of trays and sit-down service. In 1944, in view of the large number of new troopships being used jointly in the Pacific and the development of a suitable tray, the Army modified its policy.[163] But troopships under Army control were forbidden to utilize trays until proper facilities for cleaning, sterilizing, and drying them had been installed.[164]

The sales commissary was another aid to morale since it gave the soldier an opportunity to purchase cigarettes, candy, soft drinks, and other items that contributed to his comfort and pleasure. During peacetime a post exchange had been operated on each Army transport and had carried a wide variety of commodities to be sold to military personnel and their families. Under wartime conditions so varied a stock was not necessary and the rapid increase in the number of transports made the administration of post exchanges burdensome. In the summer of 1942, therefore, the post exchange was replaced by the sales commissary, operated on a more limited basis. The officer in charge was a member of the permanent military complement and functioned under the general direction of the transport commander. In the beginning sales commissaries were maintained only on Army transports and on WSA vessels allocated to the Army, but later they were established also on British vessels that were regularly engaged in the movement of U.S. troops.[165] The principal difficulty was that only limited space could be allotted to this activity, and the stocks frequently did not prove adequate. As a result, some transport commanders had to contend with the "black market" problem.

Maintaining morale was the principal aim of the so-called transport services activities. When the soldier was occupied with sports, theatricals, movies, and other forms of entertainment he had less opportunity to think about the discomforts of the voyage and the hazardous adventure that lay ahead of him. Books, magazines, phonograph records, and Army News Service broadcasts served the same purpose. While some soldiers carried their own musical instruments, the ports solicited donations of instruments, which they repaired and placed on the transports to encourage informal as well as organized musicales. The transport services activities also included informational and educational programs to prepare the soldier for experiences in the country for which he was destined and assistance with the personal problems of the individual and his family. Initially these activities were in charge of the ship's chaplain when there was one on board; if no transport chaplain was on board, the transport commander took the responsibility himself or assigned it to the ship's transportation officer. Since all of these officers had other responsibilities that prevented them from giving sufficient time to educational and recreational activities, a specially selected transport services officer

[163] For a review of these developments, see OCT HB Monograph 12, pp. 56–59.

[164] TC Cir 133, 19 Oct 43; TC Cir 80-16, 4 Apr 44, and Changes 13, 20 Jul 44; Memo, C of Water Div OCT for C of Ship Conversion Unit, 5 Jul 44, OCT HB Water Div Ship Repair and Conv.

[165] WD Cir 281, 22 Aug 42; Memo, CofT for NYPE, 21 Dec 42, OCT 400.34 N. Y.; WD Memo W 55-17-43, 5 May 43, sub: Opn of Sales Commissaries; 1st Ind, CofT for TQMG, 28 Jan 44, sub: Canteen Supplies for British Army Transports, OCT HB Farr Staybacks.



IMPROMPTU ENTERTAINMENT ABOARD SHIP

was added to the permanent military complement late in the war. The organization of each port of embarkation included an officer to supervise these activities and provide the equipment that they required.[166]

The transport chaplain's principal duty was to look after the spiritual and moral welfare of the troops. Sometimes the chaplain was qualified to assume the additional responsibility for recreation and entertainment that he had until late in the war, but often he lacked the temperament as well as the time needed to do it justice. This was true even though the chaplain was authorized to enlist the assistance of the special services officers of units being transported. The appointment of a transport services officer to take over this responsibility was therefore welcomed.

Chaplains served regularly on the troopships operated by the Army and by WSA agents for the Army. When the Navy began operating some of the new troopships that had been built for the Army, it was thought for a time that the Navy chaplain on such vessels would

[166] TC Cir 167, corrected 17 Dec 43; TC Cir 35-11, 11 Jul 44; WD Cir 360, 5 Sep 44, par. 7; TC Cir 35-2, 22 Feb 45; TC Cir 35-14, 28 Mar 45; TC Cir 35-11, 28 May 45; TC Pamphlet 43, Transport Services Programs, 27 Jun 45; NYPE Pamphlet 1, 1 May 45, sub: Transport Services Manual; all in OCT HB PE Gen Transport Complements and Services.

suffice. Experience showed, however, that the Navy chaplain's time was devoted almost entirely to the crew and consequently an Army transport chaplain was provided. The transport chaplains received guidance from the chaplains of the ports to which their vessels were attached.[167]

On the transports, as at the staging areas, it was desirable to conduct some form of training to keep the soldier physically fit, but the possibilities for training were even more limited. Since space reserved for training reduced troop capacity, the Chief of Transportation directed his port commanders not to reserve such space on voyages to North Africa, Europe, Hawaii, and Alaska, which were only slightly in excess of one week. On longer voyages a space allowance was made. In any case the prescribed training required only a minimum of equipment. The aim was to devote from thirty minutes to an hour each day to training that consisted chiefly of physical exercise. What actually was accomplished depended on the weather and other circumstances of the voyage, and to a considerable extent on the ingenuity of the transport commander.[168] Some technical training was also given on board, chiefly for radio technicians, but that, too, was affected by the limitation on equipment as well as by the rules relating to radio silence at sea.[169]

The transport surgeon was a member of the permanent military complement; he was directly responsible to the transport commander but was under the technical supervision of the port surgeon. In addition to having charge of the ship's hospital, he gave attention to all matters affecting the health of troops, including the maintenance of proper sanitation, cleanliness, and ventilation, and investigated the cause of any sickness that might develop during the voyage. It was readily recognized that overcrowding was a contributing cause to many illnesses, but the Chief of Transportation was under such pressure to meet the requirements of the theater commanders for troops that overloading was inevitable.[170] He nevertheless desired that troop movement officers always consult the port surgeons when heavy overloading was contemplated, and that their recommendations be followed when possible.[171]

Since troops received needed dental attention at home stations and at the staging areas, no space on the transports was assigned to dental equipment and dental personnel. Emergency needs were taken care of by the dental personnel of units that were on board. There was a slight modification of this policy after V-E Day. Port commanders were then permitted to install dental equipment on transports provided it could be done without reducing the troop space and with the understanding that no permanent dental personnel would be assigned.[172]

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[167] AR 55-355, 22 Aug 42; Memo, CofT for PEs, 13 Jun 44, sub: Asgmt of Army Chaplains, and atchd documents, OCT HB Meyer Staybacks.

[168] Memo, CofT for PEs, 27 Dec 43, sub: Troop Tng Aboard Transports, OCT HB Farr Staybacks; Memo, ACofS G-3 for CG ASF, 28 Jan 44, sub: Physical Tng, OCT 353.5 Physical Tng; Digest of Rpt, Maj George Ream, OCT, to ACofS G-3, 16 Mar 44, OCT HB PE Gen Transport Complements.

[169] ASF Cir 108, 28 Oct 43.

[170] Medical service on troop transports will be treated more fully in the discussion of evacuation of patients from the theaters. See below, Ch. III.

[171] AR 55-350, 14 Sep 42; Memo, NYPE for CofT, 2 Oct 43, sub: Outbreak of Diarrhea Aboard Transport, OCT 680-900 New York; Min of Conf of Port Surgeons and Troop Mvmt Offs, Ft Hamilton, N.Y., 12-14 Oct 43, p. 40, OCT HB NYPE Port Surgeon.

[172] Memo, CofT for CG NYPE, 28 Jul 45, sub: Installation of Dental Equip Aboard Troopships, OCT 564 Troopships.

Replacements and other casual troops when traveling in large numbers frequently created problems for the transport commanders because they were not as well organized and controlled as the members of units. The designation of convoy or escort officers by the commanders of the replacement depots from which such troops were shipped relieved the situation considerably after that procedure was inaugurated late in 1943, but the problems persisted. Some escort officers, being only temporarily in command of the troops, did not take their responsibilities seriously. On the other hand, some transport commanders assigned these officers staff duties that prevented them from giving proper supervision to the troops in their charge. When the latter situation came to the attention of the Chief of Transportation, he requested the port commanders to instruct all transport commanders regarding the duties of escort officers toward their troops and to warn them against unnecessary interference with the performance of those duties. He nevertheless maintained that casual escort officers must be ready to assist the transport commanders, as was the case with unit commanders.[173]

The transportation of nonmilitary passengers on troopships under Army control was carefully regulated. All applications passed through the Office of the Chief of Transportation, which obtained clearance from OPD before notifying the ports of embarkation that the passengers could be accepted. Nonmilitary passengers included diplomatic personnel and others traveling under the auspices of the State Department, representatives of other civilian agencies of the federal government, officers and employees of territorial governments, employees of contractors doing work for the armed forces in oversea areas, and representatives of such organizations as the American Red Cross and the Young Men's Christian Association.[174] This kind of travel was kept at a minimum not only because the space was needed for troops but also because the facilities and services on the transports were not up to the standards that civilian passengers expected.

The regulations provided that women, other than Army nurses and Red Cross workers, would not be carried on troopships except on specific authorization of the Chief of Transportation. He took the position that the few women who were sent abroad by civilian agencies should be transported by air, since they had to be assigned to separate compartments on troopships, and this usually involved a waste of space. The policy could not be carried out uniformly, however, for OPD sometimes found it necessary to assign troopship priorities for civilian women, and these priorities were binding on the Chief of Transportation.[175]

During the voyages transport commanders issued debarkation schedules and appropriate instructions in order that they might be studied and plans might be made to accomplish debarkations smoothly and quickly. These instructions were drawn up in accordance with the established practices of the ports, and revisions sometimes were necessitated by special orders issued by the port commanders. When calling at unfamiliar ports, the

[173] Memo, CofT for PEs, 12 Jan 44, and atchd correspondence; Memo, CG HRPE for Comdr of *General W. A. Mann*, 7 Jun 44; Memo, CG HRPE for CofT, 18 Jun 44; all in OCT HB Farr Staybacks.

[174] AR 55-390, 16 Dec 42, Secs. II and IV.

[175] Ltr, SW to Secy State, prepared 15 Mar 43; 2d Ind, CofT for ACofS OPD, 26 Nov 43; both in OCT HB Farr Staybacks; TC Cir 80-13, 1 Jan 44, sub: Mvmt of Pers.

transport commander based his instructions on such information regarding port procedures as he could obtain in advance, and he sometimes prepared alternate instructions in order to be ready for several contingencies. Upon completion of debarkation the transport commander sent a message to the port from which he had sailed, announcing his arrival overseas, indicating any discrepancies that had been discovered between the passenger list and the troops actually on board, and giving the names of any passengers that had been injured or had become seriously ill during the voyage.[176]

The key to successful troopship administration was the competence of the transport commander. New appointees found themselves confronted with a maze of unfamiliar problems. After an officer had served as transport commander for a number of voyages he could count on experience to guide him in many matters, but no two voyages were alike. At all times the responsibility was a heavy one. It required administrative skill in controlling the activities and conduct of a large number of troops under difficult circumstances, ingenuity in making the best possible use of limited means, and diplomacy in dealing with ship's officers and unit commanders. The latter were usually conservative in their criticisms, but in some cases their reports indicated that they had found little to their satisfaction on the ships.[177]

A frequent handicap to transport commanders was their low rank. Under the table of organization for military complements established by the Chief of Transportation, the transport commander on a ship carrying 4,000 or more passengers might be a colonel. On a ship carrying between 500 and 4,000 passengers he might be a major, and on smaller ships a captain.[178] Often, however, officers of such ranks were not available and officers of lower rank had to be assigned. Regardless of rank, some men had the necessary qualifications and others did not. Careful selection, constant instruction and supervision, and prompt relief of those who did not measure up to the requirements enabled the port commanders to build up a generally competent group of transport commanders.

The Liberty Ship as a Troop Carrier

Special and unusually difficult problems were encountered in connection with the use of about 225 Liberty ships that had been temporarily converted to carry troops. The Liberties, although slow and designed solely as freighters, were used for troop transportation because without them the execution of strategic plans would have been delayed.[179] The original conversions were hastily made by the War Shipping Administration in order that the vessels might join convoys to North Africa without loss of time. The Chief of Transportation recognized that the Liberty ships were far from ideal as troop carriers, but he probably did not realize when they first went into troop service in September 1943 how serious would be the complaints from those who traveled on them. The

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[176] AR 55-445, 19 Sep 42; NYPE, General Instructions for Transport Comdrs, 1 May 43, Sec. IV, OCT HB NYPE Transport Comdrs; TC Pamphlet 44, Mar 46, pp. 14, 15.

[177] For example, Rpt on Shipment 2086, to TAG, 19 Oct 44, OCT 333.7 *General A. E. Anderson.*

[178] TC Cir 25-8, revised 13 May 44.

[179] See above, pp. 90–91; Memo, Gross for Styer, 19 Nov 43, OCT HB Wylie Liberty Ship Conversions; Memo, CofT for ACofS OPD, 31 Dec 43, sub: Emergency Use of POW Converted Liberty Ships, OPD 560 (24 Jan 44).

galley and mess facilities were very unsatisfactory. The sanitary installations were inadequate. The food storage and fresh water capacities were small. Insufficient space was allotted to the medical department and the sales commissary. Ventilation and heating were poor. The deck spaces available for recreation were exceedingly limited.[180]

Other conditions contributed to the difficulties encountered on the Liberties during the early period of their employment as troop carriers. The responsibilities assumed by transport commanders on larger ships were assigned to cargo security officers, who in most instances were lieutenants without experience to qualify them for the task. The unsatisfactory quarters, poor and sometimes insufficient food, and lack of space for exercise often created a recalcitrant spirit among the troops resulting in poor discipline, pilferage of galley and commissary stores, and indisposition to maintain order and cleanliness. Some of the ships' masters resented the conversion of their vessels and the added responsibilities the transportation of passengers entailed. The troops embarked on these vessels usually were small units or casuals and most of their officers were young and inexperienced. The Chief of Transportation observed that because of the unusual conditions the more seasoned transport commanders were needed for the Liberty ships, but they obviously could not be taken from the regular troopships.

Reports from early voyages of converted Liberties in slow convoys to the Mediterranean made it clear that immediate steps would have to be taken to improve their facilities and operation. Measures for bettering the facilities were agreed upon between the Chief of Transportation and the War Shipping Administration, and the Maritime Commission was requested to accomplish the work as promptly as possible.[181] In November 1943 an understanding was reached between the Chief of Transportation and the WSA regarding the division of responsibility for the comfort and safety of the troops. The WSA, whose agents operated the vessels, agreed to provide adequate steward personnel and food, and to instruct the masters regarding their duties in connection with the care of passengers and co-operation with the transport commanders. The Chief of Transportation agreed to establish limits for the number of troops to be embarked, to arrange for the inspection of the vessels before each voyage, to assign transport commanders with adequate military staffs, and to provide sufficient medical and commissary supplies.[182]

These measures brought considerable improvement, but the temporarily converted Liberties still lacked many desirable features, and their slowness was an added disadvantage. The first plan was to carry only 350 troops, but the demand for space was so great that the limit was raised to 500.[183] By May 1944 the addition of

[180] See numerous documents in OCT HB Water Div Converted Liberty Ships, and OCT HB Wylie Liberty Ship Conversions; see also record of discussion in Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 95–102.

[181] Ltr, C of Water Div OCT for Dir Opns and Traf, U.S. Mar Com, 18 Oct 43, OCT 564 EC-2 Vessels.

[182] Agreement Between the War Shipping Administration and the Chief of Transportation Regarding EC-2 Hastily Converted Prisoner of War Ships for the Transportation of U.S. Troops Outbound, 20 Nov 43, OCT HB Wylie WSA; Memo, CG ASF for DCofS WDGS, 10 Feb 44, sub: Final Rpt—Converted Liberty Ships, OCT HB Farr Staybacks.

[183] Msg, Mvmts Div to NYPE and BPE, 4 Feb 44, OCT HB Mvmts Div Farr Staybacks; Memo, WSA New York for Col Raymond M. Hicks, 2 Mar 44, OCT 565.2 WSA.

more desirable types of vessels to the troopship fleet made it possible to discontinue use of the temporarily converted Liberties. Thereafter, only those that had been provided with permanent facilities for troops were used.[184]

The fact that the Combined Chiefs of Staff had approved the use of temporarily converted Liberty ships as emergency troop carriers did not relieve the Army of criticism. Because of the unsatisfactory conditions on board, the Navy Department requested the Chief of Transportation not to place naval personnel on these vessels. However, General Gross took the position that, since the decision to use them had been taken deliberately by the CCS as a matter of military necessity and with a realization of the problems involved, they should be used without discrimination in favor of any branch of the military service. On the other hand, he ordered that if possible the ports avoid embarking civilian passengers on Liberty ships.[185]

When a number of Liberties developed structural cracks, the U.S. Coast Guard recommended that vessels of this type be withdrawn from troop service to the extent that troop commitments would permit. The commitments at that time were so heavy that no troop lift could be spared. The Chief of Transportation agreed that strengthening alterations should be made when the ships were laid up for other repairs, but he was unwilling for them to be taken from service solely for that purpose unless the cracks constituted a safety hazard.[186]

In a report issued in June 1944 the Senate Special Committee Investigating the National Defense Program commented on the unsuitability of Liberty ships for troop traffic and expressed the view that greater foresight on the part of the military authorities would have obviated their use. General Gross, nevertheless, maintained that they had served a useful purpose and recommended that they be kept available as potential troop carriers against the possibility that they might be needed in connection with a further expansion of the military effort or for the repatriation of troops after hostilities were over.[187] That plan was followed and in the summer of 1945, in anticipation of the heavy redeployment and repatriation traffic, about 200 converted Liberties were prepared to carry 550 troops each with some improvements over their former passenger facilities.

Justification for the use of the Liberty ship as a troop carrier rested solely on the urgency of the need for additional troop lift. In September 1943, when the decision was made to employ this type of vessel for moving troops overseas, the Allies were still struggling with the problem of constructing enough ships to offset sinkings by the enemy while adequately supporting the armies on the far-flung battle fronts. The Liberty ship was being built in a fraction of the time required to complete

[184] Msg, Mvmts Div to Port Comdrs, 21 Apr 44; Memo, CofT for Port Comdrs, 29 Apr 44; both in OCT HB Water Div Converted Liberty Ships.

[185] Memo, VCNO for CofT, 7 Dec 43, sub: Trans of Naval Pers in Liberty Type Vessels; 1st Ind by Gross, 14 Dec 43; both in OCT 569.3 Liberty Ships; 1st Ind, CofT for HRPE, 22 Apr 44, OCT HB Farr Staybacks.

[186] Memo, USCG for Lt Col Otey Y. Warren, OCT, 5 Feb 44; Memo, CofT for ACofS OPD, 11 Feb 44; Memo, Farr for Gross, 17 Feb 44; all in OCT HB Farr Staybacks (Nos. 85 and 100).

[187] Senate Special Committee Investigating the National Defense Program, additional report, *Merchant Shipping*, Rpt 10, Pt. 18, June 23, 1944; Memo, Gross for Somervell, 30 Jun 44, sub: Comments on Truman Committee Rpt, OCT HB Gross Troopships.

other types of vessels, and the installation of temporary troop accommodations could be accomplished between voyages without loss of ship time. Appraisal of the use of these vessels, therefore, must take into account the fact that they represented the quickest way of achieving the additional troop lift desired by the military authorities. The withdrawal of Liberty ships from troop service as more suitable ships became available indicates that the Army regarded their use as an emergency or stopgap measure. Their further employment during redeployment was essential to the plan for bringing the war in the Pacific to an early conclusion, and during the repatriation period their use was a concession to the popular demand that the troops be returned home as quickly as possible.

Movement of Organizational Equipment

While troop units moving overseas took their personal equipment with them into the staging areas and onto the ships, their organizational equipment and initial supplies moved separately to and through the ports. The term "organizational equipment" covered the vehicles, tanks, artillery, technical paraphernalia, housekeeping tools, and other items that the unit would require in order to be an effective fighting force when it arrived on a foreign shore. Some of this equipment was loaded in the same vessels with the units to which it appertained, but most of it moved in other vessels. Some was force marked—that is, marked with the shipment numbers of the troop units to which it belonged—and some was shipped in bulk and assigned to units after reaching the theaters. The basic requirement was that the troops should have their equipment immediately or soon after their debarkation. Fulfilling this requirement involved many problems for the Chief of Transportation. Numerous devices were tried in the effort to meet these problems, and considerable improvement was achieved during the war, but because of the many considerations involved and changing conditions in the theaters a complete solution was never reached.[188]

The amount of organizational equipment to be shipped varied according to the types of units and the areas for which they were destined. The equipment of an armored force naturally had greater cubic measurement per man than that of an infantry force or a service unit.[189] The quantity of equipment required in an area where a great amount of construction or reconstruction was necessary, or in an area where no paraphernalia or supplies could be procured locally, was greater than elsewhere. The contrast between World War I and World War II was striking in this respect. In World War I approximately 50 percent of the matériel required by the American Expeditionary Forces was obtained in Europe. In World War II the Army not only shipped the preponderance of its requirements from the zone of interior, but also the bulk of those requirements was much greater because of the increased number and size of weapons, vehicles, bulldozers, and other equipment.

In the spring of 1943 the Chief of Trans-

[188] The persistence of the problems is indicated in Memo, Gross for Maj Gen Walter A. Wood, Jr., 12 Jan 45, OCT HB Wylie Staybacks; Ltr, CG NYPE to Wylie, 15 Jan 45; Memo, Berzelius for Wylie, 20 Jan 45; last two in OCT HB Wylie Cargo; Memo, Wylie for Franklin, 21 Jan 45, sub: Loading Troop Equip, OCT HB Wylie Staybacks.

[189] For a comparison, see Miscellaneous Shipping Information, data on p. 58, 2 Mar 43, OCT HB Plng Div Gen.

portation calculated that the initial movement of equipment and supplies per man averaged six measurement tons for the Central and Southwest Pacific and the Middle East, seven measurement tons for North Africa and the United Kingdom, and eight measurement tons for the South Pacific and Central Africa. In January 1945, by which date oversea operations had assumed a more stable pattern and better methods of calculating requirements and of packing and stowing matériel had been developed, the average for initial shipments to all theaters was five measurement tons per man.[190]

The movement of troops and their equipment in separate vessels was at the root of many of the problems. During the early part of the war there were persistent requests from oversea commands, particularly those in the Pacific, that troops be unit loaded—that is, loaded in the same ships with their equipment. Such a procedure was unquestionably advantageous to the theaters, since it insured arrival of both troops and equipment at the same port at the same time. From the standpoint of the zone of interior, however, unit loading frequently was not practicable. Usually it involved unbalanced cargoes and a waste of ship space. Moreover, the vessels that carried large numbers of troops had relatively small cargo capacities. The extreme examples were the *Queen Mary* and the *Queen Elizabeth,* which could carry up to 15,000 troops but could provide space for only 500 dead-weight tons of matériel.[191] Moving troops and their equipment in different ships therefore was not a matter of choice but of practical wisdom. Convoy loading—that is, forwarding the troops and their equipment in different vessels but in the same convoy—had only limited application. The convoy system was little used for sailings from the Pacific coast, and even in the Atlantic fast troopships ran independently and those of medium speed sailed in fast convoys, while most cargo vessels moved in slow convoys.[192] The slow cargo convoys, moreover, were often broken up overseas and the vessels assigned to different ports for discharge.

A complaint heard often during the early part of the war was that organizational equipment was scattered over too many vessels and hence was difficult to locate and consolidate after arrival in the theater.[193] There were several circumstances that contributed to this kind of loading. Equipment reached the ports on different and sometimes widely scattered dates, and the simplest procedure was to ship it out as it arrived. At a time when shipping space was extremely scarce, the ports desired to get the best possible stowage for each cargo vessel, and this often involved mixing organizational equipment and maintenance supplies. The ports also had to consider, especially through the period of heavy submarine activity in the Atlantic, the consequences of placing all

[190] Memo, CofT for CG ASF, 9 Apr 43, OCT HB Wylie Shipping Requirements and Allocations 1943; Ltr, SW to Sen Harley M. Kilgore, 10 Jun 43, OCT 500 Mobilization of Shipping Resources; Miscellaneous Shipping Information, 21 Jan 45, data on p. 54, OCT HB Plng Div Gen.

[191] Memo, CofT for BAS, 25 Feb 43; Memo, Col Llewellyn Wansbrough-Jones, BAS, for Farr, OCT, 6 Mar 43; both in OCT HB Farr Staybacks.

[192] 4th Ind, CofT for ACofS for Opns ASF, 4 Apr 43, OCT HB Meyer Staybacks.

[193] As an extreme case, in September 1942 Maj. Gen. Mark W. Clark reported that the organizational equipment of a regiment had arrived in the United Kingdom on 55 different vessels; Memo, CG SOS for CofT, 26 Sep 42; Memo, CofT for PEs, 4 Oct 42; both in OCT HB PE Gen Troop Equip; Memo, CofT for HRPE, 9 Oct 42, sub: Troop Equip, OCT 475 Overseas Equip Left in U.S.

or most of a unit's equipment in a single vessel if that vessel should be sunk.

Many other factors entered into the rather complex situation. Movement orders were not always issued sufficiently far in advance of the actual movement, with the result that shipments of impedimenta were late in reaching the loading ports.[194] Particularly during the early part of the war when many items were in short supply, units held the equipment they had at home stations as long as possible in order to complete their training. Sometimes the ports were not notified regarding the equipment that would be dispatched from technical service depots, or when it would arrive. At the outset many shipments of impedimenta to the ports were inadequately marked, so that identification of particular items with particular units was slow and sometimes impossible. The processing of unboxed equipment at home stations was inadequate or entirely lacking, with the result that shipments were damaged en route, particularly when they were transported overseas as deck cargoes. Packaging frequently did not meet the test of transshipment at loading and discharge ports. Advices from ports of embarkation to the theater commanders sometimes failed to give sufficient information regarding the equipment on a particular vessel and the manner of its stowage to enable the port of destination to plan ahead for its discharge and disposition.[195]

The efforts to cope with these problems fall into two distinct categories. In the first were measures taken toward better preparation in the zone of interior for handling movements of impedimenta, including clearer instructions to all concerned. In the second category were adjustments made in procedures to meet conditions peculiar to the several theaters and the changing strategic situation.

A vital factor in the zone of interior was the control that port commanders exercised over the movement of troop impedimenta from home stations and depots to the seaboard. Troops and their equipment were alike in that respect—the port commanders were in the best position to know when their facilities would be able to receive additional shipments, how long it would take to prepare the shipments for embarkation, and when the vessels would be ready to receive them. Port commanders, and they alone, were in a position to state when shipments should be made and to which facilities at the ports they should be delivered. Authority to control these movements had been vested in the port commanders in Janury 1942, as a result of the confusion that followed the uncontrolled shipment of impedimenta to San Francisco during the early weeks of U.S. participation in the war.[196]

Complete understanding between port commanders, unit commanders, and technical service chiefs regarding shipments of equipment to the seaboard was sometimes difficult to achieve. Unit commanders did not always know in advance exactly how much of their old equipment would be taken overseas. The technical services often were not given sufficient time to make shipments from their depots, and

[194] Memo, CofT for ACofS OPD, 23 Jan 43, sub: Issuance of Mvmt Orders; Memo, CG SOS for CofT, 26 Jan 43; both in OCT 370.5 Mvmt Orders (1).

[195] Memo, TAG for Cs of Supply Arms and Svs, 17 Jan 42, sub: Shipts to PEs; Memo, TAG for CG Field Forces, *et al.*, 19 Jan 42, sub: Equip of Troops; Ltr, CofS for CG WDC, 13 Mar 42; all in G-4/33889; Memo, CofT for PEs, 12 Apr 42, Org and Trans of Task Forces, OCT 370.5 (Jan-May 42).

[196] Memo, TAG for CofAAF, *et al.*, 2 Jan 42, AG 370.5 (1-1-42).

sometimes the requisitioned items were not immediately available. In addition to impressing upon unit commanders and technical service chiefs the necessity of providing the ports with prompt and full information regarding all shipments, SOS headquarters directed the Chief of Transportation to have his port commanders maintain close liaison with the sources from which equipment would move.[197] In some cases representatives of the ports were sent to home stations to assist unit personnel in organizing and loading their impedimenta.

Early in 1943, when it was learned that some units had sailed for North Africa with elaborate office furniture, housekeeping supplies, and other nonessential items, the Chief of Transportation recommended that in view of the shortage of ships the major commands examine the tables of basic allowances and designate the items that should be left behind when units moved overseas. Some months later the War Department took steps to regulate the amount of station equipment that might be shipped overseas on requisitions from theater commanders.[198]

Automotive vehicles constituted a major element of the organizational equipment of most troop units. They also were a troublesome element. By the time a unit had completed training many of its vehicles were unfit for service in a theater of operations and had to be repaired or replaced either at the home station or at the port of embarkation. Also, when vehicles accompanied troops they required extensive processing to prevent deterioration during the voyage. After some months of experience explicit instructions were issued to deal with this situation.[199] Units ordered overseas were required, unless otherwise directed in movement orders, to turn in at their home stations all general purpose and special purpose vehicles that did not meet certain specifications as to age and condition, and to notify the appropriate technical services by the fastest means of communication regarding the shortages to be made up. Units might receive vehicles to fill these shortages at their home stations, at the ports of embarkation, or after arrival overseas. The chiefs of the technical services were directed to establish pools of vehicles in the zone of interior and in the principal theaters for this purpose. As it worked out, general purpose vehicles were usually supplied to the units after their arrival in the theaters. This arrangement made possible the shipment of a considerable percentage of such vehicles partially knocked down and boxed, in which condition they required only about one third as much space as when they were fully assembled.[200] Also, when vehicles were shipped boxed the ports were relieved of the task of processing them.

The processing of vehicles at the ports to prevent deterioration during the voyage became a large undertaking. Although their authority was uncertain in the beginning, all ports found themselves doing a certain amount of processing because it had not been done at home stations or depots. The San Francisco Port of Embarkation, which had bitter experience in shipping unprocessed vehicles and tanks

[197] Memo, CG SOS for Cs of Tech Svs, 3 Oct 42, sub: Supply of Troops at PEs, OCT HB Gross Ports.

[198] Memo, CofT for ACofS OPD, 3 Feb 43, sub: Imped for Overseas Troops, OCT HB Meyer Staybacks; WD Memo W 210-24-43, 7 Sep 43, sub: Shipment of Post, Camp, and Station Equip.

[199] WD Memo W 850-19-42, 27 Nov 42, sub: Supply and Distribution of Automotive Equip.

[200] Memo, CofT for CG ASF, 5 Dec 43, sub: Shipment of Boxed Vehicles, OCT HB Wylie Shipping and Cargo for UK 1943–44.

to Pacific bases during the early months of the war, took the lead in setting up a well-equipped processing plant at Emeryville, on the eastern shore of San Francisco Bay not far from the Oakland Army base. As soon as the authority of the ports had been definitely established, the Chief of Transportation requested the other port commanders to establish similar facilities.[201] The initial purpose of processing was to seal or insulate the machinery against rust and corrosion and to board up the exposed glass surfaces against breakage. When it was found that tools and spare parts that should have accompanied the equipment did not arrive overseas, either because they were not shipped or because they were removed en route, the ports were instructed to establish the presence of these items before processing and to box them in so securely that pilferage would be difficult.

Most of the equipment was procured by the Ordnance Department, and the port ordnance officers were in charge of the processing plants. In the beginning these officers were left largely to their own devices, and the Chief of Transportation came to the conclusion that there was overprocessing at some ports. In July 1943 he pointed out to the Chief of Ordnance that, although the complaints from overseas regarding vehicles arriving in bad condition had almost ceased, there was still room for refinement in the methods because of the differing conditions affecting equipment in the various theaters and the differing requirements for shipments stowed in the hold and on deck. The Chief of Ordnance was therefore requested to develop standards for processing that would take these differences into account.[202]

Because of the heavy shipments to Europe, the port of embarkation at New York passed the largest number of vehicles through its processing plant, which was located at Port Johnston on the New Jersey side of New York Harbor. The peak was reached in May 1944, when 9,550 vehicles were serviced. From incomplete records it appears that the same month marked the peak at Emeryville, with 3,391 vehicles serviced.[203] The plants operated on an assembly-line basis and, in addition to processing vehicles for shipment, they made repairs within the capability of their facilities. The object was to have the vehicles ready for service with a minimum of attention after arrival in the theaters.

Ports of embarkation kept meticulous records of troop equipment, for they had to know at all times what equipment was being shipped for particular units, where it was located, and when it would be loaded into ships.[204] Maintaining records for these purposes was complicated by the number of units moving simultaneously, the great variety of impedimenta to be handled, amendments to movement orders affecting dates of shipment, lack of

[201] Memo, CofT for PEs, 7 Oct 42, sub: Shipment of Motor Vehicles, Memo, CofT for PEs, 21 Dec 42, sub: Ordnance Maintenance at Ports; both in OCT HB PE Gen Troop Equip; WD Memo W 850-19-42, 27 Nov 42, par. 12; WD Cir 14, 8 Jan 43, Sec. II; WD Cir 150, 2 Jul 43, Sec. III; WD Cir 175, 30 Jul 43, Sec. V; ASF Cir 76, 15 Mar 44, Sec. V.

[202] Memo, CofT for CofOrd, 22 Jul 43, sub: Standards of Performance; Memo, Meyer for CG NYPE, 31 Jul 43, sub: Preparation of Unboxed Vehicles; both in OCT HB Meyer Staybacks.

[203] NYPE monthly report, Progress and Activities, Jun 44, p. 64; (report also gives data for engineer vehicles processed by the port engineer); SFPE Quarterly Progress Rpt, Oct–Dec 44, p. 53; these and similar reports for other periods are in OCT HB files for respective ports.

[204] Memo, CofT for Contl Div ASF, 7 Jun 43, sub: Records of Org Equip, OCT HB PE Gen Troop Equip.



PROCESSING TROOP EQUIPMENT *before shipment overseas. Vehicles awaiting attention at the motor inspection base, Emeryville, California (above); processing ramps at Port Johnston, Bayonne, New Jersey (below).*



information regarding the items actually forwarded from home stations and depots, and the inability of some unit commanders to state exactly what impedimenta would accompany them overseas because of changing tables of equipment.[205] Gradually the Chief of Transportation developed a plan of complete and uniform records for all ports that would show at all times what was to be shipped and what had been shipped.[206] If part of the initial equipment had not been dispatched when the troops sailed, as was often the case, the ports of embarkation were required to advise the theaters when the remainder would be dispatched so that the theater commanders would not submit requisitions for those items. The port commanders were also responsible for advising ASF headquarters when further shipments of equipment from the zone of interior should be stopped and theater commanders requested to supply the outstanding items.[207]

The Chief of Transportation investigated the possibility of relieving the main ports through which the larger troop movements passed of the necessity of handling all of the organizational equipment for those movements. In shipping maintenance supplies, specific ports were responsible for controlling all movements to specific theaters, but they allocated the actual loading of part of the supplies to other ports, known as outports. The movement of troop equipment, however, involved a different set of circumstances. The flow of the impedimenta for a particular unit had so many sources, extended over so long a period, and was subject to so many uncertainties that splitting the movement among several ports and yet maintaining complete and up-to-date records presented formidable obstacles. Split shipments of equipment therefore were avoided whenever possible.[208]

Both in the Office of the Chief of Transportation and at the ports of embarkation special personnel was required to supervise the handling of troop equipment. The Movements Division, OCT, set up a separate unit for this purpose in December 1943 and placed in charge an officer who had had extensive experience with shipments of impedimenta at San Francisco. This unit, which eventually became known as the Troop Equipment Branch, dealt with all aspects of the subject from the time the movement orders were written until the equipment and troops were brought together overseas.[209] At the New York Port of Embarkation, where the traffic was heaviest, movements of impedimenta were supervised by the Initial Troop Equipment Division, which was coordinate with the Troop Movement Division and other operating divisions. At San Francisco and other ports, movements of troops and troop equipment came under the jurisdiction of the same division, but

[205] Memo, Wylie for Ross, CofT ETOUSA, 26 May 43, OCT HB Wylie Staybacks; Memo, CofT for Dir of Opns ASF, 11 Jun 43, OCT HB Meyer Staybacks.

[206] TC Cir 15, 2 Feb 43, sub: Shipt of Task Force Units; TC Cir 56, 27 Apr 43; OCT Cir 95, 26 Jul 43, sub: Records of Shipts; TC Cir 100-2, 4 Apr 44; TC Cir 100-3, 4 Apr 44.

[207] SOS Memo S 700-1-43, 2 Jan 43, sub: Cancellation of Back Orders; Memo, CofT for PEs, 6 Sep 44, sub: Clearance of Shipts from PEs, OCT 400.7.

[208] Memo, CofT for Col William E. Carraway, Plng Div ASF, 4 Apr 43, OCT HB Farr Staybacks; Memo, CofT for CGs NYPE and HRPE, 17 Jul 43, sub: Forwarding of Equip; Memo, CG NYPE for Port Trans Div, 26 Jul 43; last two in OCT 045.0 UGF 10; Remarks by Col Berzelius at Mtg of Port Comdrs and Opng Representatives, 8 Jul 44, in Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, p. 17, OCT HB PE Gen Port Comdrs Conf.

[209] Remarks by Col Berzelius, C of Troop Equip Br, at Junior Officers Meeting, Mvmts Div, 16 Oct 44, OCT HB Mvmt Div Gen.

separate groups of personnel were assigned to perform the separate functions.[210]

Clear instructions to explain procedures and establish the responsibility of all concerned were necessary to the efficient movement of troop impedimenta just as they were to the movement of the troops themselves. The basic instructions were included in the War Department publication, Preparation for Overseas Movement. Further instructions were included in the supplementary pamphlet, Identification of Organizational Impedimenta, which was issued in August 1943.[211] The detailed directions given in the latter pamphlet emphasize the importance that was attached to the correct marking of such shipments and to maintaining full and accurate records in accomplishing the orderly flow of organizational equipment.

The second aspect of the problem of moving troop equipment to the theaters was to adapt the procedures to differing conditions in the several oversea areas. During the spring and early summer of 1942, when a feverish effort was being made to build up American strength in the United Kingdom against the possibility of an invasion of the Continent in the fall, the movement of troop impedimenta was a major consideration. Many items of equipment were in short supply, and organizational equipment had to be held until troops were about to leave their home stations in order for them to complete their training. Unit loading was impossible because a large percentage of the troops were dispatched in vessels that had limited cargo capacity. The ships of the convoys in which most of the equipment moved were distributed among the British ports according to conditions at the time of their arrival, so that it was impossible to plan in advance where particular vessels would be discharged. At this period some items were not available for shipment until long after the troops had departed. Consequently, a considerable amount of equipment was sent to depots in the United Kingdom, where related items were brought together before they were assigned to troop units. Under these circumstances from one to three months often elapsed between the arrival of the troops and their receipt of complete equipment.

With a view to correcting the situation and at the same time utilizing some cargo shipping that the British were expected to provide, G-4 proposed that at least half of the equipment of eight divisions scheduled to sail during the summer be shipped in bulk about a month in advance of the troops. There were some objections to the plan. The AGF was uncertain of the effect of such an arrangement on the training and morale of the divisions; the troop basis was not considered firm; the theater was fearful that placing so much equipment in its depots without unit marking and issuing it to the troops from stock might involve too much delay. OPD therefore did not concur in the proposal, and strategic developments made it necessary to use the British vessels elsewhere, so that the plan—later known as preshipment—

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[210] Remarks by Col Henry J. Amy, C of Initial Troop Equip Div NYPE, at Mtg of Port Opn, Troop Mvmt and Equip Representatives, 8 Jul 44, in Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, pp. 39–45, OCT HB PE Gen Port Comdrs Conf; Preliminary Rpt, Control and Handling of Force-Marked Equip at NYPE, 16–26 May 44; Rpt of Survey, Control and Handling of Force-Marked Equip at SFPE, 4–15 Jun 44; last two in OCT HB PE Gen Troop Equip.

[211] Copies of POM and IOI are in OCT HB PE Gen Troop Mvmt to Port.

did not go into effect in 1942.[212]

In the winter of 1942–43, when the North African campaign held priority over the build-up in the United Kingdom, much the same condition prevailed with respect to troop equipment. Many shipments were late in reaching the ports of embarkation and consequently were late in being transshipped overseas. The troops and their impedimenta usually were shipped in different vessels, and the problem of getting the two together in the theater persisted. Officers in North Africa felt that they were not being adequately informed regarding the status of shipments of equipment. When General Somervell visited the theater after the Casablanca Conference, he heard strong complaints on these matters and requested an explanation from the Chief of Transportation. In response, the Chief of Transportation stated that every effort was being made to get equipment to the ports and ship it as promptly as possible, and to notify the theater commanders when delayed items would be forwarded; he did not consider it advisable, however, to give such notification until the ship on which the equipment would move had been definitely nominated.[213] No solution to the problem was found during the North African campaign.

Preshipment, or the shipment of organizational equipment and supplies in bulk ahead of troops, became an approved policy in the spring of 1943, when the build-up of forces in the United Kingdom was resumed in volume. Conditions that had prevented its execution in 1942—the scarcity of many items, the acute shortage of cargo shipping, and the uncertainty of the troop basis—had by this time been alleviated. The Chief of Transportation saw in preshipment the best chance of solving this difficult problem. There were still some who feared undesirable consequences from withdrawing equipment from troops four to six weeks ahead of their departure from training stations. But the decision was turned in favor of preshipment by the fact that in April 1943 an adequate supply of cargo space was assured and British ports were then capable of handling increased shipments. It was realized, moreover, that the accumulation of large stocks in the United Kingdom during 1943 would relieve the strain on shipping and on the ports that would inevitably develop as the date for the invasion of the Continent—then set for the spring of 1944—approached. In May 1943, therefore, preshipment on as broad a scale as possible was decreed.[214]

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[212] Memo within OCT, Lt Col Norman H. Vissering for Col Noble M. Coe, 5 Jun 42, sub: Shortage of Equip, OCT HB PE Gen Troop Equip; Msgs, Marshall to USFOR London, 4 Jun 42, CM-OUT 0786, and 17 Jun 42, CM-OUT 4300; Memo, ACofS OPD for ACofS G-4, 10 Jul 42, sub: Shipts in Bulk, OPD 520; Rpt of ETO General Board, Study 128, sub: Logistical Build-up in the British Isles, pp. 21–23; Leighton and Coakley, *op. cit.*, Ch. XIV, pp. 33–48.

[213] Memo, Somervell for Gross, 19 Feb 43, pars. 1(3)–(4); Memo, Gross for Somervell, 23 Feb 43, pars. 1*e-f*; both in OCT HB Ex File Somervell's Insp Trip to Africa.

[214] The documentation is voluminous and the following citations are given chiefly to show the TC position: 4th Ind, CofT for ACofS for Opns ASF, 4 Apr 43, OCT HB Meyer Staybacks; Memo, Meyer for Wylie, 9 Apr 43, giving review of developments to date, OCT HB Wylie Cargo; Memo, CofT for Somervell, 9 Apr 43, sub: Data on Shipping, with attachment entitled Special Problems in UK Build-up, OCT HB Wylie Shipping Reqmts and Allocations 1943; Memo, Gross for Styer, 12 Apr 43, sub: Visit of Gen Lee, OCT HB Meyer Staybacks; Memo, Gross for Lutes, 16 Apr 43, sub: Cargo for UK, OCT HB Wylie Staybacks; Memo, ACofS for Opns ASF for Gross, 17 Apr 43, sub: Cargo for UK, OCT HB Wylie Shipping and Cargo for UK 1943–44; Memo, ACofS for Opns ASF for Dir Stock Contl Div ASF, 17 Apr 43, sub: Cargo Shipts to UK, OCT HB Wylie Cargo; Rad, CG ASF for ETO, 20 Apr 43, CM-OUT 8165; Memo, Farr for Gross, 1 May 43; Memo, Gross for

During the ensuing year the preshipment plan was found an effective means of assuring that troops arriving in the United Kingdom got their equipment promptly. Gradually a larger and larger percentage of the matériel was shipped to the ports of embarkation by the procuring services rather than by the units' home stations. The Chief of Transportation maintained an unrelenting pressure on these sources to insure that shipments did not lag, and on the War Shipping Administration to insure that enough shipping to lift the cargoes was allocated. His Water Division reported almost daily on the outlook for both ships and cargo, and this report was the basis for aggressive action to keep the two in balance.[215] During 1943 the more serious problem was to get sufficient cargo delivered to the ports to fill the scheduled ships, but after the priority of the European theater for both organizational equipment and maintenance supplies was raised at the end of that year, the problem was essentially one of keeping the flow of cargo to the seaboard within the capacity of the available shipping.[216]

Although the practice of preshipping organizational equipment and supplies was admirably suited to the build-up of strength in the United Kingdom, which was a well-organized noncombat area, a different system was required when the forces moved to the Continent. In the spring of 1944, with D Day set for early June, the European Theater of Operations requested that all troop units arriving from the United States after D plus 90 be debarked on the Continent and be ready to fight within fifteen days after landing. This meant that the troop equipment would have to be accumulated and consolidated in the zone of interior, then convoy loaded so that the entire equipment of a unit would arrive in the theater at about the same time and almost simultaneously with the troops.

Several possibilities were considered in selecting a place where equipment could be accumulated. The ports of embarkation were ruled out because they did not have the necessary space. Home stations were not considered favorably because they were mostly in the south and southwest and much of the equipment would have to be shipped to them from depots and manufacturers in the northeast and then backhauled to the North Atlantic ports of embarkation. The Chief of Transportation therefore urged that the Elmira Holding and Reconsignment Point in central New York be used for this purpose. In addition to having adequate space, the installation was so situated that shipments could be effected quickly to both New York and Boston, the ports through which the bulk of the equipment was to move. This plan was approved by the War Department in the early summer.[217]

Somervell, 2 May 43; Memo, CG NYPE for CofT, 2 May 43; last three in OCT HB Wylie Cargo; AG Memo 400.22 (5-16-43), 16 May 43, sub: SOP for Shipments of Equip and Supplies to UK; AG Memo 400.22 (1 Jun 44), 2 Jan 44, sub: Change in SOP.

[215] Some of these reports are in OCT HB Wylie Shipping and Cargoes for UK 1943–44.

[216] Joseph Bykofsky and Harold Larson, The Transportation Corps: Operations Overseas, a volume in preparation for this series, Ch. III; Roland G. Ruppenthal, *Logistical Support of the Armies, Volume I: May 1941–September 1944*, UNITED STATES ARMY IN WORLD WAR II (Washington, 1953), Ch. VI.

[217] Memo, Farr for Plng Div ASF, 27 Apr 44, sub: Shipping of Units, OCT HB Farr Staybacks; Remarks by Col Farr at Mtg of Port Opn, Troop Mvmt, and Equip Representatives, 8 July 44, in Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, pp. 15–19, OCT HB PE Gen Port Comdrs Conf; Memo, Farr for Wylie, 14 Jul 44, OCT 337 Elmira H&RP; Rpt attached to Memo by Capt James M. Walls, 16 Jun 45, included in Mvmt Div Hist, OCT HB Mvmt Div Gen.

The purpose of the new project at Elmira, which eventually became known as the Northeast Equipment Staging Area, was to "receive, document, assemble, consolidate, prepare for shipment, and ship" to the ports the organizational equipment and supplies forwarded to that installation under War Department movement orders. Shipments to the ports were to be made immediately upon receipt of calls from the port commanders.[218] The matériel sent to Elmira embraced all items procured by the Army Service Forces (other than general purpose vehicles) that could not reach the home stations of the respective units before established deadline dates.

The task imposed upon the equipment staging area proved to be a very considerable one, for among the several hundred units that were dispatched to the European theater between August 1944 and February 1945 were thirty-six divisions. Frequently more than 150 carloads of freight were handled (unloaded or loaded) during a single day, and on several occasions the number exceeded 250 carloads.[219]

September 1944 proved to be the most difficult month, for not only were the staff and the procedures relatively untried at that time but a number of large units, including two divisions, were required to sail earlier than had been planned. During that month a considerable backlog of cars developed, and as a result of the congestion some shipments did not reach port in time for dispatch with the convoys for which they were scheduled. This congestion had been cleared up by mid-October through special efforts of the commander of the Elmira Holding and Reconsignment Point, who had charge of the equipment staging operation, and the Movements Division, OCT, which gave it general supervision.

From the time it was established in the summer of 1944 until February 1945 when it was discontinued, the equipment staging area at Elmira handled matériel for units embracing more than 700,000 troops. The liaison officers of some units who went to Elmira to assist in identifying and segregating the equipment of their respective organizations reported that there was considerable confusion during September and early October resulting in a "serious mixing of property." The opinion was expressed that equipment should be staged nearer the ports and under the control of the port commanders.[220] Nevertheless, the equipment staging area served a useful purpose. It relieved home stations of the heavy task of receiving, consolidating, and shipping this equipment. It enabled technical service depots to avoid congestion by dispatching equipment as soon as it was ready rather than holding it until the port call was received. It absorbed the shock that the ports would otherwise have felt when the sailing dates of units were changed. The accumulation of equipment at a point where shipments could be made equally well to either New York or Boston as circumstances might require proved advantageous. After the difficulty experienced during the early fall, the operation at Elmira proceeded smoothly and shipments to the ports were made promptly.

[218] TC Cir 5-20, 4 Nov 44, sub: Northeast Equip Staging Area; Min of Mtg at Elmira, 5 Sep 44, sub: Processing Troop Equip Under the Red Lists, OCT HB Zones Gen Elmira H&RP; Memo, CofT for NYPE, BPE, Elmira H&RP, 26 Oct 44, sub: Red List Procedures, OCT HB Meyer Staybacks.

[219] A list of cars on hand, loaded, and unloaded will be found in OCT HB Zones Gen Elmira H&RP.

[220] Memo, NYPE for CofT, 14 Oct 44, OCT HB Meyer Staybacks.

Indeed, Colonel Farr expressed doubt whether the urgent requests from the theater to advance the departure dates of numerous units could have been fulfilled without this equipment staging area.[221]

In order that troop units might be fully equipped and ready to fight soon after arrival in the European theater, it was necessary to impress into service as many fast cargo ships as could be spared from other urgent tasks. These vessels, sailing eastbound in fast (14-knot) convoys, reduced by several days the time required for the delivery of equipment to British and French ports in slow convoys. The turnaround of the ships was shortened by permitting them to make the homeward voyage unescorted. This fast service to the ETO began soon after the invasion of the Continent and continued until the heavy movement of units to that theater had been completed. In cases of special urgency, equipment was sent directly to the ports of embarkation rather than through the equipment staging area at Elmira. To avoid delay in delivering equipment to troop units after their arrival on the Continent, the impedimenta of a particular unit was loaded in the fewest possible ships even though this resulted in poor stowage and sacrifice of cargo space. In this instance military considerations required a sacrifice of the principle of good stowage, which the Chief of Transportation otherwise endeavored to enforce.[222] During the five-month period August–December 1944, 108 vessels carrying chiefly organizational equipment were dispatched to the ETO; data for later sailings of this type were not found.[223]

The problems in the Pacific relating to the shipment of organizational equipment were similar to those in the Atlantic, but there were certain basic differences. On the one hand, a greater percentage of the troops moved to Pacific destinations in relatively small units and more of the troopships had substantial cargo capacity, making unit loading possible more often. On the other hand, the military situation in the Pacific was more fluid, and the practice of diverting ships from their original destinations to widely scattered bases was more disturbing to planned movements. After Generals Somervell and Gross had visited the Pacific theaters in the fall of 1943 and had listened to complaints about the late arrival of organizational equipment and the spreading of shipments over many vessels, increased efforts were made to improve the procedures.[224]

In 1943 the Transportation Corps and also General Somervell favored the preshipment of troop equipment to the Pacific, but the ASF Supply Division was already hard pressed to find enough matériel to carry out the program of preshipment to the United Kingdom and did not want to assume this further obligation.[225] Accordingly, improvement in the delivery

[221] Memo, Farr for Historical Unit OCT, 20 Jun 45, sub: History, par. 3, OCT HB Mvmt Div Rpts; ASF Annual *Report for the Fiscal Year 1945* (Washington, 1946), p. 55.

[222] Memo, CofT for COMINCH US Fleet, 23 Aug 44, sub: Unescorted Fast Freighters, OCT HB Farr Staybacks; Memo, CofT for Mobilization Div ASF, 8 Sep 44, sub: Red List Procedures, OCT 322 Red List Units; Msg, Lt Gen Thomas T. Handy to Hq COMZONE ETO, CG AFHQ, Italy, CG NYPE, 1 Oct 44, WARX 39841; Memo, CofS ASF for Dir Plans and Opns ASF, 26 Dec 44, ASF Hq CofS—Dir of Plans and Opns.

[223] ASF MPR, Dec 44, p. 56; Memo, CofT for Styer, 5 Feb 45, sub: Org Equip Ships, OCT HB Farr Staybacks.

[224] Memos, Gross for Wylie, 26 Sep 43 and 6 Oct 43, OCT HB Wylie Ltrs from Gross.

[225] 1st Ind, ACofT for CG ASF, 11 Oct 43; Memo, Meyer for Wylie, 14 Oct 43; both in OCT HB Meyer Staybacks; ASF Staff Conf, 6 Nov 43, p. 3, OCT HB ASF; Memo, Farr for Wylie, 2 Dec 43, OCT HB Farr Staybacks.

of troop equipment to the Pacific areas depended on the establishment of closer liaison and better understanding between the ports of embarkation and the theater commands, and on the employment of unit loading wherever possible. When an equipment staging area was set up near the east coast of the United States in 1944, it was believed that a similar procedure would be introduced eventually on the west coast. This did not transpire, chiefly because the situation in the Pacific never called for as concentrated a movement of troops and equipment as that which attended the invasion of the European continent. The western holding and reconsignment points, however, served in a limited way as assembly points for troop equipment destined for San Francisco, Los Angeles, and Seattle for transshipment to the Pacific bases.[226]

The procedure for handling equipment procured by the Air Service Command for AAF units was somewhat different from that for equipment procured by the Army Service Forces. Throughout the war such equipment was sent to AAF intransit depots near the ports, where it was assembled and processed before being forwarded to the water ports of embarkation. These intransit depots were justified by the AAF on the ground that distinctive Air Forces matériel required special handling and technical treatment.

The AAF complained repeatedly that equipment and supplies procured by the ASF technical services failed to reach AAF units overseas promptly. These units were expected to be ready for combat service soon after arrival in the theaters and the ASF endeavored to overcome the delays, but some of the causes were not easy to control. When stocks were short or shipping was inadequate for all needs, AAF units, like all other units, had to be dealt with according to the established priorities. Some delays were traceable to the inability of the AAF to release equipment to the ports sufficiently in advance of the troops. When the theaters diverted ships from the discharge ports for which they were originally destined, there were usually compelling local reasons. In the spring of 1944 the commanding general of the Army Air Forces proposed to the commanding general of the Army Service Forces that matériel procured by the ASF technical services for AAF units be routed through the AAF intransit depots. The ASF did not concur since it did not believe that this change of procedure would overcome the difficulties.[227]

The task of getting organizational equipment to the theaters so that the troops could have it soon after their arrival proved a challenging one. A basic difficulty was the impracticability from a shipping standpoint of moving troops and their impedimenta in the same vessels. The frequent necessity of changing the discharge ports of cargo vessels after they had reached the theaters was a disturbing factor. During the early part of the war the situation was further complicated by the scarcity of some items of equipment

[226] Memo, CofT for SFPE, SPE, LAPE, 30 Oct 44, sub: Diversion of Certain Shipments to HRP, OCT HB Meyer Staybacks.

[227] Memo, Gross for Somervell, 23 Feb 43, OCT HB Ex File Somervell's Trip to Africa; Memos, Farr for Gross, 1 and 5 May 43; both in OCT HB Farr Staybacks; Memo, CG AAF for CG ASF, 19 Jun 43, and reply, 26 Jun 43; both in OCT 475 Oversea Equip Left Behind; Memo, CG AAF for CG ASF, 1 Apr 44, and replies, 3 and 4 Apr 44; all three in OCT HB Meyer Staybacks; 1st Ind, CG ASF for CG AAF, 6 Apr 44; Memo, C of Traf Div AAF for ACofT, 29 May 44, sub: Baylor Committee Findings, and reply, 1 Jun 44; last three in OCT 475 Oversea Equip Left Behind.

and the over-all shortage of shipping. Gradual improvement was achieved through the establishment of standard procedures, careful planning by the Chief of Transportation's Movements Division and the ports of embarkation, and close coordination between the port commanders, the commanders of units, the technical services, and the theaters. The most complete solution was recognized to be the shipment of equipment to the theaters in advance of the troops. This plan presupposed, however, a stable and well-organized base, such as existed in the United Kingdom during the build-up of strength for the invasion of the Continent, as well as adequate equipment and shipping. Unfortunately, those conditions did not sufficiently apply to any other oversea areas to warrant the adoption of a broad program of preshipment.

Joint Use of Troopships by the Armed Services

Since both the Army and the Navy were constantly moving personnel to the same theaters, economy of shipping dictated that all troop transports should be available to the troops of both services. Some of the problems that arose in connection with the allocation and scheduling of the vessels because of joint utilization have already been discussed.[228] Other problems in the joint use of troopships concern principally the Pacific, for in that area the command setup was more complex, the strategic situation was more fluid, and the forces of the Navy and the Marine Corps were larger than in theaters across the Atlantic.

In the Atlantic, where the Navy used a relatively small amount of troop space, the troopship sailing schedules were determined almost entirely by Army requirements. The Chief of Transportation's Movements Division, in consultation with the Water Division and the ports of embarkation, endeavored to work out a program of sailings that would take care of the Army personnel expected to move and at the same time meet the Navy's needs. When the Navy desired to move personnel to an oversea station, the Naval Transportation Service filed a request with the Army Chief of Transportation, who allotted space on scheduled sailings in accordance with the approved priorities.[229] Although adjustments in the schedules were sometimes necessary because of the Navy's requirements, this was not often the case.

All troopships serving the Pacific areas were regarded as a single pool and their scheduling and utilization were under joint management.[230] This pool included the owned and the chartered transports operated by the Army or the Navy, the transports assigned to the Army by the War Shipping Administration and operated for the Army by naval personnel, and those operated by agents of the WSA and allocated to the Army or the Navy. Acting in accordance with general plans and instructions agreed on by the Joint Chiefs of Staff and the Joint Military Transportation Committee in Washington, the Joint Army-Navy Surface Personnel Committee, with headquarters at San Francisco, determined the loading ports and

[228] See above, pp. 93–94.

[229] For example, Memo, CofT for NTS, 22 May 43, sub: Trans of Naval Pers, OCT 370.5 Mvmt BLOT; Memo, NTS for OCT, 22 May 43, sub: Oversea Trans for Naval Pers, and reply, 31 May 43; last two in OCT HB Farr Staybacks.

[230] Joint use of ships was practiced from the beginning of the war, but it increased after formal agreements were made during the first half of 1943; see Wardlow, *op. cit.*, pp. 170–72.

sailing dates as well as the assignment of troop space. The Joint Army-Navy-WSA Ship Operations Committee, also located at San Francisco, determined such matters as the utilization of piers, ship repair facilities, and labor. These west coast committees therefore exercised a broad control over the employment of troopships and the movement of troops and troop equipment.[231] The commander of the San Francisco Port of Embarkation represented the Army or designated the representatives of the Army in these joint activities.

Despite the fact that the joint committees functioned smoothly and with considerable effectiveness, the Army Chief of Transportation did not like the arrangement. The basic reason was that it involved a decentralization of control and interfered with the plan of centralized control on which the Transportation Corps operated. General Gross favored the decentralization of technical operating functions and carried the doctrine into effect by a broad delegation of operating responsibilities to his field representatives. On the other hand, he regarded the exercise of central control by his office over the employment of the means of transportation necessary to the economical use of those means, and similar control of troop and freight movements necessary to the close co-ordination of inland and ocean transportation and the avoidance of delays. Naval logistics was characterized by greater decentralization, and the Navy was unwilling to attempt to revamp its system during wartime.[232] The Army refused to accord as much independence to the west coast committees as the Navy desired, but it found no alternative to going along with the plan in general.

A number of specific complaints may be cited as evidence of the general dissatisfaction in the Office of the Chief of Transportation because of the lack of a closely integrated control over the movement of ships and troops in the Pacific. The OCT believed that troopships were being detained on the Pacific coast longer than was necessary, with not enough pressure being put on the completion of repairs and on quick turnaround at the loading port.[233] Sufficient advance notice could not be obtained regarding the prospective sailings of APA's and other naval combatant ships to permit arrangements to be made for the full utilization of their passenger capacities.[234] The estimates of troopship capabilities and requirements prepared by the Army and the Navy were difficult to harmonize because of the different approaches to the subject.[235] The Navy's lack of central control over the flow of personnel to the embarkation ports created a demand for more staging capacity at the ports than otherwise would have been necessary.[236]

Additional difficulties from the point of view of the Chief of Transportation arose from the independent action of the oversea commands, particularly the Pacific

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[231] Memo, Farr for Wylie, 15 Nov 44, sub: Control of Shipping in the Pacific, OCT HB Mvmts Div Gen; Min of Mtgs of Joint Army-Navy Surface Personnel Committee are filed in OCT 334 JANSPC.

[232] Duncan S. Ballantine, *U.S. Naval Logistics in the Second World War* (Princeton: Princeton University Press, 1947), pp. 229–33.

[233] Memo, Farr for Wylie, 15 Nov 44, par. 7, cited n. 231; Memo, Farr for Wylie, 16 Mar 45, sub: Utilization of Troopships, OCT 565.2.

[234] See n. 23, above; Memo, Gross for Somervell, 31 Dec 43, sub: Basis of Allocation, OCT HB Wylie Army vs Navy; Memo, Farr for Wylie, 15 Nov 44, par. 8 and summary 5, cited n. 231.

[235] Memo, Meyer for Gross, 10 Jan 43, sub: Troopship Capacities, OCT HB Meyer Staybacks.

[236] Memo, Wylie for Wood, 24 May 44, sub: Greenslade Rpt, and atchd comment on Appendix E, Recommendation 3, OCT HB Port Capacity and Utilization.

Ocean Areas, in diverting troopships and retaining them for intratheater use without approval from Washington.[237] Troop lift was needed in the theaters for the assault and support operations that were being mounted there, and the theater commanders retained vessels that had arrived from the zone of interior in order to make those operations successful. Such retentions obviously were disturbing to the planners in Washington, who were endeavoring to work out a balanced and well-timed program of troop movements from U.S. ports. Another disturbing factor from the standpoint of central planning and control was the lack of information from the theaters in regard to the movements of troopships and their return to U.S. ports. Here again the chief difficulty was with Pacific Ocean Areas.

In view of these conditions and their effect on the work of the Movements Division in planning troop movements and supervising their execution, Colonel Farr recommended in November 1944 that an "advance echelon" of the Movements Division be set up at San Francisco to collaborate with the joint committees in achieving the best possible use of troop carriers and in policing the execution of instructions issued by the Joint Chiefs of Staff and the Joint Military Transportation Committee. As conceived by Colonel Farr, this office would have been entirely independent of the Army port of embarkation and would not have dealt with operating matters; its principal function would have been "to get information and to be present when certain decisions are made of an over-all nature that require complete and thorough coordination with the Navy." The proposal carried the implication that Army interests on the Pacific coast needed a type of supervision that they had not been receiving. The plan was given careful consideration in the Office of the Chief of Transportation and a tentative organizational chart was drawn up, but in the end the creation of such an office was disapproved because of the possibility of conflict between it and the San Francisco Port of Embarkation.[238]

In the beginning the joint utilization of troopships in the Pacific was beset with frequent misunderstandings because of the lack of joint priority lists for the movement of Army and Navy personnel. Without such lists the assignment of troop space and the distribution of the inevitable deficit in troop lift could not be equitably achieved.[239] In May 1943 the Army and the Navy agreed that "a single joint priority list for personnel for overseas movement to all areas of the Pacific Theater except North Pacific and Southeast Pacific" should be prepared monthly by the two departments. The Operations Division of the War Department General Staff represented the Army in the establishment of joint priorities.[240] To provide the basis for negotiations in Washington, the commanders of the Central, South, and Southwest Pacific Areas were required to submit joint priority lists for their respective commands. These were consolidated into over-all joint priority

[237] Memo, Farr for Wylie, 15 Nov 44, par. 9 and summaries 2 and 3, cited n. 231.

[238] Recommendation 1, Memo, Farr for Wylie, 15 Nov 44, cited n. 231; Memo, Farr for Wylie, 29 Jan 45, sub: West Coast Operation; Memo, Farr for Meyer, 6 Feb 45, sub: Proposed West Coast Reorganization; last two in OCT HB Farr Staybacks; Ltr, Farr to author, 20 Jul 50, p. 3, OCT HB Mvmts Div Gen.

[239] Memo, CofT for ACofS OPD, 13 Mar 43, sub: Shipping for South and Southwest Pacific, and reply, 29 Mar 43; both in OCT 000-370.5 POA 1943.

[240] Agreement, Gen Marshall and Admiral Ernest J. King, 26 May 43, sub: Joint Priority Lists, OCT 000-370.5 POA 1943.

lists, which guided the Joint Army-Navy Surface Personnel Committee at San Francisco in its utilization of troopships and in the dispatch of troops.[241]

The joint use of troopships also called for the development of greater uniformity in the shipping procedures used by the Army and the Navy. This development was slow, but in the spring of 1945, with the prospect of an early shifting of emphasis from the Atlantic to the Pacific, a comprehensive joint directive, Ocean Shipping Procedures (short title, OSPRO), was published.[242] The primary object of the publication was to establish uniform procedures for regulating the preparation and dispatch of shipping documents and for reporting information regarding ship movements, passengers embarked, and freight loaded. These procedures applied not only to vessels sailing between the zone of interior and the theaters, but also to those sailing between theaters, since it was anticipated that the redeployment of troops after the defeat of Germany would involve substantial shipments from Europe and the Mediterranean directly to Pacific bases. In matters on which complete uniformity could not be achieved, the differing procedures of the Army and the Navy were explained, so that each service would be informed regarding the other's methods. The agreement provided for joint central record control units in each theater and at the principal U.S. ports to assist in the administration of the plan. The establishment of such units, known as Army-Navy Shipping Information Agencies (short title, ANSIA's), had barely begun when hostilities ceased.

The joint use of troopships was essential as a means of insuring that full advantage would be taken of the capacities of vessels sailing under Army or Navy control and that the priorities established by theater commanders for the shipment of personnel were observed. Differences arose over the administration of the plan, and some of the supporting arrangements, which obviously were desirable, were slow in developing. The misunderstandings and delays were attributable chiefly to the differing systems employed by the Army and the Navy for controlling transportation and movements and the fact that there had been virtually no co-ordination on this level before the war. By the end of the war substantial progress toward such co-ordination had been made.

A Test of Method and Efficiency

Oversea troop movements provided a real test of method and operating efficiency. The number of agencies concerned with both the planning and the execution phases was a complicating factor. The many types of units belonging to the Ground Forces, the Air Forces, and the Service Forces, and the loosely organized groups of individual replacements implied a wide variety of problems. The necessity of shipping units and their organizational equipment on different vessels in most instances, yet in such a manner that the troops could have their equipment soon after arrival overseas, added to the difficulties. Co-ordination was the basic requirement, and in December 1941 the

[241] Memo, CofT for CG SFPE, 27 Jul 43, sub: Priority Lists for Central, South, and Southwest Pacific, OCT 000-370.5 POA 1943.

[242] WD TM 38-412/OPNAV 39-H3, United States Army and Navy Ocean Shipping Procedures (short title, OSPRO); Monthly Vessel Utilization Summary, Jul 45, OCT HB Topic Army-Navy Joint Logistics; Memo, SFPE for CofT, 8 Oct 45, sub: Hist Record, and incl entitled ANSIA, OCT HB Topic Port Co-ordination.

machinery for this purpose was very inadequate. Later, when the system had been improved as the result of experience, large shipments of troops were moved to the seaboard, staged, and embarked with commendable smoothness.

The formulation and publication of detailed procedures was a prerequisite to the satisfactory execution of troop movements. This was true because of the many agencies involved and the multitude of services to be performed in making troops ready for movement to and service in the theaters. The instructions dealing with the preparation of units and individuals for oversea movement covered every step of the operation and fixed the responsibilities of each agency, and they were of inestimable value. Even then it was necessary for the port staging areas, in order to have troops completely ready for embarkation, to perform many services that should have been performed by other agencies.

Assignment of a key role to the port commanders was an important factor in the successful regulation of the flow of troops to the theaters. The control that port commanders exercised over the departure of troops for the seaboard, the processing and training at the staging areas, and the embarkation on the transports enabled them to so co-ordinate all stages of the operation as to avoid the congestion of port facilities, the waste of rail equipment, and the delay of ship sailings. The close contact—by teletype, radio, and cable—maintained by the ports of embarkation with the theaters they served enabled them to administer theater priorities effectively, to meet emergency requirements, and at the same time to keep the theater commanders informed regarding the status of the troops they had requested. Like many other relationships, this coordination between the ports of embarkation and the theaters was developed only gradually, and it was more successfully accomplished in the Atlantic than in the Pacific.

Wartime experience demonstrated the value of the port staging area both as a reservoir in which troops could be held pending embarkation and as a place where units that were under strength when they left their home stations could be filled, shortages of individual equipment could be made up, and minor deficiencies in physical condition and training could be corrected. Although home stations gradually improved their performance in preparing units and individuals for oversea service before shipping them to the ports, they frequently fell short of that goal. Their performance never supported the theory, which was given some attention in the early days of the war, that even in periods of heavy troop movement staging areas could be dispensed with and troops could be moved directly from home stations to shipside.

Troop movements were necessarily tailored to fit the troopships that were available. The situation that confronted the Army during the early months of the war was bleak indeed, but soon the increase in troop lift became rapid, permitting troop shipments to be increased accordingly. The American capacity was multiplied through the conversion of existing passenger ships to troop carriers, the construction of additional passenger ships, and especially through the conversion of many new cargo ships to troopships. The virtual pooling of the American and British troopship fleets to serve the Allied cause greatly helped the U.S. Army, especially in the North Atlantic. The pooling of

Army and Navy resources in the Pacific facilitated the movement of troops to the Pacific bases. The intensive operation of the troopships under Army control and the plan of loading them to the maximum practical capacity were additional measures employed to hasten the build-up of strength overseas. In brief, every effort was made to utilize the troop lift—admittedly a limiting factor—to best advantage.

The movement of organizational equipment had to match the movement of troops, but it was affected by different circumstances both in the zone of interior and overseas. Special methods were adopted to meet the exceptional requirements of the European theater in 1943 and 1944, but otherwise the task was essentially one of insuring that equipment was properly marked, getting it delivered to the ports of embarkation at about the same time as the troops, processing and shipping it as promptly as possible, and keeping the theaters of destination informed regarding the shipments en route and those that were delayed. Many difficulties were encountered and the performance was uneven.

The salient fact regarding oversea movements in World War II is that, after the transitional period immediately following Pearl Harbor, there were no serious interruptions in the shipment of troops and their equipment to the theaters in accordance with strategic plans. The inadequacy of the early procedures, failure to execute properly the improved procedures that were in effect later, and other difficulties inherent in so complex an operation resulted in some temporary annoyance and confusion but did not disturb the military program.

CHAPTER III

Redeployment and Repatriation

The most complicated and in some ways the most difficult phase of the war from the standpoint of troop transportation came after the defeat of Germany. Up to that time the movement of troops had been mainly from the zone of interior to the oversea commands; traffic between theaters and return traffic to the United States had been on a limited scale. The end of hostilities in Europe, followed closely by the Japanese surrender, involved more than simply a change in direction for the major troop movement; it involved broad changes in procedures and the handling of a far greater volume of traffic on land and on sea than had been handled at any earlier stage of the war.

During the redeployment and the repatriation periods—that is, between V-E and V-J Days, and after V-J Day—the primary objective was to move the maximum number of troops. After the German surrender heavy shipments were necessary in order to transfer sufficient forces from Europe to the Pacific to maintain an ever-increasing pressure on Japan. The progress of the campaigns under General of the Army Douglas MacArthur and Fleet Admiral Chester W. Nimitz had exceeded expectations; the Japanese strength obviously was deteriorating and no time was to be lost in pushing the war to a conclusion. After the Japanese capitulation public opinion in the United States demanded that the troops be brought home and demobilized with utmost dispatch. Providing transportation to meet these requirements proved to be a major task for the Army.

The Army's transportation task included, in addition to returning troops, heavy movements of patients from the theaters to the zone of interior, and after the fighting was over the repatriation of the war dead. Both movements involved peculiar problems and required special procedures. The return of civilians, including the dependents of military personnel, also gave rise to special problems, but this traffic was not allowed to interfere with homeward military movements.

While the bulk of the traffic was moved by ship and by rail, air transportation was used during the redeployment and repatriation periods to an extent that was not possible earlier. However, the aircraft so employed were under the control of the Army Air Forces, and the Chief of Transportation was not responsible for such movements.

Return Traffic Before V-E Day

Although the number of passengers landed at U.S. ports from Army troop-



GERMAN PRISONERS OF WAR DEBARKING AT A U.S. PORT

ships before V-E Day was small compared to the number embarked for oversea areas, the volume of return traffic nevertheless became substantial as the war progressed. The experience gained in handling this return traffic was valuable to the Army in dealing with the larger problems that developed during redeployment and repatriation.

The military element of the wartime homeward traffic was made up chiefly of rotational and temporary duty groups, casuals returning on furlough or leave, and patients. Very few units were returned to the United States before V-E Day. The Army transported some personnel of the U.S. Navy and of the Allied forces, and prisoners of war constituted a considerable movement during the campaigns in North Africa and continental Europe. Among the civilians debarked were representatives of the nonmilitary branches of the U.S. and Allied Governments, the employees of contractors who had performed construction and other work for the Army abroad, dependents of military personnel who were overseas when the war began, and the brides and children of soldiers who had married while in foreign countries. Up to the time of the German surrender the largest monthly total of passengers debarked at U.S. ports from ships under Army control was 146,246 in September 1944. Prisoners of war, chiefly from the European theater, accounted for 41 percent of that number.

There was some redeployment of units from the less active to the more active oversea commands before V-E Day. The reduction of strength in Alaska, which began in the late summer of 1943, resulted in a number of units being returned to the United States for reorganization and reassignment. A considerable transfer of units from the South Pacific Area to the Central and Southwest Pacific Areas took place as Allied forces pushed the perimeter of the Japanese forces northward and westward. During the early months of 1945 a number of units with their impedimenta were moved from the Persian Gulf Command to the European Theater of Operations and to China, and from India to the Pacific Ocean Areas. These movements, however, required no extensive redistribution of shipping such as became necessary after the German capitulation.

The increasing number of casual troops returning to the United States during 1943 necessitated a clearer definition of categories and a more explicit statement on procedures. To this end consolidated instructions were issued by the War Department in September in a document entitled, Procedures for the Return of Individuals (short title: PRI), and these instructions were revised and amplified in August 1944.[1] Although it dealt with soldiers traveling as individuals, PRI contemplated that the majority of individuals would be placed in rotational (RO) groups or temporary duty (TD) groups under group commanders. The groups were to be organized in the theater so that each would include troops destined for a single reception station in the zone of interior. Such grouping was expected to have advantages from the standpoint of administration and discipline and also to facilitate transportation arrangements. The instructions stated the basis on which rotational and temporary duty troops were to be selected, the records that were to be kept, the processing that was to be done in the theaters, and the security indoctrination that was to be provided. Of more particular interest to the Transportation Corps, PRI specified the information that was to be radioed to the zone of interior by theater commanders when troops embarked, the issuance and disposition of group or individual movement orders, the procedures to be followed during the homeward voyage, the processing to be given at the ports of debarkation, and the manner of forwarding from the ports to the reception stations. PRI also covered the handling of troops at and beyond the reception stations.

The prompt and orderly handling of troops when they arrived at U.S. ports depended to a considerable extent on the degree to which the theaters fulfilled their responsibilities regarding the movements. In addition to organizing rotational and temporary duty personnel into groups and providing them with escort officers, the theater commanders were required to notify the Chief of Transportation each month how many passengers were awaiting evacuation to the zone of interior. They were also required to send a radio message immediately after each troopship departure giving the numbers and categories of passengers embarked.[2] Army

[1] Memos, TAG for CG AAF, CG AGF, CG ASF, *et al.*, 26 Sep 43, AG 370.5 (22 Sep 43); 16 Aug 44, (10 Aug 44); 23 Dec 44, Supp. 1, (22 Dec 44); 17 Feb 45, Supp. 2, (17 Feb 45); 6 May 45, Supp. 3, (25 Apr 45).

[2] Detailed information was given the theaters regarding the capacities of vessels when carrying various types of troops to aid them in planning embarkations. OCT Misc Ltr 28, 14 Jul 44; 1st Ind, Mvmts Div for Contl Div OCT, 27 Nov 44; both in OCT 569.5 Pers Capacity of Transports.

ports in the United States were heavily engaged with outbound troop movements, and advance information regarding inbound movements was needed in order that the ports might arrange for accommodations at the staging areas, the assignment of processing personnel, the reservation of hospital beds for patients, and the provision of railroad equipment for the onward journey. The theater commands did not always provide the desired data. As late as March 1945 the Movements Division complained that the Southwest Pacific Area and the Pacific Ocean Areas were not complying with the instructions, since their advices often were entirely lacking or were not sufficiently explicit.[3] The theaters, although they protested strongly when full and prompt information was not received regarding troops en route to them, were themselves sometimes at fault in not providing such information on homeward-bound troops.

Maintenance of morale required close attention on the part of transport commanders during the voyage back to the United States. Men returning from overseas who were eligible for further military service were inclined to take a gloomy view of the future and to allow their spirits to sag. To offset this tendency, transport commanders were instructed to make the maximum use of entertainment, exercise, and orientation courses to keep the men occupied.[4] Early in 1945 an experiment was undertaken at Hampton Roads to ascertain the feasibility of placing entertainers on vessels after their arrival in the harbor to provide diversion for the soldiers during the interval between arrival and debarkation. Although the experiment was an unqualified success as a morale lifter and the results were brought to the attention of other ports, the records do not disclose the extent to which the plan was adopted.[5]

The ports for which returning troopships were destined needed accurate information regarding the time of arrival in order to make arrangements for the prompt handling of the vessels and their passengers and to prepare for any repairs that might be necessary before the next voyage. The work of the ports was so closely scheduled that unexpectedly early or late arrivals were disconcerting. To emphasize this fact the Army port commander at New York stated that when a vessel with troops, patients, and other passengers was about to arrive there were forty-two agencies to be notified, and hospital cars and ambulances sometimes had to be brought from considerable distances.[6] The cryptographic messages from the ships were received at shore stations of the Navy and at first were transmitted "through channels" to the ports—a procedure that involved a loss of time. When the return traffic from Europe began to increase, direct communication between the Navy's Eastern Sea Frontier and the ports was authorized so that the ports might have a maximum amount of time

[3] Msg, Mvmts Div OCT to Theaters, 30 Aug 44, CM-OUT 23724; Msg, Mvmts Div OCT to POA, 2 Oct 44, CM-OUT 40317; Memo, Berzelius for Wylie, 16 Mar 45, sub: Problems That Concern Mvmts Div, OCT HB Farr Staybacks.

[4] Memo, CofT for Mobilization Div ASF, 7 Aug 44, sub: Morale of Troops Returning From Overseas, OCT HB Farr Staybacks; paraphrase of Msg to Theaters, 5 Dec 44, OCT HB PE Gen Troops Inbound. Transport commanders also were instructed to enforce preventive maintenance on rifles and other individual equipment during the voyage.

[5] Memo, CofT for CG SPE, 27 Mar 45, sub: Reception of Returning Pers, and atchd rpt from HRPE, 10 Mar 45, OCT HB Farr Staybacks.

[6] Min of East Coast Port Comdrs Conf Relative to V-E Day Activities, 11 Apr 45, p. 14, OCT HB TC Gen Redepl.

in which to arrange for debarkations.[7] The requirement that vessels keep the ports informed regarding changes in the estimated time of arrival was in no sense burdensome, but uniform compliance was not obtained.[8] Failure of ships to notify ports of changes in estimated arrival times became a much more serious problem after redeployment began.[9]

The port commanders were instructed to pass returning troops through their establishments as quickly as possible.[10] The soldiers heard a brief address of welcome immediately after debarkation, then were forwarded at once to the staging area, where they were to be processed. The staging area commanders endeavored to start the men on the next leg of their journey within twenty-four hours. Physical inspections were made, primarily with a view to preventing the spread of infectious diseases, except when there had been similar inspections by the ship's surgeon before debarkation. Pay records were checked and payments brought up to date. Fresh clothing and equipment suitable for the onward journey were provided. The records of each rotational and temporary duty group were examined to insure that they were intact and in possession of the group commander and that the entries were up to date. The movement orders of these groups were checked, and as soon as firm arrangements for rail transportation could be completed the reception stations for which the groups were destined were notified of the number of personnel involved and the probable time of arrival. Casuals that did not go to reception stations left the staging areas as individuals, or as groups when practicable, after their travel orders had been checked to verify the authority for their movement to new permanent stations, officer candidate schools, separation centers, or to other destinations when they were on emergency furlough or leave.[11]

Observation of troops arriving at New York from the European theater during the winter of 1944–45 disclosed that the morale of returning troops was being adversely affected by incorrect information received in the theater regarding their movements and responsibilities upon reaching the zone of interior. Promises made in the theaters and hopes thus built up in the minds of returnees could not be realized under the approved procedures. The Information and Education Division of the Army Service Forces was responsible for keeping theater commanders correctly informed regarding these matters, but adequate dissemination of information in the theaters was difficult because of the fluctuating military situation and changing personnel. The information-education organization in the European theater, initially attached to the headquarters of the Services of Supply, was transferred to

[7] Remarks of Maj Jerry A. Griffin, C of Returning Troops Br, Mvmts Div OCT, at Mtg of Port Comdrs, Opng Representatives, and Port Air Officers, 8 Jul 44, in Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, pp. 21, 22, OCT HB PE Gen.

[8] Memo, Farr for Gross, 29 Apr 43; Min of Mtg, Oversea Troop Br, Mvmts Div OCT, 22 Jul 43; both in OCT 370.5 Debarkation.

[9] See below, p. 189.

[10] This paragraph is based on PRI, 16 Aug 44, Secs. XI, XII, XIII. See also Min of Port and Zone Comdrs Conf, Chicago, 6–9 July 44, Mtg of Port Operating, Troop Mvmt, and Equip Representatives, 8 Jul 44, pp. 6–8, OCT HB PE Gen.

[11] Separation centers, the first of which was established in March 1944, and reception stations eventually were operated as components of the personnel centers that were created at eighteen military posts in the summer of 1944; the number of personnel centers was later increased to twenty-two. WD Cir 113, 20 Mar 44, Sec. IX; WD Cir 292, 11 Jul 44; WD Cir 422, 26 Oct 44; WD press release, 1 Sep 44, sub: 18 Centers Announced for Discharging and Processing Army Personnel, OCT HB TC Gen Redepl.



USS *WAKEFIELD* LANDING TROOPS *from the European Theater of Operations.*

the staff of the theater commander in order that it might operate more effectively. The port commanders in the zone of interior were responsible for keeping transport commanders supplied with correct information so that the orientation given during the return voyage would coincide with that given in the theaters.[12]

Rotational and temporary duty troops made a number of trips in quick succession after leaving the ports of debarkation. As has been noted, all proceeded first to reception stations. While at the reception stations rotational troops, which were to remain in the zone of interior, received orders to proceed to redistribution stations but were allowed to take a furlough of twenty-one days en route; at the redistribution stations they received assignments to new stations to which they proceeded at once.[13] Temporary duty troops, which were to go back to their oversea stations after a thirty-day period of recuperation, returned at the end of that period to the same reception stations; AGF and ASF troops remained at the reception stations until called to the ports of embarkation, while AAF troops proceeded from the reception stations to AAF redistribution stations and thence to the ports.[14]

Although considerable experience was gained in handling returning troops before Germany surrendered, the War Depart-

[12] Memos, CG NYPE for CofT, 27 Mar 45 and 14 Apr 45, sub: Info and Education for Returnees; 1st Ind, CofT for CG NYPE, 26 Apr 45; all in OCT HB Demob Plng Unit Gen Correspondence.

[13] WD Cir 303, 17 Jul 44; ASF Cir 235, 27 Jul 44; ASF Cir 253, 7 Aug 44; ASF Cir 402, 9 Dec 44.

[14] PRI, 16 Aug 44, pars. 76, 77; TC Cir 100-5, revised 20 Mar 45.

ment foresaw that redeployment would involve many adjustments in facilities and procedures. Accordingly, it started early and did a meticulous job in preparing to handle the troops that would be brought back to the United States after V-E Day.

Preparations for Redeployment

The task of redeploying its forces after the defeat of Germany was recognized by the Army as both gigantic and complex.[15] A decision had to be made as to which units would be shipped from Europe directly to the Pacific and which would be returned to the zone of interior for either reassignment or demobilization. An equitable basis had to be established for the separation of some soldiers from the service and the retention of others. Means had to be found to maintain the morale of those who were being assigned to new oversea stations. All possible shipping had to be mobilized in order to effect redeployment with the greatest possible speed. Yet the flow of troops to and through the United States had to be regulated so as to avoid congesting the ports and the railroads. Care had to be exercised also to avoid glutting the limited number of ports in the Pacific areas that were to serve as bases for the invasion of Japan. The intricacy of the task was so apparent to the War Department, and to the other agencies concerned, that the planning to meet it was begun long before the invasion of continental Europe.

The planning for redeployment proceeded on several levels and therefore posed a broad problem of co-ordination. The Joint Chiefs of Staff and the Combined Chiefs of Staff went into all aspects of the subject extensively, including transportation.[16] The Combined Shipping Adjustment Board, a high-level British-American civilian agency, dealt with the employment of the shipping that was available to the United Nations.[17] The War Department developed plans relating to all phases of Army redeployment, to which Army Service Forces headquarters and the Chief of Transportation made contributions in their respective spheres. The Chief of Transportation joined with the Naval Transportation Service and the War Shipping Administration in planning for the readjustments in the allocation and operation of American vessels that would become necessary after the defeat of Germany. There also were discussions between the Chief of Transportation, the Office of Defense Transportation, and the Association of American Railroads regarding the effect of redeployment on domestic transportation. This brief review can present only those aspects of the broad subject that were of special interest to the Chief of Transportation.

Since planning for redeployment went hand in hand with planning for demobilization, such planning may be said to have started in the War Department in June 1942, when an advisory board of officers was appointed to initiate a study of the postwar Military Establishment.[18] Active planning in the Army Service Forces began in the spring of 1943. In July of that

[15] See minutes of ASF press conference held immediately after V-E Day, especially remarks of General Somervell and General Gross, which relate to transportation, OCT HB Gen Redepl.

[16] Planning and TC participation is reviewed in Memo, Plng Div for Exec OCT, 23 Jul 45, sub: Redeployment Plng, OCT HB TC Gen Redepl.

[17] See Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, p. 165, for the purpose and organization of the CSAB.

[18] This paragraph based on Maj. John C. Sparrow, History of Personnel Demobilization in the United States Army, DA Pamphlet 20-210, July 1952, Ch. II.

year a Special Planning Division was established in the War Department Special Staff to deal with both the industrial and the military aspects of demobilization. In September 1944 the War Department announced that the Army had "adopted a plan for the readjustment of military personnel after the defeat of Germany and prior to the defeat of Japan calling for a partial and orderly demobilization from its present peak strength." [19] This plan was subject to revision, of course, both before and after the end of hostilities in Europe, as further attention was given to requirements and procedures and as the circumstances of redeployment were more clearly seen.

The War Department readjustment regulations (RR) for personnel, in which the results of the extensive studies were crystallized, were published in a series of six pamphlets, all of which bore directly or indirectly on the responsibilities of the Chief of Transportation.[20] These regulations established four categories of troops: Category I troops were those to be retained in the same commands; Category II troops were those to be transferred from one theater to another; Category III troops were surplus units in the theaters that were to be reorganized and reclassified as Category I or Category II; and Category IV troops were units to be disbanded.[21]

Under the War Department's plan for redeployment, enough troops were to be shipped directly from Europe to the Pacific—the quickest route—to maintain maximum pressure against Japan. Consistent with that principle, as many as possible were to be redeployed by the slower route through the United States with time out for furlough before being reshipped to the Pacific. Some who returned to the United States were to be retained in the service and assigned to duty elsewhere than in the Pacific. As many as qualified for discharge under the Army's point system were to be returned to the zone of interior for immediate separation from the service.[22] All of these men would require ocean transportation—some for the long voyage from Europe to the Pacific, some from Europe to the United States and thence to the Pacific, and some only from Europe to the United States. In addition to troop transports, cargo shipping would be required for the organizational equipment and supplies of all troops destined for the Pacific. A basic responsibility of the Chief of Transportation in connection with redeployment was, therefore, the mobilization of the necessary shipping.

The plans formulated by the Chief of Transportation for the utilization of shipping during the redeployment period

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[19] WD press release, 6 Sep 44, sub: WD Demobilization Plan After the Defeat of Germany; ASF Plan for Redeployment, Readjustment, and Demobilization (Period I), 13 Sep 44, OCT HB Demob Plng Unit Demob Plng WD Policies.

[20] These pamphlets, the latest revisions of which are in OCT HB Demob Plng Unit Redepl Gen, were as follows:

RR 1-1 Plan for Readjustment of Military Personnel After the Defeat of Germany

RR 1-2 Procedure for Readjustment Movements

RR 1-3 Athletic and Recreation Program

RR 1-4 Army Education Program

RR 1-5 Procedures for the Readjustment of Officers, Warrant Officers, and Flight Officers After the Defeat of Germany

RR 1-6 Standing Operating Procedures for the Demobilization of Category IV Elements.

[21] RR 1-1.

[22] Detailed procedures for the zone of interior and the theaters were published in AG Memo 320.2 (15 Feb 45), 27 Feb 45, sub: Policies and Procedures Governing the Redeployment of the Army; AG Memo 370.5 (25 Apr 45), 2 May 45, sub: Revision of Annex B.

were necessarily tentative until the strategy and the troop basis for the final thrust against Japan had been determined. Nevertheless, such plans were made and remade with each change in the strategic formula so that the shipping aspect would always be assured of proper consideration. A member of the Chief of Transportation's Planning Division was transferred to the Special Planning Division of the Special Staff to work on the transportation phase of redeployment and to assure mutual understanding between the two offices.[23]

In February 1945, when redeployment planning by both the Joint Chiefs of Staff and the Combined Chiefs of Staff was taking final shape, General Gross contended that attention was being directed too largely to the problem of moving the troops and not sufficiently to the problem of making them operational—that is, having them equipped for action. At that time it was contemplated that over a period of about twelve months approximately 405,000 troops would be shipped from Europe directly to the Pacific and some 875,000 via the United States to the Pacific. General Gross urged that immediate consideration be given by all planning agencies to a study recently completed in his office that presented some essential data on the subject.[24]

The study presented an analysis of the time required to move troops and organizational equipment from Europe to the Pacific (Philippines), breaking down the total period into the time likely to elapse between the issuance of movement orders and actual departure from Europe, the time required for recuperation and training either in the United States or in the Pacific, and the time spent in travel over sea and land. The calculations indicated that, assuming no delay on account of equipment, 126 days would be required for troops to be redeployed directly and made operational; 179 days would be required in the case of troops redeployed through the United States. In contrast, 177 days would elapse before equipment shipped in unit assemblies direct from Europe to the Pacific would reach the troops, 187 days would elapse if equipment were shipped by the direct route in bulk and placed in depots before being issued to troops, and 262 days would elapse in the case of equipment shipped through the United States. From the calculations presented in this study, the Chief of Transportation concluded that the movement of equipment should be the controlling factor in scheduling the redeployment of troops; that the units to be redeployed directly should be nominated as early as possible so that their equipment might be started ahead of them; that so far as possible equipment should be shipped in bulk rather than as unit assemblies; and that the Pacific commands should be directed to establish equipment staging areas to facilitate bringing troops and their impedimenta together.

Although the poverty in troop lift, which had been one of the chief handicaps of the U.S. forces during the early days of war, had been largely overcome by increasing the capacities of existing passenger vessels, constructing new troopships, and converting freighters to troop carriers, as V-E Day approached this

[23] Maj. (later Lt. Col.) Ronald B. Shuman, who had been with the OCT since its establishment, was transferred to the Special Planning Division soon after it was set up in 1943.

[24] Memo, CofT for Dir Plans and Opns ASF, 26 Feb 45, sub: Logistical Implications; Study, Redeployment Transportation Implications, 26 Feb 45, and appended Preliminary Revision of Redeployment; all in OCT HB TC Gen Redepl.

greatly expanded capacity was seen as inadequate to the needs of the redeployment period. Those needs involved not only the speedy transfer of troops from Europe and the United States to the Pacific, but the repatriation of troops from numerous areas that would become militarily unimportant with the surrender of Germany. A full year before V-E Day, the Planning Division in the Office of the Chief of Transportation pointed out that the completion of the troopship construction program for 1945 would not provide the troop spaces required for redeployment and that the conversion of further freighters would therefore be necessary.[25] A British-American study, submitted to the Combined Chiefs of Staff in February 1945, recognized the danger of a substantial deficit in American troop lift and outlined ways of dealing with it. These ways included overloading of troopships, conversion of additional freighters, assistance from Allied, neutral, and captured enemy shipping, use of APA's and other naval vessels, full use of combatant aircraft, and careful coordination of the employment of all vessels under control of the Allied nations to insure maximum utilization of their capacities.[26]

Redeployment required co-ordination between the Army and the Navy in scheduling the return of personnel to the United States, and it was foreseen that such coordination would be even more important when the large-scale repatriation of forces from the Pacific began. A proposal to this end was placed before the Joint Chiefs of Staff by the Navy in November 1944.[27] Under this proposal the preparation and implementation of plans would have been handled on the staff level, and the Transportation Corps and the Naval Transportation Service would have been charged only with providing the means of transportation. Colonel Farr, as head of the Chief of Transportation's Movements Division, opposed the arrangement. He argued that staff decisions frequently involve long discussions, and the loss of time would prove a serious disadvantage in the effort to return troops at the maximum rate and to make maximum use of the transportation facilities. He urged that, after the basic policies had been established on the staff level, all operating matters relating to transportation be left to the appropriate operating agencies. Colonel Farr's stand was in harmony with the Chief of Transportation's protest, mentioned earlier, against the interference of higher echelons in technical matters. The Navy subsequently withdrew its proposal from the JCS docket on the ground that a study of redeployment policies had been undertaken by the Combined Chiefs of Staff.[28]

The ports of embarkation, in addition to responsibility for processing Category II units (those being transferred from one theater to another) and forwarding them to reception stations, were given another responsibility for the redeployment and repatriation periods—that of inactivating Category IV units (those to be disbanded) and forwarding the members to personnel centers for further disposition. For the latter purpose the port commanders were

[25] Memo, Stokes for Wylie, 8 May 44, sub: Proposals on C-4 Const Program, OCT HB TC Gen Redepl.

[26] CCS 746/11, 8 Feb 45, title: Over-all Review of Cargo and Troop Shipping Position for Remainder of 1945, Tab D to Annex B to Appendix B, p. 30. This study, which represented the joint efforts of the CMTC and the CSAB, assumed the defeat of Germany by 1 July 1945.

[27] JCS 1154, 6 Nov 44.

[28] Memo, Farr for Stokes, 8 Nov 44, OCT HB Farr Staybacks; JMT 83/2, 11 Jan 45.

directed to establish disposition centers in their staging areas, where the processing involved in disbanding the units and preparing the soldiers for their onward journey was to be performed.[29] Early planning in the War Department had contemplated that units to be disbanded would be forwarded from the ports to redistribution centers, where they would be inactivated and the men reclassified before being forwarded to reception stations or separation centers. The Chief of Transportation believed that the interposition of such redistribution centers involved an unnecessary waste of time and transportation, and it was for that reason that the inactivation of units was eventually assigned to the port commanders. For the same reason the Chief of Transportation favored placing reception stations and separation centers at the same installations, and the logic of this was recognized in the creation of personnel centers embracing both reception and separation activities.[30]

The adjustments that the east coast ports of embarkation would have to make when redeployment began were discussed at a conference held in New York on 11 April 1945. The chief problem was to retain sufficient staging capacity in active status and sufficient station personnel to handle the returning troops. The ports, along with other Army installations, had been under heavy pressure for some time to reduce personnel, and now they were confronted with a substantial increase in work load. Up to the time of this conference the port commanders had been handicapped in their planning by lack of information regarding the rate at which they would have to handle returning troops. In an off-the-record discussion, they were given such data as the Chief of Transportation possessed, and the estimate of the projected load, although it was tentative, enabled them to more competently compute and defend their estimates of requirements for personnel and facilities. The principal personnel needs were for clerks, typists, medical technicians, hospital ward attendants, and cooks. The need for such labor was abnormally heavy because returning troops passed through the staging areas very rapidly and usually were not available for kitchen, mess, or other work details.[31]

The planning that preceded the defeat of Germany did not neglect the Pacific coast, which was to carry the chief logistical load for both the Army and the Navy in the final drive against Japan. Care was taken to prevent shipping facilities from being diverted to nonshipping uses, and to build up staging area capacity to the level that would be required. Measures were taken also to clear depots and holding and reconsignment points of outmoded or excessive supplies in order that these installations might serve current needs more adequately. But the principal limiting factor was the capacity of the transcontinental railways. The Chief of Transportation had devoted much effort to helping the western rail lines increase their rolling

[29] OCT Misc Ltr 133, 26 Oct 44, sub: Estab of Disp Centers; RR 1-6, 16 Feb 45; TC Pamphlet 39, 1 May 45, Disp Center Org and Procedures; TC Pamphlet 40, 15 May 45, Processing and Movement of Category II Units Returned from Overseas.

[30] Memo, Farr for Demob Plng Unit OCT, 24 Apr 44, OCT HB Mvmts Div Farr Staybacks; Min of Port and Zone Comdrs Conf, Chicago, 6–9 July 44, Mtg of Port Comdrs, Opng Representatives, and Port Air Officers, 8 Jul 44, p. 27, OCT HB PE Gen.

[31] Min of East Coast Port Comdrs Conf Relative to V-E Day Activities, 11 Apr 45; Min of Conf of Representatives of OCT and East Coast PEs on Handling Returnees, at NYPE, 11 May 45; both in OCT HB TC Gen Redepl; Memo, CofT for PMG, 6 Apr 45, sub: German POWs; Memo, NYPE for CofT, 14 Apr 45, sub: Post-V-E Day Requirements; last two in OCT HB Demob Plng Unit Gen Correspondence.

stock and improve their right of ways, yet he recognized that Gulf and Atlantic ports would have to be used to some extent in supporting the forces in the Pacific.[32]

The processing of returning troops at the ports of debarkation was geared for speed. Early in the planning General Somervell pointed out that, whether they were to be separated from the service or to be sent on furloughs before being reassigned, soldiers would be impatient to reach their homes and any delay would increase the problems of morale and discipline. The Chief of Transportation therefore directed that there be no civic demonstrations at the ports; the brief receptions would be strictly military in character.[33] Under normal circumstances the processing of Category II units at the staging areas was to be accomplished within twenty-four hours, and the processing of Category IV units within forty-eight hours.[34] During the processing period constant attention was to be given to morale. Soldiers were to be relieved of work details when possible. A special meal was to be served to them soon after their arrival at the staging areas. Since a large percentage of the men would be intent on making telephone contact with their homes as quickly as possible, special telephone facilities were to be installed in the sections of the staging areas where the men would be housed, and portable telephones were to be provided in the hospitals for the use of bed patients. Arrangements were made for each man to have a thorough cleanup and to exchange any unpresentable articles of clothing for presentable ones.[35] The plan provided that while at the staging areas the troops would be briefed on the necessity of safeguarding military information and would be interrogated for information bearing on war crimes.

The Ground Forces and the Air Forces considered it necessary to maintain contact with Category IV troops while they were at the disposition centers, and the readjustment regulations provided for such liaison activities on the part of the major commands.[36] While recognizing that there were functions that the liaison officers could perform during this period, the Chief of Transportation and the port commanders viewed the arrangement with misgivings. This was particularly true because of the breadth of the instruction the AGF had issued to its liaison detachments. It was feared that the liaison activities would slow up the processing of troops and delay the onward movement. Great care had been taken to arrange for uniform and accurate information to be given the soldiers on the transports and at the ports of debarkation, and it was anticipated that the liaison detachments might introduce conflicting information. Such situations actually occurred during the initial stages of redeployment, but they were largely eliminated as the liaison groups gained a better knowledge of the responsibilities and methods of the disposition centers.[37]

According to War Department planning, troops, after being processed at the port staging areas, were to be forwarded to

[32] Wardlow, *op. cit.*, pp. 179, 180, 323–28.

[33] Min of Conf of CGs of SvCs, Dallas, Texas, 19 Feb 44, p. 41, OCT HB TC Gen Redepl; Min of Conf at NYPE, 11 May 45, p. 63, cited n. 31.

[34] Processing is defined in RR 1-1, RR 1-6, and TC Pamphlets 39 and 40, cited notes 20 and 29.

[35] Min of Conf at NYPE, 11 May 45, pp. 37–46, cited n. 31.

[36] RR 1-1, Chart I.

[37] OCT Misc Ltr 113, 5 Apr 45, sub: Liaison Detachments at PEs, and atchd Memo, AGF for ASF, OCT HB TC Gen Redepl; Min of Conf at NYPE, 11 May 45, pp. 7–16, cited n. 31; Ltr, Farr to author, 2 Jan 52, OCT HB Mvmts Div Gen.

personnel centers located near their homes for further processing before being separated from the service, or released on furlough before reassignment. The plan provided that soldiers to be reassigned would return to the personnel centers at the end of their furloughs and be forwarded thence to assembly areas, where they would be prepared for further service.[38] The Chief of Transportation emphasized the desirability of handling this traffic in such a way as to minimize the strain on the passenger services of the railroads. He wanted to keep the number of trips that the men would make as low as possible and to have them travel in organized groups whenever practicable. Group travel in special cars or special trains, as distinguished from individual travel in regular trains, permitted more economical use of railway equipment, reduced the amount of ticketing and other paper work, and enabled the Army to exercise better control over the appearance and conduct of the troops. The Chief of Transportation had to combat numerous proposals that would have violated these canons, and it was not until early in 1945 that he was rewarded by the adoption of a procedure that conformed to his desires.[39]

An effort was also made to avoid adding unnecessarily to the burden on the freight services of the American railroads. Most units returning to the United States in Categories II and IV were to be accompanied by only minimum essential equipment.[40] Heavy equipment that was still serviceable was to be shipped directly from Europe to the Pacific, and additional requirements were to be supplied from the United States. This would not only relieve the domestic carriers of the transportation of a large part of the impedimenta of redeployed units, but would also relieve U.S. ports of large transshipment operations. Equipment shipped to the Pacific from Europe and the United States was not to be marked for specific units, but rather was to be shipped in bulk and assigned to the units after their arrival at the Pacific bases.

To insure that the domestic transportation provisions of the redeployment plan were understood by all concerned, the Chief of Transportation arranged for a conference to be held in Chicago on 1 and 2 May. The first session was attended by transportation officers from the service commands, the transportation zones, the ports of embarkation, and the personnel centers, and the second session also included representatives of the carriers. In addition to clearing up any misconceptions regarding the plan of movement, these meetings were intended to give warning of the volume of traffic to be handled and the necessity for utmost economy in the use of railway equipment.[41]

It was anticipated that, despite the carefully devised arrangements for handling redeployment traffic, the railroads would encounter difficulties. Aside from the increase in the over-all load, the concentration of debarkations from Europe at

[38] Remarks by Col Finlay in Min of SvC Conf, Camp Grant, Ill., 28–30 Jun 45, pp. 199–206, OCT HB ASF; charts showing movements of Category II and Category IV troops, OCT HB TC Gen Redepl.

[39] For more detailed statement of the issues, see OCT HB Monograph 20, pp. 136–41; Memo, CofT for ACofS OPD, 20 Nov 44, OCT 370.5 Redpl of Units and Equip; Handwritten Memo, Wylie for Gross, 11 Jan 45, and atchd statement by Col Morris, Traf Contl Div OCT, sub: Redeployment, OCT HB TC Gen Redpl.

[40] RR 1-1, 15 Feb 45, par. 18; RR 1-2, 11 Apr 45, par. 16; Min of SvC Conf, Camp Grant, Ill., 28–30 Jun 45, p. 206.

[41] OCT Misc Ltr 130, 16 Apr 45; Notes on TC Conf, Chicago, 1–2 May 45, by Capt William H. Schmidt, Hist Off of Traf Contl Div; both in OCT HB TC Gen Redepl.

a few east coast ports and the uneven rate of troop arrivals were expected to create periods of unusual strain. The outlook was discussed within the Army and by the other governmental agencies concerned with domestic transportation.[42]

In accordance with a suggestion of the Director of War Mobilization and Reconversion, the domestic transportation implications of redeployment were considered early in the spring of 1945 by a panel representing the Office of Defense Transportation, the War Department, the Navy Department, the War Shipping Administration, the War Production Board, and the War Food Administration.[43] The ODT representative was the steering member of this panel. The statements submitted to the panel by the Director of ODT, Mr. Johnson, emphasized that, although the over-all transportation load would not be materially different from that handled in 1944, the cumulative strain of three years of war, the insufficiency of the new equipment provided during these years, and the inadequacy of manpower would result in a shortage of transportation during the period from V-E Day to V-J Day. Unless the programs relating to new equipment and manpower were revised, Mr. Johnson foresaw the necessity of curtailing nonmilitary traffic and possibly also establishing priorities on the movement of goods for war production. Although both passenger and freight traffic were considered, the chief concern appears to have centered about freight; yet the movement of troops became the more critical problem after redeployment began.

In formulating plans for redeployment it was contemplated that the water lift from the European and Mediterranean theaters would be supplemented by airlift for troops. The Army Air Forces estimated that the normal airlift would not exceed 12,000 per month, including 5,000 patients who were to have top priority. Shortly before V-E Day, however, the Chief of Staff directed the AAF to increase its transatlantic capacity so that 50,000 could be transported monthly, this figure to be attained not later than 1 July 1945. Measures to add the necessary aircraft to the services of the Air Transport Command were undertaken at once.[44] It was foreseen also that a large number of AAF personnel would be returned from the ETO and the MTO in tactical aircraft. Although initially it was expected that this AAF personnel would be moved directly from the aerial ports of debarkation to the places where they were being sent for recuperation, before redeployment began it was arranged that all troops landed at eastern airports would be forwarded first to the nearest water port staging area to receive the customary processing and to be organized into groups for the onward journey.[45] This arrangement avoided the necessity of setting up machinery for processing troops

[42] Ltr, ICC to CofT, 30 Jun 44, OCT 511 Misc TC; Min of ASF Staff Conf, 18 Jan 45, p. 10, OCT HB ASF; ODT press release, 31 Jan 45, OCT HB Topic ODT.

[43] OWMR Study V-E-9, sub: Transportation V-E Day to V-J Day, undated, but apparently issued in March or April 1945, OCT HB TC Gen Redepl.

[44] Memo, ACofS OPD for CG AAF, 17 Apr 45, sub: Return of Casual Mil Pers from Europe, OPD 370.9, Sec. IX-A, Case 145; Memo, CG AAF for CofS, 22 Apr 45; Draft Memo, CofS USA for Fleet Admiral Ernest J. King, USN, 26 Apr 45, file copy indorsed "not used—discussed by Gen Giles with Adm Fitch"; Summary by G-4, 25 Apr 45; last three in G-4 580; Memo, ACofS OPD for Marshall, 3 May 45, OPD 370.9, Sec. IX-A, Case 145.

[45] Min of Conf at NYPE, 11 May 45, cited n. 31; Memo, ACofS OPD for CGs of AAF, ASF, etc., 12 May 45, sub: Return of Certain Aircraft and Crews, AG 370.5 (10 May 45); Memo, TAG for CGs AAF, ASF, etc., 21 May 45, sub: Disp of Individuals Returned under Green Project, AG 200.4 (18 May 45).

at the airports and furthered the Chief of Transportation's aim to move troops in groups of a carload or more to the greatest extent possible.

The War Department plan for redeployment included procedures to govern the disposition of troops and troop impedimenta that on V-E Day were en route to theaters then becoming inactive and troops that were under movement orders to proceed to those theaters. The intention, naturally, was to stop all outbound shipments except those which would be required in the theaters despite their inactive status. Provision was also made for the disposition of rotational and temporary duty troops whose further employment might be affected by the surrender of Germany.[46]

The Operations Division of the General Staff was charged with over-all responsibility for co-ordinating the actual redeployment of troops. The commanders of the AAF, the AGF, and the ASF each designated a liaison officer to work with the Troop Control Section of OPD, and the Chief of Transportation did likewise. The specific responsibility of the OCT liaison officer was to have on hand at all times information regarding the troops and the impedimenta that were en route and the location of all ships, as well as a plan for rescheduling the ships when redeployment began. Direct responsibility for controlling the disposition of troops and supplies was charged to the Movement Coordinating Center, which had been set up in the Mobilization Division of ASF headquarters.[47]

In order to test the adequacy of the procedures for redeployment and the readiness of the several agencies to carry those procedures into effect, the War Department ordered a dry run on 25 March. The actions that each agency would be required to take on V-E Day were simulated. After studying the results of the practice operation as it affected troop movements, the Chief of Transportation reported that he considered the prescribed procedures basically sound. There were, however, some details that required further attention. General Gross recommended particularly that each troop movement order issued thereafter be specifically marked to indicate whether the shipment would be stopped on V-E Day or continued. This arrangement already had been made in connection with cargo and had been found helpful. Accordingly the symbol "#" was placed on the order opposite the name of each individual who was to continue his oversea trip despite the intervention of V-E Day, and such troops were referred to as having been "crosshatched." One of the principal advantages anticipated from this system of marking was that it would enable the Transportation Corps, when practicable, to assign only shipments of the same classification to a troopship and thus simplify the disposition of shipments at sea on V-E Day.[48]

In the Office of the Chief of Transportation the planning for redeployment, as well as for demobilization, was the direct responsibility of each director and division

[46] Memo, TAG for CGs AAF, AGF, and ASF, 3 Apr 45, sub: Disp of Individuals in or En Route to U.S. for Rotation or TD, AG 210.31 (31 Mar 45).

[47] ASF Cir 112, 24 Apr 44, Sec. VI; ASF MCC Sp Memo 2, 7 Apr 45, sub: SOP for Sp Operation, OCT HB Demob Plng Unit Redepl Policies and Procedures; Memo, ACofS OPD for CGs ASF, AGF, and AAF, 9 Apr 45, sub: Procedure for Implementation of Redepl, OPD 370.9 (9 Apr 45), and Tabs A–G.

[48] Memos for Record by Col Farr and Maj Ouderkirk, both dated 25 Mar 45, OCT HB Ouderkirk Staybacks; Memo, Gross for Lutes, 29 Mar 45, OCT 387 Trail Run of V-E Day Actions; Memo by Ouderkirk, 14 May 45, par. 9, included in Mvmts Div Hist, Apr 45, OCT HB Mvmts Div Gen.

chief, so far as his particular activities were concerned. Such planning involved many individuals and units within the OCT, and all proposals had to be co-ordinated with the other War Department agencies involved. In accordance with instructions from the Commanding General, Army Service Forces, to all technical services, the Chief of Transportation established a Demobilization Planning Unit in his office in November 1943. Headed by Col. Halsey Dunwoody (Ret.) and supervised by the OCT executive, Col. Luke W. Finlay, this unit served as a co-ordinating center for all Transportation Corps plans affecting redeployment, readjustment, and demobilization.[49]

Responsibility for the execution of approved plans on behalf of the Chief of Transportation also rested with the respective directors and division chiefs, or with the commanders of Transportation Corps field installations acting under their supervision. All actions to be taken by the Transportation Corps relating to redeployment, readjustment, and demobilization were described in detail in a pamphlet that was issued first in May 1944 and revised from time to time.[50] Immediately after V-E Day, as a further aid to those concerned with the redeployment of troops, the Chief of Transportation issued a schedule briefly outlining the actions to be taken and indicating the other War Department agencies with which co-ordination was necessary, the element of the OCT having primary responsibility for each action, and the other elements of the OCT concerned.[51]

The careful preparations that were made for redeployment, with respect to both the formulation of procedures and the assignment of responsibilities, reflected the realization that V-E Day might come suddenly and would call for a drastic readjustment in troop and cargo movements. They also reflected the realization that the smoothness and speed with which redeployment was effected would have a considerable bearing on the morale of the troops and the rapidity with which the war against Japan could be brought to a conclusion.

Redeployment Between V-E Day and V-J Day

When Germany surrendered on 8 May 1945 there were approximately 8,300,000 men and women in the U.S. Army in all parts of the world. About 5,400,000 of them were overseas, and some 3,500,000 of those were in the European and Mediterranean theaters. It was planned that by discharging about 2,000,000, moving a considerable number of troops from Europe to the Pacific, and continuing the draft about 6,968,000 men and women would be in service at the end of twelve months, a force considered necessary for the early defeat of Japan. The War Department explained to the nation that, although all physically fit soldiers who had not yet served overseas would be assigned to foreign service, it was still necessary for many of the troops that had fought in Europe to be redeployed to the Pacific. During the winter of 1944–45 the demands

[49] Memo, CofT for Dir of Industrial Demob ASF, 24 Nov 43, OCT 387 Demob Plng—Matériel; OCT Off Order 5-22, 25 Nov 43, sub: Demob Plng Unit; Memo, CofT for Dirs and Div Cs OCT, 10 Apr 45, sub: Responsibility for Preparing and Perfecting Redepl, Readj, and Demob Plans, OCT 387 Demob Plng.

[50] The first edition of TC Pamphlet 12 dealt only with matériel demobilization; actions relating to personnel redeployment were added later.

[51] OCT Misc Ltr 153, 9 May 45, sub: WD Agencies and OCT Divs Concerned with Redepl and Readj.

of the European theater had been so heavy that as V-E Day approached not a single combat division and few smaller tactical units remained in the United States. In order to meet the timetable of the war against Japan, about one third of the troops being redeployed to the Pacific would have to be shipped directly from Europe. The remaining two thirds could be redeployed through the United States and given furloughs en route.[52]

A few days after the German capitulation, Generals Somervell and Gross summarized the transportation aspects of redeployment as they then appeared. Assuming that an occupation force of about 400,000 would be left in Germany, some 3,100,000 soldiers would have to be transported from Europe during the ensuing ten to twelve months. It was estimated that approximately 845,000 would be moved during the first three months, 1,185,000 during the next three months, and 807,000 during the third quarter of redeployment. The Air Transport Command was expected to fly about 50,000 per month from Europe to the United States and the remainder would be transported by water. The long voyages to the Pacific, measuring up to 14,000 miles for troops proceeding directly from Europe to Manila, would necessitate an intensive use of all available shipping. The shipping problem was accentuated by the necessity of using many vessels for the "roll-up" of troops and supplies already in the Pacific areas and the inadequate port facilities in the Philippines and in other islands that were to serve as bases for the attack on Japan. They explained that, while the major task of redeployment from Europe to the Pacific was being performed, the Transportation Corps would also have to provide shipping to transport troops to and from numerous other oversea areas in order to carry out readjustments made necessary by the change in the strategic situation, and would have to transport troop replacements and supporting supplies to all forces stationed outside the United States.[53]

The effect of V-E Day on troopship movements in the Atlantic was moderate because the gradualness of the German collapse had permitted numerous adjustments to be made in advance. No large units had been shipped to Europe or the Mediterranean for some weeks, and the flow of replacement troops and combat equipment had been reduced to the minimum.[54] A week before the German surrender steps were taken to check the return to the theaters of temporary duty and furlough personnel that were in the United States, except those designated for return regardless of military developments.[55] As a result, so few troops were outbound when V-E Day arrived that it was not necessary to turn back any troopships then en route to Europe; they were permitted to continue to their destinations in order to be used immediately for redeployment.[56]

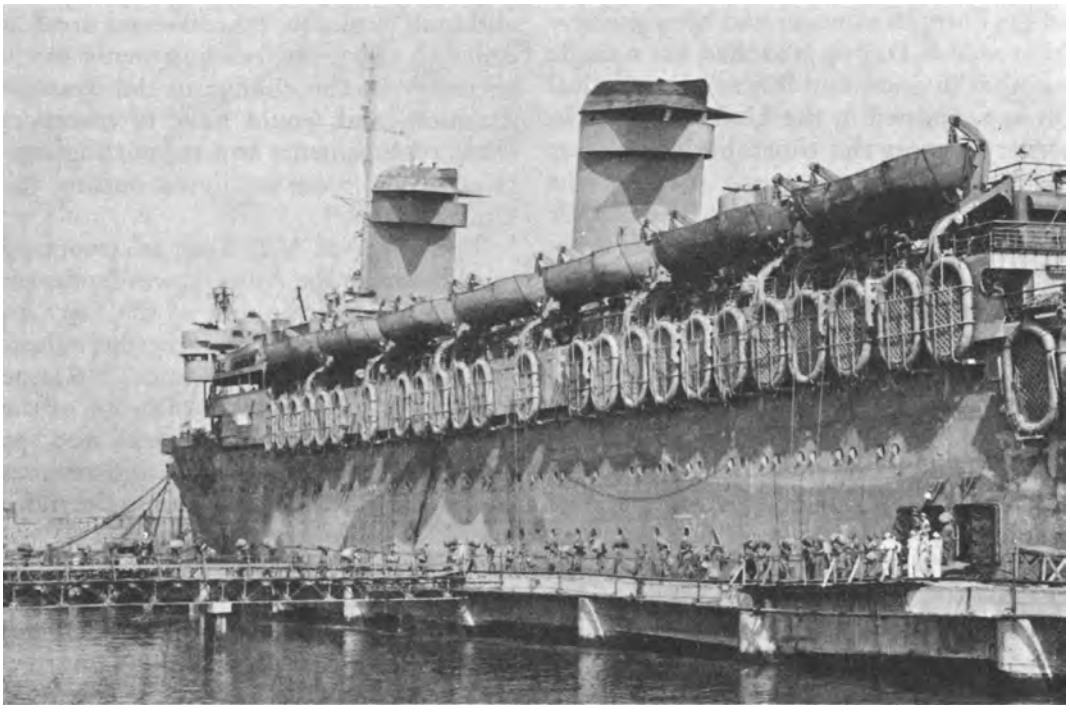
[52] Public statement by the War Department summarizing testimony given in executive session of the House Committee on Military Affairs, issued 5 May 1945, OCT HB TC Gen Redepl.

[53] ASF press conf, 10 May 45, OCT HB TC Gen Redepl. The transportation of about 90,000 American RAMP's (Recovered Allied Military Personnel) from Europe to U.S. had begun in April, and the bulk of the movement was embarked in May and June.

[54] Memo, Ouderkirk for Farr, 27 Apr 45, sub: Troops for May Shipment, OCT HB Mvmts Div Ouderkirk Staybacks.

[55] Msg, Marshall to Eisenhower, 1 May 45, CM-OUT 75415; Msg, Marshall to McNarney, 2 May 45, CM-OUT 76169.

[56] Memo, C of Mvmts Div for Hist Unit OCT, 20 Jun 45, par. 15, OCT HB Mvmt Div Rpts. In view of the prospective reduction of supply requirements in the ETO and the MTO, more than sixty cargo ships were either turned back to U.S. ports while at sea or were returned from Europe without unloading.



USS *WEST POINT* EMBARKING TROOPS AT NAPLES *a few days after the German surrender.*

About a dozen ships that had sailed or were about to sail to the United States with prisoners of war were ordered to discharge their passengers at the ports of origin so that they might embark troops without delay.[57]

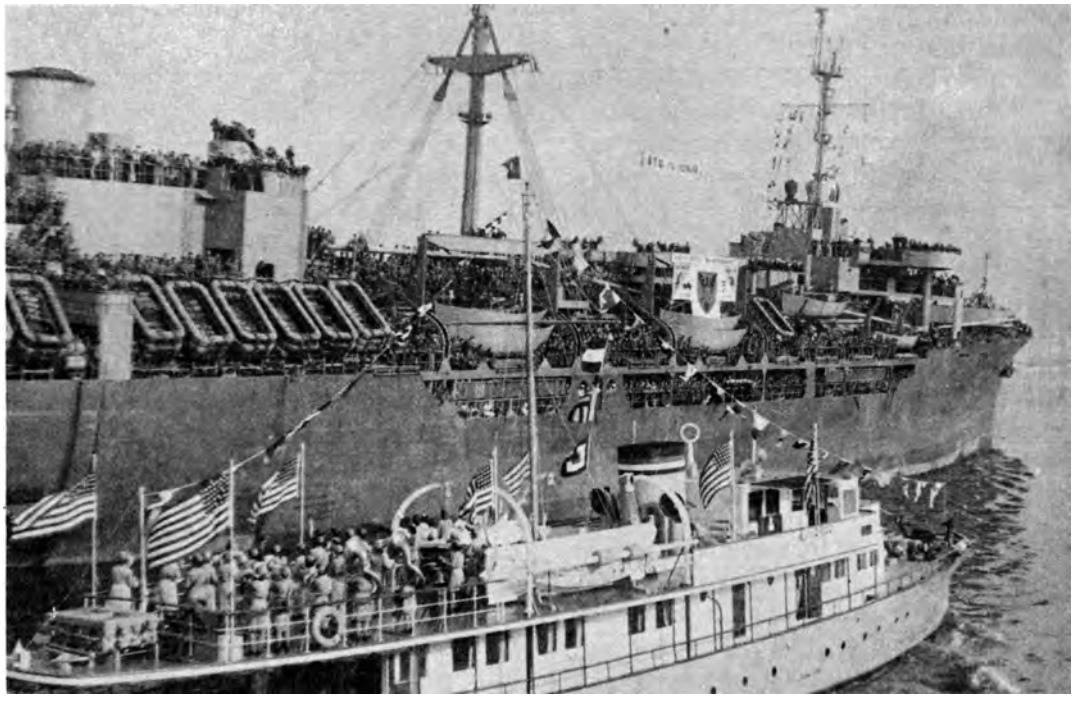
Redeployment got under way quickly. The first troopships sailing from Europe to the United States carried small units and patients. The first large unit to arrive in the United States was the 86th Infantry Division, which reached New York on 17 June. By 7 July, within two months after V-E Day, two more complete infantry divisions and parts of seven others were back in the United States being prepared for reshipment to the Pacific.[58] The first American troops to sail from Europe directly to the Pacific left Leghorn, Italy, on 8 June and arrived at Manila on 15 July. The shipment included 4,275 service troops, urgently needed at Manila, whose relatively limited organizational equipment made their early departure possible.[59]

Co-ordination of the movement of troops and equipment was the greatest problem in direct redeployment. Although

[57] Memo, CofT for Dir Plans and Opns ASF, 12 Apr 45, sub: V-E Day Action; Memo, Col Griffin for C of Mvmts Div, 9 May 45, sub: POW; Msg, Mvmts Div OCT to theaters, 11 May 45, WARX 81054, and appended note for record; all in OCT HB Mvmts Div Griffin Staybacks.

[58] WD press release for 8 July 1945 lists divisions scheduled for return to the United States by 31 December, OCT HB TC Gen Redepl.

[59] Memo by Maj Ouderkirk, 5 Oct 45, included in Mvmts Div Hist for Jun 45, OCT HB Mvmts Div Gen.



86TH DIVISION TROOPS ARRIVING AT NEW YORK *are met by the "Welcome Home" boat.*

a number of fast freighters were assigned to lift the equipment, much of it had to move in slow freighters, and in some instances the departure of troops had to be delayed so that they would not arrive in the Pacific too long before impedimenta was available. The slowness in shipping equipment was due chiefly to the inadequate facilities at European ports for processing vehicles for the ocean voyage and to delays on the part of the Pacific commands in naming destination ports.[60]

Various measures were taken to enlarge troop-carrying capacity in order that the rate of redeployment might be increased. In anticipation of its need, the Army in March had urged the Maritime Commission to expedite the delivery of troopships then under construction.[61] Work was started soon after V-E Day on a program to install temporary accommodations on about 200 Liberty cargo ships to give them a capacity of 550 each, and to convert 100 Victory cargo ships to carry 1,500 troops each.[62] Late in June the Chief of Staff directed the Transportation Corps to "exploit every possible method of loading troopships to the maximum, including

[60] Memo, CofT for OPD, 16 May 45, sub: Pacific Destinations, OCT HB Farr Staybacks; Draft of Rad to CINCAFPAC Manila, 3 Jul 45, and atchd memo for record, OCT HB Ouderkirk Staybacks; Memo, C of Mvmts Div for Hist Unit OCT, 20 Jun 45, par. 15, OCT HB Mvmts Div Rpts.

[61] Ltr, Somervell to Rear Adm Emory S. Land (Ret), 28 Mar 45, OCT 561.4 Troop Transports.

[62] These Liberties had been equipped to carry up to 500 troops in 1943–44; see above, Ch. II, pp. 90–91, 145–48.



THE *QUEEN MARY* ARRIVING AT NEW YORK *with about 15,000 soldiers aboard.*

converted cargo ships, not in excess of the lowest acceptable standards."[63] It was anticipated that this would entail double bunking, subnormal ventilation and sanitation, and the extensive use of dried and prepared foods. Arrangements were made with the Navy that whenever practicable naval personnel returning from Europe would be accommodated on combatant ships in order that the troopship space allotted to the Navy might be used for redeploying soldiers.[64] The discontinuance of troopship convoys in the Atlantic on 4 June enabled the Army to quicken the turnaround of vessels.

The plans for achieving a speedy redeployment of troops included the continued use of vessels under British control and the employment of such passenger ships as might be surrendered by Germany. The British made their three largest liners—the *Queen Mary,* the *Queen Elizabeth,* and the *Aquitania*—available for the transportation of American troops from Europe to the United States until the end of 1945. At the Potsdam Conference in July 1945, seven vessels that had been under German control were assigned to the United States.[65]

With the vessels thus obtained and with the aid of overloading wherever feasible,

[63] Memo, ACofS OPD for CG ASF, 28 Jun 45, OPD 370.5 PTO (25 Jun 45).

[64] Msg, CNO to COMNAVEU, 16 May 45, CM-IN 15801 (17 May 45).

[65] Wardlow, *op. cit.*, pp. 225–26.

the Chief of Transportation calculated that by 1 October the troop shipping available to the U.S. armed forces would accommodate more than 1,000,000 men.[66] He estimated that about 660,000 troops could be embarked in all parts of the world in August with the troop lift then available.[67]

Throughout redeployment the distribution of shipping was governed by plans for the build-up of strength in the Pacific. Although in the beginning vessels aggregating about 200,000 troop spaces were transferred from the Pacific to the Atlantic, it was intended that they should lift only one shipment from Europe and then return to the Pacific.[68] Early in July OPD requested that the troop lift in the Pacific be increased by 111,000 spaces. This request was met by the reassignment of seventy-four Victory ships that had been designated for service in the Atlantic after conversion to troop carriers. By that time the flow of troops from Europe to the United States by water and air had so far exceeded expectations that the transfer of this large number of vessels could be made without prejudicing the ability of the Transportation Corps to complete the removal of troops from Europe by 30 June 1946.[69] Arrangements with the Navy assured that all available space in combatant vessels sailing from the United States to the Pacific would be used for troops.[70]

Because of the intensity with which the ships were used, close co-ordination was necessary between the War Department and the theater commanders, and this was particularly true of the European theater. Soon after V-E Day Maj. Gen. Frank S. Ross, Chief of Transportation, ETOUSA, and a group of officers came to Washington to work out the details of redeployment procedures. The Army Service Forces sent a group to Europe, including representatives of all technical services and some of the staff divisions, to assist the ETO and the MTO with their redeployment problems.[71] The Chief of Transportation kept the theater commanders informed regarding troopship schedules, including anticipated arrival and departure dates at American and European ports. Each theater commander was required to send a pre-embarkation message to the War Department about five days in advance of every homeward sailing giving a summary of the troops to be embarked, and to dispatch complete troop rosters by air mail on the same day. Within twenty-four hours after a sailing the theater commander notified the War Department by radio concerning any corrections in the data previously forwarded.[72]

An observer from the New York Port of Embarkation who was detailed to the ETO during the greater part of the redeployment period reported that one of the chief difficulties in the theater was to reconcile the troop movement directives received from OPD with the troopship schedules and capacities provided by the Chief of Transportation, since the former consistently exceeded the latter notwithstanding the general practice of overload-

[66] Estimate by Water Div OCT, 10 Jul 45, OCT HB TC Gen Redepl.

[67] Memo, CofT for Dir Plans and Opns ASF, 7 Aug 45, sub: Available Troop Lift, OCT HB TC Gen Redepl.

[68] Memo by Maj Russell H. Nies, 14 Jun 45, in Mvmts Div Histories, OCT HB Mvmts Div Gen.

[69] Memo, ACofS OPD for CG ASF, 7 Jul 45, sub: Increased Lift for Pacific, OPD 370.5 (7 Jul 45); Memo, Wylie for Stokes, 9 Jul 45, OCT HB TC Gen Redepl; Ltr, JCS to Adm Land, WSA, 28 Jul 45, OPD 561, Sec. III.

[70] Min of OCT Opns Mtg, 25 Jun 45, OCT HB Dir of Opns.

[71] Min of ASF Staff Mtg, 29 May 45, p. 16.

[72] Memo, Farr for Finlay, 24 Jul 45, OCT HB Griffin Staybacks.

ing the vessels to the maximum.[73] This difficulty suggests that the co-ordination between OPD and the OCT regarding homeward movements was less complete than it had been during the period of heavy outbound shipments.

The Army in its planning for redeployment attached considerable importance to maintaining morale. The morale problem had to be met first in the theaters while the troops were in a state of comparative idleness awaiting transportation. The prime necessity was to keep the men occupied, and this was done as far as possible by programs of athletics, recreation, and education.[74] Care was taken also to provide correct information on redeployment objectives and procedures so that the troops would not build up expectations that could not be realized. Indoctrination was not always accomplished before sailing, and the transport commanders were accordingly directed to give the matter special attention during the voyage.[75] One result of misinformation, which had to be corrected, was that the troops believed they were on leave from the time they left the theater. Actually they were in duty status until their furloughs started at the reception stations.

When the fighting ceased the general attitude of troops in Europe was that they would willingly endure any discomfort on the voyage homeward if that would hasten their arrival, yet many voiced complaints after reaching the United States. In a broad survey of soldier opinion on the manner in which redeployment was being accomplished, The Inspector General heard many criticisms of conditions on the ships and the handling of the troops.[76] The difference in attitude before and after the voyage is not difficult to understand. In Europe the soldier was filled with the desire to get home and nothing else seemed important. Once on the way, he was face to face with the abnormal conditions that inevitably attend troop movements executed under pressure, and he found them not to his liking. It is probable that some men registered complaints when approached by press reporters after debarkation because they believed that that was the only way to make the news columns. It is clear, on the other hand, that because of overcrowding the ocean voyage could scarcely have been a pleasant experience. Many of the complaints were from men who had returned on the temporarily converted Liberty ships. It would have been fortunate if the use of these ships could have been avoided, but they were needed to carry out the timetable of redeployment, and their use before and after V-J Day enabled 375,000 soldiers to reach home earlier than would have been the case otherwise.[77]

Because of the increased number of ships to be debarked at U.S. Atlantic

[73] Memo, Lt Col Milton Wallach for CofT, 5 Sep 45, OCT HB TC Gen Redepl.

[74] Such programs were outlined in RR 1-3 and RR 1-4.

[75] Memo, CofT for CG ETO, 23 Apr 45, sub: Orientation Before Embarkation at Oversea Ports, OCT HB Griffin Staybacks; Memo, TAG for All Theaters, 27 May 45, AG 370.5 (24 May 45); Memo, CofT for CGs of PEs 29 May 45, sub: Info for Returned Troops, OCT HB Mvmts Div Troop Mvmts Inbound.

[76] Memo, TIG for CG ASF, 28 Jul 45, sub: Conditions Surrounding and Treatment Afforded American Troops Being Returned to U.S.; 2d Ind, CofT for CG ASF, 21 Aug 45, commenting on the various complaints; both in OCT 370.5 Returning Overseas Veterans. Cf. Dwight D. Eisenhower, *Crusade in Europe* (Garden City, New York: Doubleday & Company, Inc., 1949), pp. 420–22, on attitude of RAMP's.

[77] Col Marcus B. Stokes, Jr., Shipping in War, p. 22, OCT HB Topic Logistics Gen.

ports during redeployment, careful planning was necessary for the most efficient use of port facilities and rail transportation. Accurate information regarding the time of arrival for each vessel was needed, and this information was supplied by radio reports from the ships to the Navy's Eastern Sea Frontier (ESF). These reports were relayed to the Chief of Transportation and the ports of embarkation. After V-E Day in order to assure the prompt distribution of such information, the Chief of Transportation arranged for the establishment of a liaison staff at ESF headquarters in New York. This staff, which began functioning on 22 May, consisted of an officer from the OCT and officers and enlisted men assigned by the port commanders at Boston, New York, Hampton Roads, and Charleston. It maintained a twenty-four-hour watch and made one comprehensive report to the port commanders each day in addition to such special reports as might be found necessary.[78]

With the arrival of V-E Day the adjustments that had been planned for the port staging areas were placed in effect. The procedures for the operation of disposition centers for disbanding Category IV units had been recently tested at the New York Port of Embarkation, and such centers were immediately placed in operation by the port commanders at Boston, Hampton Roads, and New Orleans,[79] as well as at New York. Redeployment areas were established by these port commanders to handle Category II troops, which were being sent on to the Pacific. A section of the staging area at the Charleston Port of Embarkation, which handled a relatively small volume of troop traffic, was designated to serve as a disposition center or redeployment area as conditions might require. Since redeployment involved the return of many seasoned troops from the Pacific for demobilization, disposition centers were set up also at San Francisco, Seattle, and Prince Rupert. The basic purpose in establishing disposition centers and redeployment areas in the staging areas at the ports was to segregate inbound troops completely from those en route to the theaters in order that the different types of processing might be accomplished without interference or delay.

The plan to increase redeployment by utilizing aircraft resolved itself into two projects. The Green Project, which involved the assignment of additional transport planes to the Air Transport Command for transatlantic service, continued until 10 September 1945 and transported about 166,000 troops from the ETO and the MTO to the United States. At its height the undertaking exceeded somewhat the target of 50,000 troops per month, but in August the Army began to withdraw aircraft from it as part of a plan to augment the flow of troops from the United States to the western Pacific. The White Project involved the transportation of AAF crews and such other personnel as could be accommodated in bombers that were being returned from Europe to the zone of interior. About 85,000 men were returned in this manner.[80]

[78] Msg, Mvmts Div OCT to CG BPE, *et al.*, 18 May 45, OCT HB Mvmts Div Griffin Staybacks; Rpts of Returning Troops Br and Liaison Staff in Mvmts Div Hist for Jun 45, OCT HB Mvmts Div Gen.

[79] OCT Misc Ltr 159, 14 May 45; 1st Ind, NYPE for CofT, 18 Jun 45; both in OCT HB TC Gen Redepl. The latter document outlines readjustments made at NYPE for handling inbound troops.

[80] WD press release, 23 Jul 45, sub: 125,370 Troops Flown from Europe Since May 1; Memo, ACofS OPD for CofS USA, 4 Aug 45, sub: AAF Plan for Increasing Pacific Troop Lift, and other documents in OPD 320.2 TS, Sec. V; data provided by Hist Br, Int Div MATS, 19 Jun 51, OCT HB TC Gen Redepl.

The number of troops arriving in the United States from the European and Mediterranean theaters during June was much greater than the number that had been forecast. Early in May the Chief of Transportation had estimated that June arrivals by water would approximate 107,000; this estimate was later revised to 154,000 and actual arrivals were slightly in excess of 236,000. The increase was explained by the Movements Division on several grounds. The Navy's discontinuance of troopship convoys on 4 June permitted faster turnaround of the vessels. The resort to maximum overloading on all vessels ordered by the General Staff added substantially to the capacity of each ship. Several ships that had been scheduled for direct sailings to the Pacific were used for one voyage in the North Atlantic. The Army Air Forces also exceeded expectations by landing 56,000 troops in the United States under the Green and White Projects.[81] The total of approximately 292,000 troops landed on the Atlantic seaboard by water and air in June was exceeded by about 49,000 in July, when 341,00 were returned to the United States from the ETO and the MTO.[82]

The impact of the unexpectedly heavy influx of troops on the American railroads was severe. All of the returning soldiers, whether they were being redeployed or demobilized, had to make a number of trips in quick succession. The entire process was geared to speed, which gave no opportunity to regulate the flow and level off the peaks. Many of the troops arriving from Europe and the Mediterranean were destined for personnel centers in distant western states. The traffic from the eastern ports was largely one-way, so that a great deal of deadheading of railway equipment was involved. The demand for Pullman equipment, which had been heavy throughout the war, now became heavier, and the new troop sleepers that had been ordered after V-E Day were not yet available.

The carriers were able to provide transportation for the heavy movements from the ports, but they frequently were unable to provide sleeping cars for soldiers who were entitled to them under Army regulations. Many complaints were received through Congressional and other channels because returning veterans were required to make long trips without proper sleeping facilities. General Gross had already given the Office of Defense Transportation his opinion that a "firm denial of transportation means to the public" would be necessary and had suggested ways of making more sleeping cars available for troops.[83] On 26 June the matter was again presented to the ODT in a joint letter from the Army, the Navy, the Coast Guard, and the Marine Corps. The armed forces expressed concern because of "the inadequate response" made thus far in the provision of passenger equipment for military personnel returning from overseas. They stated that between 1 and 24 June, 143,000 Army troops had traveled an average distance of 1,251 miles in coaches because sleepers were not provided; meanwhile regular overnight sleeping car services were being maintained for the general public. While recognizing that the manner of meeting the military need must be left to the ODT

[81] Ltr, Johnson, Dir ODT, to USW, 18 Jul 45, OCT 511; Memo, Finlay for Farr, 23 Jul 45, and reply 24 Jul 45, OCT 387 Demob Plng.

[82] Ltr, SW to Sen William F. Knowland, 30 Oct 45, WDCSA 370.01, Sec. VIII, Cases 221–320.

[83] Ltr, Gross to Johnson, 30 May 45, OCT HB Gross ODT.

and the carriers, the armed forces suggested that Pullman equipment be withdrawn from all regular routes of 400 miles or less and that reservations for sleeping car space be restricted to a period of five or six days in advance of the journey.[84]

Early in July the press carried the story of a movement of 500 officers and enlisted men from Camp Myles Standish in Massachusetts to Camp Beale in California that had been made in day coaches. During the trip a rumor spread among the troops to the effect that sleeping cars had been passed that were occupied by German prisoners of war. The investigation that followed disclosed that the cars assigned to this movement were entirely unsuitable for so long a trip, but failed to locate any member of the party who claimed to have actually seen prisoners of war in sleeping cars. In his news conference on 5 July, Under Secretary of War Robert P. Patterson was requested to give the facts concerning the matter. He stated that the report regarding prisoners of war was not true and that sleeping cars were never used for such traffic except in the few cases where prisoners were also hospital patients. Referring to the assignment of day coaches, Mr. Patterson observed that the War Department some weeks previously had called the situation to the attention of the railroads and the Office of Defense Transportation and had urged that sleepers be provided for long trips, but that adequate relief had not yet been forthcoming.[85]

The public statement by the Under Secretary of War brought a vigorous response from the Director of Defense Transportation and also some countercharges. Mr. Johnson denied that the cars used for the trip from Camp Myles Standish to Camp Beale had been commuter cars as had been reported; they were all standard, steel day coaches. He objected to the implication in Mr. Patterson's statement that the entire blame for the necessity of carrying soldiers across the continent in day coaches lay with the ODT and the carriers. Rather, he contended, the War Department had never consulted the ODT regarding any of its troop movements and had not kept the ODT informed regarding the fluctuations in the volume of its redeployment traffic. He referred particularly to the great increase in troop arrivals from Europe and the Mediterranean during June compared with earlier estimates, and the prospective increase in July arrivals. He stated: "If you expect transportation to be furnished adequately, the Office of Defense Transportation and the Association of American Railroads must be informed of any such fluctuations." [86]

Mr. Patterson promptly answered these charges. He asserted that whether or not the cars assigned to the movement in question were, strictly speaking, commuter types they were quite unsuitable for transcontinental travel. He did not believe that lack of detailed information regarding projected movements justified the failure to provide proper equipment. He cited various occasions on which the ODT and the railroads had been warned of the heavy demand that would be made on

[84] Ltr, Armed Forces to Johnson, 26 Jun 45, OCT HB Gross ODT. Concerning the Canadian Government's control of the use of rail equipment, see Ltr, Thomas C. Lockwood, Canadian Transport Controller, to Johnson, 15 Jun 45, and Ltr, Gross to Lockwood, 21 Jun 45, both in OCT HB Gross ODT.

[85] Memo for the press, 5 Jul 45, ASF Hq Control Div 531.2. Reports and affidavits concerning this troop movement are in OCT HB Wylie Troop Mvmts.

[86] Ltr, Johnson to Patterson, 6 Jul 45, ASF Hq Control Div 531.2.

them for equipment and the specific suggestions that had been made to increase the number of sleepers available for troops. He asserted that with regard to withdrawing additional sleepers from regular services the Army had observed a "hesitating attitude" on the part of the carriers and a "desire to escape a direct solution." The Under Secretary added that in order to meet the charge that the load had not been adequately defined for the ODT, the Chief of Transportation thereafter would furnish the ODT with all forecasts and any modifications that might become necessary.[87]

The Senate Special Committee Investigating the National Defense Program took cognizance of the complaints regarding the transportation furnished to returning troops and the controversy over responsibility for the situation. The committee's hearings gave Mr. Johnson an opportunity to review his differences with the armed forces and the circumstances that he felt had intensified the problem. He reiterated his contention that the Army had failed to keep him properly informed regarding the volume of railway traffic to be expected as a result of redeployment, and that in the absence of such information adequate plans to meet the requirements for equipment could not be made. This, however, was only the immediate cause of the difficulty. Deeper causes lay in the failure throughout the war to make adequate provision for new railway equipment and for the protection of railway manpower. These failures were largely due to the heavy demands of the armed forces for military equipment and military manpower, and Mr. Johnson stressed the point, which he had made before, that it was inconsistent to make extraordinary efforts to destroy the enemy's transportation system while at the same time allowing our own to deteriorate.[88]

Since General Gross was in Europe at the time of the hearing, the Chief of Transportation's position was presented to the committee by Maj. Gen. John M. Franklin, Acting Chief of Transportation, aided by Colonel Finlay, Executive. Their statements indicated that the Office of the Chief of Transportation, in accordance with arrangements in effect throughout the war, had furnished advance information regarding specific troop shipments to the Association of American Railroads, which then took steps to provide the required equipment. The OCT had provided the Director of Defense Transportation with forecasts of the number of troops to arrive each month, but had not given him further details because such details had not been requested and he had no apparent need for them. The failure to keep Johnson currently informed regarding the increase of redeployment traffic over forecasts was explained on the ground that in the new undertaking to bring large numbers of troops back to the United States the excess of shipments over estimates became apparent only from day to day. In the testimony on behalf of the Chief of Transportation, the point was

[87] Ltrs, Patterson to Johnson, 9 Jul 45 and 26 Jul 45, both in OCT 511 Redepl; Memo, CofT for Dir Opns OCT, *et al.*, 1 Aug 45, sub: Rpts of Troop Mvmts for ODT, OCT 511 1943–45. In a letter to the Under Secretary of War, Mr. Johnson denied that there had been any disposition to withhold equipment from the military services and attributed any such appearance to lack of adequate information with which to work. (Ltr, Div OCT to USW, 18 Jul 45, OCT 511 Redepl).

[88] Press release by the committee, 19 Jul 45, ASF Hq Contl Div 032.3 Mead Committee; Senate Special Committee Investigating the National Defense Program, 79th Cong., 1st Sess., *Hearings*, July 23 and 24, 1945.

stressed that the problem was not one of furnishing equipment for the movement of troops, since that was already being done, but one of providing sleeping cars for those who were required to make long trips.[89]

Reading the testimony and related correspondence, one cannot escape the conclusion that neither party was without fault. If the Director of Defense Transportation, feeling that he was not being kept properly informed, had requested more up-to-date and detailed information, he undoubtedly would have received all the data that were available. He did not do this, however, until eight weeks after V-E Day, when the use of unsuitable equipment to transport troops was receiving widespread publicity. On the other hand, it is difficult to understand why the Chief of Transportation, having repeatedly asserted that the Director of Defense Transportation was responsible for the adequacy of transportation to meet the Army's need, should not have voluntarily provided that official with any and all information bearing on the extent of the need.

Several weeks after the issue came into the open, Under Secretary Patterson in a letter to John W. Snyder, Director, Office of War Mobilization and Reconversion, stated that the failure to keep Mr. Johnson fully informed had been due partly to inadvertence and partly to the lack of a clear understanding of the type of information desired.[90] This no doubt is a fair statement. More fundamental are the facts that Johnson and Gross did not agree regarding the extent to which civilian travel should be curtailed in favor of military traffic, and that while in many respects the two offices co-operated freely the relationship between them on matters involving this issue was not a sympathetic one.

The contention of the Director of Defense Transportation that throughout the war the requirements of the domestic carriers for new equipment and manpower had been neglected because of the heavy demands of the armed forces goes to the heart of the problem of war production and manpower utilization. The armed forces had been given certain strategic objectives, and their requirements for soldiers, equipment, and supplies were based on their estimates of what was necessary to accomplish those objectives. They did not fail to recognize the importance of the transportation industry in the military effort and made certain concessions to aid the carriers, but those concessions were not sufficient to meet the ODT point of view. In this connection two aspects of the military point of view must be understood. With regard to transportation equipment, the Army contended that the military need could and should be met with the available facilities by restricting the civilian use of transportation for nonessential purposes. With regard to manpower, the Army believed that the problems of both industry and the military forces could have been greatly eased by a more judicious use of the nation's labor force, possibly under a national service law.[91]

As a result of the situation that developed in June and early July, several orders were issued by the ODT to regulate the

[89] *Hearings* cited n. 88, July 27, 1945.

[90] Ltr, Patterson to Snyder, 30 Jul 45, OCT HB Gross ODT. For a summary of the information given the ODT, see TWX Conf, Gen Franklin, *et al.*, in Washington with Gen Gross in Berlin, 24 Jul 45, OCT HB TC Gen Redepl.

[91] For a fuller discussion of these issues, see Wardlow, *op. cit.*, pp. 328–41.

use of railroad passenger cars. The carriers were directed not to reserve, allocate, or sell reserve seats or sleeping car space more than 120 hours in advance of the scheduled departure of the train.[92] The measure was designed to check the practice adopted by some individuals and business firms of tying up space for which they did not have a specific or legitimate need. The operation of sleeping cars on routes of 450 miles or less was prohibited. The ODT stated that as a result of this order about 900 sleeping cars were withdrawn from regular service and placed in a pool for use of the military forces.[93] All railway passenger coaches were placed in a pool to be employed under the direction of the ODT, and the chairman of the Car Service Division of the Association of American Railroads was designated the agent of the ODT to administer the order.[94] The armed forces were required, when making organized military movements, to place three persons in each sleeping car section and corresponding coach space. This requirement made uniform the practice the Army had followed throughout the war and brought to an end the Navy's insistence on placing only two men in a section.[95] The ODT had proposed that four soldiers be placed in a section, but the Army refused to concur contending that such crowding was "beyond practicable limits," and pointing out the unfairness of requiring soldiers to travel under such conditions when civilians "vacation-bent" could have sole occupancy of berths.[96]

A number of measures were taken by the Army to relieve the acute transportation situation. The War Department renewed its instructions on reducing official military travel wherever practicable.[97] Local transportation officers were directed to consolidate small groups whenever possible in order to conserve car space, and officers ordering such movements were directed to set dates between which the movement might be made, rather than specific dates.[98] Local transportation officers were again reminded that they must give the carriers as much advance notice of their equipment requirements as possible.[99] The passenger associations of the railroads were urged to select the shortest routes for troop movements so far as practicable.[100] The regulation providing that troops were entitled to sleeping car accommodations for overnight trips was temporarily suspended, and transportation officers were directed not to request sleeping cars for trips of less than forty-eight hours.[101] The Chief of Transportation maintained a time record for each movement, indicating each step in the process of ordering equipment and moving troops, in order to ascertain where unnecessary delays were encountered.[102]

A plan of "rotational sleeping," which

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[92] ODT GO 52, 29 Jun 45.

[93] ODT GO 53, 7 Jul 45; ODT, *Civilian War Transport*, pp. 82. 83.

[94] ODT GO 55, 17 Jul 45.

[95] ODT GO 56, 20 Jul 45; Ltr, SW to SN, 5 Jul 45; Ltr, SN to SW, 13 Jul 45; last two in G-4 510, Vol. III.

[96] Ltr, Johnson to Patterson, 30 Jun 45; Ltr, Patterson to Johnson, 4 Jul 45; both in ASF Control Div 531.2.

[97] Memo, ACofS G-4 for CofS and SW, 3 Aug 45; Ltr, SW to Dir ODT, 6 Aug 45; Ltr, Acting SW to Dir ODT, 22 Aug 45; all in G-4 510, Vol. III.

[98] WD Cir 199, 3 Jul 45.

[99] WD CTB 35, 10 Jul 45.

[100] Memos, CofT for the respective passenger associations, 18 Jul 45 and 26 Jul 45, OCT 387 Demob Plng—Redepl Traf.

[101] Msg, TAG for SvCs, 11 Jul 45; Memo, CofT for TAG, 9 Aug 45, sub: Sleeping Car Equip, AG 510 (27 Aug 42)(2).

[102] Ltr, White to IMC, 25 Jun 45, OCT 531.7 Train Service; Memo, MTS for White, 7 Aug 45, OCT 080 AAR.

promised a substantial saving in sleeping car space, was tried by the Transportation Corps in July. The two trains that were operated experimentally on this basis were made up of both sleepers and coaches. The troops that had occupied the sleepers during half of the day were moved to the coaches, and the troops that had occupied the coaches were moved to the sleepers. Theoretically the plan seemed good, but in practice it presented difficulties and accordingly was not employed further. Aside from the inevitable disorder involved in changing cars, the transfer of troops from air-conditioned sleepers to non-air-conditioned coaches in midsummer created more dissension than if the men had been obliged to travel in coaches all the way.[103]

The Director of Defense Transportation requested the Army to ascertain whether greater use could be made of airlift and motorbuses in the effort to lighten the load on the railroads. The Army Air Forces determined that it would be practicable to release from seventy-five to eighty transport planes and about 260 airline pilots then in the service, and to place the equipment and personnel at the disposal of the transcontinental commercial airlines for their use in transporting military passengers. This supplementary airlift was expected to provide transcontinental passage for about 25,000 troops per month. The project was approved by the War Department late in July, but the commercial airlines did not begin moving troops until after the Japanese surrender.[104] The use of buses in lieu of rail transportation was limited by the agreement between the armed forces and the railroads to cases where the highway carriers could provide more satisfactory service than the rail lines, but local transportation officers, particularly those at personnel centers, were encouraged to keep in mind the possibility of using the highway carriers when they offered superior service.[105]

The Director of Defense Transportation also recommended that the War Department endeavor to arrange a more even flow of troops into the Atlantic coast ports. He pointed out that during a ten-day period in mid-July approximately 30,000 troops had arrived on each of two peak days, whereas the daily average for the period was less than 12,000. The War Department recognized that such heavy concentrations placed an unusual burden on the railroads, but it stated that in order to carry out the plan to return troops from Europe as quickly as possible and to be in a position to transfer ships to the Pacific for a rapid build-up against Japan, it had to make maximum use of the vessels. An attempt to smooth out the inbound flow of troops would involve retarding some of the ships, which the War Department did not consider feasible.[106] It was evident also that the measures taken had somewhat improved the military sleeping car situation, for General Williamson was able to report on 28 July that during the preceding ten days the carriers had provided sleeping cars for all movements of forty or

[103] WD press release, 20 Jul 45; Interv with Maj Farley, 24 May 51; both in OCT HB TC Gen Redepl. Major Farley represented the Traffic Control Division, OCT, as an observer on one of these trips.

[104] See below, pp. 208–09; Memo, Maj William H. Henderson, Jr., for ACofS G-4, 19 Jul 45, sub: Investigation of Air Lift; Memo, CG AAF for CofS USA, 27 Jul 45; Ltr, USW to Dir ODT, 31 Jul 45; all in G-4 510, Vol. III.

[105] Memo, CofT for ACofS G-4, 31 Jul 45, sub: Use of Commercial Bus Lines; WD CTB 43, 23 Aug 45; both in AG 537 (31 Jul 45).

[106] Ltr, Dir ODT to USW, 24 Jul 45; Ltr, USW to Dir ODT, 31 Jul 45; both in G-4 510, Vol. III.

more troops when the travel time was forty-eight hours or more.[107]

Because of the several categories of troops that were in a sense competing for the available sleeping car space, the Traffic Control Division in the Office of the Chief of Transportation had employed an informal plan of priority throughout the war. In August 1945 this plan was elaborated and adopted by all of the armed forces.[108] The joint preference agreement was applicable to all carload traffic moving under the Joint Military Passenger Agreement and to individuals engaging sleeping car space through the government reservation bureaus. First preference was given to hospital and litter patients regardless of the distance to be traveled. Second preference was given to troops moving to staging areas or replacement depots for shipment overseas. Third preference was applicable to redeployed troops moving from ports of debarkation to personnel centers and from personnel centers to assembly stations before embarkation for Pacific destinations, and also to certain civilian technicians moving under military orders. The remaining traffic was covered by preferences four and five. Within a preference category, priority was given to the movement involving the greatest number of nights of travel. This joint preference agreement did not go as far as the Chief of Transportation had gone in directing that movements of less than forty-eight hours should use coaches; it provided instead that movements of 450 miles or less would not use sleepers unless the cars otherwise would have to be deadheaded, and that movements involving only one night en route would use coaches if they were available. Probably the improvement in the sleeping car situation that occurred in July and the prospect of early delivery of the 1,200 special troop sleepers on order influenced the decision.

The heavy and steady flow of troops from port staging areas to personnel centers gave rise to some new problems in the operation of troop trains. The number of troop train commanders had to be greatly increased, and many inexperienced officers had to be trained to perform the exacting duties; arrangements were made so that they could shuttle back and forth with as little delay as possible. In addition to the train commander, the commander of a staging area assigned a group supervisor for the troops destined for a single personnel center, a car leader for each car, and the required number of kitchen and mess personnel. The Chief of Transportation issued a special pamphlet setting forth in detail the responsibilities of the staging area commanders and the troop train complements.[109] Pending the delivery of the new kitchen cars ordered in May, arrangements were made with the railroads for the assignment of additional baggage cars to be converted to kitchen cars. In July there were 500 baggage cars in this pool.[110]

Although traffic calculations were necessarily tentative and were completely upset by the early surrender of Japan, the forecasts prepared in the Office of the Chief of Transportation after two months

[107] Ltr, Williamson to ODT, 28 Jul 45, OCT HB Gross ODT.

[108] Ltr, C of Traf Contl Div to AAR, 7 Aug 45, OCT 531.7 Preference Plan; WD CTB 40, 13 Aug 45, sub: Preference Plan for Ordering and Furnishing Pullman Equip, OCT HB Traf Contl Div Pass.

[109] TC Cir 100-10, revised 13 Jun 45, sub: Mvmts to Pers Centers; ASF Cir 253, 3 Jul 45, Sec. I; TC Cir 101-2, 11 Aug 45; TC Pamphlet 45, 11 Aug 45, sub: TC Manual for St Area and Troop Train Comdrs.

[110] OCT HB Monograph 22, p. 124.

of experience with redeployment are of interest. They give an indication of the rates at which troop withdrawals from inactive theaters and the build-up of strength in the Pacific were to have been accomplished, and of the effect of this redeployment on troop travel within the United States. According to these forecasts the heaviest shipments of troops from inactive theaters would be in July, the heaviest shipments of troops from the United States to the Pacific would be in November, and the arrivals of units in the Pacific would reach a crest in December. *(Chart 5)* The volume of Army rail traffic in organized movements (forty or more troops), which had attained a monthly peak of 1,001,000 passengers in April 1943 and then had declined to slightly over 430,000 just before the German surrender when the larger part of the Army was overseas, was expected to reach almost 1,500,000 in some months in late 1945 and early 1946.[111]

Of the total force of somewhat more than 400,000 troops that was to have been redeployed directly from the European and Mediterranean theaters to the Pacific, approximately 155,000 had been embarked when the end of hostilities disrupted the redeployment plan. Of this number, 117,000 were from the ETO and most of them had been embarked at Marseille. The 38,000 shipped from the MTO had been embarked at Naples and Leghorn.[112]

Repatriation After the Surrender of Japan

Although the Japanese surrender on 14 August 1945 came much earlier than had been expected, plans for making the necessary adjustments in oversea troop movements had been worked out, and they were placed in effect at once.[113] The records of the Chief of Transportation's Movements Division, showing the position of all ships and the troop units en route or scheduled for movement, facilitated this action. Eighteen troopships that were en route between Europe and the Panama Canal destined for the Pacific were diverted to U.S. east coast ports. Twenty troopships at or en route to Marseille and Naples to embark troops for the Pacific were ordered to embark troops for discharge in the United States. Twenty-four freighters carrying organizational equipment from Europe to the Pacific were diverted to U.S. east coast ports. The troop movements scheduled to leave U.S. west coast ports for the Pacific during August were not greatly affected by the cessation of hostilities. High-point men were screened out, but otherwise units and replacements sailed as planned, and the number of Army personnel embarked for the Pacific in August (about 158,000) far exceeded that of any previous month. These troops, and the smaller numbers shipped in subsequent months, were intended to relieve from occupational duty troops that had already seen long service overseas.[114]

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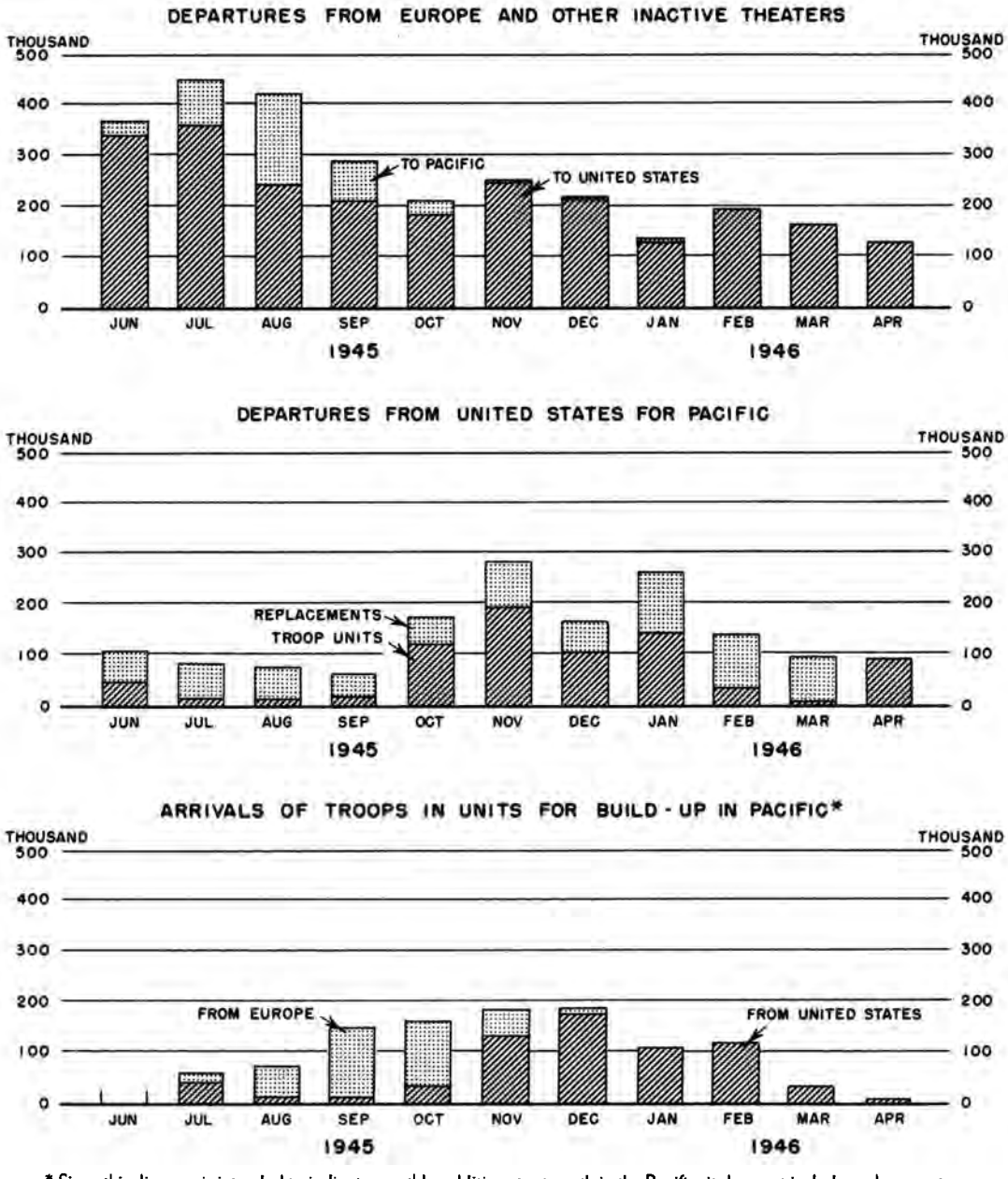
[111] Chart prepared in Transport Economics Br, Traf Contl Div, OCT, 4 Jul 45, OCT HB Gen Redepl.

[112] ASF MPR, Oct 45, Sec. 3, p. 16. For a discussion of assembly areas and port staging areas for troops being shipped from Europe as well as the work of the Redeployment Coordinating Group, which functioned in Europe, see Sparrow, *op. cit.*, pp. 178–97.

[113] Memo, TAG for CGs AAF, AGF, *et al.*, 14 Aug 45, sub: Procedure for Disposition of Units, etc., Upon Surrender of Japan, AG 370.01 (13 Aug 45).

[114] Mvmts Div Hists for Aug, Sep, Oct 45, OCT HB Mvmts Div Gen. Movements of cargo ships carrying maintenance supplies were more extensively affected, as will be explained in Ch. V, below.

CHART 5—FORECAST OF TROOP REDEPLOYMENT, PREPARED BY THE CHIEF OF TRANSPORTATION, AS OF 11 JULY 1945



* Since this diagram is intended to indicate monthly additions to strength in the Pacific, it does not include replacements.

Source: Charts A, C, and D, prepared by the Planning Division, OCT; copies in OCT HB TC General, Redeployment.

When Japan surrendered the Army had about 4,500,000 troops overseas. The size of the occupational forces had not been fixed, but it was calculated that more than 3,500,000 of these troops would have to be repatriated as soon as possible. The Army realized that there would be an insistent popular demand for speedy demobilization and that regardless of the rate of repatriation it could not be fast enough to satisfy the desires of the soldiers and their relatives. Nevertheless, the military authorities assured the nation that all resources would be utilized to bring the troops home and return them to civilian life. General Somervell and several members of his staff held a press conference on 16 August, in which many aspects of the demobilization plans were explained. On that occasion General Gross stated that in the months to come the movement of soldiers to the United States would far exceed anything achieved during redeployment. He asserted that every available ship would be used, and at the same time emphasized that the load on the American railroads would be exceedingly heavy. "All of us at home," he said, "must be prepared to accept inconveniences in order that the reunion of families in peace may be accomplished as quickly as possible." [115] He meant, of course, that regular railway services would have to be further reduced in order to provide adequate and suitable transportation for troops.

During August General Gross discussed at length with the Association of American Railroads the heavy burden that would fall on the carriers when repatriation from both Europe and the Pacific got under way. AAR officials were confident that by giving preference to military over civilian traffic the railroads could transport inland all of the soldiers that the Transportation Corps could land at the ports. In order to shorten the rail haul as much as possible, they suggested that troops returning from Europe be regrouped at the oversea staging areas and embarked on ships that would land them at the U.S. ports nearest the separation centers for which they were destined, and also that troops returning from the Pacific be assembled at Hawaii and similarly regrouped for discharge at the ports nearest their separation centers. General Gross, while recognizing the merit of these suggestions from the standpoint of the railroads, saw only limited possibility of putting them into effect because the proposed arrangements would interfere with the operation of the point system—which was being closely followed in determining the order in which soldiers would be repatriated—and because they would involve an "extravagant use of shipping capacity." [116]

The discussions between General Gross and the AAR did not bring about a complete meeting of the minds regarding the extent of military rail traffic during repatriation or the manner in which it would be accommodated. General Gross wanted a specific statement from the carriers as to the number of troops they would be able to handle. The response of the Association of American Railroads was that the only limiting factor would be the extent to which civilian travel could be reduced, a response that left the point unsettled. The AAR wanted a firm estimate of the number of troops to be landed at U.S. ports during succeeding months. General Gross could only state that, while he had pro-

[115] ASF press conf, 16 Aug 45, OCT HB TC Gen Demob.

[116] Ltr, Buford to Gross, 13 Aug 45, and reply, 17 Aug 45, both in OCT 387 Demob Plng.

vided and would continue to provide the best possible estimates, the figures necessarily would be tentative for a period because of the suddenness with which the war had ended and the necessity of completely revising troop movement and shipping plans.[117]

The rate of repatriation from Europe depended chiefly on the amount of shipping that could be assigned, but the rate from the western Pacific was affected by a number of factors. General MacArthur's troops were scattered among many small and widely separated bases, and it was uncertain how quickly they could be transported to assembly areas for embarkation on transpacific vessels.[118] The number of troops required for the occupation of Japan was difficult to determine. Because of these imponderables, MacArthur could not at once give a firm estimate of monthly shipments, and his early figures were considerably below those that he submitted later.[119] As a result, the removal of troops from Europe, which had been under way for three months and was already well organized, made much better progress during the early weeks of the repatriation period than did the return of troops from the western Pacific. By late September, however, the situation in General MacArthur's command had become clearer and the deployment of shipping to meet the requirements was well under way.[120]

The early negotiations on rail transportation for repatriated troops again brought out the differing attitudes of the Army and the Director of Defense Transportation, and these differences were sometimes expressed with more candor than diplomacy.[121] The root issue was still the division of railroad equipment, especially sleeping cars, between military and civilian traffic. Although the joint preference agreement made by the armed forces in August allowed greater latitude, General Gross had also agreed with the ODT that Army personnel would use coaches for trips of less than forty-eight hours unless sleepers were available that otherwise would have to be deadheaded, and he insisted that the latter agreement was being honored. The ODT, on the other hand, presented data to show that it was not being uniformly carried out, and contended that the failure of the carriers in some instances to provide sleepers for trips of more than forty-eight hours was due to their employment on shorter Army hauls.[122]

Late in August the Army learned that the railroads and the Pullman Company desired to withdraw about 400 sleeping cars from the military pool so that they could be used in regular overnight services. The Army notified both the Director of Defense Transportation and the Director of War Mobilization and Reconversion

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[117] Ltr, Gross to Pelley, 21 Aug 45, and reply, 25 Aug 45, both in OCT 511, 1943–1945; Ltr, Gross to Pelley, 31 Aug 45, OCT 080 AAR.

[118] Eleven such assembly areas were established to relieve transpacific troopships of the necessity of calling at many small ports, thereby saving ship time. See WD press release, 18 Oct 45, OCT HB TC Gen Demob Trans.

[119] WD press release, 10 Sep 45, sub: Target Dates for Return of Troops, OCT HB TC Gen Demob; Memo, CofT for Dir Plans and Opns ASF, 2 Nov 45, pars. 5 and 6, OCT HB Plng Div Mead Com.

[120] Rads between WD and CINCAFPAC, CM-OUT 65131, 15 Sep 45; CM-IN 23948, 29 Sep 45; CM-OUT 72042, 1 Oct 45.

[121] See last paragraphs of Ltrs, Gross to Johnson, 14 Aug 45, and Johnson to Gross, 17 Aug 45; both in OCT HB Gross ODT.

[122] Ltr, Gross to Johnson, 29 Aug 45; Ltr, Johnson to Gross, 29 Aug 45; Ltr, Gross to Johnson, 4 Sep 45; Ltrs, Johnson to Gross and USW, 6 Sep 45; Ltr, USW to Johnson, 10 Sep 45; Ltrs, Williamson to Johnson and the Pullman Co., 19 Sep 45; all in OCT HB Gross ODT.

of its opposition, with the result that the cars were not withdrawn.[123] The Army's view was that during repatriation more, rather than fewer, sleeping cars should be assigned to the military pool, which served all of the armed services. At about this time the Director of Defense Transportation took steps to abolish the government reservation bureaus, which the railroads had maintained primarily for the benefit of military personnel traveling as individuals, but reconsidered the plan when the armed forces made a joint protest.[124]

The Chief of Transportation evidently believed that there was nothing to be gained by entering into detailed negotiations with the ODT regarding rail equipment. Late in August Mr. Johnson appointed a committee representing his own office, the Association of American Railroads, the Navy, the Marine Corps, and the Army to study military requirements and make recommendations to him. Col. Joshua R. Messersmith, deputy chief of the Traffic Control Division, was the appointee for the Army. When the time came to approve the committee's final report, Messersmith did not attend the meeting. In explaining his absence he informed Mr. Johnson, undoubtedly with the approval of the Chief of Transportation, that since the War Department had no control over the distribution of equipment it would neither accept nor reject any estimates submitted by the AAR. He stated that the War Department provided the railroads and the Pullman Company with estimates of its requirements and considered the carriers responsible for meeting such requirements "with dispatch and the same degree of efficiency and comfort as is accorded the public." [125]

In his response Johnson made it clear that whereas the Chief of Transportation had requested the assignment of 200 additional sleeping cars to the military pool, he (Johnson) was of the opinion that military traffic already was using a disproportionate share of the equipment. In support of his contention, Johnson stated that on 12 September about 72 percent of these sleeping cars were in military service, leaving only 28 percent to serve the rest of the nation. General Gross then presented the following analysis from data available to him:

Sleeping Cars	*Number*	*Percent*
Total	8,034	100.0
Cars in regular service	2,544	31.7
Cars in military service	5,090	63.3
Standard and tourist sleepers in troop service	3,705	46.1
Special troop sleepers in troop service	1,237	15.4
Standard sleepers in military sleeping car lines	148	1.8
Cars under repair	400	5.0

Johnson took no exception to these figures, but he stated that in his calculation of cars in military service he had included an estimate of the number of cars represented by the military personnel that used the regular sleeper services.[126]

While the Chief of Transportation foresaw trouble in providing adequate rail transportation after repatriation from the Pacific got into full swing, the immediate

[123] Ltrs, USW to Dir ODT and Dir OWMR, 31 Aug 45; Ltr, Dir OWMR to USW, 5 Sep 45; Ltr, Dir ODT to USW, 6 Sep 45; all in OCT HB Gross ODT; Ltr, Buford to Gross, 18 Sep 45, OCT 531.2 Troop Sleepers.

[124] See above, Ch. I, p. 65.

[125] Ltr, Messersmith to Johnson, 4 Sep 45; Ltr, Johnson to Messersmith, 7 Sep 45; Ltr, Johnson to USW, 7 Sep 45; all in OCT HB Gross ODT.

[126] Ltr, Johnson to Gross, 12 Sep 45; Ltr, Gross to Johnson, 18 Sep 45; Ltr, Johnson to Gross, 21 Sep 45; all in OCT HB Gross ODT.

problem confronting him was the build-up of shipping capacity. He tackled the job aggressively, in co-operation with the War Shipping Administration and the Navy, and the results were gratifying.

On the day Japan surrendered there were 282 American-controlled vessels in U.S. Army troop service, including the small number of Liberties and Victories on which conversion work had been completed, and 5 vessels under British control. The American pool was distributed 108 to transatlantic and 174 to transpacific routes.[127]

The repatriation fleet was rapidly increased. The program of Liberty ship and Victory ship conversion was pressed. The cessation of hostilities meant that naval assault transports and naval combatant ships could be used for repatriation to a greater extent.[128] As soon as they could be released from patient evacuation, hospital ships were employed as passenger vessels. Passenger space on freighters returning to the United States was used for troops whenever practicable. For a time tankers also were employed in this way, but the practice had to be discontinued because tankers were frequently diverted en route and the troops were then landed at ports where there were no facilities for staging and processing them.[129]

In addition to increasing the repatriation fleet, other steps were taken to facilitate the return of troops. The staging capacity at west coast ports, which had been limited during the war, was enlarged. Overloading was continued to the extent weather permitted.[130] A liaison office, similar to the one established earlier on the east coast, was set up in the headquarters of the Navy's Western Sea Frontier to keep the respective Army port commanders informed regarding prospective arrivals of troopships.[131] A Ship Regulating Branch was organized in the Movements Division to control the flow of troops into the several ports in accordance with percentages established by the railroads.[132] Representatives of the Chief of Transportation and the Pacific coast Army port commanders met at San Francisco early in September for a full discussion of all matters pertaining to repatriation.[133]

The task of simultaneously repatriating Army and Navy personnel from many scattered Pacific bases gave rise to new policies regarding the use of transportation facilities. Instead of the wartime policy of considering Army and Navy troopships in a single pool and using them jointly, the Joint Chiefs of Staff in September decided that all troop-carrying vessels in the Pacific would be divided into two blocks, one for the Army and one for the Navy. The Joint Military Transportation Committee was assigned the task of allocating specific vessels to the respective blocks in accordance with the estimated requirements. The vessels in each block were to be operated primarily to meet the needs of the service to which they were allocated, but they could be used jointly when this would enable a larger number of passengers to

[127] Memo, Plng, Int, and Mvmts Div OCT for Hist Unit, 16 Oct 46, sub: Hist of Mvmts Contl Div to 15 Aug 46, OCT HB Mvmts Div Rpts.

[128] Memo, Farr for Wylie, 15 Oct 45, OCT HB Farr Staybacks.

[129] Rad, WD to Theater Comdrs, 3 Oct 45, CM-OUT 10998.

[130] Overloading of Liberties in the Atlantic was stopped in October, but overloading of Victories continued through November.

[131] Hist of Returning Troop Br, 31 Oct 45, in Mvmts Div Hist for Sep 45, OCT HB Mvmts Div Gen.

[132] Hist of Ship Reg Br, 11 Dec 45, in Mvmts Div Hist for Nov 45, OCT HB Mvmts Div Gen.

[133] Summary of West Coast Port Comdrs Conf on Returning Troop Mvmts, 6–7 Sep 45, OCT HB Wylie Troop Mvmts.

be embarked. The use of domestic transportation also was to be apportioned between the Army and the Navy according to the number of troops to be moved inland.[134]

Because of growing public criticism of the rate at which troops were being returned, the Chief of Transportation decided in mid-November to issue a detailed statement to show what had been accomplished and what was in prospect.[135] He summarized the shipping then assigned to the repatriation of military personnel as follows: [136]

Type	*Number*
Total	871
U.S.-controlled troopships	253
Converted Liberties	210
Converted Victories	87
Hospital ships	31
Naval assault transports	178
Naval combatant ships	111
British troopships	1

Of these 871 vessels with spaces for 1,370,479 troops, 400 vessels with 578,520 spaces were employed in transatlantic services and 471 with 791,959 spaces were employed in the Pacific. All of the naval assault vessels and most of the combatant vessels were in the Pacific. At that time only about 45 percent of the troop space on these ships was available to the Army, but more was expected to become available as the Navy's repatriation program progressed. The Chief of Transportation further explained that only one British vessel, the *Queen Mary,* remained in U.S. troop service because the British themselves had a large repatriation task, and that only two of the vessels that had been surrendered by Germany were being used because the others could not have been rehabilitated in time to be of great value in repatriation.

The complaints regarding the rate of repatriation, the majority of which concerned the Pacific, alleged negligence on the part of the Army in not using more cargo ships to transport returning troops. The Army carefully explained its position in public statements and in private correspondence. It pointed out that the shipping facilities at the west coast ports were operating at full capacity and that voyage repairs required by ships returning from the Pacific already were overtaxing the yards that would have to make any further cargo ship conversions. Of the Liberty ships selected for conversion early in the summer, the last had not been ready for service until October, and the last converted Victory ship would not be ready to sail until the end of November. Under these circumstances and in view of the fact that the peak of the repatriation movement would be reached in December, further cargo ship conversions were considered uneconomical. The Army stressed the inadvisability of placing troops on freighters that were not properly equipped and explained why the hasty conversions that had been made at Manila for the return of troops to the United States had been limited to a small number of vessels.[137]

[134] JCS Policy Memo 27, 21 Sep 45.

[135] WD press release, 20 Nov 45, OCT HB TC Gen Demob Trans.

[136] Conflicting statements have been made regarding the number of Liberties converted in 1945. Charles, *Troopships of World War II,* pp. 356–60, lists 201 actually converted in 1945 to carry 550 troops each. The figure of 210 may include some Liberties that had been permanently converted. Ninety-seven Victories were converted, but 10 were assigned to the British in exchange for the *Queen Mary;* see Wardlow, *op. cit.,* pp. 226–27, 301.

[137] WD press release, 20 Nov 45, cited n. 135; letters in answer to complaints are filed in OCT 370.5 Return of Troops from Overseas; messages regarding conversions at Manila are in OCT 564 Cargo Vessels; James R. Masterson, U.S. Army Transportation in

The Army further pointed out that in November, despite the wide dispersal of troops and the long voyages in the Pacific, it was repatriating more than twice as many troops as had been returned from Europe during the peak month following World War I. It also stated that, since the removal of troops from the European and Mediterranean theaters was so far advanced, beginning in December many fast troopships would be transferred from the Atlantic to the Pacific so that the rate of repatriation from General MacArthur's command would be accelerated.

These explanations did not convince persons who were willing to accept at face value the statements of soldiers that they were eager to travel under any conditions so long as they were allowed to sail, or were intrigued by the slogan "get the boys home by Christmas." Such persons could view the matter from a purely personal or sentimental standpoint, since they would not be responsible for the hardships imposed, nor affected by the complaints that would be made by many soldiers after arrival in the United States. On November 27 maritime and longshore unions, which were opposed to the policy of laying up American cargo ships or turning them over to foreign countries, championed the cause of the soldiers who were still overseas and threatened one-day strikes to emphasize their position.[138] On the same day resolutions were introduced in the House of Representatives to require the War Department to submit a forecast of troops that would be eligible for discharge within ninety days, and to require the Army, the Navy, and the War Shipping Administration to give a full accounting of ships used and not used for repatriation purposes.[139] The War Department was quick to provide such information as it possessed, although the resolutions were not formally adopted.

Air transport was used for the repatriation of troops after V-J Day, but not to the extent that it had been employed during redeployment from Europe and the Mediterranean. Two projects were set up for repatriating troops by air. In the Rainbow Project transport planes were used from the middle of September to the middle of November for the return of troops from North Africa, South America, and the Caribbean. This project had a total lift during the two months of about 12,200. In the Sunset Project bombers returning from the Pacific transported as many troops as they could accommodate.[140] After the transport planes in the western Pacific had played their role in the delivery of occupation forces to Japan, they also brought troops back to the zone of interior.

The heavy influx of troops at Pacific coast ports during November and December and the unevenness of the flow meant

the Southwest Pacific Area, 1941–47, pp. 473–75, OCT HB Monographs. Numerous cargo ships were hastily converted in the western Pacific to transport soldiers from outlying bases to assembly ports, where they were to be embarked for the long transpacific voyage, and to repatriate Japanese soldiers to their homeland.

[138] Transcript of radio address by Joseph Curran, Pres, National Maritime Union, over Mutual Broadcasting System, 27 Nov 45, OCT HB Gen Demob Trans; *The New York Times,* November 29, 1945, "Ship Unions to Quit Over Troop Delays."

[139] H. Res. 420, 421, and 422, November 27, 1945; Ltr, SW to Rep Andrew J. May, Chm House Com on Military Affairs, 11 Dec 45, Legislative and Liaison Division WDSS, file on H. Res. 421.

[140] Information furnished by the Hist Br, Int Div MATS, 19 Jun 51, OCT HB Gen Redepl.

that there were times when the railroads had more traffic than they could move promptly. The situation was more acute on the Pacific coast than on the Atlantic seaboard because the facilities of the western rail lines were not as great and because a larger percentage of the troops arriving at western ports had long rail hauls ahead of them.[141] During this period the problem of providing sleeping cars for the troops entitled to them gave way to the problem of moving the traffic by any means. On 23 November the Chief of Transportation indicated that numerous troops had been held at the ports for four days, and a few for more than seven days, rather than being cleared in the specified forty-eight hours.[142] Thereafter the situation became progressively worse, and on 25 December the number of troops held at Pacific ports beyond forty-eight hours because of lack of transportation reached a peak of 99,000. The port staging areas and improvised housing facilities were not able to absorb the backlog so that as many as 40,000 men had been kept on the ships overnight rather than being debarked immediately upon arrival.[143] This situation existed despite the fact that additional rail equipment was assigned to the western lines and that cars were deadheaded back to the ports as quickly as they discharged their loads at the inland personnel centers.

Early in November the armed forces had made a final joint appeal to the Director of Defense Transportation for the assignment of additional sleepers to troop movements from the Pacific coast. They had pointed out that the number of repatriated veterans who were required to travel from coast to coast in coaches was increasing daily. They had stated that, while a further curtailment of regular sleeper service was not a desirable action, the heavy influx of troops was the direct result of the public demand for speedy demobilization and therefore no criticism could properly be made if the public were deprived of sleeping cars on some of the shorter routes in order to give veterans proper accommodations on long journeys. The armed forces accordingly had recommended that sleeping cars be withheld from regular sleeping car services of less than 500 miles—instead of 450 miles as provided for in the existing regulation—while the military need was so great.[144] This recommendation was not placed in effect, but about 1,000 additional day coaches were assigned to troop service.

The effect of the peak repatriation movement on the carriers is reflected in two statements issued by the Association of American Railroads. In mid-December the AAR reported that the carriers' total equipment embraced 10,217 all-steel coaches suitable for long distance service, and 8,200 sleeping cars of which 1,400 were government-owned troop sleepers. More than one third of the coaches and about four fifths of the sleepers were being used in troop trains, and in addition large numbers of military personnel were using the regular trains.[145] A few days later the AAR announced that during the two

[141] In his public statement of 20 November, cited n. 135, the Chief of Transportation stated that in October 82 percent of the troops arriving at west coast ports were entitled to sleeping cars as compared with 34.5 percent debarking on the east coast.

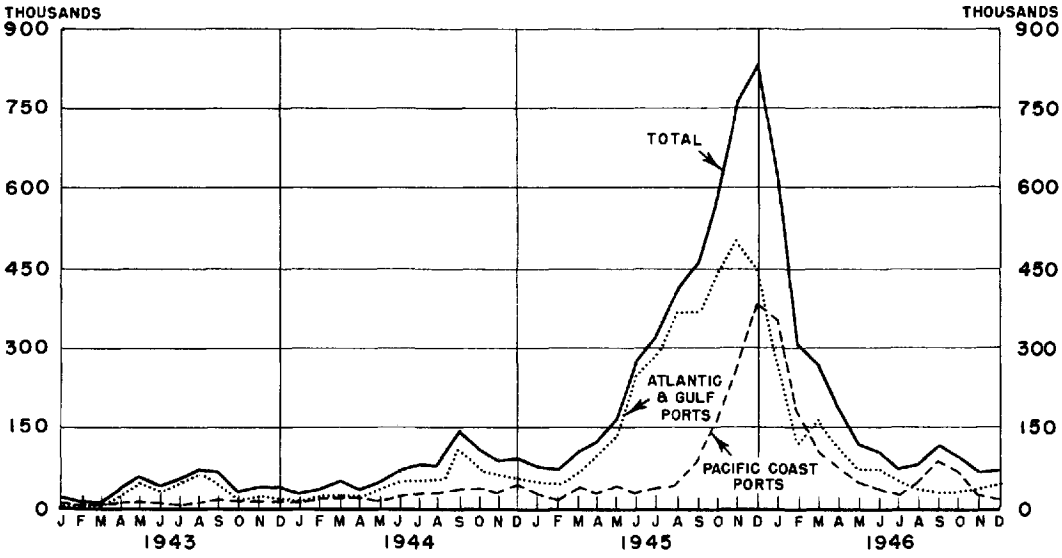
[142] Memo, CofT for Legislative and Liaison Div WDSS, sub: Delays of Troop Mvmts, OCT 511.

[143] ASF MPR, Dec 45, Sec. 3, p. 3; Hist of Returning Troops Br, 16 Jan 45, in Mvmts Div Hist for Dec 45, OCT HB Mvmts Div Gen.

[144] Ltr, Armed Forces to Dir ODT, 8 Nov 45, OCT 510 Veterans.

[145] Ltr, AAR to Sen Joseph C. O'Mahoney, 17 Dec 45, OCT 510 Veterans.

CHART 6—PASSENGERS DEBARKED MONTHLY BY THE ARMY AT U.S. PORTS FROM OVERSEA COMMANDS: 1943–1946*



* Passengers include all Army troops debarked from ships under Army, Navy, and British control, plus naval, Allied military, civilian personnel, and prisoners of war debarked from ships under Army control. The percentage relationship that Army troops bore to the total was 47.4 in 1943, 61.1 in 1944, 95.6 in 1945, and 94.4 in 1946.

Source: ASF Statistical Review, World War II, pp. 126–27, through August 1945; later months from data compiled for statistical volume of this series, from Recapitulation of Passengers Debarked and predecessor reports from the ports of embarkation to the Chief of Transportation.

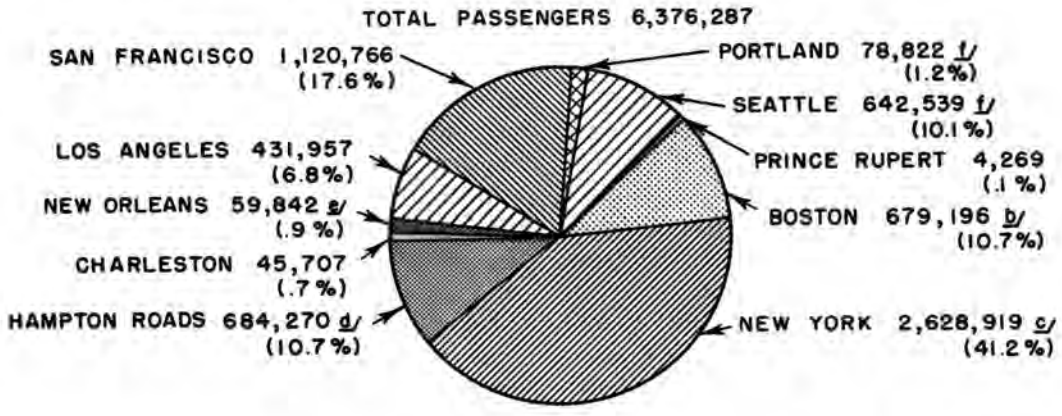
weeks that ended on 19 December the railroads had moved a daily average of thirty-six special troop trains from the Pacific coast, carrying slightly more than 19,000 servicemen; including those accommodated on regular trains, the daily movement of servicemen had been about 25,000. The AAR further stated that on the basis of estimates furnished by the Army and the Navy earlier in the fall it had planned to handle about 14,000 servicemen per day at the peak.[146] The increased military load, it emphasized, was being handled against a background of heavy pre-Christmas civilian travel.

During the month of December 1945, 834,470 passengers arrived at U.S. ports under Army auspices.[147] More than 99 percent of these passengers were Army troops, the remainder being naval personnel, military personnel of Allied nations, and civilians. West coast ports received 387,130, while Atlantic and Gulf ports debarked 447,340. A comparison of arrivals during this peak month with preceding and succeeding months may be made by referring to Chart 6. Passengers debarking during the years 1945 and 1946 were distributed among the ports as shown in Chart 7, and passengers debarking during

[146] AAR press release, 21 Dec 45, OCT HB Gen Demob Trans.

[147] This figure may be compared with 343,786 debarked by the Army during the month of June 1919, which was the peak of the repatriation movement after World War I; see *Annual Report of the Chief of Transportation Service, 1919*, p. 31.

CHART 7—PASSENGERS DEBARKED BY THE ARMY AT THE RESPECTIVE U.S. PORTS: 1945–1946 [a]



[a] Concerning passengers included, see note to chart 6.
[b] Boston was inactive during 1946.
[c] New York includes a small number of passengers debarked at the Philadelphia cargo port.
[d] Hampton Roads includes a small number of passengers debarked at the Baltimore cargo port.
[e] New Orleans includes a small number of passengers debarked at Mobile and Miami.
[f] Seattle includes a small number of passengers debarked at Portland during early 1945 and late 1946.

Source: Data compiled for statistical volume of this series from monthly report, Recapitulation of Passengers Debarked, from the ports of embarkation to Chief of Transportation.

the month of December 1945 were distributed as follows: [148]

Port	*Passengers*
Boston	74,185
New York	261,778
Hampton Roads	106,835
New Orleans	4,542
Los Angeles	119,256
San Francisco	146,295
Portland	22,298
Seattle	99,281

Since the Army had stressed the need for additional sleeping cars to handle the heavy influx of troops, its experience in securing sleeping cars in December 1945 is of interest. During that month the Army requested the assignment of 10,846 sleepers for troop movements of forty-eight hours or longer, including domestic as well as repatriation traffic. The sleepers actually assigned to these movements fell 2,824 short of the requests. As a result, 91,359 soldiers who were entitled to sleeping-car space under the forty-eight-hour rule had to be moved in coaches.[149]

The heavy repatriation traffic created problems for the Army other than those of clearing troops from the ports. The large number of troop trains in operation, combined with the rapid rate of demobiliza-

[148] Monthly Rpt, PEs to OCT, Recap of Passengers Debarked; data compiled for statistical volume of this series, now in preparation. Figures for New York and Hampton Roads include small numbers debarked from freighters at the cargo ports of Philadelphia and Baltimore, respectively. Boston debarkations were less in December than in previous months and troop movements through Boston were discontinued thereafter. Small numbers of troops had been debarked at Charleston, South Carolina, and Prince Rupert, British Columbia, earlier.

[149] Statistical Tabulation, Utilization of Sleeping Cars, October 1945–March 1946, based on records of Pass Br, Traf Contl Div, OCT HB TC Gen Demob Trans.

tion, made it difficult for the Chief of Transportation to hold sufficient personnel to provide these trains with competent commanders and crews. In order to speed up the return of these men to the ports after they had delivered troops to the personnel centers, special arrangements were made for the immediate audit of their accounts and for their return to the ports by Army or commercial aircraft when necessary.[150] Immediately after the Japanese surrender the Army announced its intention to increase the number of separation centers (components of the personnel centers) from twenty-two to twenty-seven, but this was not done immediately. As a result, some of the separation centers became congested during September and it was necessary to divert troop trains to other centers thus increasing mileage and delaying trains. To meet this situation 152 temporary separation facilities—44 of them for AAF troops and the remainder for AGF and ASF troops—were opened on 24 September, and later 4 additional separation centers were established. By November this problem had been overcome despite the unexpectedly heavy rate of demobilization.[151]

Beginning early in the repatriation period the railways received appreciable though not extensive aid from air transport. In July 1945 arrangements were made for the use of military aircraft to move repatriated soldiers east and west across the continent.[152] The aircraft were assigned to commercial airlines, which operated them under contract. These so-called TRANSCON services, which began 27 August, were from the Newark Air Base in New Jersey, Mines Field and McClellan Field in California, and Paine Field in Washington. The Chief of Transportation established special TRANSCON Centers at staging areas of the ports of embarkation at New York, Los Angeles, San Francisco, and Seattle to receive, process, and dispatch troops being forwarded by air.[153] The TRANSCON project, which was set up to move about 25,000 troops per month, continued through the following March and lifted a total of 174,501 soldiers. The peak month was January 1946, when 35,305 troops were transported.[154]

After port congestion on the Pacific coast became acute, the Director of Defense Transportation took steps to augment the eastbound airlift. On 20 November 1945, the ODT announced arrangements under which the commercial airlines would make at least 70 percent of the space on their regularly scheduled flights from Seattle, San Francisco, Los Angeles, and San Diego to the eastern seaboard available for repatriated military personnel. This undertaking was known as COM-AIR.[155] In his effort to expand the project beyond the facilities of the airlines, Mr. Johnson appealed to the Army; he found it ready to provide additional

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[150] ASF Cir 253, 3 Jul 45; ASF Cir 375, 4 Oct 45.

[151] ASF press conf, 16 Aug 45, statement by Maj Gen Joseph N. Dalton; WD press release, 13 Sep 45, sub: Temporary Separation Points and Bases; Ltr, SW to Rep James C. Auchincloss, 26 Oct 45, WDCSA 370.01, Sec. VIII; Hist of Returning Troops Br, 6 Dec 45, in Mvmts Div Hist for Oct 45, OCT HB Mvmts Div Gen.

[152] Memo, Mobilization Div ASF for TAG, 11 Aug 45, sub: Mvmts of Pers under TRANSCON Project, and atchd Memo for Record, AGO 370.5 (11 Aug 45).

[153] TC Cir 101-3, 24 Aug 45, sub: Org and Opn of TRANSCON Centers.

[154] Statistical Tabulation, Passengers Moved by Air Between East and West Coasts, based on monthly troop records of Transport Economics Br, Traf Contl Div, OCT HB Topic Air Transport Gen.

[155] WD CTB 53, 14 Dec 45, sub: Mvmt of Traf Under COM-AIR Project.

aircraft but unable to assign personnel "in view of the necessity of releasing Army air and ground crews in accordance with the general demobilization plans." [156] COM-AIR movements began on 3 December 1945 and continued into February 1946, during which period a total of 23,156 Army and Navy personnel were transported.[157]

The Director of Defense Transportation felt that neither the Army nor the commercial airlines had given adequate attention to the development of transcontinental airlift to relieve the rail lines, and he said so early in December in a letter to which he gave wide circulation. He had argued for a total lift of 100,000 per month, but this figure was never approached. In the peak month (January 1946) TRANSCON and COM-AIR together transported only 46,000 troops, and during the entire period of operation the combined lift was less than 200,000. Naturally neither the Army nor the Air Transport Association of America could accept a charge of non-co-operation; each had its peculiar problems and explanations. In the light of the rail situation in December, Mr. Johnson's chagrin at the limited results of the air projects is understandable. Evidently the pressure for a large airlift was not applied early enough. General discussion of the use of aircraft in moving repatriated troops within the United States began in the spring of 1945. It seems probable that if there had been a realization at that time, or even in August, that in a single month more than 800,000 returning troops would be landed at U.S. ports with serious congestion on the Pacific coast, arrangements for a heavier airlift could have been made.[158]

Since Mr. Johnson had stated frankly that his letter regarding lack of co-operation in his effort to increase the airlift was written primarily for the record, General Wylie replied on behalf of the Chief of Transportation in like manner, presenting the broad aspects of the problem from the Army angle. He pointed out that the armed forces had been under heavy pressure from the public, the press, and the Congress to speed up the return of troops from overseas. Excellent results in providing water transportation had been accomplished with the aid of the War Shipping Administration. The Chief of Transportation repeatedly had inquired of the railroads and the ODT whether they wanted the inflow of troops retarded, but they had expressed no such desire. The armed forces then had requested the assignment of additional sleeping cars to the western lines because the need for sleepers was especially great; this request had not been granted, although additional day coaches had been provided. The armed forces had diverted ships from one port to another in accordance with the desires of the railroads, but that action had not greatly alleviated the difficulty. A proposal that troops from the Pacific destined for personnel centers in the eastern states be routed through the Panama Canal to Atlantic ports had been considered, but the proposal had not been found acceptable because it would have involved a wasteful

[156] Memo, CofT for Mobilization Div ASF, 26 Nov 45; Memo, CofT for CG ASF, 5 Dec 45, sub: COM-AIR Lift; Ltr, SW to ODT, 5 Dec 45; all in OCT 584.1 COM-AIR Project.

[157] Statistical Tabulation, Passengers Moved by Air Between East and West Coasts, cited n. 154.

[158] Ltr, Johnson to ATC, OCT, BuPers, and Air Transport Assn of America, 6 Dec 45, OCT HB Wylie Troop Mvmt; Ltr, Air Transport Assn of America to Johnson, 10 Dec 45; Ltr, Johnson to ATAA, 26 Dec 45; last two in OCT HB Gross ODT; Ltr, Johnson to CofT, 26 Dec 45, OCT 584.1 COM-AIR Project.

use of shipping and slower repatriation. General Wylie reiterated the contention of the armed forces that more sleepers and coaches should be withdrawn from regular service to enable the western railroads to handle returning veterans properly, notwithstanding the fact that this would mean a further cut in civilian travel during the critical weeks of repatriation.[159]

Replying to General Wylie's presentation, Johnson stated that the carriers had not requested that the inflow of troops be reduced and would not do so; he implied that better regulation of the flow, not less traffic, should be the Army's contribution. He contested Wylie's statement that the ODT and the railroads had been properly informed regarding the peak loads to be handled during recent weeks. He asserted that the assignment of additional cars to the western lines would not solve the problem of port congestion; the line-haul capacity of the seven single-tracked railroads that served the Pacific coast had become the bottleneck.[160]

During December the Senate Special Committee Investigating the National Defense program again took cognizance of the transportation situation, both ocean and rail. Its inquiry into shipping was directed particularly to the large number of cargo vessels then idle, some of them laid up at U.S. ports and some of them held in the western Pacific under load since V-J Day. Consideration of troop transportation was incidental. The committee apparently was satisfied with the statement of Capt. Granville Conway, Deputy War Shipping Administrator, that no American troopships had been diverted from military service to resume commercial operations and that shipping was not the bottleneck in demobilizing troops.[161]

The committee made a much more thorough inquiry into the railway situation as it affected repatriation and demobilization. Despite the earlier complaints and countercomplaints, the testimony given at the hearing on 21 December displayed no sharp differences of opinion between the armed forces and the representatives of the carriers. Mr. Johnson, Director of Defense Transportation, Mr. Charles H. Buford of the Association of American Railroads, Rear Adm. James F. Holloway of the Navy, and General Wylie, speaking for the Army Chief of Transportation, seemed in agreement that all had been done that could have been done to meet the extraordinary situation. It was recognized that peaks and valleys in the rate of arrivals at west coast ports were inevitable since "shipping can't be scheduled like trains." The distribution of troop arrivals among the ports had been carefully made in accordance with the desires of the railroads. The assignment of more cars from the eastern and southern lines to the Pacific coast would not have substantially helped the situation since the western lines already were handling the maximum traffic that their track facilities and manpower would allow. The airlift had been helpful but had not moved the numbers that had been hoped for. The relief afforded by the use of buses had been limited because only a few of the bus operators had facilities and personnel to handle transcontinental traffic. There was some question whether greater use might not have been made of the Canadian railway lines, but it was recognized that they also had been

[159] Ltr, Wylie to Johnson, 12 Dec 45, OCT HB Wylie Troop Mvmts.

[160] Ltr, Johnson to Wylie, 19 Dec 45, OCT HB Wylie Troop Mvmts.

[161] *Hearings* cited n. 88, Pt. 32, December 12, 1945, pp. 16227–29.

heavily burdened in handling Canadian traffic.[162]

When these hearings were held the peak of repatriation traffic had been reached and relief was in sight. In other words, the situation was expected to improve rather than get worse. This fact no doubt accounts for the equanimity with which the situation was discussed by representatives of the armed forces, the ODT, and the transportation industry, in contrast with their earlier disputations.

Some of the facts brought out in the hearings are of interest. Because of the bunching of traffic, the number of troops landed on the Pacific coast on some peak days in December (47,000–48,000) had been nearly three times the average daily arrivals forecast in September (17,000). Although over a period in early December the railroads had moved a daily average of about 25,000 troops of all services out of Pacific coast ports, it was not to be expected that they could sustain this rate during winter weather when more cars would be in the shops and more delays would be encountered on the right of ways. A check of all trains from the Pacific coast for the period 5–7 December disclosed that military personnel had utilized 89.1 percent of the total sleeping car space and 90.4 percent of all coach seats. On 20 December, the day before the representatives of the armed forces and the carriers testified at the hearing, the Army had about 70,000 returning troops in its west coast staging areas and approximately 40,000 troops on ships in the ports, a total of 110,000. On the same day the Navy had some 17,000 at its Pacific port stations and none were detained on board ship. Only about 200 of the special troop sleepers ordered in May were in service in December because of a strike in the plant manufacturing the beds; this strike had just been settled.

It is clear that some of the difficulties encountered during the repatriation period stemmed from the facts that the peacetime capacity of the western railroads had been limited, that the expansion of their facilities during the war had been restricted by shortages of materials and manpower, and that after V-J Day these limitations could not be quickly overcome. As to other factors, one can raise questions but cannot provide definitive answers. Should the Army have disregarded the public demand for the speediest possible demobilization to the extent that was necessary to effect better co-ordination between water and rail movements? Could the peaks in the arrivals curve have been leveled off somewhat without seriously delaying the movements of vessels? Should the Army have made a greater effort to land troops at the ports nearest the personnel centers for which they were destined in order to shorten the rail haul? Could the heavy movement of troops in the Pacific have been started earlier and the exceptionally heavy arrivals in November and December have thus been reduced? Could more materials and manpower have been devoted to building up the western railroads during the war without deleterious effects on the military effort? Could the ODT have reduced regular sleeper services further without serious damage to the civilian economy? Each of these questions has many facets and about all that can now be said with conviction is that future military planners should give them full consideration.

[162] *Hearings* cited n. 88, Pt. 32, December 21, 1945, pp. 16279–302.

Looking back at the repatriation period after a lapse of years, one may wonder why public reaction to the rate of repatriation and demobilization should have been so unreasoning, and why the delay of a few days at the debarkation ports should have caused so much criticism. The entire operation had proceeded with a rapidity that had surpassed the hopes of most Army officers.[163] Possibly these reactions can be attributed in part to the War Department's early assurances that it would carry out demobilization with the utmost dispatch and to the inadequacy of its subsequent efforts to keep the public informed regarding the results achieved and the difficulties involved; yet it is doubtful if any course of action would have forestalled the criticism. After several years of war strain the national temper was taut and individual feelings were sensitive. Many troops had been overseas for long periods and had undergone hardship and deprivation. The average citizen did not see the problem in its larger context; he was aware only of the delayed return of the soldier in whom he was personally interested. Readiness to accuse the government of needless bungling is not an uncommon trait. These are circumstances that the military authorities will always have to take into account.

Evacuation of Patients From Oversea Theaters

The wartime evacuation of sick and wounded soldiers from oversea areas involves problems quite different from those encountered in peacetime because of the volume of the traffic and the abnormal transportation conditions. Since the Army had not made adequate advance plans, much had to be done in developing facilities and procedures after the United States entered World War II. The early measures to provide hospital facilities afloat were taken somewhat haltingly, partly because it was difficult to forecast the extent of the need and partly because of differing opinions regarding the extent to which hospital ships should be used. The procedures were evolved gradually as the result of experience. There were extensive evacuation operations within the active theaters from the forward areas to the rear bases, but this discussion concerns primarily the removal of more than 500,000 patients from the theaters to the United States.[164]

The regulations pertaining to the movement of patients were changed in many respects, but the following distribution of basic responsibilities was in effect virtually throughout the war: Hospitalization and evacuation for the Army were under the general direction of the Commanding General, Army Service Forces, and his headquarters included a unit to supervise these activities. The Surgeon General was directly responsible for the co-ordination and completion of evacuation plans; he controlled bed credits in the general hospitals in the zone of interior

[163] In a lengthy statement issued to the press on 15 January 1946 designed primarily to apprise the nation of our continuing military commitments overseas, General Eisenhower, then Chief of Staff, stated that approximately 5,000,000 members of the V-E Day force in the zone of interior and overseas had been returned to civilian life; the demobilization since V-J Day had exceeded the September estimate by about 1,665,000. Eisenhower said that, while the desire for quick demobilization was understandable, he had not anticipated that "this emotional wave would have reached proportions of near-hysteria."

[164] For a month-to-month general review of evacuation, see appropriate sections of ASF MPR, Sec. 7, Health. For a more detailed discussion, see Smith, *The Medical Department: Hospitalization and Evacuation, Zone of Interior*, Chs. XIX–XXIV.

and was the chief medical regulator for controlling the flow of patients from ports to the hospitals; he made sure that the medical personnel, equipment, and supplies for the care of patients being transported were adequate and made recommendations regarding the number of hospital ships and hospital cars to be procured. The Chief of Transportation was responsible for providing adequate shipping and rail facilities for the transportation of patients and for scheduling and operating the ships; he was also responsible for the care of patients at sea, for the debarkation of patients at U.S. ports, and for their transfer to hospital trains or ambulances. Commanders of the service commands staffed and operated the hospital cars and ambulances that were used for the removal of patients from the ports to hospitals. The Commanding General, Army Air Forces, was responsible for the development of plans and the actual evacuation of patients by air from the oversea theaters.[165]

Although the movement of patients by water and rail was a responsibility of the Chief of Transportation, he required technical advice and assistance from The Surgeon General in order to perform that function properly. Close co-ordination between the two offices was necessary on many details pertaining to the headquarters organizations in Washington, the ports of embarkation, the ships, and suitable inland transportation. Although the Hospitalization and Evacuation Branch of ASF headquarters served as a co-ordinating agency, in May 1943 The Surgeon General assigned a liaison officer to the Chief of Transportation in order to effect a closer working relationship.[166] A year later a medical regulating officer, who took over the functions of the medical liaison officer, was designated by The Surgeon General.[167] Col. John C. Fitzpatrick, Medical Corps, who served first as medical liaison officer and then as medical regulating officer, had his office in and was virtually a part of the Movements Division, OCT. In June 1945 his staff included six officers and twenty-one civilians.[168]

As liaison officer Colonel Fitzpatrick provided co-ordination between the Chief of Transportation and The Surgeon General in matters relating to medical practices at the ports and on the vessels, the suitability of shipping schedules to meet evacuation requirements, and the adequacy of medical personnel and supplies at the ports and on the ships. As medical regulating officer he maintained records of bed vacancies in medical installations where evacuated patients were to be treated, regulated the movement of patients from the ports to the respective medical installations, and consulted with the Chief of Transportation in regard to appropriate transportation arrangements.[169]

The flow of patients from overseas was governed by the War Department evacu-

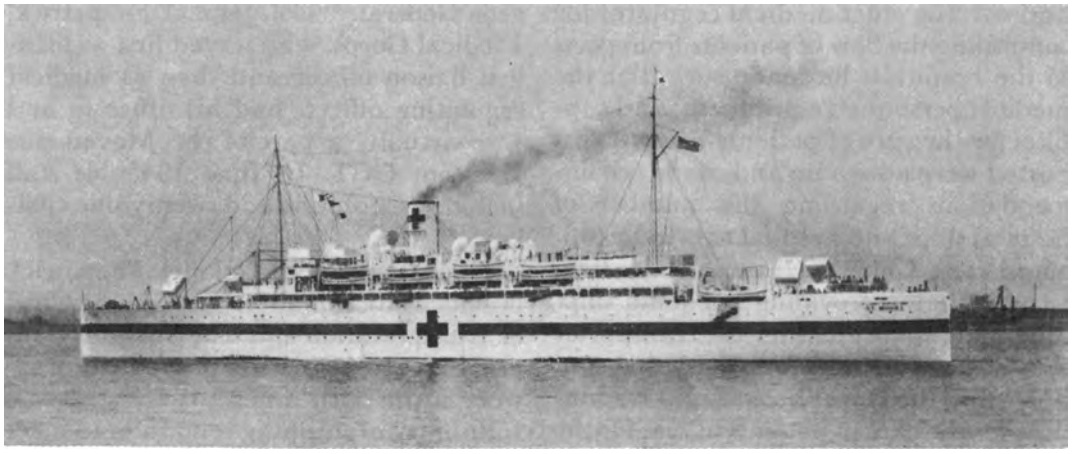
[165] Memo, TAG for CGs AGF, AAF, *et al.*, 18 Jun 42, sub: WD Hosp and Evac Policy, AG 704 (6-17-42); Pamphlet, Mil Hosp and Evac Opns, transmitted with Memo, CG SOS for CGs of SvCs, PEs, *et al.*, 15 Sep 42, SPOPH 322.15, OCT HB PE Gen Evac of Patients; Memo, TAG for CGs All Depts, Theaters, *et al.*, 25 Jan 43, sub: Sea Evac of Patients, AG 370.04 (1-19-43); WD Cir 316, 6 Dec 43, sub: Hosp and Evac of Pers; Memo, TAG for CGs of Forces in ZI and Overseas, 8 Jan 44, sub: Procedure of Evac of Patients by Water and Air, AG 704.11 (3 Jun 44).

[166] Hist Med Liaison Off, par. 1.8; 1st Ind, CofT to CG ASF, 10 May 43, OCT HB Farr Staybacks.

[167] ASF Cir 147, 19 May 44, Sec. II. For a discussion of the conditions that caused the establishment of the medical regulating office, see Hist Med Liaison Off, pars. 6.1-6.92.

[168] Hist Rpt, Mvmts Div, 20 Jun 45, par. 19, OCT HB Mvmts Div Rpts.

[169] See extract from SGO Manual and Organization Chart of the Medical Regulating Office in Hist Med Liaison Off, Preface and Incl 7.2.



U.S. ARMY HOSPITAL SHIP *ST. MIHIEL*

ation policy. The evacuation policy in effect determined which patients were to be treated in the theaters and which were to be treated in the zone of interior. Broadly speaking, this policy was expressed in terms of days—that is, patients likely to be hospitalized for longer than a specified number of days were eligible for evacuation as soon as their condition would permit. The number of days differed according to conditions such as the hospital capacities in the respective theaters, the hospital space situation in the zone of interior, and the ships available for transporting patients. In August 1943 the War Department, after consulting the theater commanders, announced that its policy of evacuation would be 180 days for the European theater (except Iceland), China, Burma, and India; and 120 days for all other oversea commands.[170]

The effect of changing circumstances on the evacuation policy is illustrated by developments in the ETO. In the fall of 1944 with battle casualties mounting and ship hospital facilities greatly increased, the number of days was reduced from 180 to 120.[171] Still later the policy was changed to 90 days. In the spring of 1945, in order to evacuate as many patients as possible before hostilities ended and troopships were withdrawn from the transatlantic service, the policy was fixed temporarily at 60 days. In July 1945, with the major part of the evacuation task completed, the 120-day basis was restored. In recommending the last change General Somervell pointed out that the Army at that time was "long on hospital space in Europe and crowded in the United States," and that westbound ship hospital space in the Atlantic had been greatly reduced by the transfer of vessels to the Pacific.[172]

[170] WD Memo W 40-19-43, 28 Aug 43, sub: Policy on Evac of Sick and Wounded. For a general discussion, see remarks of Col Fitzpatrick at Conf of Port Surgeons and Troop Mvmt Officers, Fort Hamilton, N. Y., 12-14 Oct 43, pp. 72-74, in OCT HB PE Gen Evac of Patients.

[171] Memo, CG ASF for TAG, 30 Sep 44, and atchd note for record; Memo, WD for CG ETO, 5 Oct 44; both in AG 704 (25 Aug 43)(2).

[172] Memo, Somervell for Marshall, 18 Jul 45, sub: Change in Evac Policy, OCT HB PE Gen Evac of Patients.

Since the great majority of patients were evacuated by water, the rate of evacuation was largely dependent on the availability of ship hospital facilities. The Army's aim was to have enough ship hospital facilities to meet evacuation needs as they arose, but this aim was not entirely fulfilled. The periodical estimates of future needs were affected by the fact that U.S. forces were engaged in areas and in types of combat with which the Army had had no previous experience, and in the beginning the estimates proved to be conservative.[173] In view of the acute shortage of troop lift in the early part of the war, there was a natural reluctance to convert troopships to hospital ships or to convert troop spaces on transports to hospital spaces to a greater extent than was absolutely necessary. In addition, there were differences of opinion as to how far evacuation should be accomplished by hospital ships protected under the Hague Convention X of 1907 and how far by regular troopships. The time lost in deciding these shipping questions delayed the Army's preparations for meeting its evacuation responsibilities.

In view of the early controversy over the use of troopships and hospital ships for evacuating patients, it is worth noting the advantages and disadvantages that each presented. When troopships could be used, the evacuation operation did not require the sacrifice of a great amount of outbound troop lift. On the other hand, troopships were always subject to attack by the enemy, a fact that created special problems in providing for the safety of patients on board. The employment of troopships was governed by the outbound traffic, with the result that evacuation needs at some oversea bases could not be promptly met by this means. Sometimes the hospital facilities on troopships did not measure up to the desires of The Surgeon General or of the theater surgeons, although they were greatly improved during the war. In contrast, hospital ships could with reasonable assurance be considered safe from enemy attack; they had but one purpose and could be employed in the manner that would best serve that purpose. They also provided the best facilities that the limitation of ship space and the exigencies of war would permit. But hospital ships once registered under the Hague Convention could not be used for any military purpose such as transporting troops to and from the theaters.[174]

Army efforts to secure hospital ships were blocked during the early months of the war by uncertainty as to who should pay for and who should operate such vessels. Although there was no unanimity within the War Department on the subject, a proposal that six hospital ships be built was taken by G-4 as a basis for preliminary action.[175] In January 1942 the Army requested $36,000,000 for the construction of six hospital ships, but the request was disallowed by the Bureau of the Budget on the ground that the Maritime Commission should procure the vessels from funds available to it.[176] When the Army approached Rear Adm. Emory S. Land (Ret.), Chairman of the Maritime Commission, he took the position that such ships properly came under the cognizance of the Navy.[177] His position

[173] Remarks by Col Fitzpatrick cited in n. 170.

[174] See Hist Med Liaison Off, par. 1.3; the Hague Convention X of 1907, Art. 4. The Convention is included in AR 55-530, 30 Dec 43.

[175] Memo, ACofS G-4 for TAG, 24 Jan 42, and note for record, G-4/29717-100.

[176] Memo, ACofS G-4 for CofS USA, 8 Feb 42, G-4/33006-4.

[177] Ltr, CofS USA to Land, 12 Feb 42, and reply, 24 Feb 42, both in G-4/33006-4.

was predicated on a provision in joint war plans that in case of hostilities the Navy would operate all vessels required by the Army.[178] However, the Army and the Navy had informally set aside the provision immediately after Pearl Harbor because of the Navy's inability to provide crews for the Army's transports. The Army, moreover, ascertained that the Navy had no plans for operating hospital ships under the Hague Convention.[179] The Army therefore did not agree with Admiral Land's view, and several months elapsed before any further action was taken. Finally, on 1 May 1942, the Secretary of War placed the situation before the Secretary of the Navy and proposed a conference of representatives of the two services to resolve the problem. He pointed out that the Army desired hospital ships that were protected under the Hague Convention and that naval hospital ships ordinarily were not eligible for such protection since they operated tactically with the Fleet.

At the suggestion of the Secretary of the Navy the question was referred to the Joint Staff Planners for study. From the discussions by the Joint Staff Planners it was evident that the Navy considered the operation of hospital ships a naval responsibility; but being concerned primarily with the forward areas of the Pacific and having no assurance that the Japanese would respect the markings on Convention hospital ships, the Navy intended to rely on hospital ships operating with the Fleet and evacuation ships (APH's), which would carry troops and cargo outbound and would accommodate about 600 patients on the return voyage. Neither type of ship met the Army's desire for protected vessels for use in repatriating its sick and wounded.[180]

Consideration of the subject by the Joint Chiefs of Staff resulted in agreement on two points—a tentative doctrine on the use of troopships and hospital ships for Army evacuation purposes, and the authorization of three hospital ships for Army use. With a view to economy of shipping, the JCS decided that evacuation normally would be accomplished by using troopships returning from areas that were served more or less regularly by troopships. To provide for additional Army requirements in the Pacific, where many small bases were involved, the JCS decided to request the Maritime Commission to provide three vessels for conversion to hospital ships to be registered under the Convention. These vessels were to be fitted as hospital ships in accordance with Army specifications, employed under the direction of the Army, and provided with medical complements by the Army; but they were to be converted under the supervision of the Navy and manned and operated by naval personnel.[181]

The JCS action provided only half the number of hospital ships that the Army originally had asked for, and the conversion of these three vessels occupied a much longer period than Army officers had anticipated. Since the conversion of troopships would have deprived the Army of sorely needed troop lift, it was decided to use cargo ship hulls (C-1B type) for the hospital ships, and this meant that the

[178] Wardlow, *op. cit.*, pp. 200–202.

[179] Ltr, C of Trans Br G-4 to WSA, 7 Mar 42, G-4/33006; Memo, ACofS G-4 for CofS, file copy undated, sub: Hospital Ships, and atchd draft of Ltr, SW to Adm Land, both in OPD ABC 370.05 (2-8-42), Sec. 1.

[180] JPS 27/D, 6 May 42; Memo, ACofS OPD for CG SOS, 9 May 42, OPD ABC 370.05 (2-8-42); JPS 27/1, 16 May 42.

[181] JCS 16th Mtg, 25 May 42; JPS 27/2/D, 26 May 42; JPS 52/1, 29 Jun 42; JCS 22d Mtg, 30 Jun 42.

superstructure and all accommodations and hospital fittings had to be newly designed and constructed.[182] Commencement of the conversion work was considerably delayed by a misunderstanding as to which service would provide the specifications for the machinery and the electrical equipment. The Navy expected the Army to provide these specifications, while the Army believed that it was responsible only for the specifications pertaining to hospital facilities and that since the Navy would man and operate the vessels it would provide all other specifications.[183] The hulls were built and the conversion work was accomplished on the Pacific coast, where the shipbuilding and the ship repair yards were heavily committed, and, as the Army learned in September 1943, the job was originally given a low priority. These factors, together with the Navy's usual insistence on the highest technical standards, delayed the deliveries well beyond the time the Army had foreseen.[184] The vessels, named *Comfort, Mercy,* and *Hope,* did not enter service until June, August, and September 1944, respectively.[185]

These three Army-controlled, Navy-operated hospital ships were earmarked for service in the Pacific, and when the Allies decided in July 1942 to invade North Africa in the fall of that year the question of additional hospital ships to serve in the Atlantic was immediately raised. General Eisenhower, who did not favor heavy reliance on troopships for evacuating patients, wanted five hospital ships by April 1943 and an additional hospital ship each month until a total of ten or possibly more were in service. The Surgeon General also favored ordering more hospital ships, particularly for the evacuation of patients from the smaller and more isolated oversea bases not served regularly by troopships. The Chief of Transportation, while recognizing that eventually such vessels would be required, was opposed to immediate action. He contended that emphasis should be placed on using all available troopships for moving troops to the theaters rather than withdrawing some of them from service for conversion, a step that would be necessary if early delivery of hospital ships was to be obtained. He pointed out that in any event the major part of the evacuation from the active theaters would have to be accomplished with troopships. Finally, he argued that if the need for hospital ships should become urgent, troopships could then be converted very quickly. Although the Commanding General, Services of Supply, was inclined to follow The Surgeon General's recommendation that three additional hospital ships be provided with the least possible delay, further deliberation by the Joint Chiefs of Staff resulted in a decision in November 1942 to delay action and await developments.[186]

In the spring of 1943 with the demand

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[182] Memo, CG SOS for VCNO, 14 Jul 42, OCT HB Wylie Hosp Ships; Memo, CG SOS for VCNO, 9 Sep 42, OCT 564 Hosp Ships; Memo, VCNO for BUSHIPS and BUPERS, 12 Sep 42, OCT HB Gross Hosp Ships.

[183] Memo, VCNO for CofS USA, 18 Dec 42; Memo, ACofS OPD for CofS USA, 8 Jan 43; Memo, CofS USA for VCNO, 11 Jan 43, sub: *Comfort, Hope, Mercy;* all in OPD ABC 570 (2-14-42), Sec. IV.

[184] Memo, CG ASF for VCNO, 21 Sep 43, sub: Missions for Hosp Ships to be Operated by USN, and atchd Rad, Bradley for Ralph Keating, 13 Sep 43, both in OCT HB Meyer Stayback.

[185] Hist Med Liaison Off, Tabs 7, 13, and 20.

[186] JPS 27/5/D, 24 Aug 42; 1st Ind, SG for DCofS for Opns SOS, 23 Oct 42; 2d Ind, CG SOS for CofT, 28 Oct 42; Memo, CofT for Secretariat JPS, 2 Nov 42; last three in OCT 564 Hosp Ships; JPS 27/6, 6 Nov 42; JCS 52/3, 12 Nov 42; Memo, CG SOS for CofT, 21 Nov 42, OCT 564 Hosp Ships.

for evacuation from the North African theater increasing and further campaigns in the Mediterranean and in Europe impending, The Surgeon General again proposed that additional hospital ships be authorized. He made it clear that he wanted these vessels for evacuation purposes, not for use as floating hospitals.[187] The first result of this proposal was a decision to convert two small troopships, the *Acadia* and the *Seminole,* to hospital ships and to register them under the Convention.[188] The general question was referred to the Joint Chiefs of Staff, with the result that an entirely new approach to the problem was adopted.

In accordance with a recommendation of the Army, the JCS decided in June 1943 that Convention-protected ships thereafter would be considered the "normal means" for evacuating helpless patients, and that enough hospital ships would be provided to implement the policy. At the recommendation of the Joint Military Transportation Committee it was agreed that thirteen additional hospital ships would be provided by 31 December 1943, and six more by 31 December 1944. This program, together with the three Navy-operated and two Army-operated vessels already authorized, would give the Army twenty-four hospital ships by the end of 1944. The Army indicated its readiness to convert, man, and operate these vessels, and the Navy agreed to that arrangement. In order to provide early additions to the hospital ship fleet, ten of the smaller and slower troopships were to be converted as soon as equivalent troop lift could be provided by converting fast cargo ships to troopships. The remainder of the hospital ship program was to be accomplished by the conversion of freighters.[189]

The desire to place the majority of the new hospital ships in service during 1943 was not realized. In fact, aside from the *Acadia* and the *Seminole,* only one vessel had sailed on its first trip up to the end of the year. *(Table 13)* The delays were due to general conditions prevailing in the shipbuilding and ship repair industries—heavily committed yards and shortages of materials and labor—and to the initial failure to obtain a sufficiently high priority for this work. In the spring of 1944 the Chief of Transportation reported that he was feeling some embarrassment in his effort to keep up with the evacuation program. The matter of obtaining a higher priority was pressed through the War Shipping Administration and the Coordinator of Ship Repair and Conversion, and by the end of that year all but two of the projected hospital ships had been made ready for service.[190]

In the spring of 1944 the Joint Military Transportation Committee estimated that more hospital ships than had been projected would be needed, but no additions to the program were authorized at that

[187] Memo, Col Harry D. Offutt, Dir Hosp and Evac Div SGO, for Brig Gen Larry B. McAfee, Asst to SG, 29 Mar 43, SGO 560.2 Hosp Ships; Memo, SG for OPD through CG ASF, 30 Mar 43, OCT 564 Hosp Ships.

[188] OCT HB Monograph 7, Army Hosp Ships in World War II, pp. 22–32. The *Acadia* had been serving the North African theater as an ambulance ship—that is, it was equipped to handle a large number of patients inbound but was not registered under the Convention and so could carry troops outbound.

[189] Memo, Gross for Somervell, 11 May 43, OCT 564 Hosp Ships; JCS 315, 13 May 43; JPS 187/1, 28 May 43; JCS 315/1, 30 May 43; Memo, Wylie for Somervell, 31 May 43, OCT 564 Hosp Ships; Memo by JCS Secretariat, 11 Jun 43, OPD ABC 370.05 (2-8-42), Sec. 2.

[190] Memos, ACofT for Maj Gen Lucius D. Clay, 19 May 44 and 5 Jun 44, sub: Hosp Ship Conversion, OCT 564 Hosp Ships.

TABLE 13—ARMY HOSPITAL SHIPS ENTERING SERVICE DURING WORLD WAR II [a]

Name	Cruising Speed (Knots)	Patient Capacity	First Voyage From the United States	
			Departure Date	Destination
Acadia	16	787	5 June 1943	North Africa
Shamrock	14	543	4 September 1943	North Africa
Seminole	14	454	20 September 1943	North Africa
Algonquin	14	454	2 February 1944	North Africa
Chateau Thierry	13	484	5 March 1944	North Africa
Thistle	15	455	8 April 1944	North Africa
St. Mihiel	13	504	10 May 1944	North Africa
John L. Clem	14	286	15 June 1944	North Africa
*Comfort***	14	702	21 June 1944	Australia
Blanche F. Sigman	11	590	7 July 1944	United Kingdom
Emily H. M. Weder	13	738	12 July 1944	Italy
Ernest Hinds	14	288	14 July 1944	Italy
*Wisteria**	11	588	16 July 1944	United Kingdom
Marigold	13	758	19 July 1944	Italy
*Dogwood**	11	592	21 July 1944	United Kingdom
*John J. Meany**	11	582	27 July 1944	Italy
*St. Olaf**	11	586	12 August 1944	United Kingdom
*Larkspur****	10	592	31 August 1944	United Kingdom
*Mercy***	14	702	31 August 1944	Southwest Pacific
*Jarrett M. Huddleston**	11	582	7 September 1944	United Kingdom
Charles A. Stafford	16	706	21 September 1944	United Kingdom
*Hope***	14	702	23 September 1944	Southwest Pacific
*Louis A. Milne****	12	952	19 March 1945	United Kingdom
*Ernestine Koranda****	13	722	13 April 1945	United Kingdom
Aleda E. Lutz	15	778	18 April 1945	United Kingdom
Frances Y. Slanger	19	1,628	30 June 1945	United Kingdom

[a] All listed vessels were previously passenger ships or troopships except those marked (*) which were war-built Liberty-type freighters, those marked (**) which were war-built C-1B type freighters, and those marked (***) which were older freighters. In addition to those listed, three vessels were selected for conversion to Army hospital ships in January 1945—the *Armin W. Leuschner* and the *Howard A. McCurdy* on which conversion work was suspended in August 1945, and the *Republic*, which was completed but had engine trouble on her voyage to the Pacific coast and did not enter hospital ship service until January 1946.

Source: History, Medical Liaison Office to OCT and Medical Regulating Service SGO, Incl 3.0, in OCT HB Mvmts Div Med Reg Sv. For additional data, see Charles, *Troopships of World War II*, pp. 327–51. The data given by these sources do not always agree, but the discrepancies are not serious.

time.[191] In the following November consideration of the subject was given sharp impetus by an urgent request from General Eisenhower, then supreme commander in the ETO, that additional hospital ships be assigned to serve that theater. The War Department did not approve this request; it replied that ten hospital ships already were serving the ETO and that the requirements of other theaters prevented any transfers; it further pointed out that the ETO had not

[191] JCS 777/1, 2 Apr 44. For a re-estimate of patient load and facilities, see study by SGO, Feb 44, sub: Hospitalization and Evacuation, in OCT HB Gross Hosp and Evac.

been making full use of the hospital spaces on homeward-bound U.S. troopships and emphasized that this must be done; it urged also that efforts be made to increase the number of patients evacuated on the large British liners. The War Department informed the ETO that a study of the over-all evacuation problem was under way, but that even if additional hospital ships should be authorized they would not be available before March 1945.[192]

The study of the over-all evacuation problem was being made by the Joint Logistics Committee and the Joint Military Transportation Committee, and the results were presented to the Joint Chiefs of Staff in mid-December 1944. The announced purpose of the inquiry was to determine the adequacy of existing evacuation programs of the Army and the Navy for the maximum war effort. The committees found deficiencies for certain periods and recommended that additional hospital ships with a total capacity for 5,500 patients be provided. They called attention to the heavy evacuation requirements of the ETO and pointed out that evacuation from that area by troopships would be reduced as the theater's need for additional replacements declined and troopships were transferred to the Pacific. In the Pacific, the repeated amphibious assaults on Japanese-held bases were expected to create heavy and continuous evacuation requirements. The committees' recommendation that these additional hospital ships be obtained by converting troopships was approved by the JCS, and the JMTC promptly designated five vessels to be converted and operated by the Army.[193]

Twenty-nine hospital ships were thus authorized for the Army, but only twenty-six were in service when the war ended. The conversion plans for two vessels were changed upon cessation of hostilities, and the ships were completed as troopships; another vessel was completed as a hospital ship in August but was delayed by machinery repairs after arrival at Los Angeles and did not enter service until January 1946. The twenty-six vessels actually in service before V-J Day had total accommodations for 16,755 hospital patients. As shown in Table 13, the patient capacities ranged from 286 to 1,628. Most of the vessels were relatively small and slow. Only five had cruising speeds of 15 knots or more, and only one had capacity for more than 1,000 patients. The largest and fastest was the *Frances Y. Slanger,* formerly the Italian liner *Saturnia,* which did not enter hospital ship service until June 1945.[194] In addition to these Army vessels, the Navy, which initially did not plan to operate hospital ships under the Convention, had twelve such ships at the end of the war, and they sometimes carried Army patients.[195]

The conversion and operation of hospital ships by the Army called for close collaboration by The Surgeon General and the Chief of Transportation. The conversion work was done under the supervision of the Chief of Transportation, but The Surgeon General passed on the suitability of the ships selected and determined the conversion plans and specifications so far

[192] Msg, ETO to WD, 30 Nov 44, E 69073 (CM-IN 101, 1 Dec 44); Msg, WD to ETO, 2 Dec 42, WARX 72113.

[193] JCS 1199, 16 Dec 44; Memo, CG ASF for ACofS OPD, 27 Dec 44, sub: Implementation of Hosp Ship Program, OPD ABC 370.05 (2-8-42), Sec. 2; Ltr, C of Water Div OCT to WSA, 29 Dec 44; Memo, C of Water Div for Lt Col William M. Day, ASF Hq, 7 Feb 45; last two in OCT 564 Hosp Ships.

[194] For capacities and patients carried on each voyage, see Hist Med Liaison Off, Incls 3.0 and 4.41.

[195] *Ibid.*, par. 4.9.

as they affected the accommodation and treatment of patients and the accommodation and equipment of the medical staff.[196] The Chief of Transportation was responsible for the marking, equipment, and operation of the vessels in accordance with the Hague Convention.[197]

The Army employed civilian crews in the deck, engine, and stewards departments of its hospital ships as on other Army-operated vessels, but it used military personnel in all positions pertaining to the medical care of patients. The relatively large amount of space assigned to civilian crewmen under standards adopted by the maritime industry was a matter of concern to The Surgeon General, because it reduced the patient capacities of the vessels and sometimes forced medical enlisted personnel into undesirable space. But an attempt to replace civilians with military personnel in the stewards department met with labor union opposition and therefore was carried out on only a limited scale.[198] Since the high rate of turnover among seamen was not conducive to the orderliness and *esprit de corps* essential on hospital ships, the Chief of Transportation made a special effort to induce crewmen to stay with the vessels, but he obtained no appreciable results.[199]

The medical staffs on hospital ships—at first called hospital ship companies, and then hospital ship complements—varied in size with the patient capacities of the vessels. According to the scale approved in March 1945, the complement for a vessel with capacity for 500 patients was 179 officers and enlisted men; a vessel with capacity for 800 patients carried a complement of 251; a vessel with a capacity for 1,000 patients carried a complement of 306.[200] Because of the scarcity of personnel, the complements employed during the latter part of the war were somewhat smaller than those authorized earlier. The senior medical officer permanently stationed on board was designated hospital ship commander; in addition to medical duties, he had responsibilities similar to those of the transport commander on a troopship.[201] Utilization of both military and civilian personnel on Army hospital ships necessitated the issuance of explicit instructions on matters of jurisdiction, and for the three ships that were operated by naval crews these matters were covered by an Army-Navy agreement.[202]

The Chief of Transportation assigned direct responsibility for the operation of Army hospital ships to the commanders of the vessels' home ports. The port commanders provided the civilian crews, put on board the supplies and equipment those crews required, supervised the performance of maintenance and repairs, and

[196] Memo, SG for CofT, 31 Dec 42; Memo, SG for Col Fitzpatrick, 30 Jun 43; both in SGO 560.2 Hosp Ships. SGO file 632.1 BB for the years 1940–45 includes extensive correspondence on this subject.

[197] AR 55-530, 30 Dec 43, sub: Hosp Ships; TC Pamphlet 16, 4 Apr 45, sub: U.S. Army Hosp Ship Guide.

[198] Memo, SG for CG ASF, 13 Nov 43, par. 6, sub: T/O 8-537, AG 320.3 (20 Nov 43)(2); Memo by Col Achilles L. Tynes, 30 Jan 45, and atchd statement, Data for Hist Record of Constr Br, in Hist Records SGO; Memo by Maj Howard A. Donald, 18 Jun 44, sub: Plans for Conversion of SS *Dorothy Luckenbach*, SGO 632.1 BB; Smith, *op cit.*, Ch. XXIII, pp. 420–21.

[199] Ltr, Gross to Groninger, 26 Jun 43, OCT HB Gross Hosp Ships; Memo, CofT for CG CPE, 9 Dec 44, OCT 231 Hosp Ships.

[200] T/O 8-537, 1 Apr 42, Hosp Ship Company; T/O&E 8-537T, 7 Dec 43, Hosp Ship Complement; T/O&E 8-537, 3 Mar 45.

[201] See above, Ch. II; Instruction to Hosp Ship Comdrs, issued by CPE, 4 Feb 44, OCT HB CPE.

[202] OCT Cir 164, 10 Dec 43, TC Cir 80-14, revised 15 May 44; ASF Cir 36, 31 Jan 45; Principles Applying to Army-Staffed and Navy-Manned Hospital Ships, undated, OCT HB Wylie Hosp Ships.

issued the necessary operating instructions. The port commanders also were responsible for placing on each vessel the required number of medical personnel and the required quantities of medical supplies. The medical staff and their activities on board were under the technical supervision of The Surgeon General.

Preparing hospital ships for their voyages and making preparations for the debarkation of patients were specialized jobs. For that reason, it was decided in 1943 that so far as practicable the hospital ships serving in the Atlantic should be operated out of the Charleston Port of Embarkation.[203] There was an advantage in having such vessels sail from and discharge their patients at a port that was not burdened with heavy troop or cargo movements. Also, as pointed out by Brig. Gen. James T. Duke, the port commander at Charleston, the experience gained in regularly handling a number of hospital ships enabled port officers to deal more expertly with the problems of personnel and supply that were continually arising.[204]

The deployment of Army hospital ships was determined chiefly by combat operations. They were employed mainly in evacuating patients to the United States from North Africa, the Mediterranean, the United Kingdom, continental Europe, the Southwest Pacific, and the western Pacific, and in evacuating patients from forward to rear bases in the Mediterranean and the Pacific.[205] Voyage assignments were made by the Chief of Transportation in accordance with reports of patients awaiting evacuation and estimates of casualties likely to result from impending military actions.[206] As shown in Table 13, the twenty-three Army-operated hospital ships made their first voyages to the transatlantic theaters. Some of them were transferred to the Pacific before and some after the Japanese capitulation, and others were decommissioned as hospital ships after they were no longer needed for evacuating patients from Europe.[207] The three Navy-operated hospital ships served entirely in the Pacific, a considerable part of their time being spent in moving patients within the southwest and western Pacific areas.

Regardless of the number of hospital ships in service, the greater part of the patients evacuated by water to the United States was moved by troop transports—97 percent in 1943, 75 percent in 1944, and 74 percent in 1945.[208] *(Tables 14 and 15)* In September 1942 the Commanding General, Services of Supply, instructed the Chief of Transportation to provide hospital beds equal to 5 percent of the troop berths on Army-owned transports and 4 percent on "chartered" transports.[209] These percentages were later increased to 8 and 7, respectively.[210] Not all patients required hospital beds, and during the

[203] Memo, CofT for SG, 22 Sep 43, OCT 353-370.5 Africa.

[204] Hosp Ship Opns, by Gen Duke, undated, OCT HB Wylie Hosp Ships.

[205] British hospital ships were also used for U.S. intratheater evacuation in the Mediterranean and between the Continent and the United Kingdom.

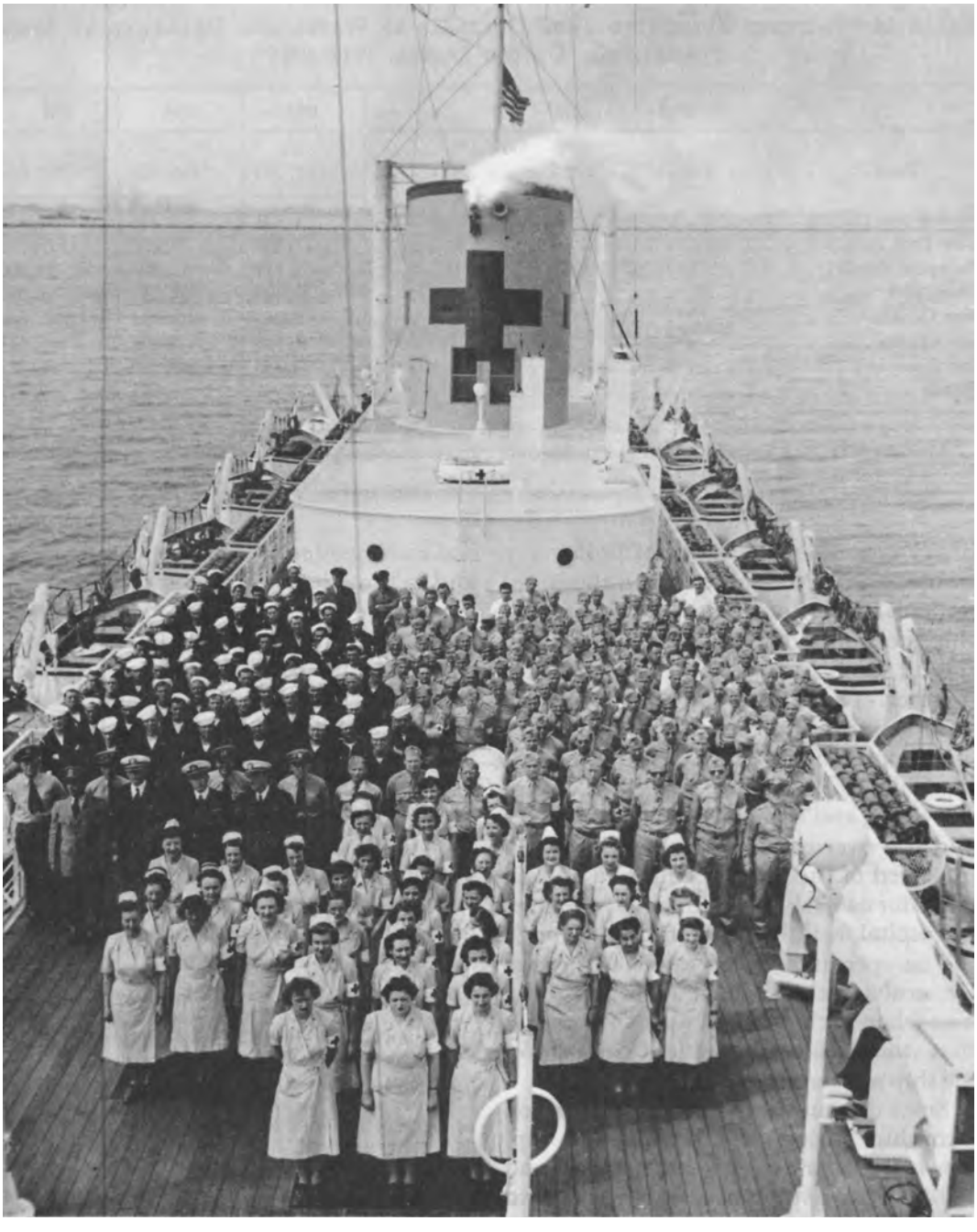
[206] See Memo, SG for Somervell, 23 Dec 43, and Memo, CofT for Somervell, 11 Jan 44, in OCT HB Farr Staybacks.

[207] Concerning the schedule of transfers to the Pacific and delays in making necessary improvements in ventilation, see Memo, Farr for Wylie, 14 Jul 45, OCT HB Wylie Hosp Ships.

[208] Hist Med Liaison Off, Sec. 7.00.

[209] Memo, CG SOS for CofT, 8 Sep 42, sub: Ship Hosp Facilities, AG 704 (6-17-42) (1). The term "chartered" covered WSA troopships allocated to the Army.

[210] Memo, TAG for CGs AAF, AGF, ASF, *et al.*, 8 Jun 44, sub: procedure for Evac of Patients by Water or Air, Incl 1, AG 704.11 (3 Jun 44).



USS *COMFORT* OFF LOS ANGELES HARBOR. *Army medical personnel and Navy crew members of the ship on deck.*

TABLE 14—PATIENTS EVACUATED FROM OVERSEAS BY WATER AND DEBARKED AT ARMY PORTS IN THE UNITED STATES: 1943–1945 [a]

Port	1943	1944	1945
Total	67,395	144,923	299,017
Boston	5,931	8,296	35,383
New York	17,810	39,850	127,748
Hampton Roads	3,814	12,807	14,800
Charleston	1,128	31,148	41,299
New Orleans	1,261	971	656
Los Angeles	1,945	3,528	15,417
San Franscisco	30,545	45,380	55,789
Seattle	4,961	2,943	7,925

[a] Includes Army, Navy, and Allied military patients debarked at Army ports indicated. In addition 168 patients were debarked at the Baltimore cargo port in 1943 and 1 in 1944.

Source: History, Medical Liaison Office to OCT and Medical Regulating Service SGO, Sec. 7.00, in OCT HB Mvmts Div Med Reg Sv.

heavy evacuation operation of 1945 many troopships carried more than a thousand patients. A few of the larger U.S. troopships accommodated 2,800 patients, and the larger British vessels exceeded that number. The "safe" patient capacity of each vessel was determined by a survey team representing The Surgeon General, the Chief of Transportation, the master of the vessel, and the transport commander, and the oversea commanders were kept informed of the current capacity of each vessel for each class of patients.[211] Changes in hospital facilities were effected through the co-operative efforts of The Surgeon General and the Chief of Transportation, and when such changes were of a nature that would affect the patient capacity of the ship a resurvey was made.[212]

Since the number of patients carried on troopships varied widely from trip to trip, it was necessary to devise a flexible and economical method of assigning medical personnel. The plan adopted was to assign to each troopship a small permanent medical staff headed by a transport surgeon, and to provide medical hospital ship platoons to be assigned to transport surgeons as supplemental personnel when needed.[213] In the beginning these platoons ranged in size from seven to eighty-eight officers and enlisted men organized to provide average care, when supplementing the permanent medical staff, for groups of patients ranging from twenty-five to five hundred. Later, the size of the platoons was reduced and nurses were eliminated.[214] Eventually it was found feasible to standardize these units

[211] 1st Ind, C of Mvmts Div OCT for C of Contl Div OCT, 27 Nov 44; OCT Misc Ltr 28, 14 Jul 44; both in OCT 569.5 Pers Capacity of Transports.

[212] General specifications for hospital areas on troopships are given in Memo, SG for CofT, 26 Nov 42, and 1st Ind, SG for CofT, 4 Jan 43; see also Memo, Col Tynes for SG, 3 Jul 43, sub: Rpt of Conf; all in SGO 632.1 BB.

[213] On the transport surgeon, see AR 55-350, 14 Sep 42, Sec. II; see also Instructions for Transport Surgeons, issued by CPE, 1 Dec 43, OCT HB CPE.

[214] T/O 8-534, 27 Oct 42, sub: Med Hosp Ship Platoons Separate; T/O&E 8-534, 21 Oct 43.

TABLE 15—PERCENTAGE OF PATIENTS DEBARKED BY THE ARMY FROM TROOPSHIPS, HOSPITAL SHIPS, AND AIRCRAFT: 1943–1945 [a]

Means of Transport	1943	1944	1945
Total	100.0	100.0	100.0
Troopships	92.8	61.4	57.4
Hospital Ships	2.7	20.4	20.1
Aircraft	4.5	18.2	22.5

[a] A total of 2,390 patients was debarked in 1941, 9,240 in 1942, and 22,909 in 1946. The patients debarked were chiefly Army personnel, but limited numbers of U. S. Navy and Allied personnel were included.

Source: Smith, *The Medical Department: Hospitalization and Evacuation, Zone of Interior*, Table 16.

on the basis of one medical officer, one dental officer, and fifteen enlisted men to care for one hundred patients.[215]

The personnel for hospital ship platoons, and also for hospital ship complements, after being trained at Medical Corps schools, was placed under the control of the commanders of the ports of embarkation. The port commanders were responsible for the organization of the required number of units and for providing such additional training as was necessary to enable the units to function properly on board.[216] At the end of June 1945 the 322 medical hospital ship platoons then in service embraced 661 commissioned officers and 4,955 enlisted men, a total of 5,616. On the same date there were 481 commissioned officers, 29 warrant officers, 1,112 nurses, and 4,351 enlisted men—a total of 5,973—assigned to hospital ship complements.[217] The training and technical supervision of such personnel was a function of the port surgeon. The supervision of medical supplies was charged to the port medical supply officer. These officers were assigned to the ports by The Surgeon General, but each officer was responsible directly to the port commander as a member of his technical staff.[218]

Until late in 1944, medical hospital ship platoons were assigned to service by the commanders of the ports to which they were attached; at that time they were placed under the control of the Movements Division, OCT, which was in a better position to direct their employment in accordance with the over-all need. The platoons were sent overseas for temporary attachment to the theater commanders, who placed them on returning troopships as their services were required.[219] Despite

[215] Memo, CofT for Mob Div ASF, 10 Jun 43, OCT 322 Med Hosp Ship Platoons; Memo, CofT for CG ASF, 1 Apr 44, Reorg of Med Hosp Ship Platoons, OCT HB Gross Hosp and Evac; Memo, Mvmts Div OCT for Hist Unit OCT, 20 Jun 45, par. 19, OCT HB Mvmts Div Rpts.

[216] The extent of the medical training given personnel was determined by the Medical Corps.

[217] Tabulation, T/O Units Used on Ships as of 30 Jun 45, prepared by Dir of Pers OCT, in OCT HB Dir of Pers.

[218] Memo,SG for CofT, 30 Apr 42; Memo, CofT for PEs, 2 May 42; sub: Port Med Supply Off; both in OCT 323.6 Duties of Med Off.

[219] Memo, TAG for CGs of Depts, Theaters, *et al.*, 25 Jan 43; sub: Sea Evac Opns, par. 2*c*, AG 370.05 (1-19-43); Memo, CofT for PEs, 5 Jun 43, sub: See Evac of Patients, OCT 370.05 Plans, Policies, and Procedures.

the effort to use them as intensively as possible, there were not enough platoons to meet requirements after evacuations became heavy, and oversea commanders were directed to make maximum use of medical personnel returning from the theaters on leave, rotation, or temporary duty, by organizing them into provisional platoons.[220]

The military operations in North Africa and the Mediterranean in 1943 made heavy demands on troopship hospital facilities. The first Army hospital ships did not become available until the summer of that year; the patient capacities of the troopships were small and not definitely established; and full co-ordination between the theater and the zone of interior had not been worked out. In June Col. Thomas G. Tousey, a medical officer from the New York Port of Embarkation, was dispatched to North Africa to study the situation, and his report disclosed many shortcomings.[221] He found that medical hospital ship platoons were being held in idleness in some base sections pending assignment to troopships, whereas the individual members might have been assigned to temporary medical duties on shore that would have provided training and helped morale. This situation was due in part to the attitude of some platoon officers who did not consider their units subject to shore duty. A definite plan for the assignment of platoons to ships was not being followed. The Army regulation requiring that platoons be assigned as units could not be uniformly enforced without great waste of personnel because it often happened that only a large platoon was available for assignment to a ship with small patient capacity. Sometimes the transport surgeons would not accept as many patients, or as many of a particular class, as the oversea medical officers desired to embark, and there were instances where patients were brought to the dock and then taken back to the hospital. Surgeons on naval transports refused to accept Army nurses, with the result that nurses had to be left behind when the rest of the platoon sailed. Colonel Tousey reported also that not enough forethought was being given to the proper kinds and quantities of medical supplies to be stocked on the respective transports. While his findings contributed substantially to the improvement of procedures, the insufficiency of ship hospital facilities continued, and at the end of the year there was a considerable backlog of patients in North Africa.[222]

A backlog of patients also developed in the European theater after the invasion of Normandy. Reference has been made to the instructions sent to ETOUSA early in December 1944 that U.S. troopships would have to be used to the maximum in evacuating the sick and wounded and that an effort should be made to use the British liners more extensively for this purpose. Such a program was necessary in order to avoid accumulating a backlog of patients that would require a long period to liquidate after the Germans had surrendered and the majority of the troopships had been transferred to the Pacific.

[220] AG Memo, 8 Jun 44, cited n. 210, par. 14*b*; OCT Misc Ltr 111 to PEs, 3 Apr 45, sub: Med Hosp Ship Platoons, OCT HB PE Gen Evac of Patients; Ltrs, CofT ASF for CofT ETOUSA and CofT MTOUSA, 10 May 45, OCT HB Gross Hosp and Evac; Rad, WD to ETOUSA and MTOUSA, 25 May 45, WARX 88847.

[221] Memo, Col Tousey for CG NYPE, 20 Aug 43, sub: Rpt of Oversea Observer, OCT 370.05 Patients.

[222] Rad, Algiers to WD, 8 Nov 43, CM-IN 4781; CMTC 76th Mtg, 2 Dec 43, Item 4; Memo, SG for Somervell, 23 Dec 43; Memo, CofT for Somervell, 11 Jan 44; last two in OCT HB Farr Staybacks Jan 1944, No. 35.

In Washington the Chief of Transportation and The Surgeon General, Maj. Gen. Norman T. Kirk, were in agreement on this point, but it was evident that the same understanding did not exist between their counterparts in Europe. The theater medical staff had a strong preference for hospital ships and also regarded the rated capacities of many troopship hospitals as too high in view of the facilities. In October 1944 General Gross requested General Ross, Chief of Transportation, ETOUSA, to give particular attention to the matter, and during a trip to Europe in December Gross made the settlement of the question one of his objectives. As a result, a much better understanding was established between the Transportation Corps organization and Maj. Gen. Paul R. Hawley, the theater surgeon, and an agreement was worked out with the British whereby the number of patients to be accommodated on the Queens was greatly increased. After necessary improvements in facilities and additions to the ships' medical personnel, first priority was given to 3,500 U.S. sick and wounded on each westbound trip of the *Queen Elizabeth* and to 3,000 on the *Queen Mary*.[223]

During the winter of 1945 General Somervell continued to stress the policy of evacuating patients from the ETO as rapidly as possible; he did not want a repetition of the slow evacuation following World War I, which he termed "the scandal and disgrace of the military service." [224] In line with this policy the Chief of Transportation instructed the port commanders on the Atlantic coast to resurvey all troopships under U.S. control in order to establish the greatest "practical patient capacity," and he was careful to see that full advantage was taken of the increased patient capacities of these vessels and the British Queens.[225] Shortly before V-E Day eighteen troopships were designated to carry as many sick and wounded as they could accommodate, and the number of able-bodied troops to be transported was correspondingly reduced.[226]

May 1945 was the peak month for evacuation by water from the ETO and the MTO, with 35,680 patients arriving at U.S. Atlantic ports during that period.[227] Those theaters had also been instructed to give top priority to patients on the westbound airlift.[228] Late in July the War Department announced that its plan to bring all transportable sick and wounded soldiers home from Europe within ninety days after V-E Day would be accomplished.[229]

For the movement of patients from the Pacific theaters the Army relied heavily on troopships until after evacuation from the ETO and the MTO had progressed to a

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[223] Ltrs, Gross to Ross, 9 Oct 44 and 17 Nov 44, OCT HB Gross Day File; Ltr, Ross to Gross, 28 Oct 44, OCT HB PE Gen Evac of Patients; TWXs between OCT ASF and OCT ETOUSA, 1035 of 27 Sep 44, 1137 of 17 Oct 44, 1149 of 19 Oct 44, 1176 of 24 Oct 44; Memo, SG for Wylie, 14 Nov 44, OCT HB PE Gen Evac of Patients; Memo, Wylie for Somervell, 15 Dec 44, ASF Hq Trans 1944; CCS 751/1, 3 Jan 45; CMT 67, 16 Jan 45; Ltr, Wylie for CG NYPE, 1 Mar 45, OCT HB Wylie Staybacks.

[224] Memo, Somervell for Wood and Gross, 23 Feb 45, ASF Hq Trans 1945.

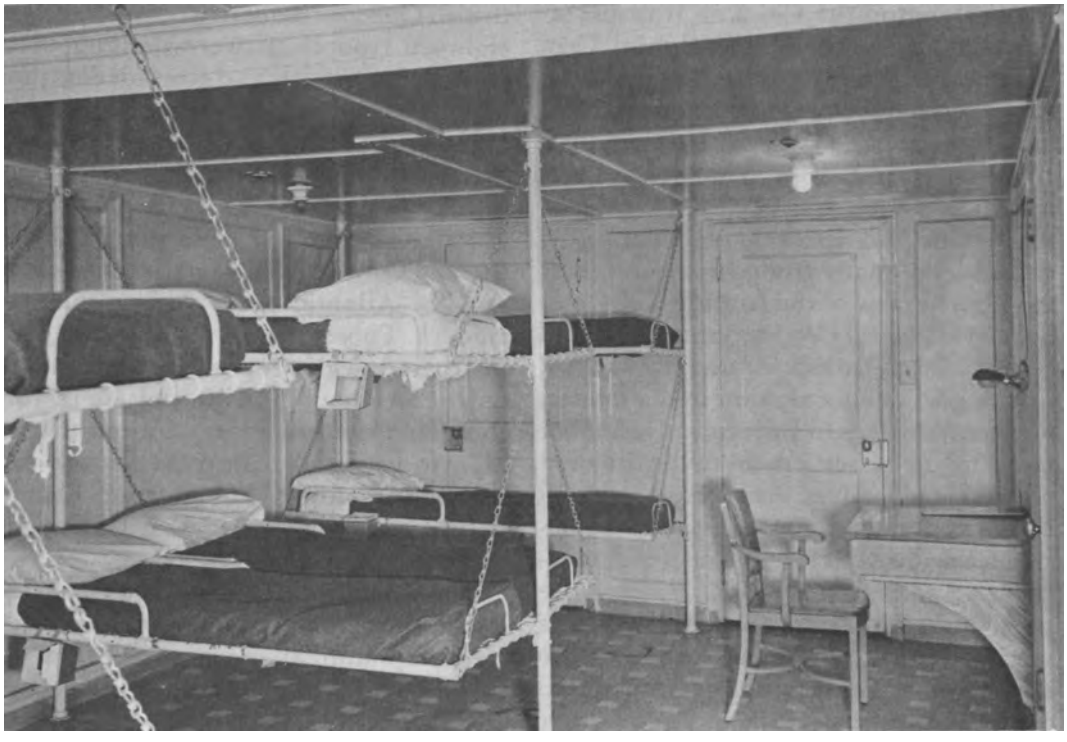
[225] Memo, CofT for BPE, NYPE, HRPE, 5 Feb 45; Memo, CofT for CG ASF, 6 Feb 45; both in ASF Hq Trans 1945; Memo, CofS USA for CG ETOUSA, 22 Mar 45; Memo, Farr for Gross, 19 Apr 45; last two in OCT HB Gross Hosp and Evac.

[226] Memo, C of Mvmts Div for C of Water Div, 27 Apr 45, sub: Troopship Utilization, OCT HB Farr Staybacks; Memo by Nies, 14 Jan 45, in Mvmt Div Histories, OCT HB Mvmt Div Gen.

[227] Hist Med Liaison Off, Sec. 7.00.

[228] Msg, G-4 to Hq COMZONE ETO, 4 May 45, WARX 80042.

[229] WD press release, 23 Jul 45, sub: All Transportable Sick and Wounded in Europe Will Be Home by End of July.



WARD ROOM ON THE ARMY TROOPSHIP *MONTEREY*

point that permitted the transfer of hospital ships from the Atlantic.[230] The Navy's troop transports as well as those of the Army were used throughout the war. Some patients were moved on freighters, and airlift also was employed when available. Because of the numerous widely scattered bases, a well-regulated utilization of ship hospital spaces was difficult to attain; some vessels returned to the United States without patients, while others carried sick and wounded in excess of their proper capacities.[231] The evacuations during 1943 and 1944 were substantial despite the small number of hospital ships in the Pacific. The peak months for the arrival of patients at U.S. Pacific ports were May and October 1945, when the number exceeded 10,000.[232] By the end of the year the evacuation of battle casualties had been virtually completed.

Theater commanders provided the zone of interior with full information regarding prospective and actual evacuations. They dispatched a radiogram on the first of each month reporting the number and classes of patients awaiting embarkation from each port in the theater and the number and classes expected to be eligible for evacuation within the next thirty

[230] Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–47, pp. 407–11, OCT HB Monographs.

[231] Memo, Meyer for Farr, 28 Jan 44, OCT HB Meyer Staybacks.

[232] Hist Med Liaison Off, Sec. 7.00.



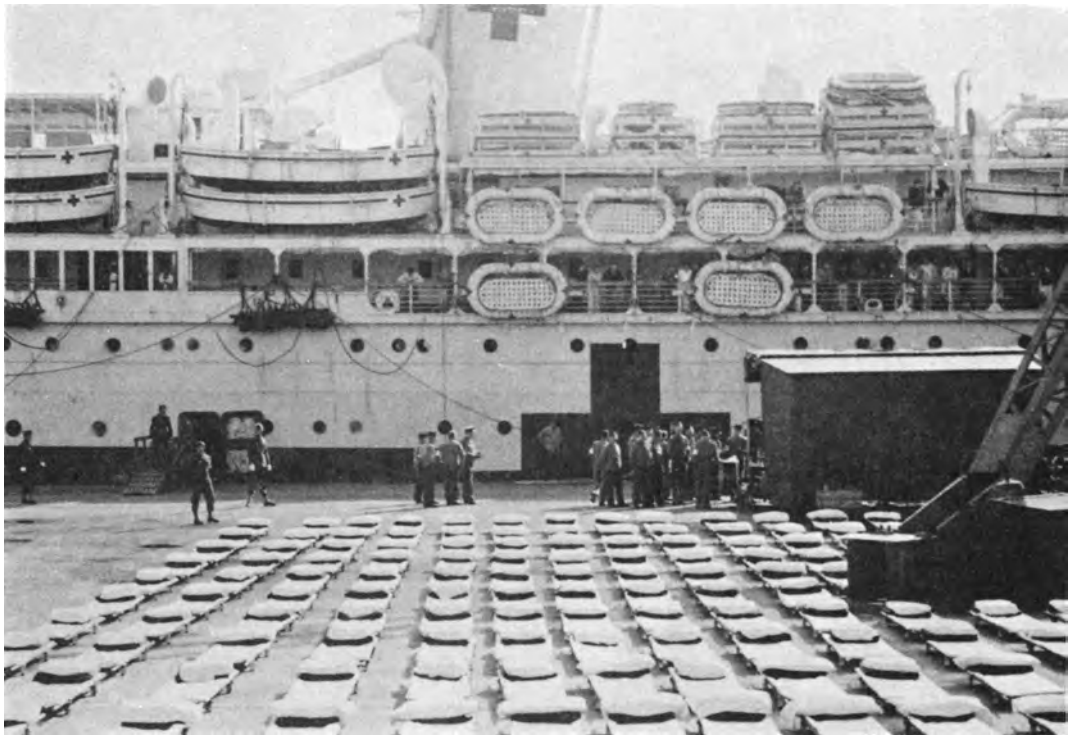
DISPENSARY ON THE *MONTEREY*

days.[233] These reports enabled the Chief of Transportation and his port commanders to adjust ship schedules to meet evacuation requirements so far as practicable and to insure that the ships were adequately equipped and supplied; they also furnished a basis for advance planning by The Surgeon General and the service commands for the use of hospital facilities in the zone of interior.

When each ship sailed the theater commander sent a radio report to the port of debarkation giving the number of patients of each class on board and the expected time of arrival.[234] On the basis of these advices, which were forwarded to all interested offices in Washington, the debarkations were planned, the debarkation hospitals to which the patients were to be forwarded were determined, the number of hospital cars and other railway equipment needed to move the patients from the ports was arranged for, and the service commands were requested to provide the number of ambulances required to make the transfer from ship to train or from ship to debarkation hospital.

[233] Memo, TAG for CGs of Oversea Comds, 16 Sep 42, sub: Essential Info Concerning Evac, AG 370.05 (9-15-42). For examples of reports, see Msg, Algiers to WD, 11 Nov 43, CM-IN 6989 (12 Nov 43), and similar messages in OCT 353-370.5 North Africa.

[234] Memo, CG SOS for TAG, 6 Jan 43, sub: Essential Info Concerning Evac, and atchd note for record; Memo, TAG for CGs of Oversea Comds, 13 Jan 43, same sub; both in AG 370.05 (1-6-43). For a time these reports were sent by air mail, but deliveries were found to be uncertain.



LITTERS READY TO RECEIVE PATIENTS *as a hospital ship arrives at Charleston, South Carolina.*

The regulations provided that motor vehicles would be used for patients only when rail transportation was impracticable. Nevertheless, ambulances were used extensively for moving patients from shipside, because at many ports trains could not be brought to the docks and the debarkation hospitals frequently were in or near the port areas. Moreover, all railway equipment was urgently needed for longer hauls where it could be more economically utilized.[235]

Until late in the war patients received from overseas were not sent to hospitals at the port staging areas but were moved directly to the general hospitals that had been designated debarkation hospitals.[236] A departure from this rule was made in the early summer of 1945 when evacuation from Europe was especially heavy, and temporary debarkation hospitals were established in the staging areas of the east coast ports.[237]

While patients were at the ports of debarkation, they were under the control of the port surgeons. These officers were in

[235] WD Cir 316, 6 Dec 43; WD Cir 87, 28 Feb 44, Sec. I; Interv with Maj Farley, 24 Sep 51, OCT HB PE Gen Evac of Patients.

[236] Memo, CofT for PEs, 9 Nov 42, sub: Military Hosp and Evac, OCT HB PE Gen Evac of Patients; ASF Cir 99, 11 Apr 44, Sec. IV.

[237] 1st Ind, NYPE for CofT, 18 Jun 45, OCT HB TC Gen Redepl; Min of Opns Mtg, 26 Jul 45, OCT HB Dir of Opns.

charge of the medical personnel of the ports, and were assisted at shipside by teams of enlisted men who were trained in handling litters and otherwise helping the incapacitated. Until April 1944 there was no uniform rule regarding the point at which responsibility passed from the port to the service command. At that time explicit instructions were issued providing that, except when otherwise agreed, the port surgeon's responsibility ceased when the patients were placed in ambulances or on trains for removal from the docks; control then passed to the service command, which staffed the conveyances.[238]

Although the bulk of the patients evacuated from oversea areas to the zone of interior were transported by water, the number transported by air was substantial—more than 18 percent of the total in 1944, and more than 22 percent in 1945. *(See Table 15.)* Air evacuation was speedy and it was especially desirable for the critically wounded for whom proper treatment could not be furnished in the theaters. The Chief of Transportation had no responsibility for patients evacuated by air, but he worked in close co-ordination with the Air Transport Command in regard to plans and procedures.[239]

Generally speaking, the Army had a good record in the evacuation of sick and wounded from overseas. As in so many other phases of the war effort, the advance planning was inadequate for a conflict of such scope, and after the United States had become a belligerent time was required to provide the necessary facilities and to work out proper procedures. The delay in getting sufficient Convention-protected hospital ships into service was traceable mainly to the necessity of using all available vessels for transporting troops to the theaters, and to the heavy commitments at the shipyards that delayed the conversion work after it had been authorized. The reluctance of some medical officers in the theaters to utilize the hospital spaces on troopships as completely as the War Department desired stemmed from their differing opinions as to the adequacy of the facilities. In its latter stages the repatriation of sick and wounded proceeded smoothly, and the rapidity with which the transportable patients were removed from the theaters after the end of hostilities reflected not only the preparations that had been made, but also the high importance the Army had attached to this task.

Transportation of Soldiers' Dependents

An account of the repatriation of military personnel would not be complete without a brief discussion of the movement of their dependents. The transportation of large numbers of military dependents on Army vessels has always been fraught with trouble, giving rise to petty grievances and numerous complaints.[240] This was especially true during the war and in the early postwar period when shipping conditions were abnormal. The Transportation Corps would have preferred not to handle this civilian traffic while heavy troop movements were in progress, but Army policy was dictated by humanitarian and morale considerations.

Thousands of military dependents were overseas when the United States entered

[238] ASF Cir 99, 11 Apr 44, Sec. IV, par. 5.

[239] Memo, CG ASF for CG AAF, 9 Nov 42, sub: Evac Opns, OCT HB PE Gen Evac of Patients; WD Cir 316, 6 Dec 43, pars. 9*c* and 13*b*.

[240] Memo, Wylie for CO NYPE, 29 Apr 46, OCT HB Ex Trans of Dependents.

the war, notwithstanding the fact that the War Department in June 1941 had prohibited further movements of this kind and had provided for the return of dependents in advance of change of station by military personnel.[241] Immediately after Pearl Harbor the return of dependents was pressed, but many could not be moved promptly and throughout the war this traffic continued to require the attention of the War Department and the Chief of Transportation.[242] It was Army policy that the repatriation of dependents should be strictly controlled by the theater commanders, who were to establish priorities and insure that this traffic did not interfere with the movement of troops or delay the dispatch of troopships.

Toward the end of the war a new type of dependent travel developed—that of the so-called war brides. Many American soldiers had married while overseas, and during 1944 and 1945 demand for the movement of their wives and children to the United States mounted steadily.[243] Some were furnished transportation during that period but always subject to the general policy regarding dependent travel. After V-E Day the movement of war brides from Europe, where the great majority of them were living, was virtually suspended in order to leave all ship space available for the redeployment of troops. In January 1945 a joint resolution was introduced in Congress under which the Secretary of War would have been "authorized and directed" to assign shipping space to these passengers. Early in August when the passage of this resolution was being sought, the Secretary of War pointed out that he already had authority to move such traffic but that it had been subordinated to the more important task of getting troops and military patients back to the United States. He indicated also that most ships, as a result of their conversion for war service, were not suitable for the transportation of women and children. The Secretary objected to the resolution because it would have deprived him of the "freedom of action" necessary to insure that the movement of dependents did not interfere with the war effort.[244] Congress took cognizance of these arguments and did not pass the resolution.

As a result of public and Congressional pressure, the foundation for the program of transporting war brides was laid in 1945, although the main movement did not begin until early 1946 after the bulk of the troops had been repatriated. Congress authorized the expenditure of public funds for the transportation of these passengers "by government or commercial means"; President Truman issued an executive order; and the Army published rules to implement the directives.[245] The Army rules indicated that the transportation of dependents would still be subordinated to military requirements

[241] Ltr, SW to Rep Merlin Hull, 5 Mar 41, OSW Trans 501–800; Memo, ACofS G-4 for CofS, 19 Apr 41, G-4/24499-178; Memos, TAG for CGs All Armies, *et al.*, 7 Jun 41, sub: Trans of Dependents and Household Goods to Oversea Stations, AG 541.1 (5-26-41), and 24 Sep 41, sub: Trans of Dependents and Household Goods to Alaska, AG 541.1 (9-9-41).

[242] Memo, ACofS G-4 for Cs of Supply Services, 18 Dec 41, G-4/24499-178; Memo, TAG for Theater Comdrs, *et al.*, 23 Nov 44, sub: Return of Dependents, AG 510 (23 Oct 44).

[243] Ltr, Farr to Col Donald S. McConnaughy, OCT ETOUSA, 30 Jan 45, OCT HB Farr Staybacks. The shipment of war brides from Australia started as early as April 44; see Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–47, pp. 301–06, OCT HB Monographs.

[244] H.J.Res. 28, January 3, 1945; 79th Cong., 1st Sess., Ltr, SW to Rep Andrew J. May, Chm House Com on Mil Affairs, 3 Aug 45, G-4 510, Vol. III.

[245] PL 126, 79th Cong., 1st Sess., July 3, 1945; EO 9587, July 6, 1945, Fed. Reg., July 10, 1945; WD Cir 245, 11 Aug 45; WD Cir 294, 27 Sep 46.

and would be strictly controlled by the oversea commanders. The ships to be used, in the order of preference, were those operated by the Army and the Navy, vessels of the War Shipping Administration, other American vessels, and vessels of foreign registry. War brides were to receive not only ocean transportation but also inland transportation to their future homes.

During the fall of 1945 the Chief of Transportation made a careful study of the war bride problem, including the probable volume of the traffic, ways of avoiding interference with troop movements, and preparation of troopships to more suitably accommodate large numbers of women and children.[246] In January 1946 the War Department announced that it had arranged for vessels to move more than 60,000 dependents from Europe by the end of June, and about 6,000 from Australia and New Zealand.[247] It indicated that the plans had been made on the basis of information obtained from the theaters, but that data regarding the number of dependents awaiting transportation and the dates of their readiness were still undependable. While it was believed that the great majority could be accommodated during the next six months, it seemed probable that the movement would continue much longer. Simultaneously the War Department issued a standing operating procedure to govern the processing and transportation of war brides in the theaters, on the ships, and after their arrival in the United States.[248]

About thirty vessels were designated to handle this special traffic, and such changes were made in their facilities as were necessary for the new types of passengers. The majority of these vessels were Army troopships or hospital ships; eight were War Shipping Administration troopships.[249] The British agreed that the *Queen Mary* should carry war brides on her westbound trips until May, and because of her large capacity—up to 2,500 dependents—and quick turnaround this ship had an important role in the undertaking.[250]

The first ship to arrive from Europe under the program was the *Argentina,* which docked at New York on 4 February 1946 with more than 600 dependents. The first ships carrying war brides from New Zealand and Australia were the *Monterey* and the *Mariposa,* which arrived at San Francisco almost simultaneously in early March with a total of more than 1,600 brides and children. Dependents moved from other areas were accommodated in smaller numbers on such vessels as offered suitable accommodations. Theater commanders were instructed not to embark dependents on freighters unless they were the only vessels available, since freighters often docked at U.S. ports where the Army was not prepared to handle passengers properly.[251]

The preparation of vessels to carry war brides required attention to many details, some of which were without precedent in Army experience. The military complements on the vessels were augmented with additional medical personnel, nurses,

[246] Memo, CofT for OPD, 16 Oct 45, sub: Return of Dependents, OCT HB Farr Staybacks.

[247] WD press release, 18 Jan 46, OCT HB PE Gen Dependents.

[248] Memo, TAG for PEs, Theaters, *et al.*, 19 Jan 46, sub: SOP for Trans of Dependents from Overseas, AGMP-M 510 (17 Jan 46).

[249] Charles, *Troopships of World War II,* p. 361.

[250] Concerning the arrangement for the *Queen Mary,* see Wardlow, *op. cit.*, p. 227.

[251] Memo, CofT for CG NYPE, 18 Mar 46; Ltr, WSA to OCT, 20 Mar 46; both in OCT 510 Dependents.

Wacs, and Red Cross workers. Cribs, high chairs, play pens, and baby baths were added to the equipment. Special laundry and ironing facilities were installed for the use of the women. A varied supply of baby foods was placed in the ships' storerooms, and numerous items that were not required on ships in troop service were added to the sales commissaries. Since at least 25 percent of the dependents were expected to be infants, it was decided that disposable diapers would have to be used, but as the *Argentina* was preparing to sail on her first trip the decision had not yet been made whether diapers would be furnished at government expense or whether they would be placed on sale.[252] This was one of many minor but vexing questions.

While the number of dependents placed on a ship was restricted in order to avoid any semblance of crowding, and berthing was not more than two-high, certain features remained that were reminiscent of the troopship. The large compartments were still there, and while an effort was made to place mothers with children in cabins, this could not always be done. Although waiters were provided to serve meals to mothers with children, other women were required to serve themselves in cafeteria style. Because of the limited number of stewards and stewardesses available, dependents were required to make their own beds and clean their quarters. This did not prove to be a felicitous arrangement, since some women were either too seasick or too careless to do their work properly. The transport commanders were directed to give the women proper guidance regarding the life on board as well as the procedures they would encounter on debarkation, but the attempted "orientation" was not very successful so far as the ocean voyage was concerned.[253]

As was to be expected, many complaints resulted from the transportation of war brides on troopships. The women and their husbands did not want to wait until more suitable accommodations became available, but many were unhappy about the treatment received. There were complaints that the ships were unfit for women and children, that they were too crowded, that there were not enough stewards and stewardesses, that the ships' personnel was unskilled and discourteous, that the life on board was too regimented, and so on. The Transportation Corps endeavored to provide for the needs of these war brides and to make their first contacts with things American a happy one, but the attendant circumstances were not favorable. Ocean travel was still affected by conditions imposed by the war.

The chief concern of those responsible for the transportation of war brides and their children was to avoid epidemic. This was a danger because of the presence of so many infants and the fact that most of the women were young and without experience in ocean travel. When a mother became seasick her standards of cleanliness, even in the care of her child, were likely to suffer. The nurses could give supervision, but there were not enough of them to undertake direct child care. Arrangements were made for women who were

[252] Memo, CofT for CG NYPE, 9 Jan 46, sub: Special Items for War Bride Program; Memo, CofT for CG SFPE, 11 Jan 46, sub: Supplies and Standards for War Bride Program; Memo, CofT for CG SPE, 11 Feb 46, sub: Additional Provisions Aboard Vessels Carrying Dependents; all in OCT 510 Dependents.

[253] An INS dispatch from Sydney, Australia, reported that the crew of a WSA ship had threatened to strike because the ship was "a floating slum." *The Washington Post*, August 28, 1946, "MP's Quiet Crew on GI Bride Ship."

traveling alone to take care of the children of mothers who fell ill, but here again seasickness and inexperience presented hazards. No serious trouble was encountered until the May voyage of the *Zebulon B. Vance*. The outbreak of a disease described as infectious diarrhea of the newborn resulted in nineteen infants being hospitalized when the ship reached New York, and the ultimate death of six of them. Three other infants from this ship were reported to have died later. Following an investigation by a board of inquiry, the War Department directed that thereafter no infants under six months of age should be transported from Europe and that not more than 25 percent of the passengers on any ship should be under six years of age. The restrictions were not made applicable to other areas because of the small number of dependents yet to be embarked. The inquiry into the *Vance* case disclosed that some of the infants had been ill while awaiting embarkation at Le Havre, and oversea commanders accordingly were instructed to give close scrutiny to the physical condition of both women and children when they arrived at the ports. Some changes were made in ships' facilities and procedures. The board of inquiry did not find that the Army had been negligent; on the other hand, it found evidence of gross carelessness on the part of some of the mothers during the voyage.[254]

Not all the problems encountered were on shipboard; the ports of embarkation and debarkation also had to develop new facilities and procedures and deal with unusual situations. Several days before a ship was to sail, war brides and their children were summoned to an assembly area near the port of embarkation. There they were given medical examinations, their papers were checked for errors or omissions, their baggage was inspected, and their local money was converted into American currency.[255] During this period of processing the needs of the women and children had to be met as they arose, and many a soldier found himself detailed to a task that was entirely new in his experience.

A persistent problem was to get the travelers to arrive at the ports at the time scheduled—neither too early nor too late—and to avoid having assembly areas overrun with relatives that might interfere with the processing. The U.S. 14th Major Port at Southampton, England, which embarked most of the British brides, maintained two assembly areas—one at the military post of Tidworth, and another at a large hotel in Bournemouth. The U.S. 16th Major Port at Le Havre, which handled most of the Continental brides, processed them at Camp Philip Morris, familiar to many soldiers as a troop staging area. The same procedures were followed at all ports of embarkation whether the number of dependents to be shipped was large or small. The theaters were expected to provide the ports of destination with full information regarding the passengers on each ship so that plans could be made in advance for the debarkation and forwarding of the travelers, but as in the case of homeward-bound troopships the reports were often delayed or incomplete.

At the ports of debarkation the war

[254] Transport Surgeon's Report of Voyage 3, 21 May 46, OCT 569.1 *Zebulon B. Vance;* Memo, SG for CofT, 31 May 46, sub: War Bride Program, OCT 510 Dependents' Complaints; *The New York Times,* June 6, 1946, p. 23; WD press release, 7 Jun 46, OCT HB PE Gen Dependents; Ltr, SW to Rep Henry M. Jackson, 17 Jun 46, OCT 510 Dependents' Complaints.

[255] Memo, SOP for Trans of Dependents, cited n. 248.

brides and their children were carefully organized so that they might be cleared by immigration, health, and customs officials with as little delay as possible. Husbands were encouraged to wait for their brides at their home towns rather than to meet them at the ports.[256] The usual plan was to transfer the passengers from the piers directly to the trains by which they were to proceed to their destinations, without any staging at the ports. When large groups of dependents traveled on the same train, a train commander was provided and Red Cross personnel was assigned to accompany them. In addition to notifying the husbands when to expect their wives, the ports of debarkation notified the service commands through which the trains would pass. A special officer was designated by each service commander to give attention to the affairs of dependents en route, and these officers were able to provide helpful assistance, especially at points where transfers were made from one train to another.[257] The Red Cross performed a useful service throughout.

In the early stages of the movement trains carrying large numbers of war brides created a problem in public relations for the Army. Press reporters and photographers went aboard at many station stops, and sometimes were overpersistent in their efforts to obtain stories for their publications. Believing that the railroads might be encouraging the practice, the Chief of Transportation requested the carriers to control the situation so far as possible. The service commanders were instructed that, without interfering with orderly news coverage, all agencies of the War Department should endeavor to protect war brides from embarrassment and the violation of their privacy.[258]

As had been anticipated, the movement of war brides was far from complete at the end of June, and the ships specially designated to transport them continued in this service for several months thereafter. Early in September 1946, the Chief of Transportation announced that the number of dependents to be moved across the Pacific had been reduced to a point where the further assignment of troopships to this special traffic was no longer necessary. Two months later the same action was taken with regard to the Atlantic. Commercial ship space was then becoming more plentiful.[259]

Up to 4 September 1946 war brides and children brought to the United States had totaled 56,214. That total included 41,502 adults and 14,712 infants; 48,408 were transported across the Atlantic and 7,806 across the Pacific.[260] During the year 1946 the total movement of dependents to the United States was 64,229; the peak month was April, when more than 16,000 were debarked.[261] The 1946 figures include some dependents other than war brides and their children, but these exceptions constituted a very small percentage of the whole.

In the meantime the movement of military dependents from the United States to oversea areas had been resumed.[262] In the

[256] WD press release, 26 Mar 46, OCT HB PE Gen Dependents.

[257] Memo, SOP for the Trans of Dependents, cited n. 248.

[258] Ltr, Col Messersmith, OCT, to IMC, 25 Feb 46; Memo, CofT for TAG, 15 Mar 46; both in OCT 510 Dependents.

[259] TC Weekly News Letter, 4 Sep 46; WD press release, 18 Nov 46; both in OCT HB PE Gen Dependents.

[260] TC Weekly News Letter, cited n. 259.

[261] Data compiled for statistical volume of this series from monthly rpts, Recapitulation of Passengers Debarked, submitted by PEs to CofT.

[262] WD Cir 98, 30 Mar 46, gave the rules and procedures.

spring of 1946 ships that had been hastily prepared for war brides were used for this traffic, although passengers were warned that the vessels were in no sense "luxury liners."[263] Later in that year transports reconditioned for the Army's postwar fleet began to enter service, and they were much better equipped to accommodate women and children. In August 1946 the number of dependents embarked for oversea destinations exceeded for the first time in the postwar period the number transported to the United States. Yet many women who desired to follow their husbands were not permitted to do so at once.[264] The readiness of the Army to permit families to join soldiers of the oversea forces depended not only on the availability of suitable transportation but also on conditions in the foreign countries. Housing was a serious postwar problem in most places, and the Army would not authorize the departure of families until it was assured that the areas of destination could accommodate them.[265]

During the period when the movement of war brides was getting under way an officer who had been wrestling with the problems remarked that it was a simpler matter to move a division of troops with all their equipment than a shipload of dependents. This was a graphic way of expressing an attitude regarding dependent travel in general that was shared by many of his colleagues. The transportation of women and children involves arrangements and procedures quite different from those employed in the movement of troops. Beyond that, ships that had received only minor rehabilitation after being in wartime troop service were not suitable for this traffic. Complaints by the wives and protests from the husbands were inevitable. Yet the War Department doubtless would have been subjected to even greater criticism if it had endeavored to delay this traffic until the conditions were more propitious.

Repatriation of the War Dead

Although the over-all responsibility for the evacuation of the war dead from oversea areas and their reburial in the United States rested with The Quartermaster General, the Chief of Transportation worked closely with him in arranging for the movement of the remains by water and by land.[266] The Quartermaster General, as chief of the American Graves Registration Service, had supervision over the return of the remains of all Americans who had died overseas during World War II. The total fatalities were estimated at 359,000. Of this number, 280,835 remains had been recovered up to 30 June 1951; 170,752 had been returned to the United States, 109,866 had been buried in permanent U.S. cemeteries overseas in accordance with instructions from next of kin, and the remainder had been buried elsewhere.[267] The first shipments of remains to reach U.S. ports under the

[263] WD press releases, 12 Mar and 9 Apr 46; Memo, C of Water Trans Sv OCT for CofT, 25 Apr 46, sub: Dependent Vessels; all in OCT HB Wylie Dependents.

[264] WD Progress Rpt, Sec. 3-A, 31 Jan 47, p. 7, OCT HB MPR.

[265] Interv with Lt Col Horace F. McFeely, C of Mvmts Contl Br OCT, 28 Oct 46, OCT HB PE Gen Dependents.

[266] QMC Historical Studies, 21, *The Graves Registration Service in World War II* (Washington, 1951); Erna Risch and Chester L. Kieffer, *The Quartermaster Corps: Organization, Supply, and Services*, Vol. II, UNITED STATES ARMY IN WORLD WAR II (Washington, 1955), Ch. XII.

[267] Risch and Kieffer, *op. cit.*, Ch. XII, pp. 402–04.

repatriation program arrived in October 1947. Arrivals during the years 1947–50 were as follows:[268]

Year	Arrivals of Remains
1947	13,612
1948	101,117
1949	51,073
1950	4,347

In the early planning the Chief of Transportation had contemplated that most remains would be returned in mortuary ships specially equipped and devoted entirely to that purpose. The plan called for ten modified Liberty ships, previously used for the transportation of assembled aircraft and tanks, to be prepared as mortuary ships by installing racks to accommodate from 6,500 to 7,000 caskets. In addition, six small vessels were to be similarly prepared with a capacity for about 160 caskets and used on short voyages within the theaters.[269] Actually, only three special mortuary ships were placed in service. It was found that by careful stowage the remains could be transported without special racks, and this meant that any ship could be used that was in a position to load at one of the oversea ports where remains were concentrated.[270]

Since special facilities and handling methods were required, there was an advantage in using as few receiving ports as possible; the plan therefore provided that all shipments in the Atlantic would be landed at New York and all shipments in the Pacific at San Francisco. At each port installation, space was set aside and adapted for the storage of remains awaiting shipment to the inland distribution centers. The port commanders at New York and San Francisco also provided facilities and operated distribution centers for remains that were destined for cemeteries in their respective areas.

The transportation of remains from the ports of debarkation to the inland distribution centers was accomplished so far as possible with special mortuary cars equipped with racks and capable of taking from fifty to sixty-six caskets. The Chief of Transportation provided 118 such cars by converting Army hospital cars that were not required after the heavy movement of patients was over. Since the remains usually arrived at the ports in large shipments, it frequently was possible to make up entire trains of mortuary cars. The regular services of the railroads were used on the occasions when only a few remains were to be shipped.[271]

From the distribution centers remains were forwarded to the places of interment. All shipments to and from distribution centers were accompanied by military escorts of the branch of the service to which the deceased had belonged. The escorts stayed with the remains until they had been delivered to the next of kin, or until burial if so requested. In most cases the escorts were the only representatives of the military services to have personal

[268] Statistical Yearbook of the Quartermaster Corps, 1950, p. 105.

[269] Memo, CofT for CG ASF, 11 Mar 46, sub: Status of Plng—Repatriation of Dead, OCT 518, Vol. I; Memo, Col Kenneth W. Gillespie for Wylie, 18 Apr 46, OCT HB PE Gen Return of Dead.

[270] Interv with Edgar C. Seward, 26 Sep 51, OCT HB PE Gen Return of Dead. Mr. Seward, as a member of the Water Division, OCT, was charged with the supervision of these matters on behalf of the Chief of Transportation.

[271] Terms for transporting remains in mortuary cars or baggage cars are given in tender by the carriers; Return to Destination in U.S. of Remains of American Dead from Overseas Battle Areas, 3 Sep 47, OCT HB PE Gen Return of Dead.

contact with relatives of the deceased and their task was a delicate one. Consequently, they were selected with care and were given special training to prepare them for their mission.[272]

Results Under Pressure

The period between the surrender of Germany and the end of 1945 was one of especially heavy pressure on the Chief of Transportation. He was under pressure to obtain enough ocean transport to effect first a quick redeployment of troops from Europe to the Pacific and then a hurried repatriation from all oversea areas. He was under pressure throughout this period and even into the next year to obtain sufficient rail transportation to move returning troops promptly from the ports of debarkation, and particularly to provide sleeping car accommodations for those making long trips.

The Army had done a comprehensive job of planning for redeployment and demobilization. It had made provision for the facilities and procedures needed to receive returning troops and process them for further assignments or for mustering out of the service. The Chief of Transportation had made effective arrangements for accomplishing the change-over from a heavy outbound movement to a heavy homeward movement of troops and equipment. Precautions had been taken against the withdrawal of troopships from military service after V-E Day, and the extent to which captured German vessels might be used had been explored. But the Chief of Transportation had relied on the rail carriers to make the required amount of equipment available as they had done previously without having a definite agreement with the Director of Defense Transportation, and this proved to be a mistake.

The mobilization of shipping for redeployment and repatriation was accomplished speedily. There were virtually no commercial passenger services in operation at that time so that all merchant-type vessels could be devoted to the requirements of the armed forces. After V-J Day many combatant vessels became available for use in repatriating military personnel. The collaboration of the Army, the Navy, and the War Shipping Administration toward the achievement of early demobilization was excellent. More troops were landed at United States ports in one month (December 1945) than had been dispatched overseas in any three-month period during the war.

The circumstances affecting the transportation of troops after their debarkation at U.S. ports were less propitious. Civilian traffic, which had not been greatly restricted during the war, continued to compete with troop traffic for rail service. The expectation of the Chief of Transportation that enough rail equipment would be diverted from regular passenger services to meet the increased military requirements was not at once realized, chiefly because the Director of Defense Transportation and the military authorities had reached no understanding in advance and held differing views on the subject. It can scarcely be said that there ever was an "understanding" between them on this point, but gradually more and more railroad equipment was assigned to troop

[272] WD Pamphlet 21-40, July 1947, sub: Mil Escorts—Return of WW II Dead; Memo, TAG for CG Sixth Army, 1 Aug 47, sub: Pers Reqmts—WW II Dead Program; Memo, TAG for CGs All Armies, *et al.*, 20 Feb 48; last two in OCT 293.1 Escorts.

traffic until four fifths of the sleepers and a third of the steel coaches were so employed. In the late months of 1945 the military traffic moved from Pacific coast ports was limited by the line-haul capacity of the railroads rather than by equipment.

Because the public wanted the speediest possible demobilization and the War Department had accepted this as a criterion, judgment as to the success of the operation must take into account first the fact that the rate of repatriation and demobilization exceeded the expectation of even the most optimistic Army officers. On the other hand, it cannot be doubted that credit for that success was somewhat dimmed by the Army's failure to have a clear-cut understanding regarding the provision of additional rail equipment and to regulate the flow of troops into the debarkation ports to conform to the arrangements that the rail, motor, and air carriers had made to move them inland.

CHAPTER IV

Freight Movements in the United States

Between Pearl Harbor and the end of 1945, Army freight shipped over the transportation systems of the United States totaled more than 340,000,000 tons. *(Table 16)* This was a colossal load to move under the supervision of a single agency, the Office of the Chief of Transportation. During 1944, the year of heaviest traffic, more than 105,000,000 tons were moved, as compared with 11,224,000 tons for which the Army issued transportation orders during the fiscal year 1919, when World War I traffic was at its peak.[1]

The volume of Army freight traffic was influenced primarily by the number of men in the service, for whether the troops were in the zone of interior or in the theaters of operations they had to be fed, clothed, equipped, and otherwise provided for, mainly with supplies produced in the United States. A secondary influence was exercised by strategic developments that might call for especially heavy shipments during periods of military crisis. Yet another factor was the amount of matériel that the War Department procured for shipment to Allied countries under the international aid programs. From a total of about 1,600,000 tons in December 1941, the first month of the war, Army shipments increased to a monthly peak of 10,900,000 tons in March 1945, when the requirements of the forces in Europe were still heavy and the build-up of strength in the Pacific was being pushed as rapidly as resources would permit. These figures comprehend only shipments made on War Department bills of lading; they do not include shipments moved on commercial bills of lading, such as raw materials and components used in the manufacture of military items and shipments by contractors working on construction projects for the Army.

The Chief of Transportation's task in connection with freight movements was heightened not only by the growing volume but also by many other circumstances inherent in the wartime transportation situation. The over-all increase in traffic, which was substantially more than 100 percent in the case of rail and motor carriers, put a heavy strain on both facilities and manpower and increased the probability of delay, damage, or loss.[2]

[1] *Annual Report of the Chief of Transportation Service, 1919*, p. 67. Domestic traffic is measured in short tons (2,000 pounds).

[2] Volume of traffic, equipment, and manpower are discussed at some length in Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, Ch. IX.

TABLE 16—FREIGHT SHIPPED ON WAR DEPARTMENT BILLS OF LADING BY ARMY PROCURING SERVICES AND COMMANDERS OF TROOP ORGANIZATIONS: DECEMBER 1941–DECEMBER 1945 [a]

(Short Tons)

Shipper	Total	1941 (December Only)	1942	1943	1944	1945
Total	340,021,413	1,617,953	50,927,653	88,271,978	105,014,009	94,189,820
Army Air Forces	36,316,429	90,417	3,687,408	8,761,867	13,544,457	10,232,280
Chemical Warfare Service	7,053,413	14,699	1,041,469	1,689,745	2,463,230	1,844,270
Corps of Engineers	63,694,700	29,528	9,829,027	21,085,233	18,032,922	14,717,990
Medical Department	[a] 1,761,210	([a])	([a])	692,080	588,320	510,810
Ordnance Department	123,898,664	710,187	17,935,347	33,955,595	39,390,435	31,907,100
Quartermaster Corps	79,899,566	662,926	14,728,912	16,309,451	21,265,497	26,932,780
Signal Corps	5,569,413	19,900	608,375	1,436,494	1,941,104	1,563,540
Transportation Corps	[a] 2,510,930	([a])	([a])	([a])	[a] 704,800	1,806,130
Organizational Moves [b]	3,092,134	35,367	700,339	1,117,430	976,308	262,690
Other [c]	16,224,954	54,929	2,396,776	3,224,083	6,136,936	4,412,230

[a] Matériel of the Medical Department was included with "Other" through December 1942, and that of the Transportation Corps through June 1944.

[b] Supplies and equipment accompanying troop organizations.

[c] In addition to the Medical Department and the Transportation Corps matériel included in certain years, this class embraced matériel of The Adjutant General and the Fiscal Director, post exchange supplies, personal property, and supplies shipped overseas for civilian aid.

Source: Monthly compilations of the Transport Economics Section, Traffic Control Division, OCT, reworked for a statistical volume of this series.

Army matériel included many items of unusual size or composition that required special handling and loading techniques. Careful attention had to be given to routing, packing, marking, and documentation to insure prompt and safe delivery. Provision had to be made for the economical movement of the Army's growing volume of less-than-carload shipments. The rates and classifications of the carriers were based on peacetime traffic and therefore required many adjustments to fulfill the Army's wartime needs. A system to control the flow of military and civilian freight to the ports and through the important inland gateways in such a way as to avoid congestion and delay had to be developed by the Army in conjunction with the other federal agencies concerned. Measures to meet these problems were initiated during 1940 and 1941 when transportation was a responsibility of The Quartermaster General, but much remained to be accomplished after that responsibility passed to the newly created Chief of Transportation in March 1942.

The Chief of Transportation was responsible for the "direction, supervision, and co-ordination of all transportation by common carrier (except air carrier)." [3] The fulfillment of this responsibility with respect to movements was charged to the Traffic Control Division; the Rail and Highway Divisions gave attention to the

[3] AR 55-5, 5 Oct 42, par. 3*a*. The Chief of Transportation was also responsible for the use of contract carriers.

carriers' needs for additional equipment and personnel; and a general co-ordinating supervision was exercised by the Director of Operations.[4]

This discussion of Army freight movements in the United States relates only to the freight shipments moved by common and contract carriers on War Department bills of lading. Some supplies were moved in motor vehicles assigned to troop units and Army installations, and some by utility railroad equipment operated on military reservations. Such traffic was small, however, compared with that which moved over the commercial transportation systems of the country, and it was under the control of the commanders of the respective units and installations, not of the Chief of Transportation.[5]

Characteristics of Army Freight Traffic

Military shipments differed from commercial traffic in certain important respects, and the differences were responsible for some of the problems that confronted the Chief of Transportation and the carriers during the war. In many cases it was necessary to formulate new procedures and to develop new handling techniques to solve the problems. At all times the differences necessitated close cooperation between the Army and the carriers and between the Chief of Transportation in Washington and the transportation officers in the field.

Shipments of Army freight had many points of origin and many destinations.[6] This was a consequence of the large number of manufacturing plants, depots, transit storage points, training camps, and ports of embarkation that contributed to the war effort. A calculation made in the Traffic Control Division of the carloads of freight shipped on War Department bills of lading during the last five months of 1944 gave the percentage relationship of the number of cars shipped from the various types of establishments as follows:[7]

Establishment	*Percent*
Total	100.0
Commercial industrial plants	48.0
Army depots	26.4
Army-owned industrial plants	10.9
Holding and reconsignment points	2.1
Commercial warehouses	2.0
Army-Navy consolidating stations	1.3
Miscellaneous Army installations	9.3

The fact that so large a percentage originated at commercial industrial plants, where the shipping personnel was not under the direct control of the Army, gives an indication of the problems involved in enforcing the Army's standards of car utilization and its procedures relating to packing, marking, and documentation.

An analysis of Army freight transportation in the United States during the first six months of 1945 disclosed that about two thirds of it was furnished in connection with shipments to domestic destinations, while about one third was furnished in connection with shipments to the ports for

[4] See above, Ch. I, pp. 14–15, for the officers in charge of these divisions.

[5] Although air freight traffic will be referred to from time to time, such traffic was controlled by the Army Air Forces, not by the Chief of Transportation.

[6] Although some of the data used in presenting the characteristics of Army freight are taken from special studies dealing with limited periods rather than with the whole of World War II, they have a sufficiently broad base to give them significance.

[7] Study by Transport Economics Section, Types of Establishments From Which War Department Carload Freight Is Moved, 8 Mar 45, OCT HB Traf Contl Div Freight. The estimates were made from a "representative sample" of War Department bills of lading that accounted for 1,365,000 carloads of freight and were therefore considered reasonably accurate.

export. The study that produced these figures was based on ton-miles of transportation and hence took into account length of haul as well as tons shipped; the data therefore cannot be compared with those given in the preceding paragraph. The study indicated that 67.3 percent of the total ton-miles was accounted for by shipments from industries, 25.5 percent by shipments from storage, and 7.2 percent by shipments from other origins such as Army posts and camps, consolidating stations, salvage centers, and ports.[8] The analysis of shipments by origins and destinations was as follows:

Origin and Destination	*Percent*
Total	100.0
Industries to domestic destinations	51.1
Industries to ports for export	16.2
Storage points to domestic destinations	8.6
Storage points to ports for export	16.9
Other origins to domestic destinations	5.9
Other origins to ports for export	1.3

The origins of Army freight shipments were well distributed geographically. Statistics are available only for carload rail shipments, but such freight constituted about 88 percent of the total. For the period 1942–45 the Fifth and Sixth Service Commands, embracing large Midwest producing areas, each originated 16 percent of the total carloads shipped on War Department bills of lading; the Ninth Service Command, which included the Pacific coast and mountain states, originated 12.2 percent of the total. The proportion of freight originated in the Ninth Service Command increased substantially during this period—that is, from slightly less than 10 percent in 1942 to 14.1 percent in 1944. The following carloads originated in the respective service commands during the four years 1942–45:[9]

Service Commands	*Carloads*	*Percent*
Total	9,645,026	100.0
I	217,058	2.2
II	925,980	9.6
III	1,106,679	11.5
IV	1,146,823	11.9
V	1,558,546	16.2
VI	1,535,528	16.0
VII	958,844	9.9
VIII	1,012,914	10.5
IX	1,182,654	12.2

The destinations of Army freight also were well distributed. Comparison of the above percentages of total carloads shipped by rail in the several service commands with the percentages for destinations, given below, discloses that the First, Second, Third, and Ninth Service Commands, in which the principal Atlantic and Pacific ports of embarkation were located, received substantially more than they shipped. The Fourth and Eighth Service Commands, which embraced large numbers of training camps and therefore were heavy consumers of supplies, also received more than they shipped. The large percentage destined for the Ninth Service Command reflects the fact that all Pacific coast ports, as well as numerous training camps, were in that area. The carloads of freight shipped during the four-year period 1942–45, classified according to the service commands

[8] ASF MPR, Nov 45, Sec. 3, p. 4. The analysis also covered the months July–November 1945, but these months were not typical of the war period.

[9] Summarized from data compiled in Transport Economics Section, Traffic Control Division, OCT, reworked on a state-by-state basis for a statistical volume of this series. The Transport Economics Section, which originated most of the statistics used in this chapter, obtained the data from bills of lading by a sampling process rather than by a complete study of the document; the Traffic Control Division was convinced that the data so obtained were substantially accurate.

for which the shipments were destined, are as follows: [10]

Service Commands	*Carloads*	*Percent*
Total	9,645,026	100.0
I	289,346	3.0
II	1,425,844	14.8
III	1,357,900	14.1
IV	1,318,784	13.7
V	872,549	9.0
VI	608,699	6.3
VII	777,311	8.1
VIII	1,026,784	10.6
IX	1,967,809	20.4

While much Army matériel was similar to and could be handled in the same manner as commercial freight, many items required special attention either because of their characteristics or because of the urgency of the movements. Supplies and equipment of the Ordnance Department constituted 36.4 percent of the total tonnage shipped; its tanks, armored vehicles, trucks, and artillery required great numbers of flatcars, while its live ammunition and bulk explosives called for special handling and security measures. Matériel of the Quartermaster Corps, which accounted for 23.5 percent of the total tonnage, included a large proportion of packaged supplies and therefore did not differ greatly from commercial freight. The equipment and supplies of the Corps of Engineers, comprising 18.7 percent of the total tonnage, included bulky and hard-to-handle items. Shipments of the Air Forces, making up 10.6 percent of the total, included many intricate and delicate assemblies that required careful handling and in some cases specially equipped cars. The radar and other technical equipment of the Signal Corps and the liquids and gases of the Chemical Warfare Service required special treatment. Some of the large items of Transportation Corps matériel, such as locomotives and boats, not only presented problems in car loading but necessitated careful attention to clearances on the railroad right of ways.[11]

The average haul for the Army's railway freight shipments was much greater than the general average. The Army average was 625 miles in the first quarter of 1942. As many new and widely dispersed industrial plants and military installations came into operation and the shipment of freight to the ports for transshipment overseas increased, the average haul rose to 692 miles in the first quarter of 1943, 720 miles in the first quarter of 1944, and 773 miles in the first quarter of 1945. After redeployment began the proportion of shipments from the industrial East and Middle West to Pacific coast ports and depots increased, and the Army average advanced to 855 miles in June 1945.[12] The average length of haul for all railroad freight, which had been 351.1 miles in 1940, increased to 473.3 miles in 1944 and declined to 458.1 miles in 1945, a year partly in the postwar period.[13]

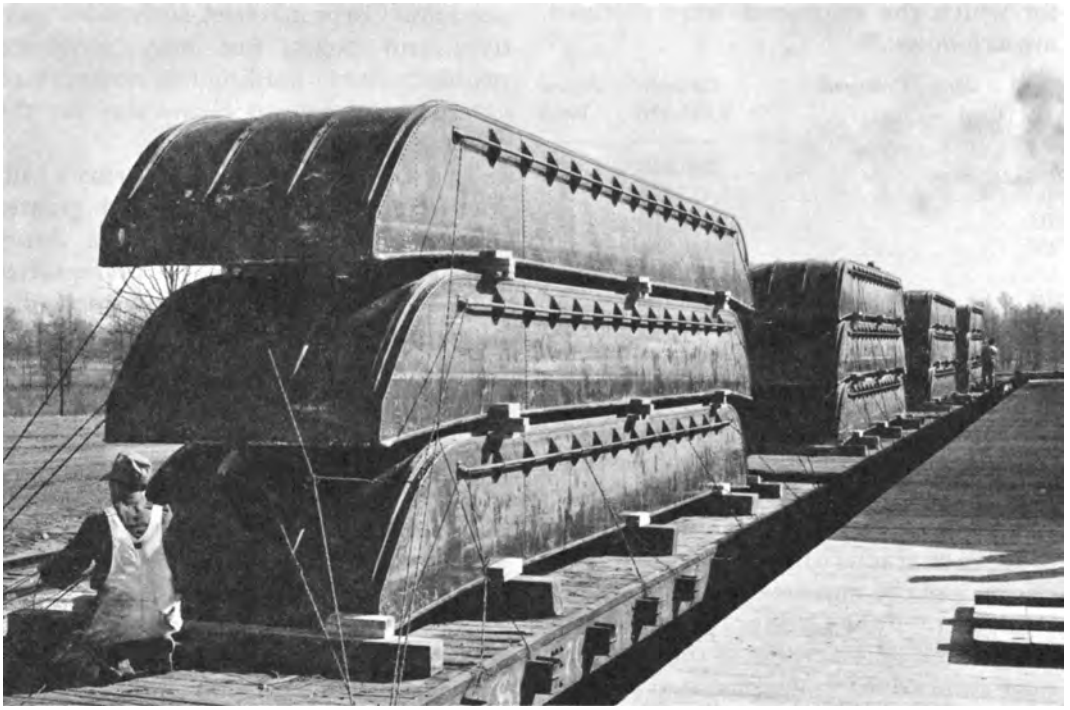
Army freight traffic did not constitute a major portion of the total tonnage moved by the railroads, but it was a substantial part and the percentage grew as the war progressed. The matériel shipped on War Department bills of lading was 5.1 percent of the total rail tonnage in 1942, 7.6 percent in 1943, 9.3 percent in 1944,

[10] *Ibid.*

[11] Percentages are based on Table 16. Analyses of Army freight by commodities were presented from time to time during 1943 and 1944 in ASF MPR, Sec. 3.

[12] Data compiled by Progress Br, Contl Div OCT, 4 Aug 45, OCT HB Traf Contl Div Freight; ASF MPR, Jun 45, Sec. 3, pp. 6, 7.

[13] AAR, *Railroads In This Century* (Washington, July 1947), p. 13.

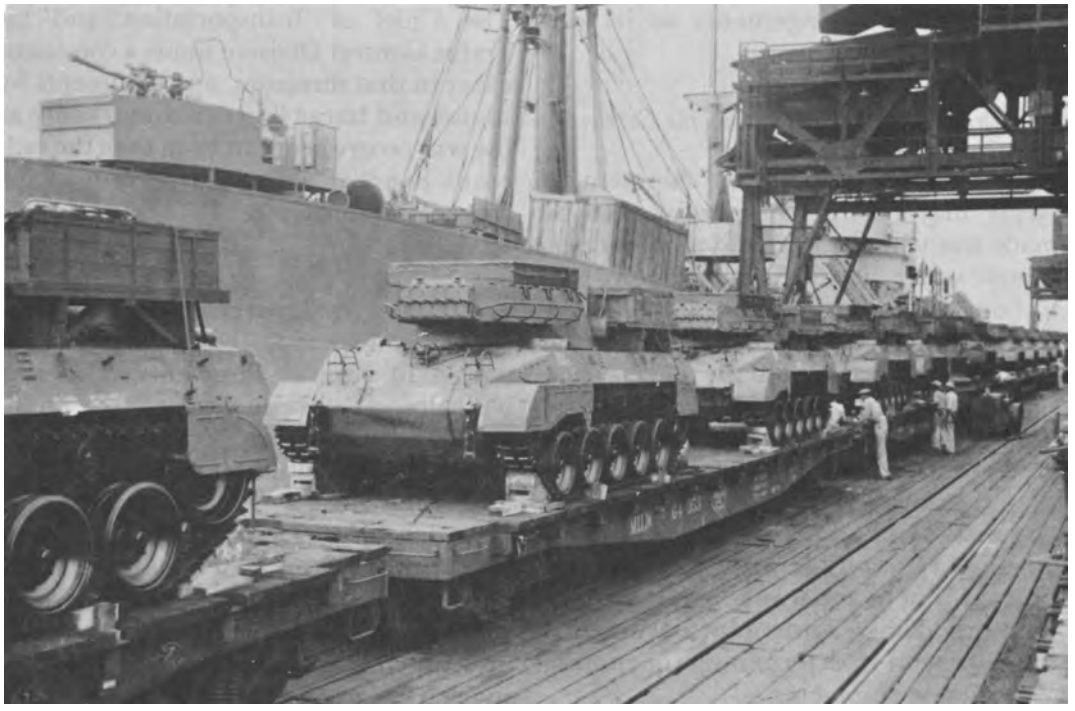


ENGINEER PONTONS LOADED ON FLATCARS *for movement to the seaboard.*

and 12 percent in 1945.[14] Two points must be borne in mind in considering these figures. The first, mentioned before, is that the data do not include shipments of raw materials and manufactured articles by industrial plants before the completion of military items for delivery to the Army. The other point is that as a general matter Army matériel, because of its distinctive characteristics and the necessity of maintaining shipping schedules, required more attention than a corresponding volume of commercial freight.

Prompt delivery was an important factor in a large proportion of Army shipments. In the early part of the war when the production of many items was behind schedule, delayed shipments might deprive troop units of equipment or supplies essential to their training and practice maneuvers. While equipment was being assembled at depots or ports of embarkation to accompany troop units overseas, the lack of one item might delay the entire shipment. The movement of maintenance supplies to the forces already overseas was carefully controlled by the oversea supply divisions of the ports of embarkation, and shipments against theater commanders' requisitions were carefully phased to meet convoy sailing dates and theater requirements. Emergency requisitions were not uncommon, and it was essential that the closely scheduled shipments from industrial plants, depots,

[14] Data compiled in Transport Economics Section and published from time to time in ASF MPR, Sec. 3.



76-MM. GUN MOTOR CARRIAGES *delivered to shipside.*

or holding and reconsignment points should be executed without failure or delay.

In order to assure prompt delivery, Army shipments were routed in such a way as to avoid congesting important terminals and to avoid sending additional shipments through inland gateways or ports that were already overburdened. The progress of urgent shipments was followed from point of origin to destination, and the carriers were called upon for special measures when such were necessary to maintain schedules. When failures occurred investigations were made to determine the causes and prevent repetitions.

In all these matters the closest possible co-operation was necessary between the Chief of Transportation and the carriers, particularly the railroads, which handled the bulk of the traffic. In 1940 the Association of American Railroads established the Military Transportation Section in its Car Service Division to deal exclusively with military freight and passenger traffic. It was located first in the Office of The Quartermaster General, and after March 1942 in the Office of the Chief of Transportation, in order to work hand in hand with the Army's transportation organization in meeting the succession of problems that each day presented.[15] While close relations were also maintained with the motor carriers, the volume and nature of the Army's highway traffic did not require

[15] See above, p. 15. Basic relations between the Army and the railroads are discussed in Wardlow, *op. cit.*, pp. 312–19.

as elaborate arrangements as its rail traffic.

Distribution of Freight Among the Carriers

In planning the inland shipment of Army matériel the first decision to be made was whether it should move by rail, motor, water, or air. Several factors had to be considered. The first was whether one mode of transport would meet the military need better than the others. Then there was the question whether at a particular time or on a particular route one type of carrier was less heavily burdened than the others. The matter of comparative costs always had to be kept in view. The first two considerations were so important that as the war progressed military expediency sometimes outweighed the cost factor in determining the routing of particular shipments.

When the United States began to rearm in 1940 and the volume of military freight began to mount, it was evident that the shipping officers of the Army had a pronounced predilection for rail transportation. The railroads were fast. Their services were regular and dependable. They could handle all types of commodities and no tonnages were too great for them to move promptly. Beyond these considerations, Army shipping officers were thoroughly familiar with the facilities and procedures of the railroads and had good working relationships with railroad officials. As the pressure on the rail lines became increasingly heavy, however, the advisability of making greater use of the highways and the inland waterways became evident to the Army's transportation authorities in Washington. It was then a matter of educating those actually routing shipments to take all carriers into account. The Chief of Transportation and his Traffic Control Division made a consistent effort in that direction, and shipments by motor and barge increased markedly as the war progressed, but even then the railroads handled almost 90 percent of the Army's tonnage in 1944 and 1945. *(Table 17)*

All but a small percentage of the military freight transported by the railroads moved in carload shipments. This was basically a consequence of the great volume of the Army's traffic, but there were other contributing factors. Matériel accompanying troop units naturally moved in carload shipments. Coal, petroleum products, and chemicals normally moved in bulk and hence in carloads. Explosives required special security measures, and it was therefore advantageous to move them in quantity shipments. Many items of military equipment were so large that one item or a few constituted a carload. In the summer of 1942 the Army inaugurated its own consolidated freight service on certain routes, and this service enabled it to bring together into carload shipments many small consignments that otherwise would have moved as less-than-carload lots. Shipments by railway express were avoided if possible because of the higher charges, and the need for speedy deliveries was frequently met by expedited rail freight service or by the use of the highway carriers.

Restrictions on the use of railway express reflected not only the higher cost but also the realization that the facilities of the Railway Express Agency were limited and that if they became overburdened the chief advantage of express service, which was speed of delivery, would be lost. Two types of restriction were employed. First,

TABLE 17—MEANS OF TRANSPORT USED FOR FREIGHT MOVED ON WAR DEPARTMENT BILLS OF LADING IN THE ZONE OF INTERIOR: DECEMBER 1941–DECEMBER 1945

(Thousands of Short Tons)

Means of Transport	Total	1941 (December Only)	1942	1943	1944	1945
All Means	340,021	1,618	50,928	88,272	105,014	94,189
Rail	307,980	1,556	46,941	80,816	94,093	84,574
Carload [a]	301,824	1,497	45,366	78,984	92,570	83,407
Less-Than-Carload	5,035	48	1,376	1,596	1,232	783
Express	1,121	11	199	236	291	384
Motor	27,926	44	3,085	7,044	9,028	8,725
Water	4,110	18	901	411	1,892	889
Air	5	(b)	(b)	(b)	(b)	(b)

[a] Shipments of 10,000 pounds or more were counted as carloads, but because of the severe shortage of cars few cars moved with so small a load.

[b] Shipments by air were: December 1941, 73 tons; 1942, 1,392 tons; 1943, 1,103 tons; 1944, 1,409 tons; 1945, 1,170 tons; total, 5,147 tons.

Source: Summary of Freight Traffic on War Department Bills of Lading, by Transport Economics Section, Traffic Control Division, OCT, reworked for statistical volume of this series.

the kinds of shipments for which express was permissible were specified—currency, valuable supplies that were subject to loss by theft, delicate instruments, perishable commodities, articles that would cost more if moved by other means, and emergency shipments. Second, shipments aggregating 5,000 pounds or more required an express transportation order issued by the Chief of Transportation.[16] During 1944 the latter restriction was relaxed somewhat to permit shipments to be diverted from air to railway express regardless of weight and without obtaining an order from the Chief of Transportation; also, provision was made for the issuance of blanket express transportation orders for certain categories of articles for which express shipment was especially suitable.[17] But while making these concessions in order to relieve shipping officers of burdensome procedures so far as practicable, the Chief of Transportation constantly reminded the technical services that express shipments would have to be held within limits.[18]

The Army Air Forces and the Ordnance Department were the heaviest users of railway express.[19] Express shipments began a sharp rise late in 1944, because of the urgent need of the armies in Europe for certain supplies, especially ammunition. They jumped to a peak of over 80,000 tons a month in February and March 1945, largely because of heavy shipments

[16] AR 55-155, 27 Nov 42, pars. 32 and 33. The size of shipments requiring express transportation orders was changed several times before being fixed at 5,000 pounds; see AR 30-955, 1 Jun 23, Sec. VII; WD Cir 130, 5 Nov 40, Sec. III; WD Cir 16, 20 Jan 42, Sec. I.

[17] Memos, CG AAF for CofT, 28 Apr 43, 22 Jul 44, and 5 Aug 44, OCT 523 Freight Diverted From Air to Ground; WD CTB 28, 2 Sep 44; WD CTB 33, 3 Nov 44.

[18] OCT HB Monograph 24, pp. 27–28.

[19] Table, Summary by Technical Services and Types of Carriers of Freight Moved on WD Bills of Lading, OCT HB Traf Contl Div Freight.

of empty shell cases to loading plants in the effort to recoup stocks that had been depleted as a result of the Battle of the Bulge and to comply with further heavy requisitions from Generals Eisenhower and MacArthur.[20]

Until September 1940 the Army's use of commercial motor transportation was severely limited by a War Department directive that required truck services to be engaged "by means of an agreement" and prohibited the use of the standard government bill of lading for truck shipments. At the time this directive was issued the motor carriers had not been brought under federal regulation and their rates and practices varied greatly. There were also other circumstances that militated against the free use of truck services by the Army. The number of common carrier and contract truck operators was small and their equipment was limited, so that large Army shipments that had to move on particular routes on particular days could not be accommodated. State laws limiting the sizes and weights of vehicles using the highways varied considerably and were the cause of delays at state borders. The highway carriers could operate only within the limits specified in their permits or certificates. The trucking industry was not as thoroughly organized as were the railroads, and motor equipment could not be shifted from place to place as freely as rail equipment. Land-grant deductions, which gave the Army favorable rates on the railroads, were not applicable to the highway carriers unless special equalization agreements were made. Beyond these considerations there was the preference that Army transportation officers had for the railroads as a result of their long collaboration. Nevertheless, the advisability of extending the use of commercial trucks was recognized when military traffic began to swell as a result of rearmament. The Transportation Act of 1940 tightened the federal regulation of the commercial trucking industry, and in September of that year the prohibition against the use of government bills of lading for motor shipments was lifted.[21] In spite of the handicaps, Army transportation officers in Washington immediately took steps to increase the volume of military freight moving over the highways.[22]

After the United States entered the war careful consideration was given to the problem of using commercial highway transportation to best advantage for the movement of Army matériel. The Chief of Transportation's Traffic Control Division had a section that gave exclusive attention to this problem.[23] Certain definite advantages in the use of highway carriers were recognized. Truck services were flexible, and pickup and delivery practices could be adapted to suit the convenience of consignors and consignees. Over short and medium distances the delivery time often was less by truck than by rail. Shipment by truck was especially suitable for certain commodities and sometimes permitted a saving in cooperage and packing costs. Motor transport could be used to relieve the railroads when they became overburdened on par-

[20] ASF MPR, Apr 45, Sec. 3, p. 7; Summary of Freight Traffic on WD Bills of Lading, by Transport Economics Sec, reworked for statistical volume of this series.

[21] WD Cir 108, 30 Sep 40, Sec. I; AR 55-105, 29 Dec 42, par. 9.

[22] A fuller discussion of the Army's use of the highway carriers will be found in Wardlow, *op. cit.*, pp. 353–67.

[23] Functions of Motor Sec, Freight Br, 12 Mar 43, OCT HB Traf Contl Div Freight.

ticular routes or at particular gateways, and could also be used to avoid the assignment of rail equipment to short hauls where the production of ton-miles of transportation was relatively low.[24]

Early in the war the Chief of Transportation considered the advisability of limiting the use of commercial trucks to distances under 300 miles.[25] The establishment of a fixed mileage limit was not approved, however, and the wartime policy was that, although as a general matter the use of the highway carriers would be confined to the shorter routes and long-haul freight would be moved by rail, the choice of a carrier for a particular shipment would be made in the light of all of the circumstances.

Army shipments by highway carriers increased steadily during the war. *(See Table 17.)* The total volume of motor freight shipped between December 1941 and the end of 1945 was almost 28,000,000 tons. This accounted for only 8.2 percent of the total Army freight; nevertheless, the proportionate increase in tonnage moved by highway was greater than that in tonnage moved by rail.[26] Matériel of the Army Air Forces, the Quartermaster Corps, and the Ordnance Department constituted the largest segments of highway freight.[27]

A study of Army highway shipments during the first half of 1944 disclosed that California and Texas were the states originating the largest percentages of the total (18.4 and 10.7 percent, respectively); they also had the largest percentages with respect to destination. Of the tonnage delivered in California, 89.8 percent originated in that state, and the corresponding figure for Texas was 75.5 percent. In the eastern part of the United States more shipments crossed state borders, but the figures nevertheless emphasized that motor freight was predominately short-haul freight.[28] An analysis of the freight shipped by highway during five scattered months of 1943 disclosed that 75 percent of the tonnage was handled by general commodity haulers, 11 percent by bulk petroleum haulers, 13 percent by automobile haulers, and 1 percent by freight forwarders.[29]

Although after September 1940 the movement of military freight by highway carriers could be accomplished on War Department bills of lading, shipments of the household goods of military personnel at government expense still required a bid and contract procedure. As the Army increased, such shipments aggregated a considerable volume and involved problems different from those encountered in the movement of other freight. During 1941 the household van operators made a persistent effort to obtain a change in the Army regulation and the removal of what they considered a discriminatory provision. The War Department, however, continued to require a special contract for each shipment of household goods, since that method enabled it to establish in advance definite transportation and assessorial charges, to make provision against unsatisfactory practices such as transfer en route and tail-gate loading, and to require performance bonds. Standard forms

[24] WD TM 55-205, 25 Aug 44, pp. 75–82, lists the advantages and disadvantages of highway transportation.

[25] Gross Log, 1 Jul 42, OCT HB Gross Log; Min of ZTO Conf, Washington, Sep 43, p. 67, OCT HB Zones Gen.

[26] Index of Tonnages Moved on WD Bills of Lading, ASF MPR, May 45, Sec. 3, p. 7.

[27] Table cited n. 19.

[28] ASF MPR, Jul 44, Sec. 3, p. 68.

[29] ASF MPR, Dec 43, Sec. 3, p. 65. The Army's use of freight forwarders is discussed below, p. 306.

for such contracts were provided to transportation officers in the field, first by The Quartermaster General and later by the Chief of Transportation.[30]

The movement of explosives naturally presented peculiar problems. This traffic was closely regulated by state and federal laws and by rules of the Interstate Commerce Commission, the railroads, and the Ordnance Department. The regulations were strictly enforced by the Association of American Railroads' Bureau of Explosives, which functioned as an inspection and enforcement agency.[31] Before the rearmament program was begun such shipments were made almost entirely by railroad freight service, but the requirements of an expanding Army necessitated modification of the practice. Until June 1941 approval of the War Department was required before shipments of explosives and other dangerous articles could be made by motor carriers, but at that time local transportation officers were authorized to make such shipments on their own authority provided the carriers certified that all federal, state, and local laws and regulations would be observed.[32] After Pearl Harbor the need for emergency shipments of explosives was great, and the use of railway express for less-than-carload lots was authorized under certain conditions. The precautions taken to avoid disasters during the transportation of explosives were especially severe in connection with export shipments, which required transshipment at the ports.[33]

Use of the inland waterways for War Department freight was negligible during peacetime, and although efforts were made to increase this traffic during 1940 and 1941 only limited success was achieved.[34] There were several drawbacks to the extensive use of water services. Delivery was slow as compared with rail. Few Army installations were served directly by water carriers, and this meant that shipments had to be handled part of the way by rail or motor. Through rates on combination rail and water routes were not uniformly available. Water rates were not subject to land-grant deductions as were rail rates on many routes. Army transportation officers could not obtain reliable information regarding water service as readily as they could regarding rail service. On the other hand, water rates sometimes were lower than land-grant rail rates, and it was evident that the time would come when use of the inland waterways would be desirable as a means of relieving the railroads. As soon as the United States entered the war, therefore, Army shipping authorities in Washington took aggressive steps to increase the use of the barge lines and instructed the transportation officers in the field to do likewise.[35]

From monthly totals of a few thousand

[30] OCT HB Monograph 6, pp. 381–88; Memo, Wardlow for Col Douglas C. Cordiner, 11 Mar 41, OCT HB Topic Household Goods; Ltr, SW to Sen Sheridan Downey, 2 Apr 41, OSW Trans 500–800; AR 55-105, 29 Dec 42, par. 9*b*.

[31] The Bureau of Explosives reported that during the period 1940–45 the railroads handled about 50,000,000 tons of military high explosives, and that with commercial shipments the total was over 65,000,000 tons. AAR press release, 15 Apr 46.

[32] OCT HB Monograph 6, pp. 146–47, 166–67; WD Cir 107, 3 Jun 41, Sec. I; AR 55-155, 27 Nov 42, Sec. IV; WD TM 55-205, 25 Aug 44, pp. 143–50.

[33] This subject will be discussed further in Chapter V, below.

[34] See Wardlow, *op. cit.*, pp. 367–69, for a more detailed discussion of this general subject.

[35] SOS Memo S 55-3-42, 23 Oct 42, sub: Utilization of Domestic Carriers.

tons in 1941, Army shipments on domestic water routes increased to more than 200,000 tons in some war months. The annual total increased from 901,000 tons in 1942 to 1,891,000 tons in 1944. The total domestic water traffic from December 1941 through December 1945 was 4,110,000 tons.[36] This traffic constituted only 1.2 percent of the total Army traffic. Waterborne tonnage could have been further increased if more barges and tugs had been available.[37] Some such equipment was built by the Office of Defense Transportation during the war, but the amount of new construction was limited by the demand for steel for the military program.

In large measure the increase in the Army's domestic waterborne tonnage was the result of the persistent efforts of the Inland Waterways Section of the Traffic Control Division. This section not only undertook to insure that shipments were routed by water when suitable services were available, but also tried to see that barges and tugs, whether publicly or privately owned, were so used as to handle the maximum traffic.

During the years 1943 and 1944 petroleum products in bulk constituted about 82 percent of the total Army freight routed on the inland waterways, and the remaining 18 percent was made up of general supplies and motor vehicles.[38] In 1945 the Army shipped considerable grain for European civilian aid down the Mississippi in barges for transshipment at New Orleans.

The Army made only slight use of commercial air service for its domestic shipments of matériel. During the entire war period air shipments totaled only slightly over 5,000 tons. *(See Table 17.)* There were two reasons for this. Since the airlines had not introduced cargo services in peacetime and early in the war had been required to surrender about half of their passenger planes to the government, air express capacity was exceedingly limited.[39] Also, the air express rate was so high that the Army required that use of this form of transportation be "confined to the most extreme emergencies."[40] Express transportation orders issued by the Chief of Transportation could not be construed as authorizing the use of air express unless air express was specifically stated. All commercial air shipments were subject to priorities issued by the Air Transport Command.[41] The effect of these restrictions in limiting the size of shipments is seen in the fact that the 903 tons of Army supplies moved by air express dur-

[36] Table, Army Traffic by Domestic Water Carriers and Air, 18 May 50, OCT HB Traf Contl Div Freight. Wartime domestic water traffic moved on the Great Lakes, rivers, canals, and intracoastal barge routes; intercoastal and coastwise steamship services were virtually discontinued because the larger ships were needed elsewhere.

[37] Min of Port Comdrs Conf, Boston, 30 Aug–1 Sep 43, p. 121, OCT HB PE Gen.

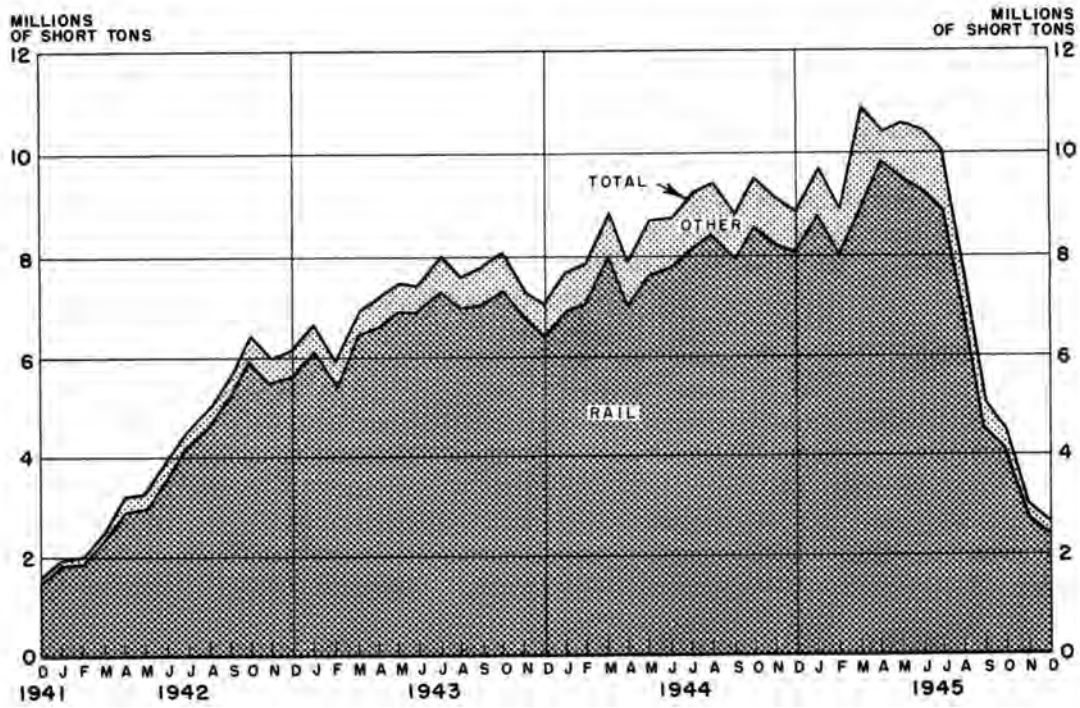
[38] ASF MPR, Jul 45, Sec. 3, p. 14. The figures for "routings" in the MPR studies are considerably larger than the figures for actual shipments given above, since shipments routed by water did not always move by that route. Wardlow, *op. cit.*, p. 369, gives an estimate of 12 percent for nonpetroleum commodities shipped by water during the entire war period. This estimate took into account the fact that petroleum shipments by barges did not begin until well into 1943. See ASF MPR, Feb 44, Sec. 3, p. 85.

[39] The development of air cargo services during the war was modest and chiefly under military control. For a brief history, see Department of Commerce, *Industry Report—Domestic Transportation,* October–November 1946, pp. 7–13.

[40] AR 55-155, 27 Nov 42, par. 34.

[41] WD Cir 385, 27 Nov 42, Sec. II, and WD Cir 369, 12 Sep 44, Sec. II.

CHART 8—FREIGHT MOVED MONTHLY BY RAIL AND OTHER DOMESTIC CARRIERS ON WAR DEPARTMENT BILLS OF LADING: DECEMBER 1941–DECEMBER 1945*



* "Rail" includes carload, less-than-carload, and express; "Other" includes highway, domestic waterway, and air.

Source: Summary of Freight Traffic on War Department Bills of Lading, by Transport Economics Section, Traffic Control Branch, OCT, reworked for statistical volume of this series.

ing the first eight months of 1944 consisted of 24,020 separate shipments.[42]

The domestic cargo service that the Air Transport Command inaugurated with military aircraft during the war lifted limited quantities of emergency supplies destined for the ports for transshipment overseas by water. In addition to requiring priorities issued by the Air Transport Command, air shipments of ASF and AGF matériel exceeding 250 pounds required the approval of the Chief of Transportation.[43]

Although other types of transport handled a substantial part of the Army's domestic freight traffic, the railroads carried an overwhelming percentage of it. This is strikingly depicted in Chart 8, which also shows the gradual growth of the traffic to a peak in March 1945, and the sharp decline after Japan surrendered. The importance of the other types was less in the volume they transported, although that afforded appreciable relief to the hard pressed railroads, than in the fact that each served especially well for a particular kind of traffic—the highway carriers for short-haul movements, the barge services for the transportation of nonurgent bulk commodities, and the airlines

[42] ASF MPR, Sep 44, Sec. 3, p. 69.

[43] WD CTB 9, 2 Feb 44, sub: Priorities for Shipments via ATC Domestic Cargo Service; ASF MPR, Sep 44, Sec. 3, p. 69.

for the speedy delivery of small emergency shipments.

Routing and Related Practices

Central control over the routing of Army freight shipments was a controversial issue during the greater part of the war. The technical services and the transportation officers in the field frequently were critical of the policy and of the manner in which it was administered. But despite the criticism, the routing regulation was not only retained but broadened, because the transportation authorities in Washington believed that close central control was necessary to insure the satisfactory movement of War Department property and the economical utilization of transportation equipment. It was found possible, however, to exempt certain types of shipments from the requirement without seriously disturbing its effectiveness.

The peacetime regulation provided that, except for property accompanying troops, shipments of two or more carloads from a single point of origin to a single point of destination should be covered by a "route order" obtained from The Quartermaster General, and that the order number should appear on the bill of lading.[44] During 1941 there was a marked increase in the volume of War Department matériel moved to the ports for transshipment overseas, including supplies shipped to Allied countries under lend-lease as well as those shipped to our own forces, and in order to provide a means for preventing congestion at the ports the regulation was changed to require that a "release and routing" should be obtained for all port-bound shipments of one carload (or the equivalent) or more, whether moving by rail, truck, or barge.[45] This procedure gave the central transportation authorities a measure of control over the time of movement as well as over the route.[46]

During this period The Quartermaster General, who was then in charge of Army transportation, conceded some of his rights under the routing regulation in an effort to reduce the work that the regulation imposed on transportation officers in the field and on his own office. Where recurrent domestic shipments were common, as between manufacturing plants and depots and between depots and other Army installations, ninety-day "term routings" were issued to cover the movement of specific commodities. Term routings were found especially useful in connection with the movement of Ordnance Department matériel. A somewhat similar arrangement was made in connection with shipments of Quartermaster supplies by certain contractors, the routing of all shipments under the contract being included in the contract terms. But these arrangements to reduce the number of route orders requested and issued affected only a minor part of the total tonnage moved, and as soon as the United States entered the war it became necessary to cancel all term routings because of the tightening transportation situation.[47]

As the war progressed the domestic transportation situation became more and more critical, and at the same time the need for close control of Army shipments increased. Also, it was found that transportation officers in the field, by breaking up shipments into single carloads, were evading the regulation requiring them to obtain

[44] AR 30-905, 1 Aug 29, par. 15.

[45] WD Cir 182, 28 Aug 41, Sec. IV, par. 15½; AR 55-105, 29 Dec 42, pars. 15 and 16.

[46] See below, pp. 267–73.

[47] OCT HB Monograph 6, pp. 127–29; Memos, TAG for CofCA and Cs of Supply Services, 29 Dec 41 and 2 Jan 42, sub: Cancellation of Blanket Routings, AG 500 (12-26-41)(1).

routing orders for all domestic shipments of two or more carloads. Accordingly, in April 1943 the Chief of Transportation obtained a change in the regulation, which required routing orders to be obtained from his office for domestic shipments of one carload or more, unless the shipments consisted of troop impedimenta or perishable subsistence.[48]

At this time—April 1943—the authority of the Chief of Transportation over the routing of Army shipments was exceedingly broad. He routed export and domestic shipments of or equivalent to one carload, with the exceptions previously noted. He controlled shipments by express if they exceeded 5,000 pounds. He controlled the routing of shipments by military aircraft, except Air Forces matériel, if they exceeded 250 pounds. Furthermore, as the officer responsible for the Army's freight consolidating service, he controlled the movement of a large percentage of less-than-carload shipments.

Control of the routing of carload freight obviously was the core of this responsibility. There were two types of orders. Route orders for domestic shipments were issued by the Freight Branch of the Traffic Control Division, and the branch's main object was to select routes that would produce the best results for the Army and use transportation equipment most economically. Release and routing orders for export freight were issued by the Control Branch, which obtained the routings from the Freight Branch and, after consulting the Water Division regarding the availability of water transportation, indicated the dates on which the shipments should move.[49] During the forty-five months of actual hostilities approximately 1,345,000 such orders were issued for domestic and export shipments, involving about 6,412,000 carloads.[50]

The most common complaint against central freight routing during the early part of the emergency concerned the time lost in getting shipments started because of the necessity of first communicating with Washington. When routings were requested by mail, as was usually the case at that period, the complaint had substance, although the Army transportation authorities in Washington believed that the advantages of central routing more than offset the disadvantage of delay.[51] In August 1941 the use of radio or telegraph in obtaining routings was authorized when conditions warranted.[52] The establishment of a teletype network connecting Washington and the larger field installations also was helpful. After the United States entered the war the proportion of mail requests declined rapidly, and when the use of long-distance telephone for obtaining routings was specifically authorized mail requests virtually ceased.[53] Use of the telephone, together with methods that the Traffic Control Division developed for supplying routings promptly, frequently enabled transportation officers in the field to make requests and receive routings in a single call. But under war

[48] Memo, CofT for TAG, 2 Apr 43, AG 510; AR 55-105, Changes 3, 28 Apr 43, par. 15.

[49] For release purposes any shipment of 20,000 pounds by rail or 10,000 pounds by highway was considered a "carload or equivalent."

[50] OCT HB Monograph 24, App. IV. In addition, more than 29,000 express transportation orders were issued for express shipments of 5,000 pounds or more.

[51] OCT HB Monograph 6, pp. 117–22.

[52] WD Cir 182, 28 Aug 41, par. 15.

[53] OCT HB Monograph 24, pp. 9–10; Rpt, Traf Contl Div, FY 1945, p. 25, OCT HB Traf Contl Div Rpts.

conditions time frequently was required to make telephone connections, and there were occasions when complicated routings could not be provided immediately.

There was criticism also of some of the routings provided by the Chief of Transportation. These criticisms emanated from transportation officers in the field and from the headquarters of some technical services. While occasionally admitting that something had gone wrong, the Chief of Transportation usually defended his selection of routes. It is understandable that there should have been differences of opinion on this subject since there were two entirely different points of view—that of offices responsible only for specific shipments, and that of the office responsible for Army traffic in general and for the economical use of transportation equipment.

The principal difficulties experienced by the Chief of Transportation originated with two services that preferred to route their own traffic and maintained organizations for that purpose. These were the Army Air Forces and the Ordnance Department. In the fall of 1942 the Air Forces, which during the war attained a large degree of autonomy within the Army, obtained a delegation of authority from the Chief of Transportation enabling it with certain limitations to route its own domestic traffic. The Chief of Transportation granted this authority reluctantly and later endeavored to recall it, but without success.[54] In the summer of 1942 the Ordnance Department asked for and obtained special blanket route orders covering all shipments between certain of its installations. The Chief of Transportation soon concluded that the use of blanket orders threatened the effectiveness of traffic control on the routes concerned and canceled them after a few months' trial.[55]

Perceiving that his difficulties with the Ordnance Department were largely due to the facts that it had a staff of traffic experts at its headquarters and that the transportation officers at important Ordnance field installations were Ordnance officers, rather than Transportation Corps officers, the Chief of Transportation took steps to change these conditions. Maintaining a traffic organization in the Ordnance Department was contrary to Army regulations, and in October 1942 the Commanding General, Services of Supply, directed that the regulations be observed.[56] The organization was accordingly dissolved and much of its personnel was transferred to the Chief of Transportation's Traffic Control Division.[57] The Army regulations also provided that so far as possible the transportation officers at field installations should be officers of the Transportation Corps, and this requirement was fulfilled as rapidly as the Chief of Transportation was

[54] See Wardlow, *op. cit.*, pp. 59–62, on reasons for the delegation and the Chief of Transportation's dissatisfaction with it.

[55] Memo, CofT for CofOrd, 25 Jun 42, sub: Ord Field Sv Route Orders; Memo, CofT for CofOrd, 1 Jul 42, sub: Releases for Ord Freight Shipts; 4th Ind, CofT for CofOrd, 28 Jul 42; Memo, CofT for CofOrd, 12 Aug 42, sub: Revision of Rail Routes; Memos, CofT for William H. Atack, Ind Sv Ord Dept, 17 and 30 Sep 42, sub: Request for Routing; Memo, CofT for CofOrd, 26 Sep 42, sub: Shipt of Boxed Vehicles; all in OCT 523.091 Ord.

[56] AR 30-905, 1 Aug 29, and its successor, AR 55-105, 29 Dec 42, par. 2*f*; WD GO 38, 31 Jul 42; Memo, CG SOS for Cs of Supply Svs, 17 Oct 42, sub: Clarification of Responsibility for Trans Functions, OCT 023 Ordnance.

[57] Memos, Lasher for CofT, 26 Dec 42, 15 Jan 43, 10 Feb 43; Memo, CofT for CofOrd, 20 Feb 43, sub: Clarification of Responsibility; all in OCT 023 Ordnance.

able to supply the officers. These adjustments made a perceptible change in relations with Ordnance in the matter of routing freight; the relationship no longer suffered from the handicap of too many experts.

The Traffic Control Division, with the full support of the Chief of Transportation, fought stubbornly to maintain the integrity of its control over the routing of freight against criticism of both the principle and the practice of such control. The division presented a number of arguments in support of its position. Two of the arguments—avoidance of congestion, and conservation of transportation equipment—were closely related. Brig. Gen. William J. Williamson, chief of the Traffic Control Division, never lost an opportunity to stress these points.[58] They both stemmed from the fact that transportation equipment was barely able to meet wartime requirements and had to be used with utmost efficiency.

The Traffic Control Division had daily contacts with Army installations and close working relations with the headquarters of the Office of Defense Transportation and the Association of American Railroads. Through these channels the division was in a position to know whenever excessive numbers of loaded cars had accumulated at particular points, and to hold back the flow of additional traffic to congested terminals, or to divert some shipments that normally would pass through congested gateways. In this way it was able to forestall immobilization of large numbers of cars by congestion and to insure that they were loaded and unloaded promptly. No other branch of the War Department in Washington concerned with transportation and no field transportation officer possessed such information on a nationwide basis. Even if they had possessed it, they probably would not have used it to best advantage, because their primary interest would have been in the movement of particular shipments rather than in the effectiveness of the transportation industry as a whole.

Other aspects of car conservation had a direct bearing on the question of centralized routing. Through his contact with the Car Service Division of the Association of American Railroads the Chief of Transportation was able at all times to know in what areas there were shortages or surpluses of cars suitable for the transportation of particular commodities. Since the Car Service Division had authority to transfer freight equipment from place to place regardless of ownership, its assistance could be obtained in building up the car supply in areas from which important Army shipments were expected to move. The Chief of Transportation joined in the Army-wide effort to reduce the crosshauling and backhauling that inevitably entered into the procurement and distribution of supplies, and his work in providing routings helped him to ascertain where such uneconomical practices existed and to confront the technical services involved with concrete evidence.

His control over freight routings enabled the Chief of Transportation to insure that the routes most advantageous to the War Department were used and that an equitable distribution of traffic among the transportation lines was maintained. Although the latter consideration was

[58] Arguments for centralized control presented in this and succeeding paragraphs are based on Memo, Col Williamson for Contl Div OCT, 30 Jun 43, which is reproduced as App. V of OCT HB Monograph 24, and his remarks in Min of ZTO Conf, Washington, 24–26 Sep 43, pp. 58–65.

always kept in view, the former was of primary importance. The most advantageous route from the standpoint of the Army was the one that would insure prompt delivery at the lowest rate. As has already been stated, the exigencies of the war often dictated that the cost factor be subordinated to military expediency and such procedure was authorized in the regulations. This might involve giving a shipment a rail routing different from that which it normally would take, or transferring it to a highway carrier. Broad military considerations also required that certain shipments be given priority over others. All of these were matters to which the Chief of Transportation, and he alone, because of his broad knowledge of traffic conditions and his close contacts with the other agencies affected by these conditions, was able to give proper attention.

The contentions that zone or service command transportation officers should route shipments moving within their respective areas, and that local transportation officers should be permitted to route short-haul shipments made from their installations, were countered with the argument that the objectives sought by the War Department in handling its freight traffic could only be achieved if dealt with on a nationwide basis. Local or area transportation officers inevitably would compete with one another in their efforts to move their own shipments promptly, and World War I had produced glaring examples of the unfortunate results of such competition. Moreover, short-haul routes usually were segments of long-haul routes, and unhealthy conditions on the former were almost sure to adversely affect traffic on the latter.

Since solicitation of Army freight by individual carriers worked contrary to the Chief of Transportation's policies on routing, it was severely frowned upon. Nevertheless, as pointed out by Lt. Col. Richard M. Boyd, chief of the Freight Traffic Branch, solicitation was a constant problem at Army installations, because local representatives of the carriers tried to increase their individual bookings even though their lines might already be operating at capacity.[59]

The improvement in the Chief of Transportation's position with respect to routing, which was due partly to the force of his arguments and partly to the strengthening of his field organization after the Transportation Corps was created in July 1942, did not mean that criticism of central routing had ended. The change made in the regulation in April 1943, giving the Chief of Transportation authority to route domestic carload shipments rather than shipments of two carloads or more, brought renewed protests from various sources. Some of the zone transportation officers were critical of the arrangement, and some divisions of the OCT questioned the advisability of making the requirement so broad. Doubt was expressed regarding the wisdom of having a staff in Washington route such small shipments when they were made wholly within a zone or service command. It was argued that, if local transportation officers were permitted to route intrazone truck shipments, they would be able to take into account the possibility of obtaining return loads and hence could increase the work accomplished by the vehicles.[60]

[59] Remarks by Col Boyd, in Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, afternoon session, 7 Jul 44, p. 24.

[60] Remarks by Lt Col Raymond C. Stone, ZTO, Eighth Zone, in Min of ZTO Conf, Washington, Sep 1943, pp. 54–57; OCT HB Monograph 24, pp. 7, 8.

By September 1943 Williamson, who was the most vigorous proponent of centralized routing, felt that the traffic situation was sufficiently stabilized and under control to warrant some relaxation of the requirements affecting domestic shipments; he was ready to sanction decentralization to the extent that it could be done without sacrificing the advantages of the system then in effect.[61] A change in the regulation issued in that month permitted local transportation officers to route, in addition to perishables and troop impedimenta, all domestic shipments of five carloads or less when they were not destined for a depot or holding and reconsignment point, and when they were not being shipped over distances exceeding 200 miles, or when rail was the best means of transport and only one rail route was available.[62] Local routing to depots and holding and reconsignment points was not permitted, because these installations received shipments from many sources and hence were specially susceptible to the bunching of traffic and car congestion. Shipments traveling less than 200 miles were considered not likely to block gateways that were important to through traffic. All such local routings had to be reported to the Chief of Transportation in weekly statements. As was the case previously, any single carload could be routed locally when emergency conditions did not allow time to obtain a routing from Washington, but since the privilege had been overworked the new regulation required that confirmation of such routings be obtained immediately from the Chief of Transportation.

The new regulation expressly authorized blanket routings as a means of relieving the field of the necessity of obtaining a route order for each shipment in cases where shipments between two points were made repeatedly. The issuance of blanket orders was entirely at the discretion of the Chief of Transportation, as were also the conditions imposed in each case. Such orders were subject to cancellation or revision at any time. Local transportation officers were required to make monthly reports to the Chief of Transportation showing the shipments effected under blanket orders during the period. These reports were studied by the Traffic Control Division in order to ascertain whether blanket routings, together with shipment routings, were endangering the fluidity of traffic at any installations or gateways. Blanket route orders, in other words, reduced the amount of communication between local transportation officers and Washington but left the control of routing entirely in the hands of the Chief of Transportation. In operation this plan worked out very satisfactorily. Among the various technical services, the Ordnance Department made the most extensive use of blanket routings.[63]

The technical services were concerned not only with the routes over which their matériel was shipped but also with the speed with which it was delivered. During the prewar emergency period expedited service was desirable because production was behind schedule and troops in training frequently were handicapped by shortages of important items of supply. The same condition existed for some time

[61] Memo, Williamson for Contl Div OCT, 7 Sep 43, sub: Decentralization of Routing Authority, OCT 500 (AR 55-105).

[62] AR 55-105, Changes 7, 27 Sep 43.

[63] Remarks by Williamson in Min of ZTO Conf, Washington, Sep 43, p. 68; Interv with Col Lasher, 15 Oct 51, OCT HB Traf Contl Div Freight.

after the United States entered the war, and to it was added the heavy and often unpredictable requirements of the active theaters.

Late in 1940 the railroads complained that they were being burdened by requests from many sources for extraordinary service, most of which could not be honored. Sometimes contradictory requests were received pertaining to the same shipment. Despite the efforts of The Quartermaster General to have all such matters channeled through his office, full compliance by the supply services and the field transportation officers was not obtained until after Pearl Harbor. Soon after the United States entered the war the Secretary of War ordered that all requests for special service be directed to The Quartermaster General's Commercial Traffic Branch and not to individual railroads or to the Association of American Railroads. An added reason for this order was that G-4 during this period required the Commercial Traffic Branch to furnish it with daily location reports covering shipments being rushed to the Western Defense Command, the Pacific bases, and certain Caribbean areas.[64]

With the creation of a Chief of Transportation in March 1942, control of requests for expedited service passed to his office and was exercised by the Control Branch of the Traffic Control Division. These requests might involve arrangements for special freight trains, the transfer of shipments from freight to express, or other special services that might disrupt regular freight schedules.[65] They were made on behalf of domestic shipments but more often pertained to export freight. The demand for expediting became increasingly heavy as the war progressed, and the critical military situation in Europe during the winter of 1944–45 brought such cases to an all-time high. During the fiscal year ending 30 June 1945 the Expediting Section of the Control Branch processed over 28,000 requests for special service, involving about 200,000 carloads of freight.

During the same year 420 special trains were authorized, although more than 50 percent of the requests were refused. Special trains were not always the result of requests from the field. The Control Branch worked closely with the ports, and when it was apparent that a special train would be necessary to enable a large shipment to reach the port in time for loading in a designated vessel or convoy, the branch arranged for this service at the time the release and routing order was issued.[66]

Under an order issued by the Interstate Commerce Commission in August 1943, all special trains, except those transporting impedimenta moving with troops, had to be approved by one of three ICC regional agents. As first issued this order would have imposed additional routine on the already heavily burdened Control Branch and would probably have caused some delays. At the request of the Army a further order was issued designating the manager of the Military Transportation Section, Association of American Railroads, an additional ICC agent to issue permits for special trains. Since the MTS staff was located in the Traffic Control Division and the two offices worked virtually as one organization, the arrange-

[64] OCT HB Monograph 6, pp. 315–19; Memo, TAG for CGs All Armies, *et al.*, 22 Dec 41, sub: Contact with AAR, AG 531 (12-16-41).

[65] See WD TM 55-205, 25 Aug 44, sub: Transportation in ZI, p. 71.

[66] Rpts, Traf Contl Div, 22 Jan 45, p. 12, and 27 Sep 45, Tab 3, p. 3; Rpt, Traf Contl Div, FY 1945, p. 27.

ment proved satisfactory to the army.[67]

The consignors and consignees of urgently needed freight frequently were tempted to approach the carriers directly to trace shipments and sometimes to divert them to new destinations. This practice, which gave increasing annoyance to the carriers before Pearl Harbor, was forbidden soon thereafter with respect to all shipments destined for the ports or for transit storage for eventual shipment overseas. Field transportation officers were directed to make such requests to The Quartermaster General, and later to the Chief of Transportation, or to the Army regulating stations on the transcontinental rail lines in the case of shipments passing those points.[68] Requests for the tracing or diverting of strictly domestic shipments might be made directly to the carriers.

Central control of the diversion of port-bound movements was especially important since uncontrolled changes in destinations might disrupt a carefully developed traffic pattern. During the fiscal year 1945 the Control Branch of the Traffic Control Division issued approximately 5,000 diversion orders.[69] Since shipments destined for oversea areas frequently made close connections with ships at the ports of embarkation, the Control Branch delegated to the port commanders authority to trace shipments destined for their installations by direct approach to the delivering carriers.[70]

In March 1943 the Ordnance Department requested that the Chief of Transportation establish an expediting unit in its Detroit Tank and Automotive Center for the specific purpose of tracing, expediting, and reconsigning export shipments from that installation. Ordnance pointed out that in many instances the center had been unable to obtain prompt tracing information through the Traffic Control Division, and in several instances efforts to expedite shipments had been improperly handled with the result that shipments missed deadline dates at the ports. While agreeing that there had been some delays in obtaining adequate tracing reports from the railroads and that some diversion orders had been bungled, the Chief of Transportation asserted that the establishment of the proposed unit in Detroit would increase rather than lessen the difficulty. One purpose of a central traffic control office, he pointed out, was to co-ordinate all expediting and tracing of oversea movements. To establish a separate office at Detroit would partially defeat that purpose. The Chief of Transportation therefore refused to go along with the proposal, but he gave assurance that his office would spare no effort to improve performance in the delivery of tanks to the seaboard.[71]

Early in 1943, because of the growing danger of congestion, the Interstate Commerce Commission at the request of the Office of Defense Transportation placed an agent in Chicago with authority to divert or reroute traffic whenever conditions might warrant. Initially no military freight was exempt from this control, but soon immunity was granted to impedi-

[67] ICC Special Service Orders 150, 25 Aug 43, and 151, 1 Sep 43; Min of Port Comdrs Conf, Boston, 30 Aug 43, pp. 120–21, OCT HB PE Gen Port Comdrs Conf; Rpt, Traf Contl Div, 22 Jan 45, p. 12, OCT HB Traf Contl Div Rpts.

[68] WD Cir 273, 31 Dec 41; WD Cir 340, 9 Oct 42; AR 55-155, 27 Nov 42, Sec. VIII, and Changes 8, 25 Aug 44.

[69] Rpt, Traf Contl Div, FY 1945, p. 27, OCT HB Traf Contl Div Rpts.

[70] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, afternoon session, 7 Jul 44, p. 45, OCT HB PE Gen Conf.

[71] Memo, DCofOrd for CofT, 30 Mar 43, sub: Tracing, Reconsigning, and Expediting; 1st Ind, CofT for CO Tank and Automotive Center, 10 Apr 43; both in OCT 023 Ordnance.

menta moving with troops. The Army, however, objected to the diversion of any military shipments, partly because such diversions disturbed schedules that had been carefully worked out between the Army and the Association of American Railroads, and partly because they involved delays to supplies urgently needed at the training camps and in oversea theaters. After a long period of negotiation the Chief of Transportation was able to have all symbol (expedited) Army shipments exempted from the diversion orders of the Chicago agent.[72]

Because of the large amount of oversize equipment included in Army matériel, constant attention had to be given to clearances in making routings and effecting diversions. During the war period the Traffic Control Division provided routings for approximately 600,000 cars that presented clearance problems. Since some carload freight was routed in the field and local transportation officers did not always give sufficient attention to clearances, it was often necessary to make diversions en route, and the Traffic Control Division reported that during the fiscal year 1944 it had rerouted 3,600 cars for this reason.[73]

The large dimensions of Army equipment frequently necessitated the use of routes not specified in the carriers' tariffs. Early in the war the Chief of Transportation requested the Association of American Railroads to arrange that rates applicable to normal routings should be allowed in such cases, since it was impossible to change the dimensions of military paraphernalia. The AAR rejected the idea of a general agreement on this point because in many cases clearance routings were costly and troublesome for the railroads, but it indicated that the carriers would consider the proposal with respect to particular shipments that did not impose heavy additional obligations on them.[74] The Traffic Control Division was able to influence the design of some marine equipment procured by the Transportation Corps so as to avoid the clearance problem, but it could not influence the design of equipment procured by the other technical services.[75]

Many considerations entered into the routing of freight, and the Chief of Transportation endeavored to keep field transportation officers who routed small shipments informed on the subject. His Traffic Control Division prepared material, which was published from time to time in War Department Commercial Traffic Bulletins, interpreting and amplifying the directives pertaining to traffic, including the routing regulations. Commercial Traffic Bulletin 2 was unique in this series. It was a loose-leaf document with a leaf for every Army post, camp, and station in the United States. In addition to information regarding the general location and the communication connections of each installation, Bulletin 2 described the transportation lines by which it could be reached and the local transportation facilities and procedures.[76]

[72] ICC Service Order 99, 3 Feb 43; ODT, *Civilian War Transport*, pp. 21–25; Wardlow, *op. cit.*, pp. 372–73. Shipments of military impedimenta were given the symbol "MI" and other expedited military shipments were given the symbol "MTX."

[73] Rpts, Traf Contl Div, FY 1944, p. 8, FY 1945, p. 10, and 27 Sep 45, Tab 2, p. 2.

[74] Ltr, Traf Contl Div to Augustus F. Cleveland, Vice Pres AAR, 16 Jul 42, and reply, 21 Jul 42, OCT 551.2.

[75] OCT HB Monograph 24, pp. 54–55.

[76] AR 30-905, 1 Aug 29, par. 4*c*; OCT HB Monograph 6, pp. 122–24; OCT HB Monograph 24, pp. 53–54. See OCT HB Traf Contl Div Misc for pages from Bulletin 2.

The importance the Chief of Transportation attached to strong central control over the routing and diversion of Army freight was the result of his conviction that this was the only way to insure expeditious movement and efficient use of transportation equipment. That view was justified by experience during the early part of World War I and in 1940–41, when such control was not exercised. Moreover, central control of the routing of Army shipments was an essential part of the nationwide system for controlling the flow of traffic to prevent congestion.

Control of Traffic Flow

Control of the flow of freight traffic in order to avoid congesting the transportation lines and terminals was a military necessity. Such control involved not only routing shipments so as to spread the traffic but also regulating the time of movement. The purpose was twofold: to assure fluid traffic conditions and prompt delivery of shipments, and to avoid the waste of transportation equipment that inevitably results from congestion. The latter object was especially important because of the impossibility in wartime of obtaining an amount of new transportation equipment commensurate with the increase in the volume of traffic. Control of both domestic and export shipments was necessary, but export shipments created the greater problem because they converged on relatively few ports and their arrival at the seaboard had to be co-ordinated with the departure of ships.

Several aspects of the control of domestic freight movements have already been discussed. Mention was made of the placing of an agent of the Interstate Commerce Commission in Chicago to observe conditions on the western railroads and to divert freight traffic when necessary to avoid threatened congestion. The Office of Defense Transportation, on the basis of reports received from the field, made a close study of operating conditions on the major rail lines throughout the country with a view to taking corrective action when and where it might be desirable.[77] The Association of American Railroads kept itself informed regarding conditions in all areas, and through its control of the distribution and utilization of freight cars was able to guide traffic away from overburdened routes or gateways. The Chief of Transportation's control over the routing of Army freight afforded a means of directing military traffic to the carriers best able to handle it. As a background for this work the Traffic Control Division made a daily study of conditions on all important railroads, at all important gateways, and at the larger Army installations.[78]

Embargoes against shipments to points or areas where traffic congestion existed or was threatened could be imposed by the Interstate Commerce Commission or by the Car Service Division of the Association of American Railroads. Individual railroads could embargo shipments to points on their respective systems.[79] The Chief of Transportation had authority to embargo shipments to Army installations.[80] The embargo power was used when other means of preventing congestion had failed, or when labor disputes or weather conditions prevented the normal handling of traffic. The congestion that arose in the

[77] See ODT, *Civilian War Transport*, pp. 17–19.

[78] See summary, Congested Railroad Gateways, in ASF MPR, Mar 44, p. 67.

[79] See AAR, *Annual Report of the Car Service Division*, 1945, pp. 16, 17.

[80] AR 55-170, 1 Sep 42.

northeastern states during the winter of 1944–45 because of unusually severe snow and ice conditions was dealt with by the imposition of broad embargoes. For a period of several weeks the railroads were permitted to load only essential military and civilian supplies for destinations in that area.[81] The embargo, which might affect both domestic and export shipments, stopped the movement of traffic and hence was a measure of last resort. The other control measures were designed to keep traffic moving and to avoid the necessity for embargoes.

The need for adequate control of port-bound shipments was so strikingly demonstrated in World War I that it was not forgotten during the interval of peace. In 1917 there was no effective machinery for keeping the flow of export freight toward the ports commensurate with the capacity of shipping to carry it overseas. Each Army supply bureau offered its freight to the railroad that it had customarily used and pressed for early forwarding. The railroads, competing for traffic as in peacetime, accepted the shipments and started them on their way without regard to traffic conditions at the ports of destination. The ports were not accustomed to handling such volumes of freight; warehouse space was limited and shipping space fell far short of the need. As a result, more cars arrived at the ports than could be unloaded. This continued until the backlog of unloaded cars not only filled the freight yards in the port areas but also glutted the sidings far back from the Atlantic seaboard.[82] The cars so immobilized ceased to serve as transportation equipment and became virtually storage facilities. The supplies in them were kept out of use even though they were urgently needed by the forces in Europe. The ports found it almost impossible to locate and transship supplies that were of high priority and therefore loaded the ships with what they had at hand. These conditions existed throughout 1917 and into 1918. They were corrected to a large degree by the establishment of an effective release system within the Army and the creation of the United States Railroad Administration and the Shipping Control Committee.[83]

Capitalizing on their 1917 experience, the railroads took steps to forestall similar difficulties as soon as the threat of another war appeared. They were in a much better position to do this than they had been at the outbreak of World War I because closer integration of the industry had been achieved with the creation of the Association of American Railroads in 1934. The first step to protect the ports on the Atlantic seaboard from congestion was the designation of a Manager of Port Traffic with headquarters at New York. This office, which began functioning in November 1939, kept traffic conditions at the ports under constant observation and undertook to co-operate with other transportation agencies in eliminating the causes and forestalling the threat of congestion. The Military Transportation Section, which the AAR established in August 1940 and attached to the Army's transportation organization, had as its primary function collaboration with the military

[81] For the effect on military shipments, see ASF MPR, Jan 45, p. 14.

[82] William G. McAdoo, Director of Railroads, *Report to the President* (Washington, 3 September 1918), states that on 1 January 1918, when the government took control of the railroads, there were 180,000 more loaded cars on the eastern lines than was normal.

[83] For further discussion, see Wardlow, *op. cit.*, pp. 29–31.

branches of the government in working out proper routings for their shipments and in obtaining prompt deliveries. Both offices proved effective instruments in the broad system of traffic control that was developed after the United States entered the war.[84]

The port authorities also were keenly interested in arrangements to keep their respective areas free from traffic jams, which interfered not only with the flow of export shipments but also with the receipt and distribution of the large tonnages of merchandise that metropolitan populations require. They were concerned primarily with the employment of local rail, harbor, and storage facilities and the control of shipping terminals to prevent their utilization for dead storage or other nontransportation purposes. At New York, which was the first port to feel the effect of the large British and French orders for war supplies placed in the United States, a joint railroad and steamship committee was formed under the auspices of the Maritime Association of the Port of New York. This was an unofficial body that undertook to forestall congestion by detecting unhealthy traffic conditions in the early stages of development and by persuading those responsible for such conditions to take corrective action. Similar committees were set up at other ports during 1940 and 1941. Yet it was recognized that municipal authorities and civic organizations would be able to accomplish only limited results in keeping the ports fluid in wartime because the bulk of the export traffic would move under the sponsorship of the federal government and would be beyond the control of local agencies. Although several federal offices were vitally concerned with the problem—including the Transportation Commissioner of the Advisory Commission to the Council of National Defense, the Maritime Commission, and the Army—none had sufficient authority at that time to deal with it aggressively.[85]

Beginning early in the prewar rearmament period the Army kept port conditions under close scrutiny. The Office of the Assistant (later Under) Secretary of War interested itself in this subject as one affecting its responsibility for the procurement of supplies.[86] The Quartermaster General's Transportation Division was constantly in touch with developments at the ports and the activities of the civilian agencies concerned. In April 1941 a Traffic Control Branch was established in the Transportation Division to study the problem, to assist the supply services of the Army in arranging for forthcoming freight movements, and to recommend such additional control measures as might become necessary.[87] In the summer of 1941 steps were taken to improve the facilities for handling the Army's export traffic by leasing a large pier in New York Harbor for the loading of ammunition, and by authorizing the construction of two large transit storage facilities where export shipments that were to move through the North Atlantic ports could be held until

[84] See Wardlow, *op. cit.*, pp. 312–13.

[85] Memo, Wardlow for Dillon, 8 Aug 41, sub: Co-ordination in Use of Port Facilities; Rpt on General Traf Conditions in the Port of New York; Ltr, Wardlow to TQMG, 14 Oct 41; notes by author from records of Ralph Budd, Transportation Commissioner, 28 Jun 43; all in OCT HB Topic Traf Contl WW II (1); Wardlow, *op. cit.*, p. 177.

[86] For a review of early developments, see Memo, Brig Gen Harry K. Rutherford for Trans Commissioner, 16 Oct 40, sub: Plan for Organization of Traffic Through Ports, OCT HB Topic Traf Contl WW II (1).

[87] OCT HB Monograph 2 summarizes the work of this branch.

the ports were ready to receive and transship them promptly.[88]

During this period there were some who favored placing the control of the Army's port-bound shipments in the hands of the respective port commanders, who would make sure that adequate shipping space was available before permitting the shipments to leave their points of origin. The Quartermaster General, however, expressed the conviction that the control should be exercised by his Transportation Division. Numerous circumstances supported that position. The division had direct contact with the General Staff, which planned all troop and supply movements, established priorities, and authorized the necessary transportation facilities. The division controlled the employment of Army transports and engaged all commercial shipping space. It had close working relations with the inland carriers and hence was in the best position to route, divert, and expedite port-bound shipments. Control of the rapidly increasing lend-lease traffic, as well as shipments to the U.S. forces overseas, was necessary. Since lend-lease freight moved over commercial piers and did not come under the jurisdiction of the Army port commanders, the control could best be exercised from Washington, where the procurement and shipping orders were issued. In fact, the Commercial Traffic Branch of the Transportation Division already had in operation an informal release system for some lend-lease shipments. This system, The Quartermaster General believed, could readily be expanded to cover all War Department port-bound movements.[89]

The control plan proposed by The Quartermaster General, and approved by the War Department in August 1941, was applicable to all carload export shipments of the War Department, including lend-lease freight but excluding freight accompanying troops. The chiefs of the arms and services were required to apply to The Quartermaster General for a shipping release and routing before starting any such shipments to the ports. This requirement was applicable to shipments from contractors' plants as well as those from Army installations.[90] After a routing had been worked out and the Commercial Traffic Branch had ascertained when vessels would be available to load the freight, a release was issued authorizing the shipment to go forward. The release expired fifteen days after date of issuance unless a longer period of validity was specified. Shippers were required to send a "forwarding notice" to The Quartermaster General when the shipments were started. By arrangement with the Association of American Railroads the originating carrier notified The Quartermaster General by wire when each shipment left the point of origin and the delivering carrier reported the time of arrival at port; abnormal delays en route were also reported.

Thus a fairly comprehensive plan to control the Army's export shipments was established before the United States entered the war. Until 7 December 1941, however, requests for release and routing had been filed for only a small proportion

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[88] Ammunition piers and intransit storage installations (holding and reconsignment points) are discussed at length below, pp. 281–95, 376–91.

[89] Memo, H. H. Bartlett for Lasher, 19 Aug 40, sub: Control of Inland and Water Shipping; Ltr, TQMG to Groninger, NYPE, 19 Jun 41; Memo, Maston for Dillon, 17 Jul 41, sub: Conf Reference British Shipping Problems; all in OCT HB Topic Traf Contl WW II (1). See OCT HB Monograph 6, pp. 271–85, for a fuller discussion of developments up to August 1941.

[90] WD Cir 182, 28 Aug 41, Sec. IV, par. 15½; OCT HB Monograph 6, pp. 285–91.

of the port-bound shipments. Time was required to properly indoctrinate local transportation officers in the requirements of the new system, and this indoctrination did not proceed as swiftly as might have been the case because some of the supply services were not in favor of vesting such broad control in The Quartermaster General.[91]

With the attack on Pearl Harbor the need for tighter control of port-bound shipments was at once evident. The Commercial Traffic Branch, working around the clock, endeavored to keep the situation in hand, but it was handicapped by the great number of urgent shipments that then became necessary, the unfamiliarity of most transportation officers with the requirements, the many shipments that had to be stopped or diverted because of the changed circumstances, and the fact that the control was not sufficiently comprehensive.

Prompt measures were taken to improve the controls. Since the most urgent shipments were to the Western Defense Command and to the Pacific coast ports for transshipment to Pacific bases and the port facilities on the Pacific coast were limited, regulating stations were established on the transcontinental railroads to hold and divert shipments on the instruction of the Western Defense Command.[92] With U.S. entry into the war supply shipments accompanying troops became an important part of oversea traffic, and accordingly a clause was inserted in all movement orders requiring transportation officers to hold such shipments, as well as the troops, until they were called forward by the port commanders.[93] Late in January 1942 the release and routing instructions were broadened to make them applicable to shipments by all War Department agencies to any port or to any general depot adjoining a port, whether the supplies were for oversea or domestic use, and to shipments by contractors on commercial as well as on War Department bills of lading.[94]

The Army recognized that control of its own port-bound traffic, however complete, would not be enough to avoid port congestion; over-all control was necessary. The military authorities could not take action concerning the movement of commercial export freight, but they could and did seek to bring shipments of lend-lease supplies by other government agencies under some form of regulation. As the result of conferences called by the Army, the Treasury Department and the Department of Agriculture, which were supplying large quantities of lend-lease materials, agreed that such materials would not be shipped to the ports unless there was assurance that they could be promptly transshipped overseas; they also agreed to honor any requests by the Army that it deemed necessary to make the arrangement effective. Col. Theodore H. Dillon, chief of the Transportation Division, OQMG, was designated the agent of the War Department through which such requests would be made. He, in turn,

[91] See Memo for Record Only, attached to DF, ACofS G-4 for TAG, 14 Aug 41, sub: Changes in AR 30-905, and pars. 6 and 8, AG 500 (5-27-29)(1), Sec. III.

[92] Memo, TAG for Cs of Supply Arms and Services, 13 Dec 41, sub: Designation of WDC as Theater of Opns, AG 320.2 (12-13-41); Memo, TAG for CG WDC, 13 Dec 41, same sub and file number; Memo, TAG for CofAAF, CGs Armies, *et al.*, 19 Dec 41, sub: Regulating Stations, AG 320.2 (12-19-41).

[93] OCT HB Monograph 6, p. 297.

[94] Memo, TAG for CG Eastern Theater of Opns, CG WDC, *et al.*, 26 Jan 42, sub: Control of Freight Shipments, AG 523.01 (1-24-42); Memo, Dillon for Col Clarence H. Kells and Lasher, 2 Feb 42, same sub, OCT HB Topic Traf Contl WW II (2).

designated the chairman of The Quartermaster General's Transportation Advisory Group to maintain day-to-day contact with the transportation officers of the Treasury and Agriculture Departments, and also with the Maritime Commission and the Association of American Railroads, to insure that the plan was carried into effect.[95] Although the arrangement proved helpful in co-ordinating freight movements to the ports with the availability of ships to load them, it did not apply to commercial traffic and it did not afford the positive control over the origination of shipments by Treasury and Agriculture that the situation required.

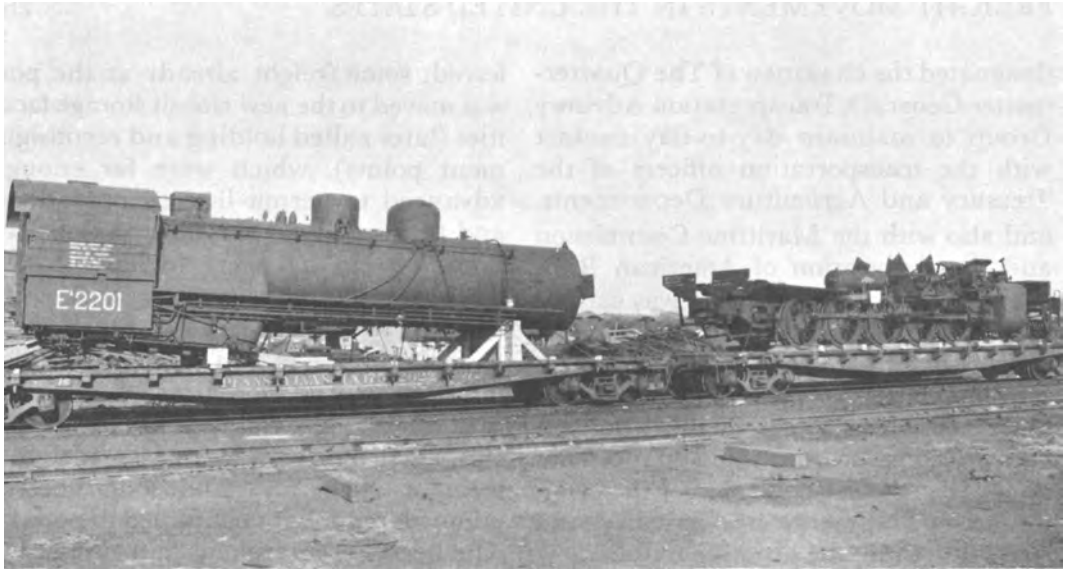
Lack of adequate control over portbound traffic when the United States entered the war resulted almost immediately in congestion at the two principal ports, New York and San Francisco. At New York, the number of railway cars on hand with freight for water shipment—a number that had been growing steadily during the fall—increased from 9,445 on 5 December to a peak of 12,282 on 27 December 1941. The number of carloads of freight held in railroad-controlled storage also increased substantially. The problem of congestion was intensified by the necessity of temporarily holding War Department lend-lease shipments at the port in order to determine what matériel should be withdrawn for the use of the U.S. Army, by disturbed shipping schedules, and by bad weather, which adversely affected port operations. Because of the extensive facilities of New York Harbor and the corrective measures that were taken, the situation did not become critical. But it was threatening and the Army used all means at its disposal to prevent it from becoming worse. The movement of some War Department shipments was deferred; some freight already at the port was moved to the new transit storage facilities (later called holding and reconsignment points), which were far enough advanced to permit limited operations, and to ground storage outside the port. Some vessels that were to have loaded lend-lease supplies at New York were diverted to other North Atlantic ports.[96]

The situation at San Francisco was far more serious and more time was required to correct it. The rail facilities in the San Francisco Bay area were less adequate than at New York and soon became jammed, but freight continued to pour in. The need for equipment and supplies at the Pacific bases was urgent. San Francisco was the supply center for the Western Defense Command and a general depot was located there. The supply services were being pressed to make shipments and gave little heed to conditions at the port. Marking and documentation were often inadequate causing confusion and delay in transshipment. Time was required to bring ships into position to load the greatly increased volume of cargo. There were no transit storage facilities back of the Pacific seaboard as there were in the East.

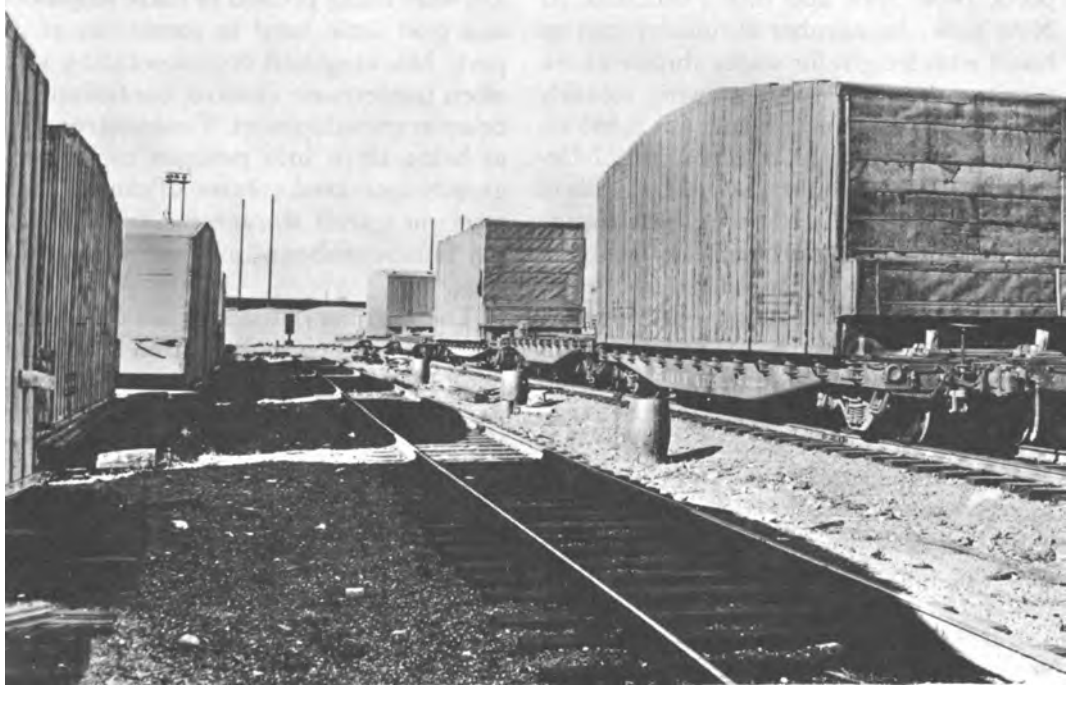
The number of loaded cars on hand in the San Francisco Bay area reached a peak of 3,208 on 12 January 1942, then declined gradually. The improvement was accomplished by stopping all oversea shipments at the regulating stations until

[95] Two memos for record by Col Dillon, both dated 12 Dec 41, distributed to all agencies concerned, OCT HB Topic Traf Contl WW II (2).

[96] Statements concerning the port conditions in this and following paragraphs are based on the author's general knowledge from his activities as chairman of the Transportation Advisory Group and on notes and data in OCT HB Topic Traf Contl WW II (1) and (2).



LOCOMOTIVES SHIPPED AS RAILWAY FREIGHT. *Broad-gauge locomotives moving to Portland, Oregon, to be assembled and shipped to the Soviet Union (above); boxed diesel locomotives on flatcars (below).*



they could be cleared by the San Francisco Port of Embarkation, and by moving many loaded cars out of the port area to cities where sidings were available. With a view to the future, immediate steps were taken by the Army and the railroads to increase rail trackage at the port. Steps were also taken to remove the general depot from San Francisco so that the railroads in the port area would not be burdened with supplies intended for consumption in the Western Defense Command.[97]

While the danger of congestion at New York and San Francisco caused the greatest anxiety, the problem also arose at other ports as additional ships were assigned to them for loading. Soon after the decision was made that lend-lease supplies destined for northern Soviet ports would be loaded at Boston, the accumulation of loaded cars became troublesome. When this traffic began moving through Philadelphia, that port became so glutted that in early March radical measures were necessary to relieve it. One phase of the problem at Boston and Philadelphia—and also at New York, where most British lend-lease shipments were handled—was that the representatives of the nations receiving such shipments wanted large "banks" of well diversified freight in the ports at all times so that there would never be delay in loading ships with the supplies that the receiving governments at the moment considered of highest priority. But not all of the difficulty was traceable to lend-lease shipments. In February and March the port of New Orleans became severely congested with War Department freight destined for the Caribbean bases and the Panama Canal because the Maritime Commission was not able to assign as many vessels to these routes as had been expected.[98]

As has been indicated, the basic cause of the port congestion that developed immediately after Pearl Harbor was the lack of a release system that could positively control the port-bound movement of all export freight—lend-lease and commercial, as well as military. Up to that point no federal agency possessed the necessary authority, and accordingly no plans were laid for a full-fledged control system. Ten days after Pearl Harbor the President invested such authority in the Office of Defense Transportation, which he established at that time.[99]

Although power to control traffic was thus provided, time was required to establish adequate machinery. The Army already had machinery in operation that was proving increasingly effective in the regulation of its own traffic, and it did not want that machinery scrapped. Neither did the Army want to turn the control of its vital supply movements over to another agency. Civilian agencies, on the other hand, were afraid to allow the military authorities to exercise over-all control. During the early weeks of 1942, while such means as were available were being utilized to deal with the constant threat of port congestion, representatives of the Office of Defense Transportation, the

[97] Data and notes in OCT HB Topic Traf Contl WW II; Hist Record, SFPE, 1941–42, pp. 88–90, OCT HB SFPE Gen; Memos, CG SFPE for ACofS G-4, 4 and 10 Jan 42, sub: Rail Congestion; Memo, ACofS G-4 for TAG, 16 Jan 42, sub: Oversea Shipts Through SF; Memo, ACofS G-4 for TAG, 18 Jan 42, sub: Diverting Shipts from SFPE and SFGD; Memo, ACofS G-4 for TAG, 31 Jan 42, sub: Cessation of Depot Activities; last five in G-4/33867-1.

[98] OCT HB Monograph 6, p. 314.

[99] EO 8989, 18 Dec 41, par. 3*d*, directed the ODT, in co-operation with the Maritime Commission and other appropriate agencies, to "co-ordinate domestic traffic movements with ocean shipping in order to avoid terminal congestion at port areas and to maintain a maximum flow of traffic."

Maritime Commission (later, the War Shipping Administration), and the Army conferred repeatedly in an effort to devise a comprehensive control system that would satisfy all concerned.[100]

The principles of a control system were approved by the Army, the War Shipping Administration, and the Office of Defense Transportation in mid-March.[101] The agreement recognized the War Shipping Administration as the agency to allocate vessels to meet the various military and civilian requirements in accordance with established priorities, and to determine, in collaboration with the other agencies concerned, the ports at which vessels would load. The Office of Defense Transportation, in collaboration with the other agencies, would determine the amount of freight that might be shipped to the respective ports and issue releases for these shipments. The War Department would provide inland routings and shipment permits for its own freight and that of such other government agencies as might authorize it to do so. An agency would be designated to issue permits for shipments not covered by the War Department system. The joint interests of the participating agencies would be administered by a committee of four consisting of an Army officer and representatives of the Office of Defense Transportation, the War Shipping Administration, and the British Ministry of War Transport. A representative of the BMWT was included because of the large number of ships that that organization controlled and the large volume of cargo that was being forwarded to the British Isles under lend-lease.

After several weeks of further planning, the Office of Defense Transportation issued instructions that established a release or permit system covering all carload, truckload, or bargeload shipments to the ports, whether the freight was for immediate export or for storage prior to transshipment and whether it was for government or private account.[102] These instructions, which were effective 1 June 1942, placed upon the carriers the responsibility of refusing shipments not covered by permits.[103] The railroads, through the Car Service Division of the Association of American Railroads, met this responsibility by placing an embargo on the loading of all export shipments except those for which permits had been issued, as evidenced by notation of the permit number on the shipping document. The motor and water carriers depended on individual action to enforce the permit requirement.[104]

The committee of four authorized in the basic agreement became known as the Transportation Control Committee and was the agency through which the details of the control system were worked out. It was soon evident that the Navy should be represented, and a fifth member accordingly was added. The Army representa-

[100] Memo, Gross for Somervell, 12 Mar 42, sub: Regulation of Defense Aid Trans at Ports; Memo, Somervell for USW, 13 Mar 42; both in OCT HB Topic Traf Contl WW II (2).

[101] Plan presented by Mr. Douglas (WSA) and approved by Gen Somervell, 18 Mar 42, OCT HB Wylie TCC. The approval of Mr. Eastman, Director of the ODT, was obtained separately.

[102] For various memos for planning, see OCT HB Wylie Trans Contl Com.

[103] ODT Instructions 1, 23 May 42, was superseded by ODT GO 16, 6 Jul 42, which was modified from time to time with respect to scope and details of procedure. See ODT GO 16-A, 10 Mar 44; ODT AO 17, 10 Mar 44; ODT GO 16-B, 12 Sep 44; ODT AO 17-A, 12 Sep 44; and ODT exception orders issued from time to time; all in file labeled ODT Regulations Regarding Control of Traffic, in ODT HB Topic ODT. For Army regulations see WD Cir 300, 4 Sep 42, Sec. II; AR 55-105, 29 Dec 42, par. 16; WD TM 38-415, 22 Jun 44.

[104] OCT HB Monograph 23, pp. 9, 10.

tive was General Wylie, Assistant Chief of Transportation for Operations. Col. John E. Craig was designated executive officer, and assumed responsibility for the detailed management of the committee's affairs. He was assisted by a small staff provided by the Chief of Transportation. The Army also provided office space for the activity. After committee procedures had been established, the members met almost daily to consider information regarding traffic conditions at the ports and at inland gateways, and to take any action that might appear necessary in connection with the general traffic situation or particular shipments. The committee's decisions on measures necessary to maintain healthy traffic conditions were placed in effect by the participating agencies. General Wylie followed the work of the committee closely but did not attend the meetings; the Army's interests therefore were represented by Colonel Craig, who was at all times in close contact with Generals Gross and Wylie.[105]

The first step in the control of port-bound freight traffic was the issuance of monthly block releases by the Transportation Control Committee. These releases indicated the total tonnage that might be moved during the month to each port by each procuring agency. The tonnages were determined by the committee after consideration of the amount of export freight that the procuring agencies expected to have available for shipment to each oversea destination, the capacity of the ships the War Shipping Administration and the British Ministry of War Transport expected to have ready to load at the respective ports, and the conditions prevailing at railway and shipping terminals. These block releases, and any changes in them that the committee might find desirable, were issued with ODT authority and became binding on the agencies authorized by the ODT to issue unit permits for individual shipments.[106]

Unit permits for individual shipments were issued by several offices. By far the largest volume of freight was permitted by the Chief of Transportation's Traffic Control Division, which performed this function not only for supplies procured by the War Department but also for those procured by other agencies of the federal government, except supplies for the U.S. Navy. Thus, under the new permit system the great bulk of export shipments of federal property was brought under the Army's release and routing system, which had been established before the United States became a belligerent. The Traffic Control Division had experienced personnel, tested procedures, and private telephone and teletype connections with the ports and some other field installations. This machinery could not have been duplicated by the Office of Defense Transportation or any other agency without great expense and some delay. The decision to entrust to the Traffic Control Division the issuance of unit permits for the bulk of the export traffic was therefore both logical and practical. Permits for shipments for the U.S. Navy were under

[105] The discussion of the work of the Transportation Control Committee and related activities is based, except as otherwise indicated, on two reports prepared by Colonel Craig: Transportation Control Committee, Its Origin, Mission, and Performance, 29 Aug 45, and Summary of Activities of the TCC, 24 Oct 45, both in OCT HB Topic Trans Contl Com. The latter report includes copies of ODT directives, working papers of the TCC, and samples of minutes. Time and space are not afforded for a study of the records of committee's daily activities, which are incorporated in OCT HB File.

[106] The terms "block release" and "unit permit" were made official by ODT GO 16-A, 10 Mar 44, but they were in use earlier.

the control of the Navy Department, although authority for issuance was decentralized to the naval districts. Permits for commercial shipments were issued initially by the War Shipping Administration and later by the Association of American Railroads.[107]

Usually the Traffic Control Division issued permits in response to requests from the headquarters of the procuring services, which then transmitted the permit numbers to the actual shippers so that they might be entered on the bills of lading. In the beginning a permit established only the date before which shipment could not be made. It developed, however, that the procuring services often were too optimistic in estimating when specific supplies would be ready to move, and their arrival at the ports was long delayed. Consequently, expiration dates were included in all permits issued after December 1942.[108] As explained by Col. H. Gordon Randall, chief of the Control Branch, under whose supervision permits were issued, the spread between initial and expiration dates varied according to circumstances. In some cases the period was as much as thirty days, but in other cases only three or four days. The distance between the point of origin and the port had a bearing on the matter, but the relative urgency of the shipment and the condition of the port were the main considerations.[109]

Before unit permits were issued the permitting agencies received assurance from the ports that shipping would be available so that the cargo could be loaded promptly. With respect to supplies destined for U.S. Army forces this assurance took the form of a call from the Army port commander at whose installation the freight would be transshipped. The Traffic Control Division maintained close contact with the port organizations and with the Water Division in the Office of the Chief of Transportation in order to insure that the initial and expiration dates on unit permits were realistic. Copies of the permits were sent to the ports concerned. With respect to lend-lease shipments, forwarding authorization serial numbers (FAS's) were issued by forwarding corporations that were established by the War Shipping Administration to assist the governments receiving lend-lease aid in moving such supplies overseas. The FAS's proved less reliable than the Army port calls, and the Traffic Control Division had frequent occasion to check with Army port agencies or with the War Shipping Administration regarding the availability of shipping space before issuing unit releases for lend-lease freight.[110]

While the carloads of freight released for shipment to the U.S. Army overseas increased as the war advanced, lend-lease shipments declined somewhat. During the first half of 1945 shipments for the Army constituted almost 75 percent of the total. *(Table 18)*

The Transportation Control Committee kept the traffic situation throughout the country under observation from day to day, not only with respect to the ports but also with respect to the rail lines and the important inland terminals. It undertook to insure that the monthly block releases

[107] Special types of permits were issued for shipments to be stored in the port areas before being exported and for shipments of export freight within the port areas. See OCT Cir 78, 13 Nov 42, sub: ODT Block and Storage Permits.

[108] OCT Traf Bulletin 4, 17 Dec 42, OCT HB Topic Traf Contl WW II (3).

[109] Interv with Col Randall, 24 Oct 51, OCT HB Topic Trans Contl WW II (3); OCT HB Monograph 23, pp. 24, 25.

[110] OCT HB Monograph 23, pp. 77–80.

TABLE 18—CARLOADS OF FREIGHT RELEASED BY TRAFFIC CONTROL DIVISION FOR SHIPMENT TO PORTS: JULY 1943–JUNE 1945

Period	Total Carloads	For the Army	War Department Lend-Lease	Other Lend-Lease
July–December 1943	511,756	242,826	90,057	178,873
January–June 1944	644,736	396,203	91,603	156,930
July–December 1944	730,721	511,575	80,469	138,677
January–June 1945	806,321	601,237	57,381	147,703

Source: Monthly Summary, WD and Lend-Lease Cars of Export Freight Released to Ports, prepared by Transport Economics Section, Traffic Control Division, OCT, reworked for statistical volume of this series.

were not exceeded by the shipments for which unit permits were issued. When traffic conditions made it necessary, the block releases were revised. Particular shipments were diverted or held back, and in some cases unit permits were canceled if the circumstances warranted. The diversion of a shipment might involve a change of destination port or rerouting to one of the Army's holding and reconsignment points, of which there were eventually ten.[111] Diversions were made not only to avoid congestion but also to comply with changes in military or lend-lease priorities. Hold or diversion orders on account of traffic conditions were issued by the Transportation Control Committee with great circumspection, and only after consultation with the military and lend-lease authorities concerned.

In their effort to keep the traffic that flowed into the ports commensurate with the capacity of shipping to outload it, the Transportation Control Committee and the Traffic Control Division endeavored to take into account all circumstances that might affect port operations. For example, during the late fall of 1944, when a large backlog of ships awaiting discharge at northern European ports necessitated reducing the sailings from U.S. Atlantic ports, releases of port-bound shipments were reduced accordingly. Allowance was made for the effect of the 1944 Christmas holiday season on the supply of railway and longshore labor at the ports. During the severe weather that crippled rail and port operations in the North Atlantic areas in the early weeks of 1945, shipments to the ports were correspondingly curtailed. The affect of V-E Day on the movement of supplies through the North Atlantic ports and the increase in shipments to Pacific ports after the end of the war in Europe were taken into account in planning port-bound freight movements. Whenever a transfer of ships from the more heavily to the less heavily burdened ports could be worked out in collaboration with the War Shipping Administration, this was done.[112]

General Gross followed the activities of the Transportation Control Committee and the Traffic Control Division closely. He believed that their procedures were

[111] Operation and utilization of holding and reconsignment points are discussed below, pp. 281–95.

[112] Interv with Col Craig, 15 Mar 45; Memos, Craig for Williamson, 14 Dec 44, 31 Jan 45, 2 Feb 45; all in OCT HB Topic TCC; Memo, Williamson for Finlay, 26 Jul 45, OCT HB Topic Traf Contl WW II (3); Trans Contl Com, Its Origin, Mission, and Performance, Sec. II, p. 7, OCT HB Topic TCC.

sound and that they were capable of providing whatever regulation was necessary to keep port conditions healthy. He particularly liked the flexibility of their control, and stressed the fact that they were concerned as much with getting enough freight to the ports to fill the ships properly as they were with preventing the ports from becoming glutted with cargo. He accordingly opposed the use of embargoes as a means of protecting the ports except in extreme circumstances. Although he recognized the difficulties experienced with shipments to the Soviet Union because of changing priorities and also believed that the British maintained unnecessarily large banks of cargo at the ports, he did not consider the imposition of embargoes against shipments of such supplies to be the proper method of correcting the situation. General Gross also opposed action by the ODT to reduce the demurrage-free time for cars held at North Atlantic ports; he felt that such an effort to cut down the banks would not improve conditions but would only increase the cost to the shippers.[113]

One aspect of the battle against congestion was the effort to reduce the number of cars detained at the ports for exceptionally long periods. During the latter part of 1942 cars of export freight were held under load at all ports an average of about eight days. During the winter months of 1943 the average was about twelve days because of increased traffic and adverse weather. In August 1943, the Transportation Control Committee began a campaign to insure that the monthly average of car detention did not exceed seven days at any port. The goal was not attained at all ports at all times, but in general the effort was successful. After the goal was set the all-ports average exceeded seven days only in January 1944, when it was 7.2 days. The general improvement in car detention can be illustrated by comparing the all-ports averages for July in the respective years: in July 1942 it was 9.5 days, in July 1943 it was 6.3 days, and in July 1944 it was 3.9 days.[114]

Throughout the war the Transportation Control Committee gave special attention to cars detained in ports longer than ten days. It did not succeed in eliminating ten-day cars, but a marked reduction was accomplished. During the first nine months of 1945 ten-day cars averaged well under 10 percent of the total cars on hand.[115] Despite the general improvement some cars were held under load thirty days or more because of unusual circumstances.[116]

The campaign against car detention was complemented by an effort to reduce the bank or accumulation of export freight in railroad hands at the ports. The bank on a given day was measured by dividing the number of carloads in port "on wheels" and in railroad storage by the daily average of carloads loaded into ships during the preceding week. A five-day

[113] Ltr, Somervell to Eastman, Dir ODT, drafted 6 Aug 42, but not sent in view of conversation between Gen Wylie and a representative of the ODT, OCT HB Gross ODT; Ltr, USW to Sen Harley Kilgore, 3 Nov 43, OCT HB Topic Kilgore Rpt; Ltr, Gross to Johnson, ICC, 8 Mar 44, OCT 504; Ltr, USW to Charles D. Young, ODT, 29 Mar 44; Ltr, Gross to Johnson, ODT, 5 Apr 44; last two in OCT HB Gross ODT.

[114] Trans Contl Com, Its Origin, Mission, and Performance, Sec. II, p. 4, and Ex. D, OCT HB Topic TCC.

[115] Frequent studies in monthly issues of ASF MPR, Sec. 3, 1944 and 1945; ASF *Statistical Review, World War II*, p. 119.

[116] Study for 1943, ASF MPR, Dec 43, Sec. 3, p. 46; Weekly Memos, Traf Contl Div for Contl Div, in OCT 562.5 Cars on Wheels.

bank was considered healthy by the Chief of Transportation, and that level was achieved for Army cargo but not for lend-lease.

Reduction of the bank assumed special importance at New York in the spring of 1944 because of the impending invasion of the European continent and the possibility of greatly increased Army shipments through that port. Although some progress had already been made, General Gross insisted that the Transportation Control Committee direct its efforts toward further reduction of the British and Soviet lend-lease banks and maintenance of a more consistent relationship between the number of carloads permitted to arrive at the port and the capacity of the shipping available to lift the cargoes. He used a study of operations at New York, prepared at his request in April, to support his position. The study showed that month by month during the past year the average Army bank had been under or only slightly above five days, while the British lend-lease bank had never been less than ten days and the Soviet bank had fluctuated widely. The data indicated that the control of export traffic flow had been more successful in the case of Army freight than in that of lend-lease, but the study also pointed out that the Army had an advantage in keeping its bank low, because its port commanders had large warehouse and open storage spaces in their establishments and were therefore less dependent on the railroads for holding freight than were the lend-lease agencies.[117]

There was a difference of opinion, even within the Office of the Chief of Transportation, as to how large the banks could be without endangering the fluidity of the ports and how much they could be reduced without handicapping the British and the Russians in getting the supplies that their changing priorities called for and in loading their ships to capacity. The point ceased to be a critical one after the invasion of Europe had been successfully accomplished. The average bank of all export freight on wheels at the principal ports during certain months when operations were not affected by bad weather was as follows:[118]

Month	*Number of Ports*	*Days' Bank*
September 1942	16	8.5
March 1943	17	5.8
September 1943	13	5.6
March 1944	19	4.9
September 1944	19	4.5
March 1945	19	4.3
July 1945	19	3.5

In policing the nationwide traffic situation the Transportation Control Committee was aided by the field organizations of all the participating agencies, as well as those of the Association of American Railroads. Reports from the various sources were co-ordinated by the executive officer and presented to the committee at its daily meetings. Since the greatest danger of congestion was at the seaboard, AAR reports showing carloads of export freight on wheels at the ports, carloads unloaded, and carloads in railroad storage were essential to the functioning of the committee. Colonel Craig used the Army port agencies extensively in his effort to go back of the statistics to develop a reliable

[117] Analysis of Shipping and Export Freight at the Port of New York From April 1943, prepared April 1944; Memo, Gross for Wylie, Craig, *et al.*, 1 May 44; both in OCT HB Topic Traf Contl WW II (3).

[118] Trans Contl Com, Its Origin, Mission, and Performance, Ex. F; ASF *Statistical Review, World War II*, p. 119. Monthly data segregating ports appear in certain issues of ASF MPR, Sec. 3, e.g., Dec 44, p. 30.

estimate of the actual and potential situation in any area that was threatened with congestion. The port agency was the successor to the commercial traffic agency, which was introduced in the fall of 1941 for the specific purpose of dealing with lend-lease shipments at the ports to insure that they were transshipped promptly and in good order. The officers in charge of the port agencies worked in close co-ordination with all other transportation and traffic representatives at the ports, and were members of the port conditions committees that were established in many places. They therefore were informed on conditions affecting all traffic, not merely lend-lease.[119]

The Army regulating stations on the transcontinental rail lines were of great service in maintaining fluid traffic conditions on the Pacific coast. When they were established soon after Pearl Harbor, there were no holding and reconsignment points in the western states, and these stations were in a sense a substitute. But even after holding and reconsignment points were functioning in Washington and California, the regulating stations had an important role in protecting the seaboard from congestion. In addition to the original stations at Spokane, Ogden, Salt Lake City, Albuquerque, and El Paso, substations were set up as required in other cities on the transcontinental routes. The Traffic Control Division furnished the regulating stations with information regarding shipments released for movement over the lines on which the stations were located; consignors sent these stations copies of bills of lading for such shipments; and the railroads kept them posted on the location of cars moving in their direction. When cars passed the regulating stations, the stations wired reports to the consignees so that they might prepare for prompt handling of the freight. When so ordered the regulating stations requested the railroads to hold or divert cars. Hold orders were issued at first by the Western Defense Commands and later by the ports of embarkation. For a short time the Western Defense Command issued diversion orders in its own discretion. These orders upset the traffic planning of the Traffic Control Division, and early in the war the Western Defense Command was instructed not to change the destination of shipments without the approval of the division unless a military emergency should arise.[120]

After the hectic days that immediately followed the outbreak of war, the regulating stations served primarily as agents of the Traffic Control Division in diverting shipments from port to port or to holding and reconsignment points. Such diversions frequently were made at the request of the Transportation Control Committee.[121] Troop cars and motor trucks came under the cognizance of the regulating stations, but railway freight was their major concern. Regulating stations were used to control Navy shipments as well as Army and lend-lease shipments. During the period of hostilities more than 3,300,000 carloads of freight were reported as passing the regulating stations.[122]

[119] Wardlow, *op. cit.*, pp. 111–12, 122; OCT HB Monograph 23, pp. 80–81; numerous documents in OCT HB TZ Gen Port Agencies.

[120] OCT HB Monograph 6, pp. 326–31, discusses the operation of regulating stations.

[121] Memo, TAG for CofAAF, *et al.*, 19 Dec 41, sub: Reg Sta, AG 320.2 (12-19-41) is the basic directive; see also various directives and documents in OCT HB TZ Gen Reg Stas.

[122] ASF MPR, Aug 45, Sec. 3, p. 12; monthly summaries, Freight Cars Passing Reg Sta, prepared by Reg Sta Br, Traf Contl Div, OCT, reworked for statistical volume of this series.

While endeavoring to prevent an excessive amount of export freight from moving into the ports, those concerned with the problem of congestion gave their attention also to the removal from the ports of so-called frustrated shipments. Much of this cargo had accumulated as the result of changed conditions following the outbreak of war in Europe, but there were also shipments that had lodged at the ports after the United States entered the war as the result of the withdrawal of steamship services to certain oversea areas, the failure to obtain export permits, and the changed lend-lease priorities. The closing of the Burma Road in the spring of 1942 left a considerable quantity of Chinese lend-lease cargo stranded at Newport News, Virginia. Some of the frustrated shipments were held in rail cars, but most of them had been consigned to port storage. In either case this dead freight occupied space needed for current exports; in addition, some of the commodities were needed by the war industries. The Army began working on the problem immediately after Pearl Harbor, but many of the shipments were not under its control. In June 1942 the Office of Defense Transportation authorized its Division of Railway Transport to order the removal of any such cargo from the ports. Later, the ODT authorized its regional directors to order the unloading of any cars that were being used for storage purposes. These authorizations covered both government and commercial shipments, but unloading orders were not issued for government freight until the appropriate federal agencies had been consulted. A considerable amount of this frustrated cargo was sent to Army holding and reconsignment points until other disposition could be made. The Transportation Corps' interest in this matter was represented by the Traffic Control Division at headquarters and by the port agencies in the field.[123]

As has been indicated, the control system initially required permits for truckload and bargeload shipments to the ports, as well as for carloads. The volume of freight arriving by highway and water did not justify the arrangement and it was discontinued in September 1944.[124] In the meantime, however, trouble had been experienced with truck deliveries at the New York Port of Embarkation, and local measures had been taken to control this traffic. The problems arose because of the limited facilities for discharging trucks at the piers, the difficulty of determining in advance at which piers deliveries should be made, and the street congestion in the vicinity of the Army port facilities. To meet the situation, special highway control stations were set up in June 1943 along the principal routes leading into New York City, and a central control station was established in the city. Truck drivers approaching the city stopped at the highway control stations to telephone the central station to obtain clearance before proceeding. This arrangement made it possible for the port authorities to prevent vehicles from arriving before they could be discharged and to provide definite information regarding the terminals at which deliveries should be made. In many cases police escorts were provided to insure prompt delivery of urgent freight. Drivers using highways on which there

[123] Memo, CofT for Clay, 10 Jul 42, sub: Delayed Traffic Awaiting Export, OCT 563.5; Rpt, NYPA, Jul 42, OCT HB TZ NYPA; ODT GOs 12, 27 Jun 42, and 12-A, 5 Jan 43; SOS Memo, S 270-1-43, 5 Feb 43, sub: Clearance of Shipts; TC Cir 50-49, 9 Sep 44, sub: Frustrated Cargo Report; OCT HB Monograph 23, pp. 14–15, 86–93.

[124] ODT GO 16-B, 12 Sep 44.

were no control stations were instructed to make their calls from any telephones available.[125] Similar control of truck deliveries to the west coast ports was provided by the regulating stations.

In summing up his experience with the Transportation Control Committee, Colonel Craig observed that there had been little difficulty with military traffic; although the committee had taken action from time to time with regard to shipments by the Army and the Navy, in general their releases to the ports and disposition of cargo at the ports had been well managed. The principal difficulties had arisen in connection with lend-lease freight. The ports through which this freight was routed were changed repeatedly, necessitating extensive diversions of shipments. The British handled their transportation arrangements efficiently, but their insistence on maintaining large banks of cargo at the ports was a cause for concern. The Russians, unlike the British, did not have an experienced shipping organization in the United States, and their practices in ordering cargo forward and loading the ships were often troublesome to those responsible for maintaining fluid traffic conditions. Particular difficulty with freight for the Soviet Union was experienced at Portland, Oregon, where most of the transpacific vessels were loaded. In addition to other problems, the employment of old Soviet vessels, whose arrivals and departures were uncertain, made smooth cargo operations difficult. Acting under instructions from the President, the Transportation Control Committee made special efforts to assist the representatives of the USSR in moving supplies covered by the Soviet protocols.[126]

A general estimate of the control of port-bound traffic during World War II must give a high rating to the plan and the manner in which it was executed. The principal cause for criticism was the tardiness with which over-all control was established, for the system was not agreed upon until three months after the United States entered the war and additional months were required to make it effective. Although the number of carloads of export freight unloaded at all ports increased from less than 700,000 in 1939 to more than 1,912,000 in 1944 *(Table 19)*, no serious congestion developed after the control plan was in full operation. Each foreseeable threat of congestion was taken into account in the monthly block releases, and unforeseen developments were dealt with by granting, withholding, or canceling unit permits or by diverting shipments to other ports or to the holding and reconsignment points. These results were accomplished through the constant vigilance of all agencies concerned and through their agreement, worked out in the Transportation Control Committee, on measures necessary to forestall or overcome difficulties. Maj. Gen. Edmond H. Leavey, who succeeded to the post of Chief of Transportation in November 1945, made the following estimate of the traffic control system:

1. It utilized the combined information and judgment of all agencies concerned with large freight movements and with the provision of shipping and railroad equipment.

[125] ASF Memo S 43, 29 Jun 43; ASF Memo S 55-20-43, 30 Jun 43; WD CTB 15, 23 Mar 45, sub: Hwy Contl Stations; Memo, NYPE for CofT, 16 Jan 45, sub: Hist Record, OCT HB NYPE Port Trans Office.

[126] Memo, Harry L. Hopkins for TCC, 21 Sep 42, OCT HB Wylie TCC.

TABLE 19—CARLOADS OF EXPORT FREIGHT UNLOADED BY THE RAILROADS AT U. S. PORTS: 1939–1945

Year	Total	North Atlantic Ports	South Atlantic and Gulf Ports	Pacific Coast Ports
1939	(a)	336,786	273,117	(a)
1940	817,877	475,671	268,179	74,027
1941	880,334	556,717	242,795	80,822
1942	954,824	553,084	177,602	224,156
1943	1,461,723	805,652	203,002	453,069
1944	1,912,834	1,076,387	232,479	603,968
1945	1,887,829	901,815	337,349	648,665

[a] Data not available.

Source: AAR, *Annual Report of the Car Service Division*, 1946, p. 16.

2. It provided a means for the coordination of logistical requirements and transportation operations, and gave assurance that military priorities would be observed.
3. It included both advance planning and a flexibility of performance which made possible whatever departures from the plan might become desirable in view of changed conditions.[127]

Transit Storage Operations

Transit storage facilities had so important a role in the protection of the seaboard from congestion, and the utilization of the installations especially provided for that purpose was so unique, that the subject merits some elaboration. The Army's ten holding and reconsignment points served as reservoirs where equipment and supplies that could not be promptly moved overseas were held until they were called to the ports.[128] In addition to preventing matériel from reaching the ports too soon, they served as facilities where related items obtained from different sources could be assembled before being sent overseas, and provided stocks near the ports from which commodities urgently needed in the theaters could be quickly delivered to shipside. Nothing of this kind had existed in World War I, although three general depots built during 1918 in New York, Pennsylvania, and Ohio, were designated to provide "storage space for supplies en route to the seaboard," in addition to performing the usual depot functions.[129]

The Lend-Lease Act of March 1941 provided the impetus that brought the holding and reconsignment points into being. The President's policy of giving maximum material aid to the Allies and the implementation of this policy by Congress made it clear that a tremendous volume of supplies would flow through the

[127] Ltr, CofT to Brig Gen Stanley L. Scott, Sv, Sup, and Proc Div WDGS, 17 Feb 47, OCT HB Topic Traf Contl WW II (3). The release system was canceled by ODT GO 16-C, 12 Oct 45, effective 15 Oct 45.

[128] In the beginning these installations were designated general depots and they were informally referred to by a number of other names, but the term "holding and reconsignment point" was officially adopted in the spring of 1942.

[129] *Annual Report of the Quartermaster General, 1918* (Washington, 1918), p. 53.

Atlantic ports when the country's production effort got into full swing. With a shipping shortage already at hand it seemed likely that supplies would become available more rapidly than they could be moved overseas. Because military supplies would constitute a major part of the lend-lease program and large shipments would have to be made to the new Atlantic and Caribbean bases, the War Department would have a heavy interest in keeping the Atlantic ports liquid. Transit storage was visualized as an indispensable element of any system that might be set up for the control of port-bound traffic.

During the spring of 1941 the subject was discussed repeatedly by officers of The Quartermaster General's Transportation Division, the Transportation Branch of G-4, and Brig. Gen. George R. Spalding (Ret.), who was then attached to the Division of Defense Aid Reports, which was later to become part of the Office of Lend-Lease Administration. Since both military and civilian storage space already was filling up, there was general agreement that new installations would be needed. After considerable preliminary planning, in which a not very successful effort was made by The Quartermaster General to ascertain from the other supply services how much space would be required for transit storage, positive steps were taken in mid-July 1941. Four leading eastern railroads were requested to propose sites about an overnight run from the seaboard that would be available for the new transit storage facilities. Two sites were chosen from those proposed and plans for construction work were undertaken at once. The properties were located at Marietta, Pennsylvania, and at Voorheesville, New York. The initial intention was that each installation would provide about 1,000,000 square feet of warehouse space and about 2,000,000 square feet of hard-surface open storage space.[130]

While these plans for new transit storage installations were being developed with The Quartermaster General's Transportation Division taking the lead, the same idea was being pursued by the Storage Unit, G-4, and the Depot Division, OQMG. In an abortive effort to hasten the availability of such storage, an old silk mill at Shamokin, Pennsylvania, was engaged. When the Transportation Division learned of this action, it notified G-4 that from its standpoint the property was wholly unsuitable. The multistoried building had only 368,000 square feet of warehouse space and was without adequate elevators; it was served only by branch rail lines and was not well situated for the quick movement of supplies to the seaboard. The lease was signed, however, and the Shamokin installation soon was designated a general depot to serve as a stopgap until new facilities were ready.[131] Some weeks later the Shamokin facility was redesignated a holding and reconsign-

[130] Draft of Memo, QMC for ACofS G-4, 25 Apr 31, sub: Regulation of Overseas Shipments, par. 6, not used after getting comments of supply services; Memo, Wardlow for Dillon, 27 Jun 41, sub: Storage and Warehouse Facilities; both in OCT HB TZ Gen H&RP; memo of conference to discuss establishing "regulating stations," 16 Jul 41, G-4/32697-2; Memo, Lt Col Frederick H. Black for Brig Gen Eugene Reybold, ACofS G-4, undated, reporting on meeting held 21 Jul 41, G-4/32697-2.

[131] DF, ACofS G-4 for TAG, *et al.*, 28 Jun 41, sub: Lease of RFC Property, G-4/32697-2; Memo, Wardlow for Col Cordiner, 17 Jun 41; Memo, C of Trans Div for TQMG, 15 Jul 41; Memo for Record by Wardlow, 15 Jul 41; last three in OCT HB TZ Gen H&RP; 1st Ind, ACofS G-4 for TQMG, 23 Jul 41; Memo, ACofS G-4 for TAG, 8 Aug 41, sub: General Plan for Shamokin; last two in G-4/32697-2; Memo, TAG for Arms and Services, 20 Aug 41, sub: Defense Aid Storage, AG 681 (8-14-41).

ment point, and the Marietta and Voorheesville installations—then in process of construction—were made subordinate to it. When operations began at Marietta and Voorheesville the arrangement proved unworkable, and in February 1942 those installations were made independent. The Shamokin facility was discontinued as of 1 June 1942.[132]

During the fall of 1941 the Transportation Division developed a program for additional holding and reconsignment points, which it believed would be needed eventually. A few days before the Japanese attack on our Pacific outposts the division recommended that such facilities be provided, as needed, near Richmond, Virginia, to back up the ports from Hampton Roads to Charleston; in the vicinity of Montgomery or Birmingham, Alabama, to back up the ports between Charleston and New Orleans; in the vicinity of Shreveport, Louisiana, to support the Gulf ports west of New Orleans; in California to back up San Francisco and Los Angeles, and in Washington to serve the Puget Sound ports and Portland, Oregon.[133] This program was approved, and on 31 December the Chief of Engineers was instructed to proceed with the selection of sites immediately.[134]

The program was subsequently extended. During the spring of 1942 authorization was given for an additional holding and reconsignment point at Elmira, New York. This facility was considered desirable because of the heavy use that would be made of the North Atlantic ports and because Elmira was served by a number of good freight rail lines. In June 1943 the last of the ten holding and reconsignment points was authorized, to be located at Auburn, Washington.[135] The need for this last facility grew out of the increased use that was being made of the North Pacific ports for lend-lease shipments and the relatively limited storage capacity at the seaboard.

Although the original conception of a holding and reconsignment point was that of an installation with about one million square feet gross of warehouse space and two million square feet gross of open storage space, the plan was changed as circumstances required. The facility at Shreveport was planned on a smaller scale because shipments routed through western Gulf ports were not expected to be heavy. The capacities of other points were increased as the need arose. Larger open storage space was found to be necessary in most cases because of the heavy shipments of equipment and other matériel that did not require covered storage.

The facilities at Marietta and Voorheesville, started in the late summer of 1941, were far from complete when the United States entered the war, but Marietta already was being used to a limited extent and Voorheesville began to receive freight for outdoor storage early in 1942.[136] The availability of storage at these installations during the early months of the war was a considerable factor in checking the congestion that threatened the North Atlantic ports.

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[132] Memo, ACofS G-4 for TAG, 24 Oct 41, sub: Command of Marietta and Voorheesville, G-4/32697-2; Memo, TAG for CofEngrs, QMC, *et al.*, 6 Feb 42, AG 681 (1-14-42); Memo, ACofS G-4 for CG Shamokin H&RP, 3 Mar 42, G-4/32697-2.

[133] Memo, TQMG for ACofS G-4, 4 Dec 41, sub: Additional Trans and Stg Facilities, OCT HB TC Gen New Facilities.

[134] Memo, ACofS G-4 for CofS, 11 Dec 41, OCT HB TC New Facilities; Memo, TAG for CofEngrs, 31 Dec 41, AG 600-12 (12-11-41).

[135] See full list of holding and reconsignment points in Table 20, p. 288.

[136] OCT HB Monograph 8, p. 22.



HOLDING AND RECONSIGNMENT POINT *at Pasco, Washington.*

Choice of sites was made through collaboration between The Quartermaster General's Transportation Division and the Corps of Engineers. The Transportation Division took particular care to insure that adequate rail capacity was available to afford a free flow of freight into and out of the points. It was considered desirable that the facilities should be far enough away from the ports to avoid the heavy metropolitan traffic but near enough to insure that supplies called to shipside on one afternoon could be delivered the next morning. The aim was to have them located on main rail lines but away from heavily trafficked industrial areas that might become congested. In the winter of 1941–42, when sites for the western points were being selected, word came from the General Staff that they should not be located near the seaboard because of the danger of bombing by the Japanese. As a result, a holding and reconsignment point was located at Yermo, California—a site that proved unsatisfactory because of its isolation and climate and the consequent

difficulty of obtaining sufficient labor to carry on operations.[137]

In planning these facilities the advice of a number of storage experts was obtained. Among them were Mr. Harry D. Crooks, a member of The Quartermaster General's Transportation Advisory Group, and Mr. Leo J. Coughlin. Mr. Coughlin later was commissioned as a colonel, and served during the war as chief of the Transit Storage Division in the Office of the Chief of Transportation. The buildings decided on were of one story, 960 feet long and 180 feet wide, with platforms for loading and unloading rail cars running the full length of each side and a platform for handling truck freight at one end. The open storage areas were provided with adequate tracks so that freight could be unloaded from cars with crawler or railroad cranes and placed in the space it was to occupy without additional handling. At several points a limited amount of shed space was provided. Because of their isolated locations, some of the points had to provide housing in addition to administrative buildings and utilities. Excluding Yermo, the sites averaged about 600 acres; the Yermo site was over 2,000 acres because of the unusual character of the terrain.[138] Although in the preliminary conversations some attention was given to refrigerated space and to storage for ammunition and explosives, neither type of storage was included in the holding and reconsignment points.

The larger part of the money for constructing the holding and reconsignment points was provided from lend-lease funds. In July 1941 when the first steps were being taken toward the establishment of these facilities, War Department funds were not immediately available. In order to avoid delay in starting construction General Spalding suggested that lend-lease funds be used. This was logical since at that time it was believed that the holding and reconsignment points, as well as some other projected facilities, would be used chiefly for the handling of lend-lease supplies.[139] The suggestion was followed not only with respect to the installations at Marietta and Voorheesville but also with respect to those that were undertaken later. Up to February 1944, lend-lease funds totaling approximately $43,000,000 had been used in constructing the holding and reconsignment points. This amount constituted about two thirds of the total cost.[140]

The holding and reconsignment points had been conceived as facilities for the storage of War Department shipments destined for oversea areas, including shipments for the U.S. Army and shipments under lend-lease. During the early months of the war it was necessary to divert lend-lease supplies procured by the Treasury and Agriculture Departments into Marietta and Voorheesville in order to protect the ports from congestion. The question then arose whether this should be permitted as a regular procedure. The need was obvious, and in view of the large financial investment the Lend-Lease Administration had made in these installations there was little doubt as to the answer. An additional argument was the fact that, under the plan for controlling

[137] OCT HB TC Gen New Facilities contains documents that give a running account of the selection of sites and the construction of facilities.

[138] OCT HB Monograph 8, p. 25.

[139] Memo, Col Black for Gen Reybold, undated, reporting on meeting held 21 Jul 41; Ltr, SW to Maj Gen James H. Burns, Div of Defense Aid Rpts, 30 Jul 41; both in G-4/32697-2.

[140] 1st Ind, CofEngrs for CofT, 17 Feb 44, OCT HB TC Gen New Facilities. These figures do not include the cost of the Auburn Holding and Reconsignment Point, where construction was still in progress.

port-bound shipments adopted in March 1942, the Chief of Transportation was to have control of the release and routing of lend-lease supplies procured by Treasury and Agriculture. Accordingly, all lend-lease supplies were eligible for transit storage at the holding and reconsignment points throughout the war.[141]

Time and effort were required to have the holding and reconsignment points recognized as essentially transportation facilities and to bring their operation under control of the Army's transportation officers. Initially, the points were placed under the control of the Assistant Chief of Staff, G-4, and were administered by his General Depot Service.[142] The Quartermaster General's Transportation Division did not like this arrangement but accepted it. The part that the installations at Marietta and Voorheesville played in relieving congestion at the North Atlantic ports during January and February 1942 served to strengthen the arguments of the transportation authorities. When a Chief of Transportation was created in March 1942, the operation of the "reconsignment stations for oversea shipments" was placed in his charge.[143] Gradually it became established that not only the operation of the points but the control of the utilization of their space and the flow of supplies in and out of them were functions of the Chief of Transportation.[144]

Additional time and effort were required to establish the doctrine that the holding and reconsignment points should not be used for general storage purposes but only for the temporary storage of freight earmarked for oversea shipment.[145] This doctrine was challenged in the spring of 1942, partly because it involved a new type of storage operation that many Army officers did not understand and partly because the general demand for storage space was exceedingly heavy. The Chief of Transportation considered the holding and reconsignment points essential to the proper functioning of his office and was unwilling to have their utility as elements of the transportation system compromised. He therefore opposed allotment of space to the supply services, at least until it had become evident that all space was not needed for transit storage. The supply services accordingly were informed that the points would be used only for shipments moving to the seaboard for transshipment overseas, and that no shipments should be consigned to these installations without the approval of the Chief of Transportation.[146] After it became evident that space could be used for other types of storage without interfering with the basic function of the holding and reconsignment points, this

[141] Memo, Col Henry B. Holmes, Jr., for Somervell, 4 Feb 42, sub: Control of Lend-Lease Shipments; Memo, Col Robinson E. Duff for Gross, 8 Feb 42; Memo, Wardlow for Dillon, 9 Mar 42; Memo, Dillon for Gross, 21 Mar 42, sub: Relation Between Storage and Transportation; all in OCT HB TZ Gen H&RP.

[142] Memo, TAG for Cs of Arms and Services, 20 Aug 41, sub: Defense Aid Stg and Trans, AG 681 (8-14-41); Memo, TAG for Cs of Supply Arms and Services, 6 Feb 42, sub: Shamokin Gen Depot and H&RP, AG 681 (1-14-42).

[143] Initial Directive for Org of SOS, 9 Mar 42, par. 10*c*.

[144] Memo, Dillon for Gross, 21 Mar 42, sub: Relation Between Storage and Trans, OCT HB TZ Gen H&RP; AR 55-25, 12 Oct 42, par. 1*f*; AR 55-155, 27 Nov 42, Sec. VIII, par. 38*c*.

[145] Memo, TAG for Cs of Arms and Services, 20 Aug 41, sub: Defense Aid Storage and Trans, AG 681 (8-14-41).

[146] Memo, CofT for Col Duff, 24 Apr 42, sub: Use of Transit Depots for Stg, OCT HB Wylie Staybacks; Memo, TAG for Cs of Supply Arms and Services, 11 May 42, sub: Trans and Stg of Lend-Lease Supplies, par. 3, AG 486.1 (5-6-42); Memo, CofT for CofOrd, 20 Jun 42, sub: Proper Functions of H&RP, OCT 523.091 Ordnance.

was arranged. The Chief of Transportation was unwilling, however, to allow any space to get beyond his control or to be incorporated in the Army general depot system.[147]

In view of the heavy shipments of naval supplies to Pacific bases and the limited capacity of the Pacific coast ports, arrangements were made in the summer of 1943 for the Navy to use space in the western holding and reconsignment points. Experience had demonstrated that Army and lend-lease supplies did not then require the entire capacity of those installations. Also, the Army believed that this arrangement would help to correct a tendency on the part of the Navy to concentrate its supplies at the ports and fill warehouse facilities so that space was not available for emergency needs.[148] In the spring of 1945, when plans were being made for the final thrust against Japan, the question arose whether the Navy should construct additional storage facilities or continue to use the Army's holding and reconsignment points. General Gross believed that the existing installations could meet the needs of both services provided they were used only for transit storage, but he pointed out that up to that time a considerable part of the naval supplies that had been admitted to the holding and reconsignment points had remained there for long periods. This was a violation of the principle of transit storage, which the Navy recognized and undertook to correct.[149]

The largest withdrawal of space from transit storage operations was made for the Transportation Corps depot system, which was inaugurated in February 1944. Early in the war when procurement was lagging, Transportation Corps equipment and supplies were frequently assigned to troops as soon as they were delivered by the manufacturers, and those that passed through the holding and reconsignment points remained there a relatively short time. As deliveries under the procurement program improved and stocks were accumulated, a depot system became necessary. The holding and reconsignment points were the only storage facilities operated by the Chief of Transportation, and since they had sufficient space it was natural that the Transportation Corps depots should have been located there. Initially, depots were established at Marietta, Montgomery, Lathrop, and Voorheesville, and later subdepots were set up at Elmira, Yermo, and Auburn. In May 1945 these depot activities were occupying 2,785,000 square feet gross of closed space and 15,082,000 square feet gross of open space. *(Table 20)*

Numerous other allocations of space were made by the Transit Storage Division acting for the Chief of Transportation. In such cases the footage required was relatively small and the allocations were made with the understanding that they could be withdrawn if the space was needed for transit storage. The agencies whose supplies were thus accommodated at the holding and reconsignment points included the British Ministry of Supply mission, the Maritime Commission, the

[147] Memo, Dep Dir of Plans and Opns ASF for Cs of Tech Svs, 1 Dec 43, sub: Distribution System Plan, OCT 401 Distribution Plan; Memo, CofT for Dep Dir Plans and Opns, 4 Dec 43, OCT HB Meyer Staybacks.

[148] Memo, Somervell for Adm Horne, 1 Jun 44, ASF Hq Navy 1942–44; Interv with Col Leo J. Coughlin, 29 Dec 44, OCT HB TZ Gen H&RP.

[149] Min of Conf, Matériel Distribution Committee OCNO, 5 Apr 45, pp. 7–11, OCT HB Topic Navy; Min of First Session, Joint Army and Navy Supply and Shipping Conf, Washington, 1–6 May 45, pp. 26–27, G-3 337 (1 May 45).

TABLE 20—WAREHOUSE, SHED, AND OPEN STORAGE SPACE AT HOLDING AND RECONSIGNMENT POINTS: 31 MAY 1945

(Thousands of Square Feet)

Location and Type of Storage	Warehouse		Shed		Open	
	Gross in Operation	Net Usable [a]	Gross in Operation	Net Usable [a]	Gross in Operation	Net Usable [a]
Total	11,176	7,645	102	95	49,033	24,366
Transit Storage	8,391	6,121	100	93	33,951	16,021
Auburn, Washington	891	657	49	44	1,651	945
Elmira, New York	1,499	1,071	0	0	10,716	4,971
Lathrop, California	783	571	0	0	2,228	1,114
Marietta, Pennsylvania	857	588	0	0	2,413	981
Montgomery, Alabama	345	254	0	0	1,202	711
Pasco, Washington	1,039	772	50	48	3,591	1,477
Richmond, Virginia	1,037	776	0	0	3,861	1,877
Shreveport, Louisiana	520	397	0	0	1,498	601
Voorheesville, New York	475	316	1	1	5,294	2,622
Yermo, California	945	719	0	0	1,497	722
Transportation Corps Depots	2,785	1,524	2	2	15,082	8,345
Lathrop, California	739	468	0	0	2,514	1,358
Auburn, Washington (Subdepot)	167	121	0	0	439	253
Yermo, California (Subdepot)	86	64	0	0	888	460
Marietta, Pennsylvania	583	302	0	0	3,200	1,329
Montgomery, Alabama	692	248	0	0	2,998	1,656
Voorheesville, New York [b]	518	321	2	2	5,043	3,289

[a] Net usable space was that portion of the gross space that could be used for storing matériel; it excluded space devoted to aisles, receiving and shipping, offices, and other nonstorage activities.

[b] The Transportation Corps subdepot at Elmira, under jurisdiction of the depot at Voorheesville, had been authorized but was not yet in operation.

Source: ASF Monthly Progress Report, 31 May 1945, Sec. 2-H, Storage Operations, pp. 45–46.

Department of Commerce, the Treasury Department, and various elements of the Army that required storage space in particular areas.[150] The troop equipment staging area, which was operated at the Elmira Holding and Reconsignment Point during the fall of 1944, assembled, processed, and held the equipment and supplies of particular troop units until the matériel was called to the ports for "preshipment" to Europe. This undertaking involved operations beyond those usually performed for matériel stored in transit and was therefore in the nature of an "extracurricular" activity.[151]

The fact that space in the holding and reconsignment points was available for these other purposes was the result of the effectiveness of the control over the routing of freight to these facilities and the efforts of the Transit Storage Division to prevent

[150] Rpts, Transit Stg Div, FY 1944, p. 7 and FY 1945, p. 12; TC Cir 50-13, revised 11 Aug 45.

[151] See above, pp. 157–59.

supplies from remaining for indefinite periods. Starting with the assumption that supplies normally should not remain more than thirty days and never more than sixty days, the division undertook to have property that had remained beyond sixty days removed by the procuring agencies. Later, the policy of notifying the procuring agencies whenever shipments had remained beyond forty-five days was adopted. Recognizing the difficulties created by changes in oversea requirements and the scarcity of storage space, the division did not actually demand the removal of the supplies, but it kept the agencies reminded of their responsibility.

The tendency of the procuring agencies, particularly the Treasury Department, to allow shipments for which they did not have other disposition to remain at the holding and reconsignment points indefinitely was a matter that required constant attention. It was difficult for these agencies, and also for the Storage Division of Army Service Forces headquarters, to fully accept the fact that the holding and reconsignment points were transit storage facilities and not depots.[152] Nevertheless, during the fiscal year 1945 the Transit Storage Division succeeded in reducing the amount of freight on hand in excess of sixty days from 11,000 to 3,500 carloads.[153]

The effort to minimize "dead storage" was in line with the Transportation Corps' policy of keeping the percentage of occupancy at the holding and reconsignment points low. This policy drew criticism from other branches of the Army that were confronted with growing inventories and crowded depots, but the Chief of Transportation insisted that ample free space should always be maintained to permit a fluid transit storage operation and to insure that emergency shipments could be accommodated if necessary. In enforcing this policy the carloads of freight actually in storage and the carloads booked for early delivery were totaled and the remainder of the capacity was considered free space. The average amount of free space was about 50 percent, taking into account the space allotted to Transportation Corps depots as well as that used for strictly transit storage operations. *(Table 21)*

During the four-year period 1942–45 the ten holding and reconsignment points received shipments equivalent to about 293,000 carloads, including matériel for storage in transit pending movement overseas and Transportation Corps depot stocks. This added up to about 8,790,000 short tons.[154] The great bulk of it arrived in carload lots, although some came in smaller shipments. The total freight handled in and out at the holding and reconsignment points was somewhat over 17,000,000 short tons. *(Table 22)*

The shipments handled at the holding and reconsignment points were of three types. Type A consisted of shipments that had been released for movement to the ports but had had to be diverted en route or moved back from the ports because of lack of shipping or change in movement plans. Type B consisted of matériel intended for early movement overseas that had been shipped directly to the holding and reconsignment points to be held as stockpiles upon which the ports could draw to meet current ship-loading require-

[152] ASF MPR, Sep 43, Sec. 6, Analysis, pp. 97–103, Flow of Traf Through H&RP; Rpt, Transit Stg Div, 26 Sep 45, sub: Accomplishments and Handicaps, p. 4, OCT HB Transit Stg Div.

[153] Rpt, Transit Stg Div, FY 1945, p. 7.

[154] The estimate is based on thirty tons to the carload, which was the average for Army matériel in 1944 and 1945.

TABLE 21—PERCENTAGE OF FILLED, BOOKED, AND FREE SPACE AT HOLDING AND RECONSIGNMENT POINTS ON DESIGNATED DATES

Date	Working Capacity (Carloads)	Percent Filled	Percent Booked	Percent Free
31 January 1943	65,344	34	10	56
31 January 1944	76,180	45	15	40
31 January 1945	88,300	34	17	49

Source: Analysis of H&RP occupancy in monthly issues of ASF Monthly Progress Report, Sec. 3. These analyses show separately the several points, the several procuring agencies, and carloads in open and closed storage. Beginning in June 1944 TC depot stock and TC matériel in transit storage are separated.

ments. Type C included supplies intended for eventual shipment overseas but not covered by current requisitions. Shipments of the latter type, which in the beginning were not expected to bulk large, became considerable as production increased and storage space at contractors' plants and technical service depots became overcrowded. A large part of such shipments consisted of Army supplies sent to the holding and reconsignment points for assembling into units before shipment overseas.[155]

A simple system of inventory and accounting was desirable in order to relieve the holding and reconsignment points of as much clerical work as possible. In the beginning technical service representatives at the points kept depot records of the property under their supervision. This plan proved time-consuming and the detailed records were not found necessary. In May 1943, therefore, formal accountability for supplies en route to oversea destinations was terminated when the shipments left the depots of the procuring agencies, and accountability was not established for property shipped to the holding and reconsignment points directly from contractors' plants. The holding and reconsignment points, as well as the ports of embarkation and the port agencies, thereafter maintained only carload identity, supported by informal "jacket files" in which copies of the bills of lading and any diversion notices were placed, with appropriate cross-indexing. A formal accounting system was necessary for Type C supplies since such shipments were usually broken up before being forwarded overseas and identity could not otherwise have been maintained.[156]

At the outset the Chief of Transportation's responsibilities in connection with the holding and reconsignment points, including supervision of storage operations and control of the utilization of space, were entrusted to his Transit Storage Division. In June 1942, in order to facilitate operational supervision, the division established district offices at Philadelphia and

[155] Procedure Governing the Handling of Trans and Accountability Papers on Shipts to H&RP, 10 Aug 42, OCT 140.2 H&RP; TC Cir 105-9, revised 11 Jun 45, sub: Standard Operating Procedure for Storage in Transit; Rpt, Transit Stg Div, FY 1945, pp. 4–5.

[156] Memo, Col Coughlin for Col Hodson, 25 May 42, sub: Accountability at H&RP; Memo, C of Transit Stg Div for Traf Contl Div, *et al.*, 12 Sep 42, and atchd Procedures; all in OCT 140.2 H&RP; WD Cir 127, 29 May 43, Sec. VI; WD Cir 275, 30 Oct 43, Sec. III; WD Cir 431, 6 Nov 44, Sec. V.

TABLE 22—SHORT TONS OF FREIGHT HANDLED IN AND OUT OF THE HOLDING AND RECONSIGNMENT POINTS: 1942–1945 [a]

Holding and Reconsignment Points	Total	1942	1943	1944	1945
All Points	17,123,457	1,631,446	5,332,841	6,106,232	4,052,938
Auburn, Washington	817,310	. . . . .	. . . . .	574,761	242,549
Elmira, New York	2,387,349	22,738	671,521	1,099,506	593,584
Lathrop, California	2,491,574	156,469	1,064,741	717,262	553,102
Marietta, Pennsylvania	2,955,166	655,291	830,903	995,569	473,403
Montgomery, Alabama	787,098	20,412	174,733	315,970	275,983
Pasco, Washington	2,104,639	163,107	602,710	655,913	682,909
Richmond, Virginia	1,481,465	96,665	407,235	537,325	440,240
Shreveport, Louisiana	689,275	17,222	170,312	293,780	207,961
Voorheesville, New York [b]	2,405,062	494,126	1,044,980	624,024	241,932
Yermo, California	1,004,519	5,416	365,706	292,122	341,275

[a] Transportation Corps depot stock included up to March 1944 but not thereafter.

[b] Includes 52,950 tons handled during 1943 and 1944 at open storage yard at Ravena, New York, which was under the jurisdiction of Voorheesville.

Source: ASF Monthly Progress Report, Sec. 2-H, Storage Operations, summarized for a statistical volume of this series, now in preparation.

San Francisco and obtained authorization for a third office in a southern city.[157] When the nine transportation zones were established in the following December, supervision of operations was decentralized to the zone offices and the district transit storage offices were discontinued.

Although the zone transportation officers thereafter were held responsible for detailed supervision of operations, the Transit Storage Division continued to provide over-all supervision and co-ordination of procedures and to make such inspections as were considered necessary. The utilization of space was controlled entirely by the division, since such control required a knowledge of operations and space conditions at all of the points and close co-ordination between the Transit Storage Division, the Traffic Control Division, and the Transportation Control Committee in regard to the release of shipments to the points and the diversion of shipments already en route. In addition to the holding and reconsignment points, the Transit Storage Division supervised storage operations at the railroad open storage yards and at the ports of embarkation.[158]

The general scarcity of labor and the isolated locations of the holding and reconsignment points created a manpower problem that required constant attention. The bulk of the operating personnel consisted of civilians directly employed. At certain points contractors were engaged to provide personnel for freight handling and some accessorial services. The engagement of contractors and the contract terms were closely controlled by the Transit

[157] Memo, CofT for C of Transit Stg Div, 1 Jul 42, sub: Allotment of Officers, OCT 320.21 H&RP.

[158] TC Pamphlet 1, Org Manual, gives the organization and defines functions of the Transit Stg Div; TC Cir 135-1, 4 Jan 43, sub: Inspection of H&RP, and revision, 15 Jan 45.

Storage Division.[159] German prisoners of war and Italian Service Units were used in some instances. At Yermo, which was in the most unfavorable position from the standpoint of labor procurement, civilians accounted for only one third of the staff on 30 April 1945. On that date the personnel of the ten holding and reconsignment points (excluding Transportation Corps depot activities) was as follows: [160]

Type	*Number*
Total	6,305
Officers	249
Enlisted men	124
Civilians (direct hire)	4,052
Contractors' personnel	609
Prisoners of war	681
Italian Service Units	590

From the beginning the Army's technical services had representatives stationed at the holding and reconsignment points to supervise the storing of their property and such assembling, processing, and accounting as might be necessary.[161] Since these representatives were responsible to the technical service chiefs, the commanders of the holding and reconsignment points did not have full control of their activities and were sometimes handicapped by the arrangement. In October 1943 the technical service supply sections were abolished, and the representatives of the technical services thereafter were responsible only to the commanders of the installations.[162]

The holding and reconsignment points were new installations and their operations were somewhat different from those of other storage facilities. The Transit Storage Division, therefore, gave constant attention to their operating methods and efficiency. The use of materials-handling equipment was studied in order to assure maximum service from this difficult-to-obtain machinery. The use of pallets and racks was exploited so far as practicable. Improvements in packaging and crating, which were developed by the technical services during the war, aided in improving handling methods. The average number of tons handled per man-day by shipping and receiving labor was increased from 11.03 in June 1943 to 16.02 in April 1945. The average number of tons handled per man-day by storage labor increased from 4.72 to 8.36 between these dates.[163] The division also studied the utilization of space in order to reduce wherever possible the footage used for aisles, gear shops, and working areas.

Railroad open storage yards were used to supplement the open storage space at the holding and reconsignment points. The railroads provided the yards and handled and guarded the material under contractual arrangements with the Army. The yards were under the supervision of The Quartermaster General until October 1943 and then passed to the control of the Chief of Transportation.[164] Under the Chief of Transportation, the zone transpor-

[159] Rpt, Transit Stg Div, FY 1945, p. 7. See OCT Cir 108, 21 Aug 43, for approved contract form.

[160] ASF MPR, May 45, Sec. 2-H, Stg Opns; OCT HB Monograph 16, p. 60. About 1,700 of these employees were assigned to holding and reconsignment points by the service commands to operate the utilities and to provide fire and police protection and medical service.

[161] Memo, TAG for C of Supply Services, 11 May 42, sub: Trans and Stg of Lend-Lease Supplies, AG 486.1 (5-6-42).

[162] OCT Cir 126, 9 Oct 43, sub: Consolidation of Technical Service Sections at H&RP.

[163] Rpts, Transit Stg Div, FY 1944, p. 8, and FY 1945, p. 13. Further improvements are shown by Transit Stg Div Rpt, 26 Sep 45, Ex. A. Detailed studies appear in monthly issues of ASF MPR, Sec. 2-H, Stg Opns.

[164] ASF Cir 89, 25 Sep 43, Sec. II.



OUTDOOR STORAGE SPACE *at holding and reconsignment points (top and middle); railroad open storage yard (bottom).*

tation officers were responsible for periodical operational inspections to insure that proper storage methods were being used and that adequate protection was being given public property, but the Transit Storage Division maintained general supervision and booked all space.[165]

The number of railroad open storage yards available and the number used by the Army varied from time to time. On 24 June 1944, when the activity was near its peak, forty-nine yards were available with a total capacity of 46,837 carloads; all but two were east of the Mississippi. Of this number, thirty-seven yards with a total capacity of 38,995 carloads were actually being utilized by the Army; 17,521 carloads were on hand, 4,433 carloads were booked to arrive, and free space was available for 17,041 carloads.[166] From October 1942, the first date for which figures are available, through September 1945 a total of 78,662 carloads were received and 83,832 carloads were shipped.[167] Only matériel intended for shipment overseas and moving in carload lots was accepted. Having a large number of widely scattered yards available enabled the Transit Storage Division to assign shipments to yards near their sources, thus reducing crosshauling and backhauling when the shipments were moved to the ports. Length of tenure was not as strictly controlled as in the case of the holding and reconsignment points.

The value of the holding and reconsignment points, supplemented by the railroad open storage yards, was generally recognized during the war. They helped in protecting the ports from congestion, aided in avoiding the uneconomical use of rail equipment for storage purposes, relieved the storage facilities of contractors and procuring agencies, and provided stockpiles near the seaboard from which supplies could be quickly moved into the ports. The chief of the Traffic Control Division believed that they made a large contribution to the war effort.[168] The Transportation Control Committee relied on them constantly in its effort to relieve strain on the ports and the railways. In the readjustment of supply movements necessitated by the end of hostilities in Europe, the holding and reconsignment points and the railroad open storage yards accommodated large quantities of freight no longer needed overseas.

No question arose regarding the justification for the holding and reconsignment points that backed up the Atlantic and Pacific ports. Failure to use the Gulf ports as extensively as had been anticipated gave rise in 1943 to questions regarding the advisability of retaining the Shreveport installation as a transit storage facility, but the Chief of Transportation maintained that this should be done as insurance against future abnormal requirements. He had in mind that as the effort against Japan increased New Orleans would have to load considerable cargo for the Pacific theaters because of the limited capacity of the west coast ports.[169]

It is evident, on the other hand, that the holding and reconsignment points provided more space than was actually needed

[165] TC Cir 135-2, 11 Jan 44; ASF Cir 56, 23 Sep 44, Sec. IV.

[166] Weekly Rpt of RR Open Stg Yards, 24 Jun 44, OCT HB TZ Gen RR Opn Stg Yds.

[167] Summarization of Weekly Rpt of RR Open Stg Yards, prepared by Transport Economic Sec, OCT, reworked for statistical volume of this series.

[168] Remarks by Williamson, in Min of Port Comdrs Conf, Boston, 30 Aug 43, p. 123.

[169] Memo, C of Contl Div OCT for C of Transit Stg Div, 23 Jun 43, OCT HB Ex Staybacks.

for transit storage. The effectiveness of the release system in holding export shipments at the source until shipping was in sight to transport them overseas meant that a relatively small percentage of such shipments had to be placed in storage en route to the ports. This was a development that the transportation officers of the Army and the Lend-Lease Administration could not foresee, and they took the safe course of providing too much rather than too little space at the holding and reconsignment points. Such a policy seems justified in the light of the harmful traffic congestion that developed at and back of the ports during World War I. As for the policy that maintained so large a percentage of free space in these installations almost to the end of the war, the justification is less apparent. In retrospect it would seem that the Chief of Transportation's insistence on a margin of safety against possible emergencies may have been carried too far.

Mobilization and Conservation of Freight Cars

Utmost efficiency in the use of equipment was necessary if the railroads were to meet the demands of wartime freight traffic. The tonnage to be moved exceeded all previous records. The number of cars owned by the railroads had decreased considerably since World War I, although their average capacity was larger. The amount of new rail equipment obtainable during the war was severely limited by the heavy demands made upon the nation's production resources by programs for the construction of ships, aircraft, tanks, guns, and other war necessities.[170] Under these conditions it was mandatory to get the greatest possible service out of the cars that were available, and this was a matter to which all the agencies concerned applied themselves assiduously. While this discussion is concerned chiefly with the measures employed by the Army, note must be taken of the efforts of the Office of Defense Transportation and the railroads themselves.

The Office of Defense Transportation, charged with maintaining adequate rail service for war needs, imposed regulations on shippers and carriers to overcome the practice of light loading that had grown up during peacetime. Shippers were prohibited from offering and the railways were forbidden to accept carload shipments that did not equal in weight the marked capacity of the cars or did not utilize all practicable stowage space. This regulation, together with other measures, resulted in an increase in the average loading of carload freight from 38.15 tons per car in 1941 to more than 40 tons during the period 1942–45. Shippers of less-than-carload freight were required to load at least 10 tons in a car unless exceptions were granted. The loading of such freight increased from an average of 5.5 tons per car in 1941 to about 9.5 tons during the war period. The ODT made studies of circuitous routings that were wasteful of car time and found that the number of cases of unjustifiable circuity was too small to warrant the issuance of a general regulation. But shippers and carriers were called to account when such cases were discovered.[171] In addition to these regulations, the ODT fostered a broad campaign of education to keep shippers and carriers

[170] For a fuller discussion, see Wardlow, *op. cit.*, pp. 319–23, 328–33.

[171] ODT, *Civilian War Transport*, pp. 11–15, 96–97.

alert to the need for conserving equipment by all possible means.[172]

The carriers conducted a constant campaign to promote the full loading and quick dispatch of cars. The railroad-sponsored shippers' advisory boards, which functioned in the thirteen car service districts, kept the need for efficient car utilization actively before the men upon whose interest and co-operation the success of the effort depended—the shippers and receivers of freight. About 600 car efficiency committees were organized to police the situation locally. The annual "perfect shipping month" represented a special effort to bring the many aspects of the problem forcefully to the attention of all concerned and to stimulate efforts to obtain better results. The carriers through the Association of American Railroads published loading rules covering the loading of specific commodities or the use of specific types of cars. These rules, which were based on experience and special tests, provided the best known methods of obtaining uniform, safe, and economical loading. The Army directed its transportation officers to observe the loading rules and collaborated with the AAR in formulating or improving those that pertained to military equipment.[173]

The plenary power that the Association of American Railroads had over the freight equipment of its members was a great aid in enforcing efficient employment. The Car Service Division could assign cars to particular traffic or to areas where they were needed regardless of ownership. In peacetime this authority was used to meet such abnormal requirements as that created by the annual grain movement. In wartime it virtually placed the freight cars of the nation in a single large pool that could be drawn on for military shipments as required.

The Military Transportation Section of the Car Service Division worked with the Traffic Control Division in the Office of the Chief of Transportation to insure that equipment for Army freight was available when and where it was needed. For especially large or urgent movements the Military Transportation Section began planning the supply of cars when the routing was issued. In other cases the transportation officer at the point of origin notified the initial carrier of his requirements and that railroad provided the cars from its own supply or obtained them from a connecting line. If enough cars were not obtained in this manner, the aid of the district representative of the Car Service Division was sought, or as a last resort the Military Transportation Section was requested to overcome the deficit by ordering the required number of cars to the loading point.[174] At the request of the Military Transportation Section each railroad designated a single operating official to whom requests for cars could be directed and gave him authority to comply with such requests immediately. In fact, all matters pertaining to military traffic were handled through that official.[175]

Shortages of some types of cars were encountered at certain seasons and in certain localities before the United States

[172] Joseph B. Eastman's address, "A Program for War Transportation Efficiency," at a meeting of the Pacific Coast Shippers Advisory Board, 9 December 1943, gives "do's" and "don't's" for shippers, receivers, and carriers of freight.

[173] AR 55-155, 27 Nov 42, par. 6; ASF Cir 193, 30 May 45, Sec. III, lists AAR publications.

[174] Wardlow, *op. cit.*, pp. 312–13; OCT HB Monograph 24, p. 73.

[175] Interv with J. J. Kelly, MTS, 16 Nov 51, OCT HB Topic RRs MTS.

became a belligerent, and thereafter they steadily increased.[176] Reports of shortages and surpluses, which were received by the Association of American Railroads weekly from the member lines, together with information obtained from its district representatives, aided the Car Service Division in utilizing the surpluses reported in certain districts or on certain lines to offset shortages of cars of the same types reported elsewhere. In its advance planning to avoid shortages, the division was aided by quarterly forecasts of freight car requirements compiled in collaboration with the shippers' advisory boards.[177]

The shortages, although an increasing cause for concern, did not become critical enough to affect military traffic until the winter of 1945. At that time the unusually severe weather in the northeastern states and the embargoes placed on shipments into that area immobilized so many cars that a widespread stringency was severely felt for several months. During this period the total of the reported shortages of boxcars far exceeded the reported surpluses. Although military supplies were exempt from the embargoes, the loading of some of the Army's less urgent shipments was delayed during this period.[178]

The Army as the nation's largest user of rail transportation had a special interest in and responsibility for the strict enforcement of economy in the utilization of cars. The arrangements for the routing of shipments and the control of traffic flow, which have been discussed, were major contributions to this cause. There remained the necessity of overcoming a tendency toward careless and wasteful use of cars at Army installations. The effort in that direction began during the rearmament period when military traffic was increasing and numerous new installations were being established. Early in the war the Chief of Transportation published the following basic principles of car conservation, which he urged all shippers and receivers of Army freight to observe:

> Load all cars to maximum carrying capacity or full visible capacity.
>
> Do not detain cars beyond the minimum time actually required for loading and unloading. This should never exceed twenty-four hours except in the most unusual circumstances.
>
> Remove dunnage and debris from cars at time of unloading to permit immediate reuse.
>
> Do not order cars in excess of actual requirements, nor hold empties for prospective loading.
>
> Place orders for cars as far in advance as possible, specifying type and size of car, time car is required, commodity to be loaded, and destination.
>
> Use all possible precautions against damage or contamination of cars.[179]

The prompt dispatch of cars at Army installations was an aspect of car conservation on which the Chief of Transportation placed strong emphasis.[180] Although constant attention had to be given to the

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[176] Report, Summary of Car Surplus and Car Shortage, issued weekly by the AAR, separated types of cars, districts, and railroads. See study based on these reports in ASF MPR May 43, Sec. 3, p. 76; C. B. Peck, "Freight-Car Needs Exceed Supply," *Railway Age*, January 1, 1944, pp. 39–40.

[177] Wardlow, *op. cit.*, pp. 313–14.

[178] Wardlow, *op. cit.*, p. 333; ODT, *Civilian War Transport*, p. 311. Studies of surpluses and shortages appeared frequently in ASF MPR, Sec. 3; see particularly issue of July 1945, p. 15, concerning boxcar situation.

[179] OCT Cir Ltr 9, 15 Jun 42, sub: Demurrage and Conservation of Trans Equip.

[180] Memo, CofT for CGs of SvCs and COs of Installations, 21 Oct 42, sub: Daily Car Situation Rpt, OCT HB Traf Contl Div Freight; WD Memo W 55-1-43, 12 Jan 43; WD CTB 36, 14 Dec 44, sub: Utilization of RR Cars; WD CTB 12, 10 Feb 45, Car Detention and Demurrage.

tendency of local transportation officers to call in cars before loading could actually be started in order to be sure that the equipment would be on hand when needed, the greater problem was to insure that cars were unloaded and released promptly by consignees. Scarcity of storage space, shortage of labor, and the general press of business created a strong temptation to delay unloading. In order to bring this condition under control, the larger Army installations were required to make daily reports on their car situation by wire and more detailed monthly reports by mail. This information, together with reports received through the Association of American Railroads, enabled the Chief of Transportation to take whatever action might appear necessary to prevent cars from being used for storage or to relieve congestion at an installation.[181] During the winter of 1944–45, when car shortages were being reported throughout the nation, car detention reports were required of all Army installations.

In order that Army installations receiving freight might prepare for the unloading and release of cars promptly on arrival, consignors were required in the beginning to notify the consignees by wire whenever shipments of one carload or more were started. After experience had demonstrated that these notices were not necessary on all shipments, the regulation was modified and notices of carload shipments were required only when the consignee was a port of embarkation or an installation of the Air Forces, when the shipment consisted of ammunition or gasoline, or when the consignee had requested such notice; in other cases wire notices were sent when shipments of ten carloads or more were made.[182] When shipments of twenty-five carloads or more were made to depots, the consignors were required to obtain clearance from the consignees before starting the shipments. This arrangement enabled the consignees to schedule the arrival of the freight in accordance with their ability to unload and store it, or to request that the shipments be postponed. As has been noted, all shipments to holding and reconsignment points were cleared by the Transit Storage Division in the Office of the Chief of Transportation, which controlled the use of space at those installations.[183]

Demurrage charges, which became effective when cars were held beyond the specified period (usually forty-eight hours), provided an additional means of enforcing car economy.[184] Commanders of Army installations that held cars beyond the demurrage-free period were required to justify the resulting charges to the Chief of Transportation.[185] Average-demurrage agreements between the Army and the carriers encouraged installations to earn credits by unloading and releasing cars quickly in order that these credits might be set against debits incurred on cars that

[181] For examples, see correspondence between the Association of American Railroads, the Chief of Transportation, and the Chief of Ordnance regarding the car situation at several Ordnance installations, OCT 504 and OCT 504 Toledo Tank Depot.

[182] Memo, TAG for CGs of Corps Areas, *et al.*, 4 Mar 41, sub: Notice by Wire to Consignee, AG 523.01 (2-28-41); AR 55-105, par. 7, 29 Dec 42, and Changes 3, 4, 8, 11; WD CTB 21, 22 Jun 44; WD CTB 33, 2 Jul 45; OCT HB Monograph 24, pp. 68–72.

[183] WD Cir 419, 26 Dec 42, Sec. IV; WD Cir 63, 1 Mar 43, Sec. V; WD Cir 93, 24 Mar 45, Sec. VI; Memo, Williamson for Wardlow, 19 Apr 45, sub: Rpt of Shipts, OCT HB Traf Contl Div Freight.

[184] The ODT increased demurrage charges from time to time to speed the release of types of cars in especially heavy demand; see ODT, *Civilian War Transport*, p. 314.

[185] WD Memo 55-23-43, 5 Jun 43, sub: Detention of RR Cars, AG 531.5 (6-4-43).

could not be handled so promptly.[186] The general traffic weight agreement entered into with the railroads and the Railway Express Agency, authorizing the use of weights given in the carriers' classifications and tariffs or established by the Army by means of tests, obviated the waste of car time involved in track scaling or the physical weighing of shipments in cars.[187]

The car situation reports from Army installations were compared in the Chief of Transportation's Control Division, and monthly tabulations were prepared showing, in addition to over-all results, the records of the several installations and types of installations. These comparisons were published for the purpose of creating competition and encouraging the commanders of facilities whose records were less satisfactory to increase their efforts. The studies do not cover the entire war period, but the available data indicate that there was progressive improvement. The following tabulation shows, for installations handling (loading or unloading) fifty or more cars per month, the percentages of cars released before the end of the first demurrage-free day, during the second demurrage-free day, and after the forty-eight-hour free time had expired:

Period	*Before end of first free day*	*During second free day*	*After expiration of free time*
1943			
November–December	63	24	13
1944			
July–December	63	25	12
1945			
January	66	24	10
February	69	22	9
March	68	23	9
April	71	22	7
May	67	25	8
June	69	23	8
July	71	22	7

Proper loading was another basic principle of car conservation to which the Chief of Transportation gave careful attention. It involved using car space to the fullest possible extent and following the prescribed rules relating to the loading of particular items. Full loading, in addition to getting the greatest possible service out of the available equipment, had several collateral advantages—it reduced the cost of loading and unloading, saved labor, reduced switching operations, and conserved yard space. The loading rules published by the Association of American Railroads and its Bureau of Explosives were designed to insure safe transit for the freight and protection of the cars from damage and at the same time to afford best utilization of car capacity. Many of these rules dealt with the use of open-top cars for such bulky and irregularly shaped items as tanks, motor vehicles, artillery, and boats.[188]

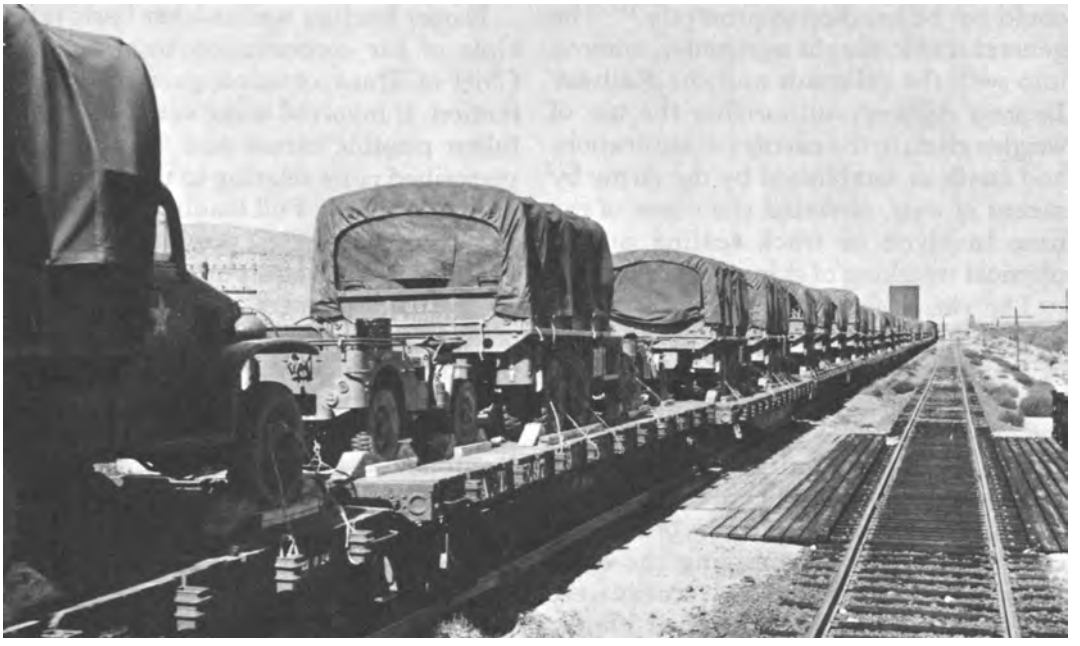
The Chief of Transportation impressed upon the technical services the relationship of full and correct loading to car supply and the prompt movement of their matériel.[189] Toward the end of the war he began circulating to transportation officers in the field photographic records of inadequate and improper loading and illustra-

[186] AR 55-175, 24 Aug 42, pars. 4, 6; WD CTB 17, 15 May 44, sub: WD Master Average Demurrage Agreement.

[187] WD Cir 284, 25 Aug 42; WD Cir 346, 15 Oct 42.

[188] The Ordnance Department also published loading rules for the equipment it procured since it did not consider the AAR rules sufficiently complete and clear; Memo, CofT for CofOrd, 12 Aug 44, sub: Proposed Ord Publications; 1st Ind, CofOrd for CofT, 9 Mar 45; both in OCT 505 Ord.

[189] Memo, CofT for TQMG, 3 Apr 43, OCT 505 QMG Heavier Loading, and similar memos to other technical services; Memo, CofT for CofOrd, 28 Jan 44, OCT 505 Ord.



TWO 2½-TON TRUCKS LOADED ON EACH FLATCAR

tions to show how the more difficult items should be stowed, blocked, and braced. He directed the zone transportation officers to see that installations had copies of the loading rules that were of interest to them, and to assist local transportation officers in making these rules effective.[190]

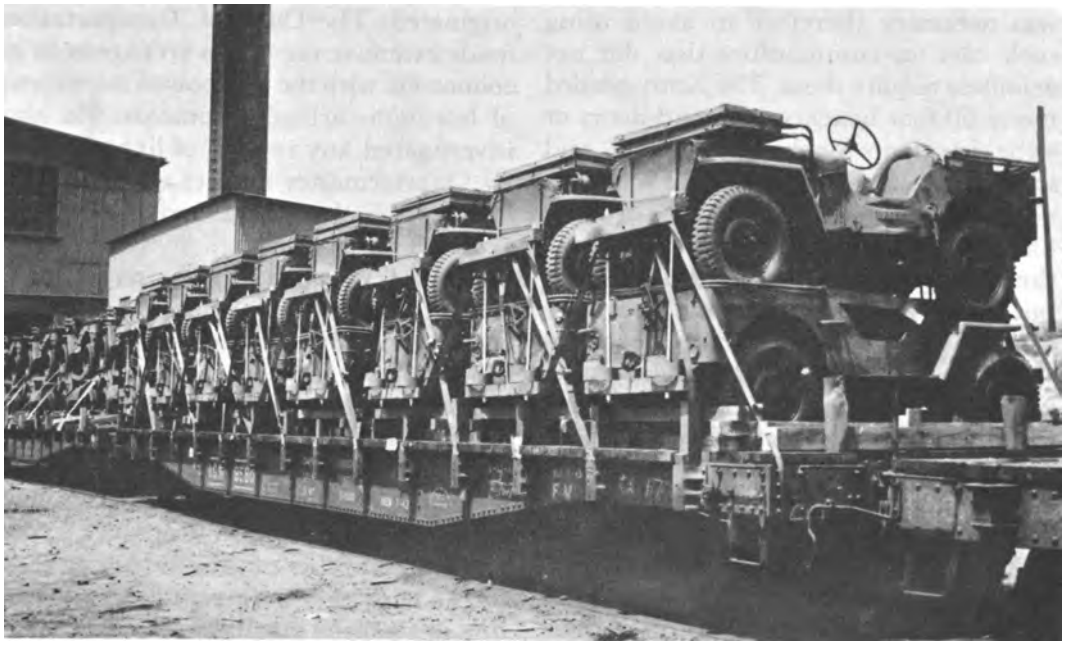
During the greater part of the war the Chief of Transportation was handicapped in dealing with the matter of correct car loading by questions of prerogative. In the prewar rearmament period when loading rules were being developed for many types of military equipment, the procuring services of the Army conducted their own loading tests, dealt with the Association of American Railroads regarding the publication of rules, and issued instructions to transportation officers at the installations they controlled. The Quartermaster General's Transportation Division co-operated in an advisory way but was not able to take the initiative.[191] The same condition prevailed after the Chief of Transportation took office in March 1942, although his responsibility under Army regulations for the management of Army transportation and for liaison with the carriers seemed to carry with it final responsibility for establishing and enforcing loading rules.[192]

The Chief of Transportation found this situation unsatisfactory, and he also objected to a disposition on the part of the Supply Division of ASF headquarters to

[190] Memos, CofT for ZTO Third Zone, 7 May 45, sub: Car Loading Rules; 14 May 45, sub: Car Loading of 20-Ton Semi-Trailer; 17 Aug 45, sub: Maximum Loading; all in OCT 505 Third Zone. The memorandum of 7 May 1945 lists published rules.

[191] OCT HB Monograph 6, pp. 161–63.

[192] AR 55-5, 5 Oct 42, and AR 55-105, 29 Dec 42.



SIXTEEN ¼-TON TRUCKS LOADED ON A FLATCAR *by double-decking*

exercise supervision over the procuring services in these matters. His Traffic Control Division sponsored loading tests, recommended loading methods, and made checks of bills of lading to determine how well the loading rules were being observed, but it had to rely on persuasion rather than direction to make its views effective. In the spring of 1945 the division took agressive steps to change the situation. The result was a declaration by ASF headquarters that "direction and supervision over the application of the railroads' loading rules in connection with War Department shipments, and liaison with the railroads' representatives and associations in connection with the revision of existing or the promulgation of new loading rules or specifications by the carriers" were duties of the Chief of Transportation.[193]

It was necessary to control wherever practicable the types and sizes of cars used for particular kinds of matériel. The object was twofold: to use cars in which equipment could be stowed with a minimum amount of lost space and to relieve the demand for the types of cars in short supply. The Army's need for open-top cars—flats and gondolas—was especially heavy and the supply was limited.[194] It

[193] Ltr, Williamson to Buford, Vice Pres AAR, 29 Mar 45 and reply, 28 Apr 45; both in OCT 080 AAR; 2d Ind, CofT for CofOrd, 29 Mar 45, OCT 505 Ord; Memo, CofT for Maj Gen Frank A. Heileman, ASF Hq, 3 Apr 45, sub: Routing Shipment Surveyors Rpts; 1st Ind by Gen Heileman, 4 Apr 45; Memo, Gen Sv Br for Transport Efficiency Sec, 28 May 45; last three in OCT HB Traf Contl Div Freight; ASF Cir 193, 30 May 45, Sec. III; Ltr, Buford for Messersmith, 30 Jul 45; Ltr, Williamson to Buford, 8 Aug 45; last two in OCT 080 AAR; OCT HB Monograph 24, 74–75.

[194] See ASF MPR, Jan 44, Sec. 3, p. 82, and Oct 44, Sec. 3, p. 56.

was necessary therefore to avoid using such cars for commodities that did not definitely require them. The Army needed many 50-foot boxcars with end doors or wide side doors for shipping trucks, and special measures were necessary to prevent such equipment from being ordered for other commodities. The use of cars of the wrong size not only wasted car space but also involved additional freight charges when the cars could not be loaded to the specified minimum weight. Study of bills of lading enabled the Traffic Control Division to detect when shippers, through ignorance or carelessness, had ordered improper cars and to bring these errors to the attention of the responsible officers.[195]

The conservation of refrigerator cars required special measures.[196] Most of these cars belonged to owners other than the common carriers and hence were not subject to the control the railroads had vested in the Association of American Railroads with respect to their own freight equipment. To meet this situation the Interstate Commerce Commission, at the request of the Office of Defense Transportation, issued a service order that placed all refrigerator cars in a pool and designated the manager of the Refrigerator Car Service Section of the AAR as the agent of the ICC to control the movement of such cars and to obtain the maximum service from them. Ordinarily refrigerator cars were subject to a great amount of deadheading, because the predominant movement of frozen and chilled products was from the western states to the east. In order to avoid the loss, the railroads were permitted to substitute refrigerator cars for boxcars for the transcontinental movement of suitable nonrefrigerated commodities to the states where heavy refrigerated shipments originated. The Chief of Transportation made extensive use of this arrangement in connection with the westbound movement of less-than-carload shipments. He also investigated any reports of light loading by Quartermaster market centers to determine whether there had been negligence.[197]

The Army relied entirely on the railroads for cars to move its solid freight traffic, but it owned and operated a fleet of tank cars for the transportation of liquids. At its peak this fleet embraced 4,100 cars and hauled between 30 and 40 percent of the Army's traffic in gasoline and other petroleum products, acids, and chemicals. The decision to acquire a considerable number of tank cars was taken on the basis of economy and as a precaution against the possibility that commercial tank cars, the greater part of which were owned by private operators other than the railroads, would be in heavy demand for vital nonmilitary traffic. Events proved the wisdom of this decision, for in 1942 and 1943 when most oil tank ships were withdrawn from the coastwise water routes the burden of this traffic fell largely on the rail routes. The operation of the Army's tank cars was supervised by a branch of the Traffic Control Division and

[195] OCT Cir 29, 13 Jul 42, sub: Limiting Use of Open-Top Car; OCT Cir 63, 22 Oct 42, sub: Expediting Mvmt of Freight Cars; 1st Ind, CofT for ZTO Third Zone, 15 Feb 43; 3d Ind, CofT for Detroit Tank Automotive Center, 17 Mar 43; last two in OCT 505 Chester Tank Depot; Memo, CofT for CofOrd, 6 Jul 43, sub: Proposed Restrictive Use of Type "A" and "B" Boxcars, OCT 531.4 Ord; TM 55-205, 24 Aug 44, p. 66.

[196] ODT, *Civilian War Transport,* pp. 27–34, discusses the general problem.

[197] Memo, CofT for TQMG, 28 Apr 43; Memo, CofT for ZTO Ninth Zone, 4 May 43; Ltr, ODT to CofT, 6 Oct 44; Ltr, CofT for ODT, 24 Oct 44; all in OCT 531.4 Conservation of Refrigerator Cars; Memo, CofT for ZTO, Third Zone, 30 Jul 45, sub: Service Order 104, OCT 505 Third Zone.

three regional offices. Their efforts to obtain maximum line-haul service and to avoid the use of cars for storage purposes increased the average daily mileage from 14.2 in 1941 to 81.9 in 1943.[198]

A limited number of boxcars were permanently equipped to transport military items that required special fittings. The railroads provided such cars during peacetime to move motor vehicle assemblies such as engines and transmissions. Many of them continued in service during wartime, although the number was reduced in view of the reduction in automobile production and the great need for boxcars for general traffic. During the war about 400 cars were permanently equipped with cradles for the transportation of aircraft assemblies. The permanent assignment of cars to this traffic and the transportation of the heavy cradling devices on the round trip free of charge were done under a special quotation by the railroads under Section 22 of the Interstate Commerce Act.[199]

Army carload freight loaded in 1944 and 1945 averaged 30 tons per car. This represented gradual improvement from 24 tons per car in December 1941, 28 tons in 1942, and 29 tons in 1943. It was considerably below the general average for rail carloadings, which was somewhat over 40 tons during the war years. There were several reasons for this difference. A large percentage of Army freight was made up of items that were light in relation to the space occupied (notably vehicles and aircraft assemblies), while a relatively small percentage consisted of the bulk commodities that afforded compact and heavy loading (coal, ore, and grain, for example). Some shipments were made under pressure of time, particularly those destined for oversea areas, so that full attention could not be given to the conservation of car space. Many shipments required large numbers of cars, and the carriers could not always supply the types and sizes desired without wasteful deadheading and delay. The wide variation in average carload weights as between the several procuring services is shown in Table 23. The significance of these averages can be visualized by considering them in conjunction with the tonnages shipped by the respective services as shown in Table 16.[200]

A Car Service Section was set up in Control Branch of the Traffic Control Division to give special attention to the mobilization and conservation of freight equipment. This section dealt with the Military Transportation Section of the Association of American Railroads on the allocation of cars in sufficient numbers and of proper types for particular shipments, studied the daily car situation reports in order to ascertain where remedial measures were necessary, and policed the observance of release dates by shippers. Considerable aid in dealing with these matters was given by the Transport Economics Section, whose statistical studies of car detention and car loading have been noted before.[201] The zone transportation officers

[198] For a fuller discussion, see Wardlow, *op. cit.*, pp. 381–85.

[199] Memo, Capt Schmidt for Wardlow, 2 Oct 44, sub: Special Handling of Airplane Parts; Interv with J. J. Kelly, 23 Nov 51, sub: Permanently Equipped Freight Cars; both in OCT HB Traf Contl Div Freight.

[200] Weight of carloads of principal Army items and savings of cars as between April 1943 and April 1944 are shown in ASF MPR, Jun 44, Sec. 3, p. 64. See also ASF MPR, Aug 44, Sec. 3, p. 76.

[201] Concerning the studies of Transport Economics Section, see rpts of Traf Contl Div, FY 1943, pp. 6–7; FY 1945, p. 44; 27 Sep 45, Tab 7; all in OCT HB Traf Contl Div Rpts.

were called on frequently to investigate conditions at installations where the car situation was unsatisfactory and to suggest measures for improvement.[202] Representatives of the Traffic Control Division discussed the problems with groups of local transportation officers and railroad representatives in order to impress upon them through personal contact the importance of car conservation.[203]

Despite the attention given the matter and the general progress made, the performance of Army installations in regard to correct loading and the prompt dispatch of cars was uneven. The Association of American Railroads frequently brought to the notice of the Chief of Transportation reports from its field representatives indicating that particular installations had failed to observe the approved practices in connection with particular shipments. In some cases investigation of these reports developed that there had been extenuating circumstances such as bad weather or labor shortages that delayed loading or unloading, or pressure for prompt shipment that prevented the exercise of the usual care in loading. When it was evident that the complaint was justified, the Chief of Transportation requested the chief of the technical service responsible for the operation of the installation concerned to take appropriate corrective action. The investigations sometimes showed that the railroads had not been without fault.[204]

Conservation of freight equipment through the avoidance of crosshauling and backhauling received continuous attention. This was essentially a problem of distribution and the Army's procuring services were primarily responsible for dealing with it, but the Chief of Transportation took an active hand because of the waste of transportation that the practice entailed.[205] The early attack on the problem through distribution planning boards within the several procuring services did not prove highly effective, and in August 1943 the boards were dissolved. The responsibility was then taken over by the Stock Control Division of ASF headquarters and corresponding units in the technical services.[206]

When studies of bills of lading and route orders by the Transport Economics Section disclosed evidence of crosshauling, the Chief of Transportation brought the facts to the attention of the procuring services concerned, but he had no authority to pursue the matter further. In August 1944 his facilities for studying the situation were broadened somewhat by a War Department regulation requiring transportation officers at depots and other ASF installations to report to him any incidents of crosshauling that came to their atten-

[202] On the handicaps of ZTO's caused by lack of authority to take positive action at field installations controlled by other services, see Wardlow, *op. cit.*, p. 119.

[203] A series of conferences held during February and March 1945 were attended by more than 2,000 Army officers, an equal number of rail representatives, and several hundred representatives of other government agencies; Rpt, Traf Contl Div, FY 1944, pp. 4, 5; Memo for Record by Capt Schmidt, 30 Mar 44, OCT HB Traf Contl Div Misc.

[204] Ltr, Williamson to Buford, Vice Pres AAR, 31 Oct 44, OCT 080 AAR.

[205] The Army defined crosshauling as "the shipping of materials and supplies into any area where the items are, at that time, procurable or available at a shorter distance than the contemplated point of origin"; WD Cir 338, 18 Aug 44, Sec. VII. The most difficult aspect of the problem was the shipment of component parts to assembly points and their eventual backhaul in the completed articles. The WPB and the ODT dealt with the matter on a nationwide scale.

[206] Memo, CG SOS for ACofS Opns Div SOS, CG AGF, *et al.*, 24 Oct 42, AG 540 (10-18-42); WD Cir 12, 7 Jan 43, Sec. VII, WD Cir 177, 3 Aug 43, Sec. IV.

TABLE 23—AVERAGE TONS PER CAR SHIPPED ON WAR DEPARTMENT BILLS OF LADING BY THE SEVERAL SHIPPING AGENCIES: DECEMBER 1941–DECEMBER 1945 [a]

Shipper	1941 (December Only)	1942	1943	1944	1945
General Average	24	28	29	30	30
Army Air Forces	17	20	20	20	21
Chemical Warfare Service	22	29	31	31	31
Corps of Engineers	17	41	40	38	36
Medical Department	(b)	(b)	18	18	18
Ordnance Department	37	35	30	31	30
Quartermaster Corps	18	22	26	29	31
Signal Corps	20	19	21	23	23
Transportation Corps	(b)	(b)	(b)	30	31
Organizational Moves	18	12	14	17	20
All Other	22	26	29	26	24

[a] Compilation covers all cars loaded with 10,000 pounds or more, whether carload or less-than-carload shipments.
[b] Included with "All Other."
Source: Monthly reports of Transport Economics Section, Traffic Control Division, OCT, reworked for statistical volume of this series.

tion.[207] Although much time and effort were given the matter, it was recognized that, because of the complex processes of procurement and distribution and the high degree of specialization in industry, crosshauling could only be reduced, not eliminated. The feeling in the Office of the Chief of Transportation at the end of the war was that limited yet worthwhile results had been accomplished.[208]

Consolidated Car Service

The consolidated car service, which the Chief of Transportation established as part of his wartime operation, was an unprecedented venture, since neither the Army nor any other governmental agency had operated such a service previously. It proved valuable, not only for the Army but also for the other armed services, in expediting the delivery of small shipments, conserving car space, reducing freight charges, and keeping shipments under control while they were en route.[209]

Although carload freight constituted the great bulk of the Army's tonnage, less-than-carload (LCL) freight accounted for about 40 percent of the total number of shipments. Transportation officers at Army installations were required to consolidate their small shipments into carloads when-

[207] WD Cir 338, 18 Aug 44, Sec. VII. Transportation officers at AAF installations did not report to the Chief of Transportation but to the Traffic Division, AAF headquarters.

[208] For further discussion and documentation, see Chronological Description of Developments in Cross-Haul Economy Program of War Department, 11 May 44, OCT HB Traf Contl Div Freight, and Wardlow, *op. cit.*, pp. 344–45.

[209] OCT HB Monograph 15 discusses this service in greater detail than can be undertaken here; the author of this wartime monograph conferred frequently with the officers who were directly concerned with the operation. AAR, *Transportation in Wartime* (Washington, 1947), pp. 199–203, discusses the "merchandise," "package," or "LCL" services of railroads, truck lines, and freight forwarders.

ever possible, but in most instances the accumulation of a carload of such freight to move from one installation to another installation could not be accomplished without intolerable delay.

During prewar years transportation officers had the choice of several routes for their small shipments. Usually these shipments had been dispatched by railroad LCL service, which was more expensive than carload service, yet rather slow. The more urgent small shipments had been forwarded by railway express, which was speedy but much more costly. Some shipments had been routed over the highways, but on long hauls the truck lines had proved unsatisfactory. Furthermore, when these services were used, the Army lost control of the shipments while they were in transit, and in wartime this was undesirable, particularly in connection with supplies destined for the ports for transshipment overseas. When General Williamson, then a civilian, became chief of the Traffic Control Division in the spring of 1942, he saw an opportunity for the Army to establish its own system for accumulating LCL shipments in areas from which such shipments were heavy, consolidating them into carloads, and forwarding them at carload rates to distributing points, where the carloads would be broken up and the shipments reforwarded to their respective destinations. Williamson's experience as general traffic manager for a large mail-order house aided him in visualizing the advantages of such a system.[210]

A service similar to that contemplated by Williamson was offered by commercial freight forwarders. They performed the assembling, consolidating, and distributing operations, charged their clients the less-than-carload rate, and kept as compensation for their services the difference between that rate and the carload rate they paid the carriers. Under a prewar regulation Army transportation officers were forbidden to use freight forwarders because they were not under the regulation of the Interstate Commerce Commission. In peacetime the need for their services was limited, but in wartime they could be useful. In March 1942, with legislation pending to bring freight forwarders under federal regulation, the Army prohibition was lifted.[211] After the Army's consolidated car service was established, freight forwarders were used only on routes not covered by that service.[212]

The Army consolidated car service was started on 1 July 1942, with a consolidating station at Chicago and distributing agencies at Los Angeles and San Francisco. The LCL shipments from Midwestern and eastern states to California were heavy, and assured a steady movement of consolidated cars. All transportation officers were required to consign LCL shipments between the specified areas, with certain designated exceptions, to the Chicago station for consolidation and onward movement. The excepted shipments included explosives and other dangerous commodities, perishables, household goods, items too large for loading in side-door boxcars or requiring the use of a crane, and livestock. A section of a freight house of the Chicago

[210] Memo, Williamson for Gross, 15 Apr 42, sub: Proposal for Estab Consolidated Car Opns, OCT 523.02 Freight; Remarks by Williamson at ZTO Conf, Washington, 24–26 Sep 43, pp. 69–75, OCT HB Zones Gen.

[211] AR 30-905, 1 Aug 29, par. 13, and Changes 1 and 2; Memo, Rail Br for CofT, 15 Mar 42, sub: AR Pertaining to Freight Forwarders, AG 500 (5-27-29)(1), Sec. III; WD Cir 91, 28 Mar 42, Sec. II; OCT HB Monograph 6, pp. 133–34.

[212] The conditions under which commercial freight forwarders were employed during the war are discussed below, pp. 312–13.

Junction Railway was selected for the consolidating station because it had a large receiving platform for truck deliveries, adequate rail trackage and platforms, and satisfactory freight handling and office space; it also had the advantage of being near the Chicago Quartermaster Depot, where many small shipments originated. The facilities for the delivery of cars from the station to the trunk lines were excellent.[213] At San Francisco a railroad freight house was leased for the distributing agency, and at Los Angeles arrangements were made with a freight forwarding and trucking concern to unload and transship the contents of consolidated cars.[214]

The Chicago–California service, which was started as an experiment, quickly proved its value and additional consolidated car routes were opened. Each extension of the service was preceded by a close study of the nature and volume of the LCL shipments moving between the areas involved. At the close of the war consolidating stations were being operated by the Chief of Transportation at Chicago, New York, Philadelphia, St. Louis, Cleveland, and San Antonio; distributing agencies were located at Los Angeles, San Francisco, Oakland, Seattle, Tacoma, Spokane, Portland, El Paso, and Atlanta. During 1944 two substations of the Chicago Consolidating Station were placed in operation, one in Chicago to relieve the parent station of some of the truck deliveries that were overtaxing its facilities, and another in Detroit to collect LCL shipments from the surrounding manufacturing area and move them by truck to Chicago for consolidation into carloads.

The buildings and other facilities for these installations were rented from local transportation or warehousing concerns. The physical handling of freight at the consolidating stations was performed by railroads under published tariffs or special contracts; at the distributing agencies it was performed by local cartage companies that also provided pickup and delivery service.[215]

In addition to the above Transportation Corps stations and agencies, consolidating and distributing functions were performed on behalf of the Chief of Transportation by a number of installations operated by other branches of the Army. These were the Fort Worth Quartermaster Depot, the Ogden Arsenal, and the ASF depots at Ogden, Columbus, and Memphis. Existing facilities were adequate except at Ogden and Memphis, where some additional construction was necessary.[216] The commanders of the installations provided personnel for the physical handling of the freight.

In many cases it was found feasible to perform both consolidating and distributing functions at the same installation. The Chicago Consolidating Station, for example, broke down and distributed carloads that had been consolidated at New York and Philadelphia. The Los Angeles Distributing Agency consolidated cars for consignment to points east of the Mississippi. The Seattle Distributing Agency consolidated cars for movement to Prince Rupert, where the freight was reshipped to stations in Alaska. This dual operation was performed wherever it could be undertaken profitably; all consolidating stations were also distributing agencies, but the

[213] Memo, Williamson for Gross, 23 May 42, OCT 532.02 Chicago; WD Cir 184, 12 Jun 42.
[214] OCT HB Monograph 15, pp. 28–29.
[215] Rpts, Traf Contl Div, FY 1943, pp. 17–19; FY 1944, p. 34; both in OCT HB Traf Contl Div Rpts.
[216] OCT HB Monograph 15, p. 4.



THE CONSOLIDATED CAR SERVICE. *The distributing agency at Los Angeles, California (above); the loading platform of the consolidating station at Philadelphia (below).*



reverse was not always the case.[217] An installation was called a consolidating station or a distributing agency according to the activity that predominated.

Not all consolidated cars were consigned to distributing agencies; about 30 percent of them were consigned directly to the installations for which the supplies were destined. The consolidating stations were encouraged to exploit the possibilities of direct consignment, since this type of operation saved the handling cost at a distributing agency. Ports of embarkation and large depots were the principal consignees of such cars. On the same principle, though on a smaller scale, arrangements were made for originators of LCL freight to consign carloads to Army distributing agencies for breakdown and reshipment to consignees within the areas served by those agencies.[218]

As is evident from the preceding discussion, the basic purpose of the Army's consolidating and distributing enterprise was to provide service between specific areas.[219] Although this service took care of the heavier LCL movements, there were many routes in the intricate pattern of traffic between Army installations and between Army contractors and installations for which it did not provide. In such cases the LCL services of the railroads, the highway carriers, and the commercial freight forwarders were employed.

The number of consolidated car routes that could be profitably maintained depended on the volume of the LCL shipments moving between particular areas, and after the Chicago–California service was started Williamson began negotiations with the Navy to bring it into the project. Accounting difficulties interposed the principal obstacle, but all obstacles were overcome and Navy participation began on 1 February 1943. The installations were then redesignated Army-Navy consolidating stations and distributing agencies. The Marine Corps was added in April 1943, and the Coast Guard in February 1944. Although the LCL shipments of all the armed services were thus made eligible for movement over the consolidated car routes, responsibility for the operation of the service remained entirely with the Army Chief of Transportation. Operating costs were prorated according to the tonnage handled.[220] Army shipments comprised about two thirds of the total tonnage handled and shipments of the other armed services about one third. *(Table 24 and Chart 9)*

The consolidated car service worked out very satisfactorily from the standpoint of the railroads and transportation in general. The average loading per car was far heavier than the general average for LCL loadings. It was long-haul traffic, the average distance being about 2,500 miles. Speedy delivery was the chief objective, and the emphasis that the Chief of Transportation placed on prompt loading and unloading, as well as his insistence that consolidated cars of military freight be moved in fast trains, promoted quick car turnaround. Close supervision over the

[217] Rpt, Traf Contl Div, FY 1944, p. 34.

[218] OCT HB Monograph 15, pp. 8-9; Memo, Williamson for Finlay, 13 Oct 42, sub: Loading of Direct Cars, OCT 505 Chicago.

[219] These areas are designated in the basic directives covering this service: WD Cir 184, 12 Jun 42; WD Cir 255, 30 Jul 42; WD Cir 302, 7 Sep 42; WD Cir 11, 6 Jan 43; WD Cir 49, 12 Feb 43; WD Cir 244, 7 Oct 43; WD Cir 165, 27 Apr 44; WD CTB 14, 14 Apr 44; WD CTB 19, 1 Jun 44; WD CTB 36, 16 Jul 45. See particularly maps in latter document.

[220] OCT HB Monograph 15, pp. 147-60, App. V; Memo, C of Bureau of Supplies and Accounts for Commandants of Naval Districts, *et al.*, 21 Jan 43, OCT HB Zones Gen Consol Sta; OCT Cir 36, 3 Mar 43; TC Cir 60-1, 1 Jan 44, and revision, 23 Jun 44.

TABLE 24—TONS OF LESS-THAN-CARLOAD FREIGHT CONSOLIDATED BY THE ARMY-NAVY CONSOLIDATING STATIONS: JULY 1942–DECEMBER 1945

Station	Total	Army	Navy, Marine Corps, Coast Guard
Total	2,388,941	1,569,392	819,549
New York [a]	434,368	205,494	228,874
Philadelphia [a]	322,254	157,014	165,240
Chicago [b]	1,102,982	740,909	362,073
St. Louis [c]	187,165	132,435	54,730
Cleveland [d]	13,421	4,789	8,632
Other [e]	328,751	328,751	. . . . .

[a] First shipments in September 1942.
[b] First shipments in July 1942.
[c] First shipments in April 1944.
[d] First shipments in July 1945.
[e] Includes freight consolidated by distributing agencies.

Source: Monthly reports, Consolidating and Distributing Agencies Branch, Traffic Control Division, OCT, reworked for statistical volume of this series.

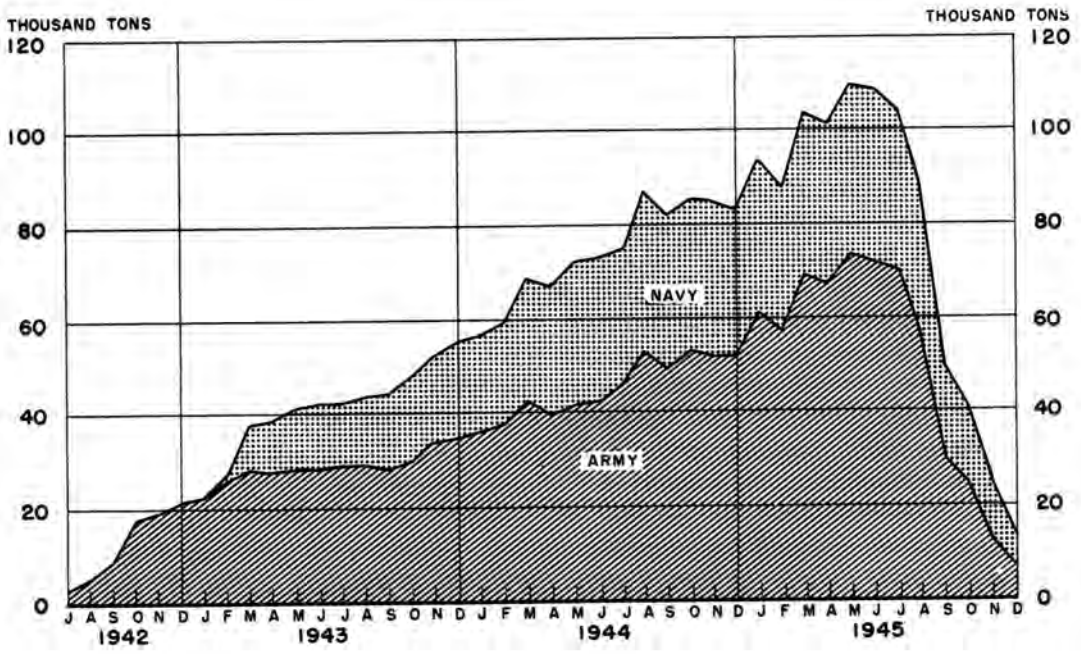
loading and unloading operations resulted in careful stowage, relatively little damage to the freight, and cleanliness of cars when they were released.

In January 1943, in an effort to relieve the shortage of boxcars, the Interstate Commerce Commission authorized the use of refrigerator cars for suitable types of dry freight on certain westbound routes over which refrigerator cars usually were deadheaded. The Chief of Transportation gave full support to the program, and up to the end of the war well over 45,000 refrigerator cars were loaded at the consolidating stations—about half of them at Chicago. Since on the average about two and a half refrigerator cars were required to move the load of a boxcar, the number of boxcars saved was about 18,000.[221]

Routings for consolidated cars were worked out by the Consolidating and Distributing Branch of the Traffic Control Division, rather than by the Freight Branch. By comparing the actual transit times over various combinations of lines, the branch determined which routings were the more satisfactory. Blanket route orders were issued for shipments from each consolidating station to each regular destination, the routes to be utilized by the stations in such a manner as to distribute the traffic equitably among the carriers. Although initially the cars dispatched each day from a particular station were divided among the approved routes, it was soon found profitable to give as many cars as possible to one initial carrier, which hauled them to a junction point where they were dispersed to their respective destinations. This plan often enabled the initial carriers to make up a full train of merchandise cars that moved on fast schedule; it also reduced switching and thus relieved busy freight yards and conserved motive power. The

[221] OCT HB Monograph 15, pp. 14–17, 51, 52; Memos, CofT for NY Consol Sta, 2 Feb 43 and 30 Aug 43, OCT 531.4 NY; ASF MPR, Aug 45, Sec. 3, p. 7.

CHART 9—MONTHLY TONNAGE OF LESS-THAN-CARLOAD FREIGHT CONSOLIDATED BY THE ARMY-NAVY CONSOLIDATING STATIONS: JULY 1942–DECEMBER 1945*



* Includes freight consolidated by the distributing agencies. Navy freight includes that of the Marine Corps and the Coast Guard.

Source: Monthly reports, Consolidating and Distributing Agencies Branch, Traffic Control Division, OCT, reworked for statistical volume of this series.

consolidating stations accordingly were instructed to rotate the traffic among the approved routes, at first on a weekly and then on a fortnightly basis. The latter arrangement enabled the railroads to plan for the handling of military consolidated cars over a period, and at the same time maintained the principle of equitable distribution.[222]

The routings were so carefully planned and the deliveries so closely scheduled that this service was appreciably affected by the diversion orders of an agent of the Interstate Commerce Commission who was stationed in Chicago to reroute freight trains whenever this became necessary as a means of relieving congestion on a particular line or at a particular gateway. After about a year of effort the Chief of Transportation succeeded in having carloads of military freight moving under symbols—that is, specifically expedited shipments—exempted from such orders, but he was never able to have consolidated cars symbolized. In addition to the fact that they involved delayed deliveries, diversions also affected adversely the ability of the Traffic Control Division to furnish information regarding the location and probable arrival time of shipments. This was particularly serious in connection with shipments to the ports for loading in particular vessels or particular convoys.

[222] OCT HB Monograph 15, App. II, pp. 50–56.

When such cases arose, the division was obliged to call upon the carriers for special expediting service, a procedure it endeavored to avoid as much as possible because of the disturbing effect on the carriers' operations.[223]

The truck lines also derived benefit from the consolidated car service. The Chief of Transportation found that the highway carriers gave faster service than the railroads in moving LCL shipments over the shorter distances from points of origin to consolidating stations and from distributing agencies to consignees, and he urged that they be used whenever practicable. As a result, many truck operators were able to obtain good return loads on routes where this had not been possible.[224] Certain motor carriers were willing to enter into agreements allowing reduced rates on movements from points of origin to the consolidating stations in Chicago, New York, Philadelphia, and St. Louis in view of the heavy and regular shipments to those stations.[225] As already stated, trucks were used with great success in moving LCL shipments from the Detroit substation to the consolidating station in Chicago, and the necessity of establishing a consolidating station in Detroit was thereby avoided. In some parts of the country where rail rates were subject to land-grant deductions, the highway tariff rates were higher. When this situation existed, the Chief of Transportation endeavored to obtain sufficiently fast service from the railroads or to induce the truck lines that had not already signed equalization agreements to do so. When neither effort succeeded, the highway carriers were used for urgent shipments despite the higher rates.[226]

A considerable part of the freight delivered to the consolidating stations originated within the respective metropolitan areas. Initially the Army regulation contemplated that such freight would be delivered to the consolidating stations by the consignors, but vendors whose contracts provided for delivery f.o.b. plant were not bound to do so, and frequently refused to bear the drayage charges. In an effort to meet the situation, the regulation was revised to require contracting officers to place a clause in each contract with a vendor located in a city where there was a consolidating station providing for delivery f.o.b. consolidating station.[227] This arrangement conflicted with current procurement practices, and was not found workable by the technical services. The requirement was dropped, therefore, and when contractors for articles purchased f.o.b. plant refused to pay the drayage charges, the government did so.[228] The matter of local drayage at government expense was simplified by contracting with a trucking concern in each city to haul all such traffic to the consolidating station, and also to haul shipments received at the consolidating station for distribution to consignees in that area.[229]

The commercial freight forwarders were not happy about the Army's consolidated

[223] Ltrs, Williamson to AAR, 23 May 44, OCT 080 AAR, and 1 Jun 44, OCT 523.091 AAR; OCT HB Monograph 15, pp. 56, 57.

[224] Ltr, American Trucking Associations to Gross, 2 Nov 42, and reply, 4 Nov 42, OCT HB Gross Day File.

[225] OCT Cir Ltr 36, 9 Nov 42, sub: Use of Motor Carriers; WD Memo W 55-19-43, 16 May 43, and Changes 1, 9 Oct 43.

[226] OCT HB Monograph 15, pp. 64–67, 69–71.

[227] WD Cir 302, 7 Sep 42, pars. 7 and 14 of Secs. I, II, III.

[228] OCT HB Monograph 15, pp. 67–68; WD Cir 244, 7 Oct 43, par. 9 of Secs. I, II, III.

[229] See Ltr, ZTO Sixth Zone to OCT, 18 Sep 45, p. 17, sub: Rpt on Accomplishments and Handicaps, OCT HB Sixth Zone Gen.

car service since it dealt with freight that they otherwise might have handled. In 1943 they undertook to stop the allowance of special rates by the carriers for the movement of LCL shipments to consolidating stations and from distributing agencies, but their appeal to the Interstate Commerce Commission in this matter was unsuccessful.[230] In 1945 they opposed the establishment of an additional consolidating station at Cleveland.[231] This does not imply that the freight forwarders were excluded from military traffic. Freight forwarders could be used on routes not covered by the Army consolidating operation, and they could be employed for moving freight to the Army consolidating stations when their service was advantageous to the Army. In order to establish uniform and acceptable conditions in connection with the use of freight forwarders, each such concern was required to sign an individual agreement with the Chief of Transportation. The names of the forwarders who had agreements were published from time to time, and Army transportation officers were directed to use only those that were listed.[232]

When military shipments were turned over to freight forwarders, the forwarders became the shippers and consequently the freight charges of the carriers were not subject to land-grant deductions. This difficulty was overcome by an agreement between the railroads, the approved forwarders, and the War Department stipulating that when Army shipments that had been consolidated by forwarders moved over land-grant railroads, the forwarders making such consolidations would give statements to the General Accounting Office and the railroads so that land-grant deductions could be taken on military freight.[233]

The use of express for shipments to the consolidating stations was limited as much as possible not only because of the greater cost but also because of a number of practical difficulties. The billing procedure of the Railway Express Agency did not provide all the information needed by the consolidating stations to accurately reforward shipments to their final destinations, and express shipments usually reached the consolidating stations considerably before the bills of lading arrived by mail. Because of the Railway Express Agency's nationwide service, its employees sometimes dispatched shipments to their ultimate consignees rather than to the consolidating stations. After unsuccessfully trying various expedients to eliminate these difficulties, the Chief of Transportation advised shippers that, when they considered it necessary to use express, they should forward their shipments by that means directly to the consignees. The same advice was given with respect to the use of parcel post.[234]

The operations of the consolidating stations and the distributing agencies were geared to the accomplishment of several principal objectives: (1) speed in delivery of shipments, (2) accuracy in the reforwarding process, (3) full utilization of car space, and (4) avoidance of damage to the merchandise. Most of the facilities used by the consolidating service had been de-

[230] OCT HB Monograph 15, pp. 84–85.

[231] Ltr, Freight Forwarders Institute to Gen Gross, 27 Apr 45; Memo, Williamson for Gross, 9 May 45; both in OCT 323.3 Cleveland.

[232] WD Cir 293, 31 Aug 42, par. 8; WD Memo W 55-4-43, 3 Feb 43, sub: List of Approved Freight Forwarders; WD Memo W 55-35-43, 20 Aug 43; WD CTB 26, 24 Aug 44, Utilization of Commercial Freight Forwarders.

[233] Rpt, Traf Contl Div, FY 1943, p. 35; WD Cir 50, 13 Feb 43, par. 1.

[234] OCT HB Monograph 15, pp. 62–64.

signed for other purposes and, although they were remodeled to some extent, they fell short of the ideal. These shortcomings and the scarcity of labor were offset wherever possible by the use of mechanized equipment, notably fork-lift trucks and gas-powered tractors. The Chicago Consolidating Station, which handled a considerable number of heavy items, had two 10-ton cranes. Through study of the results achieved the procedures used at the several stations gradually were standardized. In 1944 a checking system was introduced to provide a means of verifying at any time during loading that all packages stowed in a car were for the same destination, and this system considerably reduced misloading. At the request of the Chief of Transportation the Freight Claims Division of the Association of American Railroads sent representatives to the consolidating stations at intervals to observe their methods of handling and stowing freight and to offer suggestions. The reports on these inspections uniformly spoke well of the methods used.[235]

As a procedure essential to the speedy delivery of shipments, the Chief of Transportation laid down the policy that freight must be forwarded from consolidating stations and distributing agencies without delay. At the consolidating stations there frequently was conflict between the policy of prompt dispatch and that of loading cars to the maximum. The rule was that shipments should not be held on the platforms or in the cars more than twenty-four hours, except in unusual circumstances. The Chicago station reported at the end of the war that 93 percent of the freight that it had consolidated had been dispatched on the day of receipt.[236]

While the Chief of Transportation placed a military staff at each installation to supervise the operation and handle the administrative work, the freight handlers were provided entirely by contractors. Labor supply was a continuing problem and the contractors had to employ unusual recruiting methods to maintain a force of laborers, with or without experience, adequate to give the prompt dispatch to shipments that the Chief of Transportation required. The Chicago Junction Railway, following a practice used extensively by the western railroads during the war, imported about 250 Mexicans for this purpose. The use of wholly unskilled workers for moving and stowing freight placed a heavy burden on the supervisory staff in its effort to minimize the cost and inconvenience resulting from the misdirection or improper loading of shipments.[237]

The railroads' practices relating to freight charges on consolidated cars presented a problem to the Army in its effort to dispatch shipments promptly and at the same time keep the charges as low as possible. Two general types of mixed carload rates were available: the so-called Rule 10 mixture, under which freight charges were based on the highest-rated article loaded in the car and the minimum weight was the highest applicable to any loaded article; and all-commodity point-to-point

[235] OCT HB Monograph 15, pp. 92–102; Standard Operating Procedures for Receiving, Balloting, Loading, or Billing Freight; TC Pamphlet 32, Standard Operating Procedure for Handling Overages, Shortages, and Damages; WD CTB 8, 25 Jan 45, sub: Unloading Record; Outline of Organization and Operation of the Army-Navy Consolidated Car Service, 23 Nov 45; last four in OCT HB Zones Gen Consol Sta.

[236] Min of ZTO Conf, Washington, 24–26 Sep 43, p. 72, OCT HB Zones Gen; Ltr, ZTO Sixth Zone to OCT, 18 Sep 45, p. 15, OCT HB Sixth Zone.

[237] OCT Monograph 15, pp. 103–04; Ltr, Maj James Sloss to ZTO Sixth Zone, 21 Apr 43, OCT 505 Chicago; Ltr, ZTO Sixth Zone to OCT, 18 Sep 45, p. 18, OCT HB Sixth Zone.

rates, which were subject to a designated minimum weight. On its important transcontinental routes the Army was at a disadvantage in using the all-commodity rates since they could be used economically only on higher-rated commodities. Consequently, on the lower-rated articles the Army was forced to follow the practice of the commercial freight forwarders and resort to bracket loading under Rule 10—that is, bracketing together for loading in a given car commodities taking approximately the same carload rates. This practice had drawbacks, for it required high-grade personnel to classify and segregate the freight prior to loading, resulted in the frequent shifting of packages from car to car during loading, complicated platform operations, and encouraged delay and light loading. In order to remedy the situation the Army negotiated with the carriers for special all-commodity rates under Section 22 of the Interstate Commerce Act to eliminate the necessity for bracket loading. Agreement on a quotation for transcontinental cars was not reached until February 1944. The quotation then obtained was based on the average charges paid on consolidated cars between specified points during agreed periods in 1943. Section 22 quotations on other routes were obtained subsequently.[238]

In setting up the consolidated car service Williamson recognized that expert leadership would be necessary. With this in view he arranged for the commissioning of James Sloss, who had been associated with him in a similar operation. Major Sloss headed the Consolidating and Distributing Agencies Branch of the Traffic Control Division throughout the war, guided the expansion of the service, and was responsible for many of the policies and practices followed. The branch was charged with technical supervision over the operations of the consolidating stations and the distributing agencies and with such analyses of the traffic as might be necessary to the improvement and extension of the service. Differing interpretations in Washington and in the field of what constituted technical supervision caused some difficulty.[239]

Each consolidating station and distributing agency was under the direct administrative and operational supervision of the zone transportation officer within whose territory it was located. This arrangement was in line with the general policy of the Chief of Transportation to decentralize the control of field activities as much as possible. Major Sloss, while recognizing the advantages of decentralization, felt that in this instance the plan worked out disadvantageously in several respects. He found a disposition on the part of some officers to regard the installations as virtually autonomous rather than as part of a closely integrated nationwide system. This was particularly noticeable in connection with the assignment of key military personnel, the acquisition of facilities, and the negotiation of contracts for freight handling and drayage. The misunderstandings that arose, Major Sloss felt, resulted in a weakening of morale at the installations. In a report made at the end of the war, he expressed the view that many of these misunderstandings could have been avoided by a clearer definition of the responsibili-

[238] OCT HB Monograph 15, pp. 72–80; Ltrs, Maj Sloss to author, 28 Feb 52 and 29 Oct 52, OCT HB Traf Contl Div Freight.

[239] TC Pamphlet 1, Org Manual. For detailed analysis of functions as conceived by Major Sloss, see Outline of the Organization and Operation of the Army-Navy Consolidated Car Service, 23 Nov 45, OCT HB Zones Gen Consol Sta.

ties of the Consolidating and Distributing Agencies Branch.[240]

The consolidated car service was generally regarded as a successful and worthwhile undertaking. It handled more than 4,500,000 separate LCL shipments averaging about 1,000 pounds in weight and covering a wide range of commodities, some of which were not acceptable in freight forwarder service.[241] The delivery time was better than that obtainable by any other means except express and air, both of which were much more expensive. Deliveries to the west coast were about forty-eight hours faster than those obtainable through freight forwarder service and many days faster than by railroad LCL service.[242] By paying carload rates on about 150,000 consolidated cars, rather than freight forwarder charges or the carriers' LCL rates, the government was saved about $15,000,000 net—that is, after deduction of the cost of operating the consolidated car service.[243] The average of about eighteen tons per boxcar loaded at the consolidating stations was well above the average for railroad LCL service and therefore represented a substantial saving in car capacity.[244] An important advantage from the military standpoint was achieved through the constant control the consolidated car service provided over individual shipments, and the superior tracing system, which enabled diversions and reconsignments to be made at the request of the consignors.[245]

The Army-Navy consolidated car service was a wartime project resulting from the heavy and frequently urgent shipments of military LCL freight and the pressure under which the transportation industry operated. Soon after hostilities ceased plans for the demobilization of the service were made, and the last installation was scheduled for inactivation on 1 February 1946.[246]

Freight Rates and Classifications

Freight charges constitute a technical and an extremely complex subject and, like some other subjects dealt with in this volume, cannot be discussed in detail. The Chief of Transportation in his relationships with the common carriers and the Interstate Commerce Commission was continuously engaged in an effort to improve the Army's position with respect to such charges and thus save money for the federal government. This discussion can only indicate in a general way the lines of his endeavor and the measure of his success.

Before and during the early part of the emergency Army transportation officers were required by regulation to use "the most economical route," except in unusual circumstances. In peacetime the regulation was rigidly enforced, but during the war it was more and more frequently found desirable to use more expensive routes in order to meet delivery requirements, to avoid burdensome as-

[240] Rpt, Traf Contl Div, 27 Sep 45, sub: Accomplishments and Handicaps, Tab 4, OCT HB Traf Contl Div Rpts.

[241] Rpts, Traf Contl Div, FY 1944, p. 33, and 27 Sep 45, Tab 4, p. 2; OCT HB Monograph 15, p. 102.

[242] Rpt, Traf Contl Div, FY 1944, p. 36; Memo, Williamson for Gross, 9 May 45, pars. 2*f*, *h*, *k*, OCT HB Gross Day File.

[243] Rpt, Traf Contl Div, 27 Sep 45, Tab 4, p. 2; WD press release, 28 Dec 45, OCT HB Zones Gen Consol Sta.

[244] Memo, Sloss for Williamson, 1 Apr 43, OCT 523.02 LCL Consol Freight; Rpt, Traf Contl Div, 27 Sep 45, Tab 4, p. 2.

[245] Memo, Williamson for Gross, 9 May 45, pars. 2*d–e*, OCT HB Gross Day File.

[246] OCT Misc Ltr 387, 19 Nov 45, OCT HB Zones Gen Consol Sta.

sessorial charges, to avoid congestion on the transportation lines or at Army installations, or to insure adequate security or the use of suitable transportation equipment. In other words, wartime operations required consideration of service as well as cost, and the regulation was modified accordingly.[247]

The Chief of Transportation emphasized that all types of carriers were to be considered in routing shipments—rail, water, and highway. The choice between rail and motor routes gave considerable trouble because the highway carriers were used chiefly for the shorter hauls and most of this traffic was routed in the field. Many local transportation officers found it difficult to keep abreast of changes in rates, which sometimes favored the motor lines and sometimes the rail lines, and which in some cases were subject to land-grant deductions and in other cases were not. Also, some transportation officers were inclined to adhere too rigidly to the principal of economy and to overlook the advantages of superior service.[248]

The Chief of Transportation had full responsibility in rate matters, including the provision of rate information to all elements of the War Department and the conduct of negotiations with the carriers.[249] During the prewar rearmament period some of the procuring services had endeavored to deal directly with the Association of American Railroads in regard to rates on their matériel, but the AAR had insisted that all such matters be channeled through the proper War Department agency, which at that time was the Office of The Quartermaster General.[250] This tendency toward independent action cropped up during the war with respect to highway rates. When The Quartermaster General was informed that some of his market centers were negotiating directly with the motor carriers, he immediately directed that all such matters should be handled through the Chief of Transportation.[251]

A similar situation with the Army Air Forces was not so quickly settled. The Chief of Transportation complained that AAF field representatives were dealing directly with contract tank truck operators for the movement of gasoline and that these independent negotiations were prejudicial to his relations with the carriers. While acknowledging that the Chief of Transportation had general responsibility in such matters, the AAF contended that in emergency cases its transportation officers must have the privilege of making contracts. After discussions extending over several months, the matter was settled on the basis that these emergency contracts would be immediately submitted to the Chief of Transportation for review, and for readjustment if he should find them incompatible with the general rate structure.[252]

[247] AR 30-905, 1 Aug 29, par. 8b, and Changes 2, 1 Oct 37; AR 55-105, 29 Dec 42, par. 4, and Changes 5, 19 Jul 43, Changes 6, 20 Aug 43, Changes 13, 22 May 44, and Changes 14, 15 Dec 44.

[248] Memo, C of Traf Contl Div for CofT, 22 Jan 43, sub: Differential, AG 510 (1 Dec 42)(1); Min of Port Comdrs Conf, Boston, 30–31 Aug 43, p. 122; Min of Port and Zone Comdrs Conf, Chicago 6–9 Jul 44, afternoon session, 7 Jul 44, pp. 26–29.

[249] AR 55-105, 29 Dec 42, par 3.

[250] OCT HB Monograph 6, p. 151.

[251] Memo, CofT for TQMG, 25 Nov 44, sub: Freight Rate Adjustments; 1st Ind, TQMG for CofT, 1 Dec 44; both in OCT 551.2 Rate Adjustments Misc.

[252] Memo, CofT for C of Traf Div Office of AC of Air Staff, 10 Jan 44, and reply, 20 Jan 44; Memo, CofT for AC of Air Staff, 2 Mar 44; Memo, CG ASF for CG AAF, 19 May 44; Memo, CG AAF for CofT, 24 May 44; Memo, CG AAF for CG ASF, 29 May 44; all in OCT 551.2 Rate Adjustments Misc; Interv with Homer S. Paul, 7 Dec 51, OCT HB Traf Contl Div Freight.

The calculation of freight rates for all branches of the Army involved a great amount of detailed work by a staff of experts in the Traffic Control Division. In addition to computing charges on shipments moving currently, the division quoted rates for the use of Army contracting officers of all services in comparing bids for delivery f.o.b. plant with bids for delivery f.o.b. destination, and in determining which of several f.o.b. plant bids would work out most advantageously for the War Department. During the fiscal year 1943, which saw the peak of this activity, the division furnished 123,000 such quotations after taking into account not only the various types of transportation but also the applicability or nonapplicability of land-grant deductions. The division was at that time maintaining a file of more than 16,000 carriers' tariffs and a land-grant index of about 178,000 cards covering the principal commodities, classifications, and routings.[253]

Land-grant deductions of 50 percent from tariff, which were applicable on some routes and not on others, greatly complicated the rate problem, but they represented a large saving on military freight as compared with commercial rates. The Transportation Act of 1940 abolished these deductions for all traffic of the federal government except military and naval. The War Department traditionally had argued for the retention of the land-grant benefits, and, during the war when the question of total abolition came before Congress, it opposed such action on the grounds that heavy additional cost would be imposed on the government, and that the railroads should not collect commercial rates on the heavy wartime military traffic that came to them not only in unprecedented volume but also without the expense of solicitation and advertising.[254] The Chief of Transportation estimated that the abolition of land-grant rates would deprive the War Department of the benefit of deductions from commercial freight rates totaling between $150,000,000 and $200,000,000 in a war year, but that this amount might be reduced to $50,000,000 or less by obtaining additional special rate quotations from the railroads under Section 22 of the Interstate Commerce Act.[255] The land-grant deductions remained in effect on military traffic throughout the war, but soon after the close of hostilities Congress abolished them, effective 1 October 1946.[256]

Land-grant deductions were originally applicable only to the railroads to which the federal government had ceded land in order to encourage the development of unsettled areas in western and southern states. In time, the scope of the deductions was extended by means of equalization agreements to railroads that were in competition with the land-grant routes.[257] The highway carriers were not requested to equalize rates before World War II because the Army made relatively little use of their services.[258] During the rearmament period, however, in order to clear the way for an expansion of shipments by truck, the motor carriers were invited to sign equalization agreements beginning in

[253] Rpt, Traf Contl Div, FY 1943, pp. 43–44. The division furnished 54,329 quotations during the fiscal year 1944 and 69,378 during the fiscal year 1945.

[254] See above, pp. 17–20.

[255] Subcommittee of the House Committee on Appropriations, 79th Cong., 1st Sess., *Hearings on the Military Establishment Appropriations Bill for 1946*, p. 482.

[256] PL 256, 79th Cong., December 12, 1945.

[257] OCT Routing Cir 3, 1 Apr 43, sub: Freight Land Grant Equalization Agreements, OCT HB Traf Contl Div Freight.

[258] See above, p. 248.

July 1941. Many of them did so, but others declined. Truck operators who handled only a small amount of traffic could not afford to forego part of the revenue on military shipments. Some operators who signed equalization agreements found the resulting business unprofitable and sought to be relieved of their obligations.[259]

From the beginning the carriers and the War Department were in disagreement as to whether land-grant deductions were applicable to War Department shipments to foreign countries under lend-lease.[260] Reflecting the railroads' point of view, a bill was introduced in Congress late in 1941 that would have limited the application of land-grant deductions to "property necessary for the maintenance and subsistence of the armed forces of the United States." The War Department opposed the measure, contending that shipments of lend-lease materials were vital to the defense of the United States and that, since such freight was property of the Army until it was transferred to a foreign government at the loading port, it should take the same transportation rates as supplies intended for the use of the Army.[261] The bill was not enacted.

In a test case involving a shipment of phosphate fertilizer to Great Britain on lend-lease, brought by one of the railroads, the circuit court of appeals found for the carriers. The Army nevertheless continued to endorse bills of lading for lend-lease shipments to indicate that they were military. In 1947 the U.S. Supreme Court upheld the circuit court decision. It maintained that a shipment of fertilizer was not entitled to land-grant deductions under the Transportation Act of 1940, which provided that such deductions were applicable only to property "moving for military or naval and not for civil use."[262] At the same time the Supreme Court in another test case held that shipments of copper cable, lumber, and other materials moving to an oversea base for the construction of buildings to be used for the training and recreation of military personnel were eligible for land-grant rate deductions.[263] As an outgrowth of the first-mentioned decision, refunds were due the railroads on many shipments made by the War Department under the lend-lease program, and possibly also on shipments under the program for relief of civilian populations of liberated and occupied areas. Naturally there were many borderline cases to be cleared up by consultation between the Association of American Railroads and the General Accounting Office.

In addition to his effort to preserve the economies that the Army derived from land-grant rates, the Chief of Transportation pursued other lines of action to reduce the charges paid on military freight. Traditionally, rates have been established by committees or bureaus representing the rail or motor carriers in the several territories. During the war in order to expedite consideration of the many requests for readjustments in favor of the government, the railroads established a committee in Washington to deal with rates affecting all parts of the country. The

[259] OCT HB Monograph 6, pp. 155-61; OCT Cir Ltr 29, 26 Aug 42; OCT Cir Ltr 33, 14 Oct 42; OCT Routing Cir 4, 22 Jan 43; WD CTB 3, 1 Apr 44; WD CTB 4, 1 Mar 45; last five in OCT HB Traf Contl Div Freight.

[260] Ltr, AAR to OQMG, 14 Jul 41, reply, 22 Jul 41, and other documents in OCT 551.6 Trans Act of 1940.

[261] Ltr, SW to Dir Bureau of the Budget, 10 Dec 41, OSW Railroads.

[262] *U.S.* v. *Powell,* 330 U.S. 238.

[263] *Northern Pacific Railway Company* v. *U.S.,* 330 U.S. 248.

tariffs published by the carriers embrace class rates, for which purpose the many items are grouped into classifications, and rates for commodities that for one reason or another are not covered by the class rates. All tariffs are filed with the Interstate Commerce Commission, which is charged by law with supervision of interstate rates to insure fairness and avoid discrimination, or with the corresponding state agencies. In his endeavor to obtain lower rates for Army matériel, the Chief of Transportation first presented his requests to the carriers; if he failed to obtain satisfactory results in that manner, he could then arrange for the Judge Advocate General to initiate formal proceedings with the Interstate Commerce Commission or with the state regulatory bodies.

Throughout the war the railroads were threatened with prosecution by the Department of Justice on the ground that their rate bureaus contravened the federal antitrust laws. The Army joined with the Navy and the Office of Defense Transportation in urging that actions of this nature be limited to those necessary to eliminate specific abuses, and that any general attack on the carriers' method of establishing rates be deferred until after the war. This position was based on the conviction that any actions that would divert the attention and energies of the officers of the railroads from their transportation functions and involve them in a legal defense of their rate practices would be harmful to the war effort. The prosecutions were deferred, although the matter was kept alive by the Attorney General's office.[264]

A basic rate problem requiring the attention of the Chief of Transportation was that of insuring that War Department supplies and equipment were placed in the proper classifications to obtain the lowest applicable class rates. Out of what was roughly described as "almost a million" military items that were placed in the wartime stream of traffic, thousands were entirely new and others had moved in such small quantities that no question had been raised previously regarding their classification. General Williamson stated that he began work on this problem soon after he assumed office as chief of the Traffic Control Division in March 1942. The task was twofold. The nomenclature applied to Army items by the procuring services, which often varied widely from commercial nomenclature, had to be translated into descriptions that when entered in the bills of lading would place the articles in the proper classifications. The descriptions so developed were published by the Chief of Transportation in a freight billing guide, use of which not only assured that the Army would be billed by the carriers at the proper rates but also saved much time for the carriers and the General Accounting Office in preparing, auditing, and adjusting bills. The second aspect of the task was to obtain, by application to the railroads' classification committees, new classifications for Army items that did not properly belong in the classifications in which they had been previously placed.[265]

[264] Joint Ltr, USW, Under Secy of Navy, ODT to Atty Gen of the US, 6 Nov 42; Memo, CofT for Julius H. Amberg, OSW, 8 Oct 42; Ltr, Pelley, Pres AAR, to Gross, 21 Oct 42; Ltr, AAR to Gross, 7 Dec 42; Ltrs, Johnson, ODT, to Byrnes, OWM, 9 and 10 Aug 44; Ltr, Atty Gen to SW, 18 Oct 44; all of above in OCT HB Gross Rail; Memo, Gross for Amberg, 3 Apr 44; Ltrs, SW to Atty Gen, 14 Jun 44 and 14 Feb 45; last three in OCT 013.3 Anti-Trust Prosecutions.

[265] Min of Port Comdrs Conf, Boston, 30 Aug–1 Sep 43, p. 122; Rpt, Traf Contl Div, FY 1944, p. 11; Statements by Gross and Williamson, in *Hearings on the Military Establishment Appropriations Bill for 1945*, pp. 271–73, and *Hearings* cited n. 255, pp. 483–84, 488, 521–29.

At the end of the war it was evident that substantial further savings could be effected by surveys to correct bills of lading in which incorrect commodity descriptions had been entered. Some of the misdescriptions had been used before the billing guides were available and others came about through failure to use the guides. The surveys, which covered bills of lading issued beginning 1 January 1943, started late in 1945. They were made at the installations where the shipments had originated and where the documents necessary to correct the descriptions were available. The Chief of Transportation had over-all responsibility for the conduct of these surveys, but the work was done under the direct supervision of the zone transportation officers. In addition to the monetary saving, the investigation served a useful purpose in teaching transportation officers in the field the advantage and the method of using the billing guides.[266]

Beginning in 1941 the Army made extensive transit arrangements with the railroads under which shipments could be halted at intermediate points for processing or storage, or both, yet move at through rates rather than the higher local rates. Such arrangements were customary in commercial practice, and they were especially important to the Army during the war because so much of its matériel destined for oversea areas was subject to processing or storage en route. As was noted earlier in this chapter, the Chief of Transportation made extensive use of holding and reconsignment points and railroad open storage yards for the temporary storage of export shipments in order to protect the ports from congestion. These transit arrangements represented substantial savings for the Army, but the savings cannot be measured by the difference between the through rates and the combined local rates. In the first place, the railroads usually met the Army's requests for transit privileges with Section 22 quotations that eliminated land-grant deductions. Secondly, the railroads based their quotations on the so-called *Ex parte 148* rate increases, which the Interstate Commerce Commission had authorized and then had suspended with the proviso that the increases could be retained in connection with special rates voluntarily granted by the railroads to the federal government.[267] Protests by the War Department against the inclusion of these increases in the Section 22 quotations were unavailing.[268]

The War Department encountered difficulty in obtaining satisfactory export rates for supplies being shipped to Pacific destinations. The regular export tariffs for shipments to Pacific ports, which had been established in peacetime to enable the transcontinental railroads to compete with the intercoastal water routes, incorporated a number of rules with which the Army could not comply in wartime—especially those requiring that oversea

[266] Min of Port and Zone Comdrs Conf, Omaha, Sep 45, p. 63; ASF Cir 417, 14 Nov 45, Sec. VIII; Rpt, Commercial Traf Sv, 15 Aug 46, p. 14, OCT HB Traf Contl Div Rpts. During 1946 the savings through corrected descriptions totaled over $6,500,000; Army Progress Report, 31 Jan 47, Sec. 3-A, p. 33.

[267] OCT HB Monograph 6, pp. 151–54; AR 55–155, 27 Nov 42, Sec. IX, and Changes 7, 26 May 44; OCT Traf Bull 6, 26 Dec 42, sub: Storage or Processing in Transit—Procedure at Transit Points; WD CTB 16, 9 May 44, same subject; WD TM 55-205, 25 Aug 44, pp. 62–64; Rpt, Traf Contl Div, FY 1945, p. 13, OCT HB Traf Contl Div Rpts; Rpt, William B. Hammer, Charles E. Bell, Emory B. Ussery to Dir of the Bureau of the Budget, 20 Oct 45, pp. 100–15, OCT HB Traf Contl Div Freight Rate Case.

[268] Memo, Williamson for Finlay, 16 Oct 44, sub: *Ex parte 148* Increases, OCT HB Traf Contl Div Freight.

destinations be shown on bills of lading and that the freight be continuously in the possession of the carriers. Section 22 quotations that the carriers originally proposed eliminated the land-grant deductions and hence were not acceptable to the War Department. The *Ex parte 148* increases that the carriers insisted on including in such quotations were a troublesome factor in the negotiations. Eventually, after an appeal had been made to the Office of Defense Transportation by the War Department and other government agencies, negotiations with the carriers resulted in an agreement being reached early in 1944, retroactive to the beginning of 1942. The Section 22 quotation that resulted from this agreement permitted the War Department to use either the export rates without land-grant deductions or the domestic rates with land-grant deductions, whichever resulted in the lower charge for shipments direct from origin to port. For freight that was stored in transit, the War Department could use either the export rates without land-grant deductions or the domestic rates with land-grant deductions, the rate in either case being subject to the *Ex parte 148* increases. This agreement resulted in some saving for the War Department, but not as much as the Traffic Control Division considered proper; it was of more benefit to the nonmilitary branches of the government, whose shipments were not eligible for land-grant deductions under any circumstances.[269]

The War Department filed many requests with the railroads for lower rates on specific commodities, especially those that were moving in large quantities. While the requests contemplated reduced tariff rates that would have been further subject to land-grant deductions, the railroads frequently replied with Section 22 quotations that eliminated land-grant deductions. The War Department could apply either the Section 22 quotations or the tariff rates with land-grant deductions. In this way the land-grant roads protected themselves from a double cut in their revenues. The War Department had the alternative of accepting such quotations or instituting formal proceedings before the Interstate Commerce Commission to obtain more favorable rates.

During hostilities the War Department initiated or participated in about seventy-five formal proceedings before the Interstate Commerce Commission to obtain rate or classification adjustments. General Williamson considered it preferable to handle such matters by informal negotiations with the carriers since that method brought results more quickly, and he felt that in most instances the adjustments made by the carriers were more favorable to the War Department than those that could have been expected from the commission. Formal proceedings were employed, therefore, only when informal negotiations failed to achieve acceptable results.[270] During the greater part of the war the Traffic Control Division felt that its measure of success before the commission was small. Later it began to "achieve some degree of success" in the cases that it brought to litigation.[271]

Two other circumstances militated against the initiation of formal proceedings. One was the limited number of men on the staff of the Traffic Control Division

[269] ASF MPR, Jan 44, pp. 88, 89; Rpt, Hammer, Bell, and Ussery, cited n. 267, pp. 91–100.

[270] *Hearings* cited n. 255, p. 491.

[271] Memo, CofT for CG ASF, 15 Apr 46, sub: Freight Rate Charges Incurred by WD, par. 6f, OCT 551.2 Rate Adjustments—Allegations of Proctor.

who were qualified to perform the meticulous technical work necessary to the preparation of the cases. On 1 June 1945 there were only twenty officers and twenty civilians actively dealing with rate adjustment and classification matters, and this was the largest number so engaged up to that time. General Williamson stated that this staff was not adequate for the task and that in June 1945 there was a backlog of approximately 400 rate matters. Personnel ceilings on both officers and civilians, which the War Department imposed on organizations in the zone of interior because of the general manpower shortage and the need for military personnel overseas, together with the scarcity of men of proper qualifications, were given as the reasons for this situation.[272]

The second circumstance adversely affecting formal rate cases before the Interstate Commerce Commission and state regulatory bodies arose from the fact that the proceedings were conducted through counsel provided by the Judge Advocate General.[273] Although the Traffic Control Division prepared the data and assisted in all technical aspects, Williamson did not consider the arrangement an effective one. He believed that the persons presenting the War Department's position to the regulatory bodies should have specialized experience in such proceedings, familiarity with the principles and practices that entered into the construction and adjustment of rates, detailed familiarity with the evidence presented, and full acquaintance with the policies of the War Department in its negotiations with the carriers. Counsel assigned by the Judge Advocate General frequently did not have these qualifications. In October 1944, when the Chief of Transportation tried to rectify the situation, the Judge Advocate General maintained that he could not relinquish his responsibility for representing the War Department in these proceedings or permit representatives of the Chief of Transportation to act as cocounsel. Arrangements were worked out at that time for closer collaboration between the Chief of Transportation's rate specialists and the legal personnel of the Judge Advocate General's Office.[274]

The work of the Rate Adjustment and Classification Section, Freight Branch, Traffic Control Division, was under the direct supervision of an experienced traffic officer, who was designated for that specific purpose, and under the general supervision of the chief of the division. In 1944 a standing rate committee consisting of specialists in various aspects of freight traffic was established in the division to review all proposals for adjustments before they were submitted to the carriers. The object of the committee was to insure that no proposals were submitted that might prove injurious in any way to the War Department's interests, and to provide data to make the presentation of proposals as effective as possible.[275] The Traffic Control Division appears to have relied chiefly on its own efforts for the initiation of these matters until late in the war. In February 1945 the zone and local transportation officers were requested to observe traffic closely, and report to the Chief of Transportation any circumstances indicating that economies could be realized by rate adjustments, classification

[272] *Hearings* cited n. 255, pp. 471–81, 491.

[273] AR 410-5, 17 Aug 44, par. 1.

[274] Memo, Williamson for Finlay, 17 Oct 44, sub: *Ex parte 148* Increases, OCT 551.2 *Ex parte 148;* Memo, Finlay for Williamson, 18 Oct 44, OCT HB Ex Staybacks, Dec 1942–44.

[275] Rpt, Traf Contl Div, FY 1945, p. 15.

revisions, transit arrangements, or changes in railroad practices.[276]

During the calendar year 1944, the charges by the domestic carriers for transporting Army matériel aggregated over $1,300,000,000.[277] This traffic involved the movement of over 105,000,000 tons of freight. Taking this wartime traffic as a basis, the Traffic Control Division endeavored to calculate the extent of the savings accomplished through its efforts to obtain more favorable rates and classifications. It estimated that the adjustments obtained in 1943 represented annual savings of about $4,751,000; those in 1944, about $14,651,000; and those in 1945, about $40,153,000. On this basis the adjustments accomplished during the three-year period represented total savings approaching $60,000,000 a year with traffic at wartime level.[278] The division's activities in regard to rate adjustments and classifications during 1944 and 1945 are analyzed in Table 25.

Although Generals Gross and Williamson believed that, considering the limitations imposed by wartime personnel ceilings and the scarcity of qualified men, a good job had been done in getting fair rates on Army freight, there were some who did not share that view. Several persons employed in the Traffic Control Division expressed the opinion that the Army was paying higher than reasonable charges.[279] Some members of Congress feared this to be the case and requested that the matter be thoroughly investigated.[280] As a result, the Director of the Bureau of the Budget appointed a special committee of three experts to make an investigation.

The committee began its work in May 1945 and rendered its report five months later.[281] From information assembled during that period the committee concluded that, while the Traffic Control Division had obtained many changes in rates and classifications that had saved the government large amounts, it had not begun its study of possible adjustments as early as it might have, nor had it carried its studies, its negotiations with the carriers, and its recourse to the official regulatory bodies as far as might have been done; consequently, adjustments that might have been obtained with large savings to the government had not been obtained. While the railroads had made numerous concessions in favor of the government, in many instances they had declined requests filed by the Chief of Transportation or had refused to grant as great concessions as had been sought. In submitting its findings the committee observed that the Traffic Control Division's paramount responsibility was to get War Department traffic transported promptly and efficiently, and that throughout the war the section dealing with rate adjustment and classification matters had been inadequately staffed.

The War Department accepted the committee's conclusions only in part. It agreed that its activity in this field had

[276] Memo, Lt Col Ingwald C. Olsen for Adm Asst OCT, 16 Jan 45, sub: Adjustment of Freight Rates and Classifications, OCT 551.2 Rate Adj Misc; WD CTB 10, 8 Feb 45, sub: Reporting Info.

[277] *Hearings* cited n. 255, pp. 513, 518.

[278] *Ibid.*, p. 491; Rpt, Traf Contl Div, 27 Sep 45, Tab 2, p. 1; Army Progress Report, 31 Jan 47, Sec. 3-A, p. 33.

[279] Memo, C of Freight Br Traf Contl Div for C of Contl Div OCT, 28 Aug 44; Memo, CofT for WD Budget Officer, 22 Sep 44; Memo, CofT for SW, 6 Feb 46; Memo, CofT for CG ASF, 15 Apr 46; all in OCT 551.2 Rate Adjustments—Allegations of Proctor.

[280] Ltr, Dir Bur of Budget to SW, 30 Apr 45, AG 551.2 (6 Dec 44)(1); *Hearings* cited n. 255, pp. 476–97.

[281] Rpt, Hammer, Bell, Ussery, cited n. 267.

TABLE 25—ANNUAL SAVINGS THROUGH RATE ADJUSTMENT AND CLASSIFICATION ACTIVITIES OF THE TRAFFIC CONTROL DIVISION [a]

Cases	1944	1945
Negotiated With the Carriers:		
Initiated	272	276
Decided in favor of War Department	130	236
Denied or withdrawn	41	82
Pending at end of year	95	53
Estimated annual savings	$5,697,500	$32,798,039
Before the Regulatory Bodies:		
Initiated	45	15
Decided in favor of War Department	48	7
Denied or withdrawn	15	14
Pending at end of year	12	6
Estimated annual savings	$8,954,000	$7,354,730

[a] Corresponding data for 1942 and 1943 are not available. Figures include savings accomplished through rate and classification adjustments, and transit and export rate arrangements.

Source: Army Progress Report, 31 Jan 47, Sec. 3-A, p. 33; Interv with Homer S. Paul, 15 Oct 53, OCT HB Traf Contl Div Freight.

been restricted by staff limitation, but denied that it had failed to pursue this activity vigorously. It pointed out that the reasonableness of freight charges was not something that could be mathematically determined, but depended on extensive analyses of transportation characteristics, conditions, and principles pertinent to the movement of specific commodities.[282] The War Department agreed, nevertheless, that the Interstate Commerce Commission and any other regulatory bodies that might have jurisdiction should be called upon to review the rates established and the charges paid on War Department traffic, and it requested the Attorney General to initiate proceedings to that end before the appropriate agencies.[283] At the suggestion of the Navy the scope of the proceedings was extended to include the traffic of other branches of the federal government.

After investigation and preliminary hearings before the Interstate Commerce Commission, the Department of Justice prepared briefs in support of seventeen cases claiming reparations from the railroads on account of wartime freight charges believed to have been excessive. Broadly speaking, the premises on which the Department of Justice based its claims were the very large volume of freight that the government shipped during the war and the adjustments that it believed private shippers would have claimed under similar circumstances.[284]

At the time of this writing (October 1953) final disposition of these cases had not been made. After an extended examination into the issues, the examiners for the Interstate Commerce Commission concluded that the rates, ratings, charges,

[282] Ltr, SW to Dir Bur of Budget, 2 Feb 46, and inclosed Memo, CofT for SW, 23 Jan 46; both in AG 551.2 (29 Nov 45)(1).

[283] Ltr, SW to Atty Gen, 28 Sep 46, AG 551.2 (29 Nov 45)(1).

[284] Interv with Frank Vesper, Dept of Justice, 17 Dec 51, OCT HB Traf Contl Div Freight Rate Case.

and tariff rules of the railroads that had been assailed by the Department of Justice had not been shown to have been unreasonable, and recommended that the complaints be dismissed.[285] The Department of Justice is preparing and intends to file exceptions, and further hearings will probably be held before the commission makes its final determination in the matter.

The Measure of Accomplishment

The primary objective of the Chief of Transportation in the transportation of Army freight by the commercial carriers was to have this freight moved promptly, safely, and in an orderly manner. The means he employed to that end were generally effective and accomplished their purpose.

The greatest obstacle to the attainment of the objective was the shortage of rail freight cars, and the efficient use of cars was therefore the core of the problem. The working arrangements the Chief of Transportation had with the carriers, his policy of controlling routings to the extent that appeared desirable, his substantial contribution to the system of over-all traffic control—which was established to avoid congestion and the consequent immobilization of railroad equipment—and his measures to promote the prompt dispatch of cars at Army installations were clear evidence of his appreciation of the problem and his determination to avoid the pitfalls it presented.

Credit must be given to the Chief of Transportation for two undertakings that were innovations with the Army and important contributions to its plan of handling freight traffic. One was the establishment of the series of holding and reconsignment points, which effectively protected the ports against the arrival of more freight than they could properly handle and performed other useful services. The other was the inauguration of the consolidated car service, which facilitated the delivery of small shipments and improved the utilization of car capacity. To a large degree the success of these undertakings can be attributed to the fact that they were placed under the direction of men who had had extensive experience with similar operations in civilian life. While the Army controlled these two undertakings, the other armed services were permitted to share their benefits.

The most severe criticism directed at the Chief of Transportation's handling of freight matters concerned the charges paid to the railroads. There are no definitive standards by which to judge whether those charges were reasonable or excessive. It is a question to be determined by the Interstate Commerce Commission in the exercise of the discretionary power vested in it by Congress. The decision of the commission on the complaints filed by the Department of Justice will be of great interest to all parties, since such a sweeping claim on behalf of the government has not been made heretofore.

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[285] Rpt of Examiners, Marion L. Boat and Howard Hosmer, War Materials Reparations Case, 22 Jul 53; Interv with Frank Vesper, 15 Oct 53, OCT HB Traf Contl Div Freight Rate Case.

CHAPTER V

Oversea Freight Movements

The ultimate test of the effectiveness of the Transportation Corps was its ability to deliver matériel to the theaters of operations in accordance with their requirements, since any failure in meeting those requirements would have a direct influence on the success of the theater commanders in carrying out their military missions. The responsibility involved not only transporting sufficiently large tonnages overseas but also moving the many types of supplies and equipment in accordance with theater requisitions and approved priorities. It also involved keeping the flow of shipments under close control, in order not to overburden the ports of embarkation and the ports and storage facilities in the theaters. The tonnages to be transported were great because the forces overseas were large, the standards for equipping, feeding, and clothing troops were the highest in military history, the rate of destruction and attrition was high, and the great bulk of the matériel had to be shipped from the United States. The task was intensified by the heavy losses of ships and cargoes inflicted by enemy submarines and aircraft.[1]

The Army shipped more than 132,000,000 measurement tons of cargo overseas by water in the period December 1941–December 1945.[2] During the year 1944 more than 48,000,000 measurement tons were shipped, and during the peak month of March 1945 the movement totaled almost 6,000,000 measurement tons. *(Table 26 and Chart 10)* Comparison of these figures with a total of less than 9,000,000 measurement tons shipped overseas by the Army during the period June 1917–November 1918 gives an idea of how much greater the ocean transportation requirements were in World War II than in World War I.[3] A realistic comparison of the tasks that fell to the Army transportation service in the two wars must take into account also the fact that in the earlier conflict the bulk of the cargo was shipped to a few well-developed ports in Europe, while in World War II, with U.S. troops deployed virtually around the globe, supplies had to be moved much greater distances and in many cases had to be discharged at primitive or wholly undeveloped ports and beaches.

Many agencies contributed to the effort to move supplies overseas in accordance with theater needs. The Joint Chiefs of

[1] A fuller discussion of Transportation Corps responsibilities for the forces overseas is given in Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, pp. 1–27, 82–94.

[2] The relatively small amount of freight moved overseas by air was not under the control of the Chief of Transportation; hence it is not discussed in any detail in this chapter. Concerning the Chief of Transportation's loss of control of air traffic, see Wardlow, *op. cit.*, pp. 51–53, 67.

[3] OCT Rpt, Comparative Data, World War I–World War II, July 1943, pp. 14–17, OCT HB Monthly Progress Rpts.

TABLE 26—TONS OF CARGO SHIPPED BY THE ARMY BY WATER FROM THE ZONE OF INTERIOR TO THE SEVERAL OVERSEA AREAS: DECEMBER 1941–DECEMBER 1945 [a]

(Measurement Tons of Forty Cubic Feet)

Oversea Areas	Total	1941 (December Only)	1942	1943	1944	1945
All Areas	132,119,533	284,023	11,834,995	28,500,226	48,512,945	42,987,344
Atlantic Areas	79,629,397	123,102	6,117,903	17,995,497	31,916,244	23,476,651
North America	1,706,209	26,757	526,795	300,366	240,474	[b] 611,817
Latin America	2,995,142	75,041	1,443,770	1,050,775	425,556	([b])
Europe	46,739,955	18,456	2,401,872	6,523,170	20,616,125	17,180,332
Mediterranean and North Africa	26,328,456	0	1,019,807	9,295,760	[c] 10,328,387	[c] 5,684,502
Central Africa and Middle East	1,859,635	2,848	725,659	825,426	[c] 305,702	([c])
Pacific Areas	52,490,136	160,921	5,717,092	10,504,729	16,596,701	19,510,693
North America	6,933,922	45,978	1,742,367	3,118,381	1,663,920	363,276
Central Pacific	14,279,689	77,756	1,556,563	1,504,413	[d] 4,371,513	[d] 6,769,444
South Pacific	3,760,463	0	802,577	1,620,935	[d] 1,336,951	([d])
Southwest and Western Pacific	20,907,604	37,187	1,385,297	2,807,046	6,601,933	10,076,141
Asia	6,452,482	0	230,288	1,453,954	2,622,384	2,145,856
Japan and Korea	155,976	0	0	0	0	155,976

[a] Includes cargo shipped to Army commanders overseas on vessels operated by or allocated to the Army, on vessels operated by or allocated to the Navy, and on commercial vessels for the military forces or for civilian relief; also lend-lease supplies shipped on vessels operated by or allocated to the Army. Figures do not include lend-lease supplies procured by the War Department and shipped on vessels not under Army control.

[b] Latin America tonnage is combined with North America tonnage in 1945.

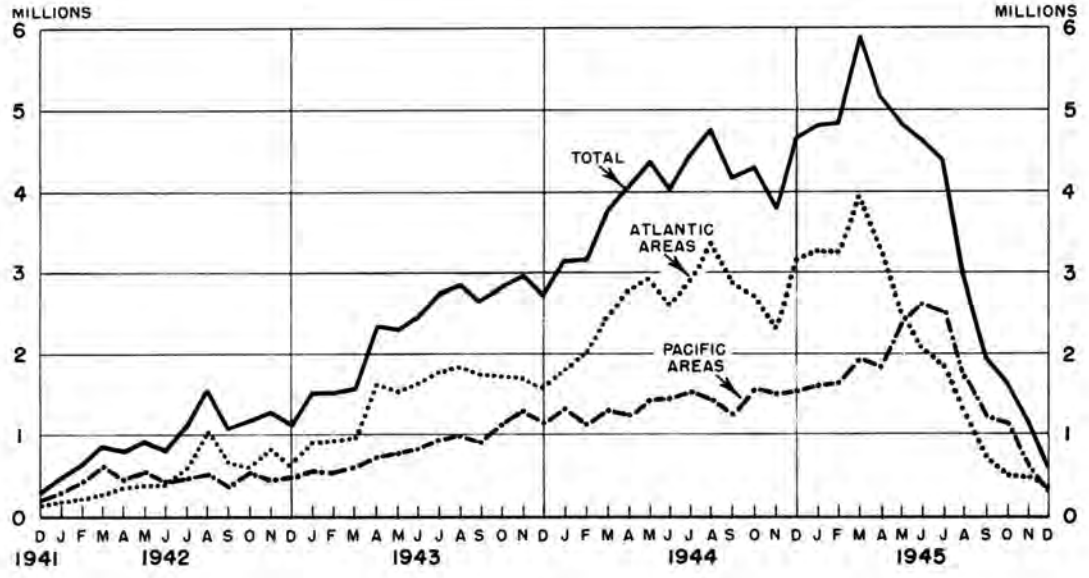
[c] Central Africa and Middle East tonnage is combined with Mediterranean and North Africa beginning November 1944.

[d] South Pacific tonnage is combined with Central Pacific beginning August 1944.

Source: Monthly reports by the ports of embarkation, Outbound and Inbound Cargo, tabulated for a statistical volume of this series now in preparation.

Staff in conjunction with the Maritime Commission developed a program for the construction of sufficient vessels to insure that the military plans adopted by the JCS could be carried out. The War Shipping Administration arranged for the operation and allocation of most of the cargo vessels required by the Army. The Navy provided escorts for all convoys and also carried some Army cargo in naval transports. The Army ports of embarkation called supplies to the seaboard at the proper time and arranged for the efficient loading and prompt dispatch of the vessels. Within the Office of the Chief of Transportation the Traffic Control Division was concerned with the transportation of freight to the ports; the Water Division was concerned with the provision of adequate shipping and the smooth functioning of the ports; the Director of Operations was responsible for co-ordinating the land and water phases, providing adequate port facilities for the transshipment of cargo, and insuring that movements were executed in accordance with direc-

CHART 10—ARMY CARGO SHIPPED MONTHLY FROM THE ZONE OF INTERIOR TO OVERSEA DESTINATION: DECEMBER 1941–DECEMBER 1945*
(Measurement Tons of Forty Cubic Feet)



* Atlantic areas include North and Latin America, Greenland, Iceland, United Kingdom, continental Europe, Mediterranean, Africa, and the Middle East. Pacific areas include western Canada, Alaska, Central Pacific, South Pacific, Southwest Pacific, western Pacific, India, Burma, Japan, and Korea.

Source: Monthly reports by ports of embarkation to the Water Division, OCT, tabulated for statistical volume of this series, now in preparation.

tives of the General Staff. It should be borne in mind that the Army was only one of several organizations making demands upon the port facilities and the shipping resources of the nation, so that close coordination with the federal transportation agencies and the Navy was at all times necessary.[4]

The need for ships to move military freight to the theaters was on an ascending scale throughout the war. Looking ahead to future requirements the Army realized that nothing should be allowed to interfere with the shipbuilding program and the allocation of an adequate number of vessels to Army service. In the summer of 1943, after the military success in North Africa and a favorable turn in the Allies' antisubmarine campaign, it was feared that there would be a letdown in the war effort because of overconfidence. The production of military equipment and supplies was lagging, some ships were being dispatched without full cargoes, and a cutback in the Maritime Commission's shipbuilding program was rumored.[5] At this stage General Somervell sent the following note to General Gross:

[4] On the provision of ships and port facilities and the control of their employment, see Wardlow, *op. cit.*, pp. 18–23, 135–85.

[5] Statement by Lewis W. Douglas, Deputy War Shipping Administrator, reported in *The New York Times*, July 11, 1943; statement by Gen Somervell reported in *Time*, July 12, 1943.

It is essential that we *get* every ship we can and that we *fill* these ships with men and their equipment. I want you to scream your head off to me whenever this program is endangered. It is about our most important job. You will have to look ahead if you are to succeed.[6]

As matters developed, the shipbuilding output of the United States for the year 1943 was the largest in history—almost 20,000,000 dead-weight tons—and by the end of the year the lag in production of military matériel was being overcome.

Analysis of Outbound Freight Traffic

The total of about 132,000,000 measurement tons of freight that the Army shipped overseas during the war and up to the end of 1945 consisted mainly, but not entirely, of equipment and supplies for its own forces. The Army transported some naval cargo to Pacific areas in accordance with the arrangement whereby ships operating under the control of one service were utilized in the best interest of the war effort as a whole, and it shipped some naval supplies to transatlantic areas where the Navy had small numbers of personnel and operated few supply vessels. The Army also shipped supplies to the outlying bases, notably Hawaii, for the use of the civilian populations. As the Army occupied former enemy-held territory in North Africa, Italy, continental Europe, and later in the Pacific, it assumed responsibility for supplying the civilian populations with food and other necessities in order to meliorate hardship and encourage co-operation. A limited amount of lend-lease matériel was loaded on ships allocated to the Army and is included in the total tonnage figure. But the bulk of the freight was intended for the use of Army forces, and it was in connection with the movement of such cargo that the principal problems arose.

Roughly 60 percent of the cargo the Army moved overseas went to transatlantic theaters and bases and 40 percent to Pacific destinations. *(See Table 26.)* During the early months of the war the greater volume was shipped to the Pacific in an effort to check the expansion of Japanese control in that area. *(See Chart 10.)* But the Allied strategy called for the defeat of the European Axis first, and the highest priority soon was given to the North African theater and then to the European theater, with the result that transatlantic cargoes exceeded those shipped westward beginning in the summer of 1942 and continuing until the surrender of Germany. The curve representing shipments to the Atlantic areas reflects clearly the rapid build-up of matériel in the United Kingdom just before the invasion of Normandy; the heavy shipments directly to the Continent after our forces had gained a foothold there; the reduction of cargo loading during the fall of 1944 because of acute shipping congestion in northern Europe; the resumption of the heavy outbound cargo movement as the congestion began to clear up and the Battle of the Bulge created a strong demand for ammunition and other materiel; and finally it shows the peak movement of supplies to Europe for the final drive into Germany. When shipments to the European theater could be reduced, the freight movement to the Pacific began a sharp rise, but this increase was soon checked by the Japanese surrender.[7]

The heaviest shipments were made from

[6] Memo, Somervell for Gross, 27 Jun 43, OCT HB Gross Shipping Capabilities and Requirements.

[7] For a fuller discussion of ocean transportation in relation to Allied strategy, see Wardlow, *op. cit.*, pp. 5–8.

eight ports of embarkation and two cargo ports. Some of the ports of embarkation had subports at which Army personnel was regularly stationed, and occasionally ships were loaded at other harbors where no Army port organizations were maintained, but the great bulk of the cargo was loaded at the ten ports listed in Table 27. This table shows that the San Francisco Port of Embarkation loaded the largest tonnage of any port in December 1941, and it continued to do so for several months thereafter. Seattle loaded cargo chiefly for Alaska until the threat to that territory was past, and then it began to ship considerable tonnages to the central and western Pacific. Los Angeles underwent gradual but substantial development as a port for the movement of supplies to the Pacific and Asiatic theaters. Boston supplied the garrisons in Newfoundland, Labrador, Greenland, and Iceland, but the heaviest movements through that port were to northern Europe. New York, which loaded about 29 percent of the total tonnage, was the principal port for supplying the European theater; it also loaded large tonnages for the Mediterranean and smaller amounts for other destinations. The Philadelphia and Baltimore cargo ports and the Hampton Roads Port of Embarkation shipped chiefly to the Mediterranean and Europe. Charleston carried a light cargo load, its principal wartime role being that of home port for the hospital ships serving in the Atlantic. New Orleans was the main shipping port for the garrisons at Panama and in the Caribbean, but it also shipped considerable tonnages to Europe and the Pacific.[8]

To conserve shipping, cargoes for transatlantic destinations were loaded at U.S. Atlantic ports and cargoes for Pacific destinations were loaded at U.S. Pacific ports. There were numerous departures from the rule, however, because vessels were sometimes transferred from one ocean to another, or ships or supplies were more readily available on one coast than on the other. In the later stages of the war against Japan, the Chief of Transportation deliberately planned to use Gulf ports, and if necessary Atlantic ports, to supply the forces in the Pacific, because the capacities of the west coast ports and the transcontinental railroads were not sufficient to carry the entire burden of an all-out effort against Japan. During the entire war period New Orleans loaded almost 3,700,000 measurement tons of cargo and New York loaded about 1,000,000 measurement tons for movement to Pacific destinations. The tonnages loaded at other Atlantic ports for movement westbound through the Panama Canal and at Pacific ports for movement eastbound through the canal were considerably smaller. The shipment of supplies to India for the Asiatic theater was shared by Atlantic, Gulf, and Pacific ports; during the early part of the war, when the Mediterranean was closed and the submarine menace in the Atlantic was severe, such supplies moved westbound, but later the principal movement was eastbound.[9]

The bulk of the cargo dispatched to the theaters was procured and distributed by the seven technical services of the Army Service Forces and by the Army Air Forces.[10] The largest shippers were the

[8] Monthly reports by PEs, Outbound and Inbound Cargo, tabulated for a statistical volume of this series, now in preparation.

[9] *Ibid.*

[10] Army cargo included petroleum products shipped in cans and drums but not bulk shipments; bulk gasoline, etc., was moved in tankers under control of the Navy or the WSA; see Memo, Army-Navy Petroleum Board for CofT, 14 Dec 43, ASF Hq Trans 1943.

TABLE 27—TONS OF CARGO SHIPPED TO OVERSEA DESTINATIONS BY THE PRINCIPAL ARMY PORTS: DECEMBER 1941–DECEMBER 1945 [a]

(Measurement Tons of Forty Cubic Feet)

Shipping Ports	Total	1941 (December) Only)	1942	1943	1944	1945
All Ports	132, 119, 533	284, 023	11, 834, 995	28, 500, 226	45, 512, 945	42, 987, 344
Boston	9, 481, 780	160	600, 612	1, 959, 969	3, 953, 680	2, 967, 359
New York	38, 524, 545	75, 257	3, 717, 884	10, 116, 328	15, 861, 674	8, 753, 402
Philadelphia	5, 952, 170	346	4, 541	743, 729	2, 772, 146	2, 431, 408
Baltimore	6, 865, 643	0	51, 290	1, 028, 166	2, 811, 494	2, 974, 693
Hampton Roads	12, 955, 734	7, 277	337, 900	3, 020, 069	5, 464, 725	4, 125, 763
Charleston	3, 675, 088	5, 543	386, 242	672, 139	1, 092, 313	1, 518, 851
New Orleans	7, 954, 767	41, 058	972, 863	883, 486	2, 002, 136	4, 055, 943
Los Angeles	9, 164, 364	2, 423	485, 346	1, 495, 561	3, 293, 091	3, 887, 943
San Francisco	25, 028, 759	101, 645	3, 486, 401	5, 555, 283	7, 711, 629	8, 173, 801
Seattle	12, 516, 683	50, 314	1, 791, 916	3, 025, 496	3, 550, 057	4, 098, 900

[a] The ports shown are the eight at which the Army operated ports of embarkation and the two (Philadelphia and Baltimore) at which the Army operated cargo ports. While the greater part of the cargo was loaded directly at these ports, some was loaded also at officially designated subports and at other ports located near and supervised by the principal ports. Of the unnamed ports, the larger tonnages were loaded at Searsport, Maine (470,000 M. T.), a subport of Boston; Prince Rupert, British Columbia (950,000 M. T.), a subport of Seattle; and Portland, Oregon (1,800,000 M. T.), a subport of San Francisco through August 1944 and a subport of Seattle thereafter. For definition of cargo included, see Table 26, note *a*.

Source: Monthly reports by the ports of embarkation, Outbound and Inbound Cargo, tabulated for a statistical volume of this series, now in preparation.

Quartermaster Corps with 28 percent, the Ordnance Department with 23 percent, the Army Air Forces with 15 percent, and the Corps of Engineers with 14 percent. *(Table 28)* In addition to food, clothing, and other supplies and equipment that it procured for all Army forces, the Quartermaster Corps shipped considerable quantities of supplies for the relief of the civilian populations of occupied areas. These shipments are included in Table 28 under "Army—Miscellaneous." The large tonnages shipped by the Ordnance Department included not only weapons and ammunition but also trucks and other automotive equipment that were procured by that department. A very large part of the freight shipped by the Corps of Engineers consisted of machinery and materials used in the repair and construction of buildings, airfields, docks, railways, highways, and other facilities in the theaters. In considering the Air Forces' tonnage, it must be remembered that many aircraft were flown overseas and that many AAF supplies were moved to the theaters by air.

Supply shipments to the theaters fell into several categories, each of which had peculiar implications for the Transportation Corps. "Initial supply" included the supplies and equipment that accompanied or were allotted to troop units when they moved overseas. "Maintenance supply"

TABLE 28—TONS OF CARGO SHIPPED BY WATER TO OVERSEA DESTINATIONS BY THE RESPECTIVE PROCURING SERVICES: DECEMBER 1941–DECEMBER 1945 [a]

(Measurement Tons of Forty Cubic Feet)

Services	Total	1941 (December Only)	1942	1943	1944	1945
All Services	132, 119, 533	284, 023	11, 834, 995	28, 500, 226	48, 512, 945	42, 987, 344
Army Air Forces	19, 707, 741	40, 929	1, 163, 639	4, 147, 644	9, 067, 968	5, 287, 561
Chemical Warfare Service	1, 076, 182	1, 513	52, 636	313, 888	519, 452	188, 693
Corps of Engineers	19, 160, 270	84, 638	2, 525, 795	4, 542, 403	6, 531, 115	5, 476, 319
Medical Department	1, 143, 088	2, 237	137, 064	259, 407	440, 012	304, 368
Ordnance Department	30, 749, 768	13, 906	1, 552, 370	7, 840, 785	12, 494, 933	8, 847, 774
Quartermaster Corps	37, 493, 923	113, 338	5, 349, 574	6, 621, 593	12, 080, 088	13, 329, 330
Signal Corps	2, 542, 954	6, 617	182, 062	568, 509	980, 768	804, 998
Transportation Corps	3, 277, 578	[b]	[b]	844, 564	1, 309, 061	1, 123, 953
Army—Miscellaneous[c]	15, 169, 250	11, 920	738, 804	2, 870, 279	4, 446, 134	7, 102, 113
Navy [d]	1, 798, 779	8, 925	133, 051	491, 154	643, 414	522, 235

[a] Concerning cargo included, see note *a* to Table 26.

[b] Transportation Corps matériel included with "Miscellaneous" through 1942.

[c] Includes lend-lease and civilian relief supplies shipped on vessels operated by or allocated to the Army, Coast Artillery Corps shipments, troop baggage, household goods and other personal property of military personnel changing stations, Army Exchange and Special Services shipments, and some other items.

[d] Includes naval supplies shipped on vessels operated by or allocated to the Army. The Navy also transported Army matériel on vessels operated by or allocated to it.

Source: Monthly reports by the ports of embarkation, Outbound and Inbound Cargo, tabulated for a statistical volume of this series, now in preparation.

comprehended items required for the support of troops already overseas; this matériel was shipped automatically, or in response to requisitions received from the oversea commanders, or in accordance with directives issued by the War Department. "Operational projects" covered the requirements of future undertakings that demanded extraordinary quantities or unusual types of matériel. All of these categories of supply were planned in advance so that the necessary procurement and shipping arrangements could be made. However, owing to unforeseen strategic or logistical developments, emergency requirements sometimes arose that presented especially difficult problems for the chiefs of the procuring services as well as for the Chief of Transportation.[11]

The amount of initial supplies to be shipped for each soldier sent overseas and the amount of maintenance supplies required for his support each month thereafter were carefully computed by the Chief of Transportation's Planning Division, taking into account the quantities and the cubic measurements of the thousands of items needed by the various types of troop units. These tonnages were basic factors in the planning of both the War Department

[11] See Memo, Vissering for Franklin, 28 Nov 42, sub: Call and Release of Cargo to PEs, OCT 563.5 (1942)(1).

and the Joint Chiefs of Staff for future military operations, since the strength of the forces overseas and the shipping available for their support had to be kept in balance. The tonnage factors varied for the different oversea areas according to the nature of the military operations, the amount of construction work required, the climate, and the extent to which supplies could be procured locally.

As the war advanced the tonnage factors were reduced. Early in 1943 initial supply, as computed for planning purposes, ranged from 6 to 8 measurement tons per man; for example, it was 6 tons for the Southwest Pacific, 7 tons for North Africa and the United Kingdom, and 8 tons for the South Pacific and Central Africa. In January 1945 an average of 5 measurement tons per man was used in planning the movement of initial supplies to all theaters. Maintenance requirements early in 1943 ranged from 0.9 measurement tons to 1.8 measurement tons per man per month. In January 1945 the maintenance supply factor ranged from 0.5 measurement tons for the Caribbean to 1.5 measurement tons for Alaska; it was 0.8 measurement tons for the more active theaters—that is, Europe, the Southwest Pacific Area, and the Pacific Ocean Areas.[12] The reductions in tonnages were made possible by the completion of most construction work in the theaters, the shipment of a larger percentage of vehicles in partially disassembled condition, the transportation of assembled aircraft on the decks of tankers and aircraft carriers where they were not charged against the available cargo space, the more compact packing of supplies, the dehydration of certain subsistence items, and the ability to compute the tonnages more precisely as the result of experience at the ports.[13]

A system of keyed operational projects was instituted in June 1943 to facilitate long-range logistical planning.[14] It was then evident that large quantities of supplies and equipment would be required for future military operations in excess of those provided for in the Army's tables of basic allowances and tables of equipment, and that more definite planning for the procurement and transportation of needed matériel would be necessary than had been undertaken up to that time. Where adequate theater organizations existed, the projects were developed by the theater commanders and submitted to the War Department General Staff for approval. When there was no theater organization ready to undertake such planning, projects were originated in the War Department. The latter procedure is illustrated by the preparations for the final phases of the war in the Pacific. In order to insure that matériel adequate for so large an undertaking would be ready, it was necessary to start procurement before the Joint Chiefs of Staff had assigned operations against Japan proper to any theater command. Various projects were initiated by the Planning Division, ASF, in collaboration with the technical services, and two of these projects became the basis for the OLYMPIC and the CORONET plans, which

[12] Memo, Wylie for Somervell, 9 Apr 43, and atchd tabulation, sub: Initial and Maintenance Tonnages, ASF Hq Shipping 1942–43; Ltr, SW to Sen Harley Kilgore, 10 Jun 43, Question 5 and Table V, OCT 500 Mobilization of Shipping Resources (Kilgore Report); Planning Div OCT, Misc Shipping Information, p. 54, OCT HB Plng Div Gen. These average tonnage requirements took into account loss of shipping space due to broken stowage.

[13] Interv with Brig Gen Marcus B. Stokes, Jr., C of Plng Div OCT during WW II, 16 Jan 52, OCT HB Plng Div Gen.

[14] Rads, WD to Theaters, 1 Jun 43, CM-OUT 831–39.

were to have been used in carrying the war to the Japanese home islands.[15]

In a war of the scope and variety of World War II, even the most perspicacious planning could not forestall emergency calls from theater commanders for supplies. Often the matériel could not be immediately provided by the procuring services, a circumstance that increased the importance of fast transportation. To meet such a circumstance the Chief of Transportation had to move the supplies from depots or manufacturing plants to the seaboard in the quickest possible time and to have the fastest available vessel or vessels at the port ready for prompt loading.

These emergency operations were frequent. For example, in the summer of 1942, 300 medium tanks, 100 tank destroyers, and about 13,000 tons of ammunition were rushed by special convoy to the Red Sea, via the Cape of Good Hope, to help the British Eighth Army check the advance of the German *Afrika Korps* toward Suez and the Middle East. Although one vessel of the six-ship convoy was sunk in the Atlantic, a replacement cargo was loaded at New York on the fast *Seatrain Texas* and was delivered with the remainder of the shipment. Speaking before the Congress in May 1943, Prime Minister Churchill said: "These weapons played an appreciable part in the ruin of Rommel's Army at the battle of El Alamein and in the long retreat which chased him back to Tunisia."[16] In February 1943, a shipment of 5,000 trucks and other equipment, totaling 240,000 measurement tons, was dispatched by special convoy to North Africa. This shipment was made in response to a radiogram from General Somervell, who was then visiting the theater and had become impressed with the handicaps imposed on General Eisenhower by the shortage of motor transport.[17] In February 1945, when an urgent call was received from the European theater for plywood boats to be used in the assault crossing of the Rhine, 556 such craft were constructed in nine working days; some were transported to the theater by air, but the majority were moved by fast train and fast ship. The return of General MacArthur's forces to Manila early in 1945 gave rise to an emergency request for water purification equipment that was moved in forty expedited carloads to San Francisco, where a ship was held ready to receive the cargo.[18]

In its general aspects, the Chief of Transportation's task in moving supplies to the oversea commands was a complex one because of the volume and variety of the cargo, the many ports of embarkation and debarkation involved, and the frequent disruption of his plans by emergency requests. The remainder of this chapter will be devoted to some of the more specialized aspects of the operation.

Regulation of Oversea Supply Movements

Regulation of the movement of matériel

[15] See History of Planning Division, ASF, Vol. 2, Ch. 13, for general discussion; Memos, CG ASF for ASF Divs and for Cs of Technical Services, both dated 27 Oct 43, SPX 400 (13 Oct 43); ASF Manual M 415, 25 Aug 44, sub: Special Operational Supplies; Memo, Oversea Opns Br, Plng Div, for Wardlow, 2 Oct 45, sub: TC Special Operational Supply; Memo, Foreign Trans Facilities Br, Plng Div, for Wardlow, 11 Oct 45; all in OCT HB Plng Div Oversea Opns Br.

[16] Pertinent documents in OCT HB Gross Tanks to Egypt.

[17] Story of the Embarkation on Convoy 5½, OCT HB NYPE; Eisenhower, *Crusade in Europe*, pp. 116, 148–49.

[18] WD press release, 24 Mar 45; Memo, Water Div for Wardlow, 12 Dec 45; both in OCT HB Water Div Misc.

from the zone of interior to the oversea commands was entrusted largely to the Chief of Transportation. Fulfillment of the responsibility was divided between the Office of the Chief of Transportation in Washington and the ports of embarkation that operated under his supervision, but the port commanders had the major role.[19]

This regulation was considered by some to be more a supply function than a transportation function, and for that reason the arrangement was not uniformly accepted as a logical one, even though there were practical considerations in its favor. When the plan was adopted soon after Pearl Harbor, it was apparent that for a considerable time there would be shortages of shipping and of many types of military supplies. Under these conditions the chief problem would be to maintain a balance between the supplies ready for loading at the ports and the ships ready to lift them, and to keep the cargoes actually shipped as nearly in accordance with theater requirements as could be done with the resources available. This involved day-to-day and almost hour-to-hour knowledge of both cargoes and ships, and no other agency was in as good a position to have this knowledge as the ports where the cargoes and the ships were brought together. There also was an advantage in distributing the regulation of the flow of supplies to the theaters among several field agencies, in this instance the ports, since to have concentrated the responsibility in the hands of a single agency in Washington or in the field would have imposed on that agency an extremely heavy and highly complex task. Looking after the supply needs of a single active theater proved to be a challenging undertaking.

The division of responsibility between the Office of the Chief of Transportation and the ports was clearly drawn. Basic policies were worked out between ASF headquarters and the Chief of Transportation and were communicated to the ports by the latter. In broad outline the procedure for the movement of supplies was as follows: The OCT transmitted to the ports any information affecting supply movements to the respective oversea commands, such as troop movement orders, troop strength figures, and authorized levels of supply, that it obtained from the General Staff or ASF headquarters. On the basis of this information and requisitions received from the theaters, the ports calculated the quantity of freight to be moved to each oversea destination and the number of ships needed for the purpose. In accordance with such calculations the Water Division in Washington obtained allocations of vessels from the War Shipping Administration to supplement any Army or Navy transports that might be available. On the basis of the shipping so provided, the ports issued calls for specific supplies to be delivered at the seaboard during specified periods, thus clearing the way for the Traffic Control Division in Washington to issue permits for the movement of the shipments from their points of origin. The ports kept a careful check on the movement and receipt of such shipments, arranged for their loading into ships, and notified the oversea commands regarding the supplies en route to them. The ports were the normal points of contact between the consuming forces over-

[19] Because of the many procuring agencies, ports of embarkation, oversea commands, and types of matériel, the oversea supply system was complicated and subject to revision in some details. The aim in this section is not to unravel all the complications or to trace all the changes but to give a general idea of how the system worked.

seas and the procuring services in the zone of interior.[20]

Under this plan of regulation the ports had the key role in scheduling the movement of supplies to the theaters. During 1942 and early 1943 the arrangement did not work out to the satisfaction of General Lutes, who, as ASF Director of Operations (earlier Assistant Chief of Staff for Operations), was charged with staff supervision of supply distribution. Although initially he had favored placing the regulation of oversea supply movements under the control of the port commanders, General Lutes came to the conclusion that in the execution of the responsibility the ports were subordinating supply considerations to transportation considerations, with the result that ASF supply policies and theater needs were sometimes disregarded in the effort to load the ships with well-balanced cargoes.

In the early part of 1943, when the machinery and procedures at the ports were still undergoing development and numerous complaints were being received from the theaters, ASF headquarters considered two proposals to change the plan. The first was that the oversea supply divisions (OSD's) at the ports be made directly responsible to the ASF Director of Operations rather than to the port commanders. The second, which originated in the ASF Control Division, was that an Atlantic oversea service command be set up to replace the oversea supply divisions of the east coast ports and to function directly under ASF headquarters. (Extension of this proposal to other coasts was to be left for later consideration.) The Chief of Transportation vigorously opposed both proposals, which he believed were contrary to the basic principle on which the oversea supply plan had been founded—namely, the co-ordination of supply movements and shipping by the port commanders.[21]

In order to settle the issue, Maj. Gen. Wilhelm D. Styer, General Somervell's Chief of Staff, made a personal investigation of the oversea supply operation. He reported that there was no need for a radical change in the organization since he found no weaknesses that could not be corrected within the existing framework. But Styer pointed out that General Lutes, in order to fulfill his responsibility for staff supervision of the supply aspect of oversea supply (as distinguished from the transportation aspect), would have to receive full information from the oversea supply divisions at the ports, have direct and free communication with the OSD's, and issue instructions to them on supply matters in emergencies. General Somervell accepted this solution, and General Gross, who had indicated that he was ready to make any changes that would improve the effectiveness of the oversea supply divisions, immediately instructed the port commanders that the new arrangement was in effect.[22]

[20] This general statement is amplified hereafter. A much more complete discussion than can be undertaken here will be found in OCT HB Monograph 27, and ASF Hist Monograph, Development of Overseas Supply Policies and Procedures. See also Leighton and Coakley, *Global Logistics and Strategy, 1940–1943*, Ch. XIII.

[21] See OCT HB Monograph 27, pp. 152–70. The "Lutes Diary" frequently cited in this monograph is a file of documents still in General Lutes' personal possession. See also Memo, Col Clinton F. Robinson, C of Contl Div ASF, for CG ASF, 16 Mar 43; Memo, Lutes for CofT, 27 Mar 43; Memo, Gross for Styer, 1 Apr 43; Memo, Gross for Lutes, 4 Apr 43; Memos, Lutes for CofT, 10 and 13 Apr 43; all in OCT HB PE Gen Oversea Supply.

[22] Memo, Styer for Somervell, 16 Apr 43; Memo, Lutes for CofT, 23 Apr 43; Memo, CofT for PEs, 23 Apr 43; all in OCT HB Gross Oversea Supply.

The Chief of Transportation at the same time took steps to expand the Oversea Supply Branch in his office, which was charged with studying and co-ordinating the work at the several ports and with developing effective procedures and controls.[23] General Styer had warned that this branch should not be permitted to interfere with the work of General Lutes's office in supervising the distribution of supplies, and in practice it did not do so; it dealt entirely with the organizations and procedures at the ports.

Underlying the controversy were two distinct points of view. One emphasized supply considerations and the timeliness and orderliness with which matériel was delivered to the theaters in response to their needs. From that angle it was intolerable that shipments should be broken up and loaded in different ships or different convoys with the possibility that the segments might be landed at different oversea ports. Deviation from the approved priorities also was objectionable, since it threw theater stocks out of balance and led to a general maldistribution of supplies. Such disregard of the principles of supply procedure were described by General Lutes as "shipping tonnage only."[24] The other point of view was predicated on the shortage of shipping and the consequent undesirability of putting vessels to sea without having loaded them as nearly "full and down" as the available cargo would permit. General Gross was confronted with the danger that failure to make the best possible use of the ships the War Shipping Administration had placed at his disposal would prejudice his future efforts to obtain sufficient vessels to move the ever-growing volume of Army freight.

The plan adopted in April 1943 recognized the validity of the first point of view by providing for direct supervision of the oversea supply divisions in supply matters by the supply staff of ASF headquarters. It recognized the second point of view by leaving the OSD's under the command of the port commanders, who were in the best position to co-ordinate supply and transportation considerations in planning cargoes and loading ships. On the whole the plan worked well, although oversea supply in the Pacific continued to be a troublesome problem.

The oversea supply system that has been outlined was not introduced until after the United States had entered the war and the existing plan had been found inadequate. In peacetime and during the prewar emergency period the procuring services shipped supplies to the ports as they became available, and the ports shipped them overseas in accordance with percentages established by the War Department—that is, a specified percentage of the cargo space was used for the supplies of each procuring service with such adjustments as might be found necessary from time to time.[25] Early in 1941, because of the increased number of ships in Army service and the increased number of oversea bases to be supplied, G-4 began issuing a priority list to guide the port com-

[23] Hist Record, Oversea Supply Br, Jul 43–Jul 44, OCT HB PEs Gen Oversea Supply. This activity began in the Port and Field Agencies Division, was transferred to the Control Division, then moved back to the former in May 1943.

[24] Ltr, Lutes to Maj Gen Orlando Ward, 30 Mar 51, with notes on manuscript prepared by John D. Millett, pp. 6–7, OCT HB ASF Gen.

[25] Memo, Col Cordiner, OQMG, for TAG, 1 Nov 39, sub: Change in Allocation of Cargo Space; Memo of Record by Cordiner, 29 Mar 41, sub: Digest of Activities—Transportation Division; pars. 31 and 33; both in OCT HB OQMG Water Transport Br.

manders in loading transports.[26] A few months later the Army set up a release system in order to control shipments to the ports and keep them commensurate with shipping capacity. But this machinery had been made only partially effective when U.S. entry into the war multiplied the pressure on the ports of embarkation.

The shortcomings in the existing arrangements were especially apparent in connection with the supply of Pacific bases through the San Francisco Port of Embarkation. Commanders in the Pacific complained that they were not getting the items that they most urgently needed; that the cargoes were badly scrambled, with component parts scattered and high-priority supplies buried beneath less urgently needed shipments; that information regarding the make-up of cargoes was not provided at all or arrived too late to be of aid in unloading; that considerable cargo was damaged en route because of improper processing or stowing; and that troops and their equipment arrived at different ports. These difficulties could not be attributed wholly to deficiencies at the port of embarkation or to the procuring services; the commanders in the Pacific contributed to the unsatisfactory situation. They sometimes requested too much or too little of particular items, were not certain at which ports supplies should be delivered, and did not have the machinery for administering the matériel in an orderly and efficient manner after it had been landed.[27]

These were conditions that had to be corrected, and quickly. The new system, which was announced in January, became effective on 1 March 1942. In the initial directive the new arrangement was presented schematically, and responsibilities were clearly defined for the Secretary of War and the General Staff—the Services of Supply and the Transportation Corps had not yet been established—the oversea commanders, the port commanders in the zone of interior, the chiefs of the procuring services, and the zone of interior depots designated to furnish supplies for the theaters. Although this system was amplified and modified in some respects, its general features continued in effect throughout the war.[28]

It was a basic principle of the system that the supply of each oversea command should be the responsibility of a single port of embarkation in the zone of interior. While this so-called primary port had full responsibility, it might direct that some of the cargo be loaded at other ports known as outports. The outport arrangement was necessary because the primary ports were not physically capable of transshipping all the supplies required by the larger and more active theaters, and because the use of outports sometimes was more economical from the standpoint of domestic trans-

[26] Memo, ACofS G-4 for TAG, 17 Mar 41; DF, ACofS G-4 for TQMG, *et al.*, 30 Apr 41; both in G-4/32742; Memo, ACofS G-4 for CG NYPE, 1 Apr 41, G-4/32783.

[27] On the problems of the American Expeditionary Forces in France in 1917–18 arising from similar difficulties, see John J. Pershing, *My Experiences in the World War*, 2 vols. (New York: Frederick A. Stokes Company, 1931), Vol. II, pp. 309–10.

[28] The basic directives on responsibilities were AG Memos, 22 Jan 42, AG 400 (1-17-42); 28 Apr 42, AG 400 (4-27-42); W 700-8-42, 10 Oct 42, AG 400 (10-9-42), all entitled Supply of Oversea Departments, Theaters, and Separate Bases. For procedures developed under the system, see TC Pamphlet 5, sub: Standard Operating Procedure for Supply of Oversea Theaters and Bases, first issued 27 Jan 44, and revised 1 Apr 44 and 1 Jun 45; ASF Manual M 411, 29 Jun 44, sub: Procedure for Processing Oversea Requisitions.

portation.[29] Since the commander of the primary port was responsible for the proper movement of all supplies regardless of where they were loaded, he was given command over the outports with respect to such movements.[30]

The ports responsible for the supply of the smaller oversea commands were changed as conditions warranted, but those responsible for the larger theaters remained the same. From the standpoint of geography, port capacity, and domestic transportation it was natural that New York should have been the primary port for the United Kingdom and North Africa in the early part of the war, and later for the European and Mediterranean theaters; that Boston should have been the primary port for the North Atlantic bases; New Orleans for the Panama Canal and the Caribbean bases; San Francisco for the Central, South, and Southwest Pacific Areas; and Seattle for Alaska. A primary port might use as many outports as it needed; all Atlantic and Gulf ports served as outports of New York; all Pacific coast ports, New Orleans, and sometimes Charleston, Hampton Roads, and New York served as outports of San Francisco.[31] Assignments of primary responsibility to the ports were made by ASF headquarters in consultation with the Chief of Transportation; the utilization of outports was worked out informally between the Chief of Transportation and the primary port commanders.[32]

Some months after the inauguration of the new system, each port commander was directed to establish a special unit in his organization to administer his oversea supply responsibilities. This unit became known as the oversea supply division.[33] It was concerned solely with ASF matériel moving to the oversea commands for the maintenance of forces already there or under approved oversea projects; it was not responsible for the initial equipment and supplies of troops being sent to the theaters or for the supplies used in local port operations. As subsequent discussion will show, the task of the oversea supply division was an intricate as well as a vital one, so that a large organization was required at the ports responsible for the supply of large oversea forces. In the beginning neither trained personnel nor tried procedures were available, so that much had to be learned through experience.

The Oversea Supply Division at New York, which was headed from the beginning by Brig. Gen. (later Maj. Gen.) William M. Goodman, developed the most satisfactory organization and procedures, and late in 1943 the other ports were instructed to adopt the same system. At that time General Goodman was sent to San Francisco to assist that important port in making the desired adjustments. A meeting of the Chief of Transportation and his staff with all port commanders and their staffs at New Orleans in January

[29] Of the cargo shipped under the control of the NYPE in the period December 1941–April 1945, that port actually loaded 53.8 percent, and the outports 46.2 percent. See Summary NYPE, Dec 41–Apr 45, pp. 2, 3, OCT HB NYPE Gen.

[30] Memo, CofT for CG NYPE, *et al.*, 17 Feb 43; Memo, CofT for CG SFPE, *et al.*, 9 Feb 44; both in OCT HB PE Gen Oversea Supply; TC Pamphlet 5, 1 Jun 45, defines functions of primary ports and outports.

[31] See schematic diagrams of oversea supply, 1 May 43, and 1 Oct 43, OCT PE Gen Oversea Supply; also diagram in ASF MPR, 28 Feb 45, Sec. 3, p. 45, and other issues.

[32] ASF Cir 175, 10 Jun 44, Sec. II.

[33] The first oversea supply division was set up at the NYPE in July 1942. For functions of the OSD as eventually defined, see TC Pamphlet 5, 1 Jun 45, Sec. III.



MAJ. GEN. WILLIAM M. GOODMAN, *Chief of the Oversea Supply Division at New York receives his second star from Maj. Gen. Homer M. Groninger, Commander of the New York Port of Embarkation.*

1944 afforded an opportunity for detailed discussion of the New York system.[34]

The oversea supply divisions were aided by officers assigned to them by the several technical or procuring services, and in some cases by the theaters for which the ports had primary supply responsibility. The technical service officers and their staffs were an integral part of the OSD organizations and were responsible to the division chiefs in matters relating to matériel procured by the services they represented and the efficiency with which that matériel was moved to the ports.[35] The plan to have officers from the European theater stationed at the New York Port of Embarkation and officers from the Southwest Pacific Area stationed at the San Francisco Port of Embarkation was inaugurated in 1942, when the oversea supply operation was still in the developmental

[34] Memo, CofT for LAPE, 22 Nov 43, OCT HB Gross Day File; Min of Port Comdrs Conf, New Orleans, Jan 44, Vol. I, pp. 25–36, 51–54, 138–42; Vol. II, pp. 1–14, Tabs A and B, OCT HB PE Gen Port Comdrs Conf. For the organization of the OSD at the NYPE, see Hist Record, OSD NYPE, 1943, Tab A-1, OCT HB NYPE OSD.

[35] Lecture by Gen Goodman at Atlantic Coast Transportation Corps Officers Training School, undated but apparently given late in 1943, pp. 6, 12, OCT HB PE Gen Oversea Supply.

stage and when lack of understanding between the ports and the theaters was one of the principal problems. It was a sound and helpful arrangement, although General Gross felt it necessary to take precautions against theater representatives attempting to assume positions of authority and so interfering with the work of the oversea supply divisions.[36] On the same principle, representatives of the ports of embarkation were sent on temporary duty to the theaters to study their supply requirements and methods and to give theater supply officers a better understanding of the procedures in the zone of interior.

Maintenance supplies shipped to the oversea commanders fell into two broad categories that involved different procedures. In the beginning, in order to relieve the newly organized oversea commands of part of the burdensome and almost impossible task of requisitioning everything they needed, supplies that were consumed at relatively constant rates and were standard for all areas—such as food and motor fuel—were shipped by the ports automatically in accordance with the strength of the oversea commands and the reported status of their stocks. Other supplies were shipped in response to theater requisitions, adjusted by the oversea supply divisions to reduce demands that appeared to be in excess of normal requirements.[37]

While there were obvious advantages in automatic supply, there were also dangers due to variations in the rate of consumption, changes in troop strength at particular bases, and local procurement of which the oversea supply divisions were not informed.[38] Shortages of items supplied automatically could be corrected in time by theater requisitions, but excesses had a tendency to accumulate without anything being done about them.[39] The shipment of excessive quantities of a particular item to a particular oversea base might involve an undersupply of the same item at another base, and it inevitably entailed a waste of shipping.

In view of this difficulty and the developing ability of the theaters to determine their own requirements, automatic supply was gradually curtailed and the scope of requisitioning was broadened. The first step in this direction was the adoption of a phasing arrangement. New commands were to be supplied automatically until they were able to set up inventory control and other procedures essential to intelligent requisitioning. When a command was sufficiently organized to requisition some but not all of its requirements it passed into the phase called semiautomatic supply. The third phase, known as supply by requisition only, demanded a thoroughly organized theater supply system and stabilized levels of supply.[40] Some theaters were slow in attaining this status, and full requisitioning for all theaters was not decreed until the spring of 1945.[41]

When requisitions for supplies were received at the primary ports, the requests for noncontrolled items procured by the Army Service Forces were "edited" in the

[36] Telephone Conv, Gross with Groninger, 29 Dec 42, p. 3, OCT HB Gross Day File.

[37] Memo, CG SOS for CofT, *et al.*, 24 May 42, sub: Handling of Requisitions at PEs, SPX 400 (5-21-42), OCT HB PE Gen Oversea Supply. For definition of supply classes I, II, III, IIIa, IV, V, see ASF Manual 807, 25 Oct 44, Glossary, p. 13.

[38] That this danger had been foreseen is indicated by Memo, ACofS G-4 for TAG, 16 Jan 42, sub: Reduction of Surpluses in Oversea Departments, G-4/33889.

[39] With reference to Quartermaster supplies, see Alvin P. Stauffer, The Quartermaster Corps: Operations in the War Against Japan, a volume in preparation for this series, Ch. IV.

[40] WD Cir 220, 20 Sep 43; WD Cir 203, 23 May 44.

[41] AG Ltr, 16 Mar 45, sub: Oversea Supply Rpts, AG 400 (13 Mar 45).

oversea supply divisions by representatives of the technical services concerned. They were edited first with respect to the correctness of nomenclature and stock numbers, marking instructions, and the reasonableness of the quantities requested. Editing as to quantity required the maintenance of extensive records at the ports, based on the troop strength in the respective oversea commands, their authorized levels of supply as established by the War Department from time to time, published tables of equipment and allowances for the various types of troop organizations, and matériel status reports showing the supplies on hand in the theaters and en route to them. Next the requests for particular items were considered in relation to the stocks available in the zone of interior, and the depots from which they should be drawn were determined. In this the OSD's at the ports and the chiefs of technical services collaborated closely.[42]

During the early part of the war requisitions were frequently found to be excessive; they called for either more than the theaters apparently needed or more than the zone of interior was able to supply. The oversea commands sometimes did not know what they already had on hand or they calculated their authorized levels of supply inaccurately.[43] Reduction of the requested quantities often entailed consultation between the ports and the oversea commands by telephone or teletype. If agreement could not be worked out in this manner, ASF headquarters was called on for a decision. In 1944 the War Department directed the theater commanders to establish stock inventory systems as quickly as possible, and when ASF headquarters was satisfied that a theater had an adequate system, the port of embarkation was authorized to omit the editing of requisitions from that source as to quantity, unless the quantity requested was obviously in error.[44]

The requisitions that oversea commanders submitted usually covered a wide variety of items. After being edited they were broken down into so-called extract requisitions by the oversea supply divisions, and these extracts were forwarded to the initial sources of supply. Extract requisitions for noncontrolled items normally were forwarded to "filler depots," which had been designated by the respective technical services to serve particular ports and had built up stocks for that purpose. Sometimes when the urgency of the oversea requisitions made it desirable to avoid the delay involved in processing extract requisitions through filler depots, the oversea supply divisions could fill them from the limited stocks of noncontrolled supplies held at the ports, or from supplies temporarily in storage at holding and reconsignment points near the ports. Until late in the war the usual procedure was to send unedited extract requisitions for controlled items directly to the chiefs of technical services, who did the necessary editing and re-extracted them to the depots that were best able to furnish the supplies.[45] *(Chart 11)* The list of controlled items, which was issued by the War Department from time to time, included

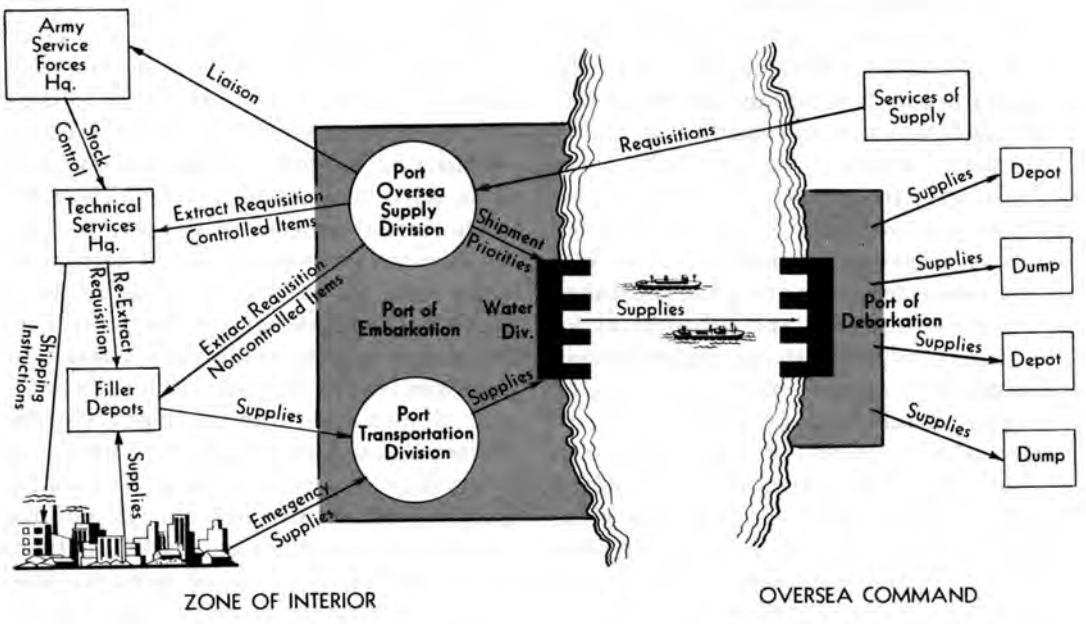
[42] Min of ASF Staff Conf, 11 Aug 42, p. 7; Memo, CG ASF for C of Svs, 17 Aug 42, sub: Editing of Requisitions, OCT HB PE Gen Oversea Supply; OCT Cir 82, 19 Nov 42, sub: Proper Editing of Requisitions.

[43] Concerning levels of supply, see Hist of Plng Div ASF, Vol. 2, pp. 201–06.

[44] AG Ltr, 9 May 44, SPX 400 (5 May 44); AG Ltr, 10 Oct 44; SPX 400.312 (10 Oct 44); WD TM 38-418, 1 Nov 45, sub: Oversea Requisitions.

[45] WD Memo W 700-35-43, 25 Jul 43, sub: Controlled Items of Equip; ASF Cir 88, 24 Sep 43, Sec. I; WD Cir 191, 13 May 44; ASF Manual M 411, 29 Jun 44, pp. 1.05 and 1.06; WD Cir 65, 28 Feb 45.

CHART 11—BASIC PLAN FOR FILLING REQUISITIONS FROM OVERSEA COMMANDS FOR ARMY SERVICE FORCES SUPPLIES



those items in short supply or designed for special or limited use that had to be distributed with unusual care. Beginning 1 May 1945, requisitions for critical items—a classification that had superseded controlled items—were sent from the theaters directly to the chiefs of technical services, and information copies were sent to the ports.[46]

The extent to which supplies for use in filling oversea requisitions should be stocked at the ports was a much controverted subject. Under the original plan port commanders were authorized to establish "port reserves" of noncontrolled ASF supplies that might be used for this purpose in emergencies. The intention was that port reserves would be maintained on a very limited basis, but some port commanders found it advantageous to build up rather extensive stocks to insure their ability to fill urgent oversea requisitions promptly and also to provide cargo to fill ship space left available by the failure of other supplies to reach the ports as expected. In addition to requiring considerable storage space and operating personnel, these port reserves ran counter to the doctrine of centralized stock control that General Lutes was endeavoring to make fully effective. Consequently, after considerable discussion, port reserves were abolished in July 1943 and the port commanders were authorized to maintain instead only "port stocks," which would include small quantities of selected fast-moving items to be used for supplying station complements and troops passing through the ports. Port stocks were subject to the stock control procedures that had been established throughout the Army

[46] AG Ltr, 16 Mar 45, AG 400 (13 Mar 45).

Service Forces and could be drawn upon by the chiefs of technical services when necessary.[47]

The Chief of Transportation was satisfied with this ASF decision as it affected the east coast ports, but he believed that special consideration was required by the Pacific coast ports because of their distance from filler depots and the principal manufacturing areas and the limited capacity of the western railroads. ASF headquarters recognized the validity of the argument and also the need of using all possible means to speed up the action on requisitions from Pacific theaters. Accordingly, the San Francisco Port of Embarkation was authorized to maintain larger stocks of certain items and, when advisable, to fill oversea requisitions from these stocks without taking the time to call on filler depots.[48]

The arrangement did not work out to General Lutes' satisfaction, and in March 1944 he recommended that the depot in the Oakland branch of the San Francisco Port of Embarkation be transferred to ASF control. Lutes did not believe the OSD at this port was functioning properly—a view shared by others, including General Gross—and he considered it "fundamentally unsound" for ports of embarkation to control large stocks. General Gross objected to the proposal, for he saw "nothing but disadvantage to overseas supply" in it. The Oakland storage facilities, he argued, were an integral part of the port establishment and it was not feasible to have them under separate management. He pointed out that the port frequently had experienced delay in obtaining shipments from ASF depots on extract requisitions, whereas port stocks were immediately available. General Somervell supported the position taken by his Chief of Transportation, but he directed that the deficiencies in the oversea supply division be corrected at once.[49]

The ability of the oversea commands to requisition supplies in an orderly and accurate manner and the ability of the oversea supply divisions to edit the requisitions properly depended on their understanding of the supply policies that the War Department had laid down. As an aid to such understanding, the OSD's prepared monthly supply policy charts, in which they endeavored to present in a concise form all the basic factors governing the supply of a particular oversea command with respect to each classification of matériel. The chart showed whether supplies in a particular classification were to be shipped automatically or in response to requisitions, the levels of supply that the command was authorized to maintain, the current troop strength figures projected ahead for several months, and exceptions or qualifications applicable to particular items within a classification. The authority for each statement in the chart was shown.[50] General Goodman in explaining the advantages of this device, which had originated in his division, pointed out that the supply policy chart for the United Kingdom presented on a

[47] Memo, CG ASF for CofT, *et al.*, 24 Feb 43, sub: Utilization of Port Reserves, OCT 400.23; Memo, CG ASF for CofT, 21 Jul 43, sub: Stocks at PEs, OCT 400.2 Stock Control; OCT HB Monograph 27, pp. 43–51.

[48] 1st Ind, CofT for Dir of Opns ASF, 30 Jul 43, OCT 400.2 Stock Control; Memo, CG ASF for Cs of Tech Svs, 29 Nov 43, sub: Stockage at SFPE, OCT 400.23.

[49] Memo, Lutes for Somervell, 21 Mar 44, sub: Oakland Depot; Memo, Gross for Somervell, 23 Mar 44; Memo, Styer for Somervell, 25 Mar 44, with Somervell's indorsement of same date; Memo, SFPE for Gross, 8 Apr 44; all in OCT 323.3 Oakland.

[50] See typical chart in Hist Record, OSD NYPE, 1943, Tab I, OCT HB NYPE OSD.

single sheet, albeit a large sheet, information that had been assembled from forty-eight different directives and other documents.[51]

Shipments of matériel to the ports had to be carefully synchronized with planned sailings, and to that end several devices were used by the oversea supply divisions. The first step was to prepare a shipping period cycle chart, by which the total time allotted for acting on requisitions and loading the cargo in vessels was broken down into five periods. At east coast ports the shipping cycles were governed by the sailing dates of convoys. The second step was to prepare a cargo distribution chart, which showed what supplies were expected to be available for loading at each port (primary or outport) for each destination during each shipping cycle, with their weight and cubic measurement. The cargo distribution charts served as a basis on which the port transportation divisions could plan to bring cargoes into the ports and the port water divisions could make preliminary plans for loading the ships that had been allocated and request additional ships if necessary. The first cargo distribution chart for a particular shipping cycle was issued as soon as the depots began processing requisitions for that cycle, and several revisions were issued thereafter until the supplies actually were at the port.[52] Finally, on the basis of cargo at or about to arrive at the port, a master loading plan was prepared for each shipping cycle. This plan was the work of a loading committee that consisted of representatives of the port water division, which was responsible for the berthing and stowing of the vessels; the port transportation division, which arranged for the movement of freight from rail terminals or warehouses to shipside; and the oversea supply division, which had information regarding theater requisitions and priorities; together with such other officers as the port commander might designate.[53]

Each of the five periods in the shipping cycle chart had a terminal date, and it was the responsibility of the oversea supply division to follow up each extract requisition and determine whether these dates were being observed. The terminal dates were the cutoff date, by which oversea requisitions were to have been edited and extract requisitions dispatched from the ports; the initial date, by which the sources of supply were to have notified the ports of the availability or nonavailability of the supplies requisitioned and to have begun preparation for shipment; the limiting date, by which all supplies were to have been made ready for shipment to the port; the deadline date, by which all were to have arrived at the port; and the last shipping date, by which all were to have been loaded and put to sea.[54] Each port technical service representative followed up the supplies that his service procured.

The oversea supply divisions studied the results of the follow-up procedure to ascertain where delays were being encountered. ASF headquarters analyzed the data each month, and the technical services that had experienced difficulty in

[51] Remarks in Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, Vol. I, p. 27, OCT HB PE Gen.

[52] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 4, 5, and Tab A, pp. 8, 9, OCT HB PE Gen.

[53] TC Pamphlet 5, 1 Jun 45, pp. 8–10.

[54] Concerning follow-up responsibility and procedures, see WD Memo W 55-6-43, 9 Feb 43, sub: Responsibilities in Follow-up of Shipments to PEs; ASF Cir 92, 29 Sep 43, Sec. IV; SOP Memo 6, OSD NYPE, 1 Dec 43, Tab F, in Hist Record OSD NYPE 1943; TC Pamphlet 5, 1 Jun 45, Pt. I, pp. 11–13 and Pt. III; TC Pamphlet 46, 1 Aug 45, sub: Procedure for Follow-up of Extract Requisitions.

meeting initial or limiting dates were required to investigate and determine the causes.[55] While delays were usually due to procurement lags and the slow processing of requisitions at technical service depots, there were other contributing factors such as delay in getting information necessary to the editing of a requisition, inability of the Traffic Control Division to give an immediate release for shipment because of conditions at the loading or discharging point, and difficulty in getting an immediate assignment of freight cars.

The crux of the matter from the standpoint of the theater commanders was the time required for supplies to reach them after requistions had been prepared. Several studies of what was termed the supply turnaround cycle were made by ASF headquarters. Since the traffic involved many widely scattered ports of destination, several technical services, hundreds of shippers, and a great variety of conditions affecting each segment of the turnaround, a satisfactory analysis was difficult to achieve and all generalizations and comparisons were subject to qualification. This statement also applies to the average turnaround cycles for four principal theater commands given below. These figures, which represent the average number of days elapsed from date of requisitioning to delivery of the supplies at oversea ports, are based on shipments by all ASF technical services that were loaded at ports in the United States during the three-month period December 1944–February 1945:[56]

Theater Command	*Turnaround Cycle (Days)*
European Theater of Operations	133
Mediterranean Theater of Operations	115
Southwest Pacific Area	181
Pacific Ocean Areas	118

In order that the port oversea supply divisions might know as early as possible whether requisitioned items would reach the port by the deadline dates, the initial sources of supply were required for a time to notify the OSD's whether the supplies were immediately available, and if not, what delay might be involved in getting them from secondary sources or from vendors. In October 1944 this requirement was modified, and thereafter the ports were notified only of prospective delays or the nonavailability of particular items. When it was evident that supplies could not be shipped as desired, the primary port so informed the oversea command and endeavored to ascertain whether substitute supplies were desired or whether the requisitions could be canceled. These "notices of delayed items and/or nonavailability" were important both from the standpoint of meeting theater needs and from the standpoint of planning the loading of ships. Yet the technical services frequently were slow in dispatching them or overlooked the responsibility entirely. To correct this deficiency, a policing system was established early in 1945, under which the OSD's prepared reports on violations of the regulation and the zone transportation officers

[55] Memo, CG ASF for Tech Svs and PEs, 4 Jun 43, sub: Supply Procedure, SPX 400 (6-1-43); ASF *Annual Report for the Fiscal Year 1944*, pp. 23–26; Memo, NYPE for CofT, 13 Oct 44, OCT 563.5 Time Analysis Report for ETO Shipments; ASF Staff Conf, 29 Nov 44, pp. 10, 11; ASF MPR, 30 Apr 45, Sec. 6-B, Review of the Month, pp. 33–36, and ASF MPR, 31 May 45, pp. 50–62.

[56] ASF MPR, 28 Feb 45, Sec. 6, Analysis, Turnaround Cycles—Oversea Supply, p. 2. The analysis shows the average cycles for the supplies of each technical service and discusses problems affecting each segment of the turnaround—that is, time for transmission of requisition from theater to primary port, port editing time, time in the zone of interior depot system, time en route to port of embarkation, and time afloat.

made investigations at the implicated technical service depots. This policing system brought some improvement, but the plan never worked to the complete satisfaction of the ports.[57]

Detailed records were maintained to enable the ports to exercise the close control that was necessary over the movement and loading of supplies. At New York and other large ports records were kept by machine methods. From these records the New York Port of Embarkation prepared five reports daily to show the status of each carload of freight that had been shipped to the port—one report covered the cars en route; another, the cars that had arrived at port rail terminals; a third, the cars that had been ordered into lighters for movement to port shipping terminals; a fourth, the cars that had arrived at shipping terminals; and a fifth, the cars that had been unloaded at shipping terminals. These reports were the basis for the master loading plan.

Two other reports were used by the New York Port of Embarkation in its control of the oversea supply operation. Up to the time the supplies were designated for loading on a particular vessel, the OSD regularly prepared a statement showing the status of each extract requisition for which it was responsible. This statement disclosed the relative efficiency with which the several technical services were meeting the shipping-cycle dates and served as a basis for action to overcome unwarranted delays. The other report in terms of commodities and measurement tons showed the status of the cargo set up for loading during each shipping cycle. From this report the port was able to judge what additional action was necessary in order to fill the ships that had been scheduled to sail.[58]

In scheduling the movement of supplies to the seaboard and in planning cargoes the OSD's were required to give careful attention to two kinds of priorities—those established by the War Department to indicate the comparative importance of the oversea commands, and those established by the oversea commanders to indicate the relative urgency of the need for the various kinds of requisitioned supplies.[59] In the beginning considerable difficulty was experienced because of the failure of oversea commanders to insert priorities on their requisitions, and because of changes in theater priorities after the requisitions had been processed and the shipping period cycle charts had been set up. Changes in War Department and theater priorities sometimes required the removal of cargo from ships that were being loaded in order to make room for other supplies.[60] It sometimes happened that high-priority cargo for which ship space was being held did not arrive in time for loading, and the oversea supply divisions then had to find substitute cargo. While this might involve a disregard of priorities, the Chief of Transportation con-

[57] TC Pamphlet 5, 27 Jan 44, p. 4; ASF Manual M 411, 29 Jun 44, pp. 1.05 and 1.06; ASF Cir 336, 7 Oct 44, Sec. I; ASF Cir 1, 2 Jan 45, Sec. III; TC Cir 50-2, 12 Jan 45, and revision 1 Jun 45; OCT Misc Ltr 242, 14 Jul 45, sub: Violation Reporting; all in OCT HB PE Gen Oversea Supply.

[58] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, morning session, 7 Jul 44, pp. 14–34, OCT HB PE Gen.

[59] WD Memo W 700-8-42, 10 Oct 42, pars. 2*b* and 5*a*(3); WD Memo for CG AGF, AAF, *et al.*, 28 Nov 43, sub: Priorities for Oversea Shipments, AG 400 (25 Nov 43).

[60] Memo, CofT for PEs, 16 May 42, sub: Supply of Oversea Bases, OCT 400.302 Oversea Bases; Memo, Col Abbott Boone for Gen Wylie, 13 Apr 43, sub: Priorities, OCT HB PE Gen Oversea Supply; Ltr, CofT for Maj Gen John C. H. Lee, CG SOS ETOUSA, 3 Apr 43; OCT 565.2 England.

sidered it essential that ship space be filled if at all possible.[61]

The difficulty of strictly following the theater commanders' priorities was heightened at east coast ports by the convoy system, which caused peaks and valleys in the volume of cargo loaded.[62] The priority problem involved frequent consultation between the oversea supply divisions, the theaters, ASF headquarters, and the Operations Division of the General Staff. For a period OPD sent a representative to the New York Port of Embarkation for each convoy sailing to help with questions of priority.[63]

One of the problems with which the port loading committee had to deal was that of getting component parts and related items in the same ship in order to insure their arrival at the same oversea port at the same time. This presented difficulties because supplies that were to be loaded in the same ship or the same convoy frequently were shipped to the port from different sources, and hence arrived at different times and possibly at different railway terminals. Inadequate or inaccurate marking contributed to the problem, particularly during the early part of the war. The "marrying up" of components was a procedure through which the ports of embarkation could do much to simplify supply operations overseas. On the other hand, it was desirable to spread shipments of particular items or assemblies over two or more ships, so that if one vessel should be lost at sea the theater would still receive part of the quantity requisitioned. "Spread loading" was particularly important in the case of critical items and other supplies that were urgently needed in the theater.[64]

The primary ports were responsible for keeping the oversea commanders informed regarding the status of their requisitions and the supplies actually shipped. Copies of the edited requisitions, the cargo distribution charts, and notices of nonavailability were sent overseas as they became available. Periodically the oversea commanders were informed regarding the status of requisitions that were long outstanding and still unfilled. At the time of each sailing a cargo summary was sent to the theater by cable or radio, and copies of the manifest and the stowage plan were forwarded by air courier. When there was doubt that the manifest would arrive sufficiently far in advance of the vessel, a more detailed cargo cable was sent. The Oversea Supply Division at New York also prepared lists of the principal items procured by each technical service and attached copies to the manifests. These lists gave much more detailed descriptions than could be included in the regular shipping documents, and they were helpful to the theaters as well as to the technical services in the zone of interior.[65] The problem of transmitting adequate and accurate cargo information to the theaters

[61] Telg, CofT to NYPE, 30 Dec 42, OCT HB Meyer Staybacks.

[62] Memo, Gross for Lutes, 4 Apr 43, sub: Cargo Loading for UK and North Africa, OCT HB Wylie Staybacks.

[63] Remarks by Gen Goodman in Min of Port Comdrs Conf, NYPE, 18 Feb 43, p. 6, OCT HB Gross Ports.

[64] Goodman lecture, cited n. 35, p. 19; Memo, CofT for SG, 5 Nov 43, sub: Shipt of Med Assemblies; Memos, CofT for NYPE and SFPE, 5 Nov 43; Memo, Somervell for Gross, 23 Nov 44; Telg, CofT for East Coast Ports, 24 Nov 44; last four in OCT HB Meyer Staybacks.

[65] Memo, CofT for PEs, 8 Feb 43, sub: Instructions Pertaining to Advance Copies of Ship's Papers, OCT HB PE Gen Oversea Supply; OCT Cir 11, 25 Jan 43, sub: Report to Oversea Commanders on Status of Requisitions; Port Comdrs Conf, New Orleans, 11–14 Jan 44, Vol. I, p. 32, OCT HB PE Gen.

was greatly simplified in late 1943 by the introduction of a new shipping document.[66]

During the early part of the war the theaters complained often and bitterly regarding the failure of the ports of embarkation to give them satisfactory information by cable or radio and to forward manifests and stowage plans early enough to be of assistance in arranging for the discharge of vessels and the clearance of cargo from the ports. The early receipt of such information was particularly important to the forces in the United Kingdom and the Southwest Pacific, where the ports of discharge frequently were not determined until after the vessels had arrived in theater waters. Time naturally was required for the ports of embarkation to develop the procedures and train the personnel needed to insure prompt and accurate compilation and dispatch of cargo information. In addition, the communication lines were glutted, air courier service was subject to interruption, and information and documents were not always transmitted from the outports to the primary ports on time. Yet it is surprising that the problem remained acute so long. In the early part of 1943, after General Somervell visited a number of theaters where he encountered "general dissatisfaction" with the way information was being received, a concentrated effort was made to ascertain and correct the defects in the system.[67] Steady improvement followed in the Atlantic, but the flow of information to the Pacific theaters made less progress.

The theaters were not always without fault in this matter, for cargo information was sometimes received but not properly distributed. General Goodman on visits to the United Kingdom and North Africa found that data forwarded by the New York Port of Embarkation had reached the theaters in good time but had not reached the officers concerned.[68]

There were numerous occasions when particular supplies were urgently needed overseas and when specially expedited service was furnished by both the procuring services and the Transportation Corps.[69] Fast cargo ships were assigned to various routes at various times to aid the Chief of Transportation in meeting urgent theater requirements, but the first formal express service was set up early in 1945.[70] Speedy delivery of many types of supplies was called for at that time by the European theater because of abnormal expenditures during the Battle of the Bulge and the heavy requirements for the drive into Germany. This led to the establishment of a continuous expedited service, which was designated first by the code name STRESS and then by the name REX. When the theater indicated that such service was required on particular requisi-

[66] See below, pp. 400–402.

[67] Memos, McIntyre for Wylie, 1 and 2 Feb 43, OCT HB Wylie Urgent Matters; Memo, Somervell for Gross, 19 Feb 43, ASF Hq Trans 1943. A more detailed discussion will be found in Bykofsky and Larson, The Transportation Corps: Operations Overseas, particularly the chapters on the United Kingdom, North Africa, and SWPA. Memo for Record, OCT ETOUSA, 18 Jun 43, sub: Step-by-Step Flow of Marine Intelligence and Ships Papers, OCT HB PE Gen Oversea Supply, reveals the problem from the theater standpoint. Numerous directives were consolidated and published in WD TM 38-412, 21 Mar 44, sub: Standardized Supply and Trans Info.

[68] Ltr, Goodman to author, 11 Mar 52, with comment on various parts of draft of this section, OCT HB PE Gen Oversea Supply.

[69] For procedures, see TC Pamphlet 5, 1 Jun 45, Pt. I, Sec. IX.

[70] JMTC 11th Mtg, 4 Jun 42; Memo, Somervell for Gross, 19 Feb 43, par. 11, OCT HB Wylie Urgent Matters; Ltr, Wylie to Col Edward C. Rose, CBI, 24 Jul 44, OCT HB Wylie Staybacks; Memo, CofT for CNO, 15 Feb 45, sub: Fast Vessel Service to ICEBERG, OCT 565.2 SF.

tioned items, those supplies were shipped to the ports by air or railway express, were loaded on the first available vessels—preferably fast ships that sailed unescorted—and were stowed in readily accessible spaces so that they could be unloaded as soon as the ships had docked.[71]

General Lutes, who had conceived the plan during a visit to Europe, recognized that special service could be extended only to items for which the theater's need was really urgent. Theater supply officers did not at first grasp this point, and some of the requisitions marked REX could not be justified or the amounts called for were excessive. When the first requisitions came in, the Chief of Transportation pointed out that from the standpoint of cost in manpower and transportation REX shipments would have to be kept to the minimum.[72] During the period this plan was in effect—7 February to 11 May 1945—REX shipments totaled 104,000 measurement tons.[73] Ammunition, vehicles, and spare parts figured prominently in these expedited movements.

In order to assist the ports in dealing promptly and effectively with their many problems in connection with oversea supply, the customary requirement of communication "through channels" was set aside. The oversea supply divisions were authorized to communicate directly with the chiefs of technical services and their depots, and with the ASF Assistant Chief of Staff for Operations and his Stock Control Division, regarding the availability and shipment of particular supplies. All communications relating to matters of policy passed through the Office of the Chief of Transportation. The privilege of direct contact with the sources of supply and the officers who controlled distribution served the oversea supply divisions to good advantage, and they appear to have used this privilege discreetly.[74]

Direct communication between the oversea supply divisions at the primary ports and the oversea commands was necessary to enable the OSD's to keep up to date on the theaters' complex and changing requirements and to keep the theaters informed regarding the progress made in filling their requisitions. The New York and San Francisco Ports of Embarkation, which had primary supply responsibility for the large and active theaters, held daily consultations with theater supply officers. Telephone and radio were used for this purpose until 1944, when teletype connections were installed. The teletype arrangement proved the most satisfactory, since it afforded opportunity for a fast two-way exchange of views and information and provided a complete record of the discussion. Teletype conferences were particularly valuable when preparations were being made for assault operations and the theaters were confronted with unusual and urgent needs for supplies and equipment.[75]

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[71] Rpt, Lutes to Somervell, sub: Mission to ETO, 4 Dec 44–19 Jan 45, pp. 251–59, ASF Somervell File; Memo, CofT for PEs, 5 Jan 45, sub: STRESS Shipments, OCT 563.5 ETO; Msg, Planning Div ASF to COMZONE ETO, 23 Jan 45, WARX 25930.

[72] Memo, CofT for Lutes, 23 Jan 45, sub: REX Shipments, OCT 563.5 ETO.

[73] Memo for Record by author, 6 Jun 45, OCT HB PE Gen Outbound Cargo.

[74] Memo, Lutes for Gross, 23 Apr 43; Memo, CofT for PEs, 23 Apr 43; both in OCT HB Gross Day File; Memo, Gross for PEs, 12 Jun 43; Memo, CofT for Cs of Tech Svs, 12 Jun 43; last two in OCT HB Ex Staybacks; OCT Misc Ltr 16 to PEs, 15 Jan 45, sub: Direct Communication, OCT HB PE Gen Oversea Supply.

[75] Memo, Col Meyer, OCT, for Col E. Bennett Whipple, SWPA, 5 Jul 44, OCT HB Meyer Staybacks; Memo, CG SFPE for CofT, 18 Sep 45, p. 9, sub: Report on Accomplishments and Handicaps, OCT HB SFPE Gen.

The AAF had an entirely separate system for distributing the supplies that it procured, as distinguished from those procured by the Army Service Forces for use by the AAF in common with the AGF. This system included the Air Service Command (ASC), which procured technical supplies and equipment peculiar to the Air Forces; oversea air service commands, which were responsible for the supply of particular oversea areas; and intransit depots, which were located near the seaboard, where air technical supplies were assembled and processed before being shipped to the theaters. When these supplies were flown overseas they were forwarded from the intransit depots to ports of aerial embarkation, which were operated by the Air Transport Command; when they moved by water they were forwarded to the water ports of embarkation operated by the Transportation Corps. The existence of these separate AAF agencies necessitated certain departures from the procedures used in moving ASF supplies through water ports of embarkation.[76]

Early in 1942, under the original plan of oversea supply, requisitions for air technical supplies were received and edited by the primary (water) ports and forwarded to the Commanding General, Air Service Command, or to depots designated by him. Later in 1942 the ports were directed to send requisitions for these supplies to the ASC without editing, and eventually the oversea commanders were directed to send their requisitions for air technical supplies, as well as certain other equipment used by the AAF, directly to the ASC. Priorities for this matériel were to be worked out between the oversea commanders and the Commanding General, Army Air Forces. These changes were in line with the growing autonomy of the Air Forces in many fields.[77] The OSD's at the water ports notified the AAF intransit depots regarding the space available to them on each convoy or during each period, and gave them the dates when their shipments should arrive for loading. The intransit depots were responsible for delivering supplies in accordance with the priorities.[78] Shipments of air technical supplies were not covered by the shipping period cycle charts through which the OSD's exercised detailed control over movements to the ports.

In the spring of 1944, the Army Air Forces proposed that supplies procured by the ASF for the use of AAF commanders overseas be requisitioned and shipped in the same manner as air technical supplies. The proposal did not meet with the approval of ASF and it was not adopted. The Chief of Transportation pointed out that the proposed plan would further interfere with the control of freight movements to the ports, with cargo planning, and with the efficient use of shipping. It also would require the AAF to duplicate organizations and facilities that the ports had already established and developed into a smoothly working system. Setting up a separate system for all supplies mov-

[76] On the establishment of ports of aerial embarkation, see Wardlow, *op. cit.*, pp. 51–53. For the operation of AAF intransit depots, see WD TM 38-415, 22 Jun 44, Secs. IV and IX.

[77] AG Memo 400 (1-17-42), 22 Jan 42, pars. 2*c*(2) and 2*d*(9); AG Memo 400 (3-3-43), 6 Mar 43, pars. 5*a*(2) and 5*b*(9); WD Memo W 700-8-42, 10 Oct 42, pars. 5*a*(2) and 5*b*(9), and Changes 1, 12 May 43; AG Memo 400 (25 Nov 43), 28 Nov 43, sub: Priorities for Oversea Shipments, par. 2*b*(1).

[78] Notation on manuscript attached to Ltr, Goodman to author, 11 Mar 52, OCT HB PEs Gen Oversea Supply.

ing to the AAF overseas would not overcome delays caused by the nonavailability of supplies, a problem that the Chief of Transportation believed was at the root of this proposal.[79]

All freight moved overseas by air was subject to shipment instructions issued by the Air Transport Command (ATC).[80] The volume of matériel procured by the ASF and shipped by air to the ground forces and the service forces in the theaters was never great, but it gradually increased as the war progressed and combat activities in the theaters created emergency requirements. When a theater commander requested air shipment of a particular ASF item, the oversea supply division of the primary port first confirmed the availability of the item, then ascertained from the appropriate ATC office when the shipment could move and through which port of aerial embarkation, and finally passed this information on to the source of supply with shipping instructions.[81] Initially, problems concerning the actual movement of ASF shipments through ports of aerial embarkation were handled by liaison between those ports and the nearest ports of water embarkation. Beginning in October 1944, the Chief of Transportation assigned officers—known as ASF air freight regulating officers—to the ports of aerial embarkation to assist with the identification of ASF shipments, to police their packaging, marking, and documentation, and to expedite their movement.[82]

Certain other types of matériel supplied to the theaters were covered by special procedures. Under the original plan ammunition was to have been supplied by the ports automatically, but this did not prove feasible because of continuing shortages in the zone of interior. Under the plan actually followed, the theaters submitted monthly ammunition status reports that were carefully considered by the Commanding General, Army Service Forces, and the Commanding General, Army Air Forces, who authorized the quantities of ammunition to be shipped in the light of the available stocks and the world-wide military situation.[83]

The original plan to supply gasoline, lubricants, and other petroleum products automatically also proved unworkable. After a period of confusion resulting from uncertain responsibilities and competition for supplies between the air, ground, and naval forces, theater requisitions for these products were channeled through the Army-Navy Petroleum Board, which harmonized the demands in the light of the available stocks and passed the requisi-

[79] Memo, undated, prepared in the OCT regarding proposal presented in a letter from Brig. Gen. Lyman P. Whitten, AAF, on 1 April 1944; Ltr, Goodman to Gross, 11 Apr 44, with attached comments on the proposal; both in OCT HB Wylie AAF.

[80] WD Cir 211, 1 Jul 42, Sec. III; WD Cir 385, 27 Nov 43, Sec. II; Memo, TAG for CGs AAF, ASF, Cs of Tech Svs, 28 Jun 43, sub: Shipmts of Supplies by Mil Aircraft, AG 400.22 (26 Jun 43); Memo, CofT for Dir of Opns ASF, 11 Aug 43, OCT HB Meyer Staybacks; Memo, Dir of Opns ASF for ACofS G-4, 12 Aug 43, G-4 400.22, Vol. I; Rad, WD to Oversea Comdrs, 21 Aug 42, CM-OUTs 9043–56.

[81] Memo, CofT for PEs, 20 Jun 44, sub: SOP in Handling Air Shipments, OCT 581.2; NYPE Procedure Cir 63, 20 Feb 45, sub: Air Shipment Procedure, OCT HB PE Gen Oversea Supply; ASF Cir 132, 13 Apr 45; ASF Cir 303, 9 Aug 45; WD Memo 700-45, 14 Jun 45, sub: Shipment of Supplies by Military Aircraft.

[82] Rpt, Port and Field Agencies Div, FY 1945, pp. 10–11, OCT HB P&FA Div Rpts; WD Cir 75, 8 Mar 45, Sec. II.

[83] Memo, AG 400 (1-17-42), 22 Jan 42, Incl 3; AG 400 (27 Apr 42), 28 Apr 42, pars. 2 and 7; WD Memo W 700-8-42, 10 Oct 42, pars. 2*c* and 6; Goodman lecture, cited n. 35, p. 9; Hist of Plng Div ASF, Vol. II, p. 242.

tions on to the supply agencies of the respective forces for their further action.[84] So far as possible petroleum shipments to the theaters were made in bulk in tankers operated under Navy control; only petroleum products shipped in cans and drums were transported by the Army.

Two other types of shipments involved somewhat different procedures. When the initial troop equipment and supplies specified in the War Department orders directing units to proceed overseas were shipped to the ports, the shipments were regulated by the troop movement divisions (the Initial Troop Equipment Division at New York). These troop movement divisions collaborated with the oversea supply divisions and the water divisions in working out loading plans.[85] When operational projects—which required General Staff approval—had been approved, the supporting requisitions, or bills of materials, were sent to the ports of primary supply responsibility, which prepared extract requisitions and regulated the movement of the supplies in much the same manner as other requisitioned matériel.[86]

The primary purpose of the oversea supply divisions at the ports was to assist the Army Service Forces in keeping matériel flowing to the theaters in accordance with theater requisitions and the approved priorities. Broadly speaking, this purpose was accomplished, although there were numerous shortcomings in the day-to-day administration of the system. Neither the OSD's nor an effective traffic control plan was placed in operation until several months after the United States entered the war, and their procedures had to be worked out gradually and in a measure through trial and error. The emphasis initially placed on filling the ships with the cargoes that were ready for loading contributed to building up unbalanced stocks overseas. This situation obtained until direct supervision of the operation by the supply staff of ASF headquarters was decreed in the spring of 1943. Despite the effort devoted to strengthening the OSD at San Francisco, improvement was very slow and that division had to be entirely revamped in the summer of 1945. Nevertheless, in certain basic aspects the system proved its soundness. The movement of supplies to the ports was kept commensurate with theater requisitions and shipping capacity. Cargo planning was based on an up-to-date knowledge of priorities and reliable information regarding the availability of specific shipments for loading. The records that the OSD's kept on the progress of each requisition furnished a basis for detecting unwarranted delay in any phase of the operation and for taking corrective action.

A secondary but important purpose of the oversea supply divisions was to assist the stock control officers of ASF headquarters and the technical services in keeping theater stock inventories from becoming unnecessarily large. This purpose was achieved in the sense that the theaters were not given a free hand in accumulating supplies; their requisitions were edited in the light of levels of supply and tables of allowances authorized by the War De-

[84] OCT HB Monograph 27, pp. 9–15; WD Cir 220, 20 Sep 43, par. 11; NYPE OSD SOP for Setting Up Packaged Petroleum Products, 25 May 43; Hist Record, OSD NYPE 1943 Tab E; SOP for Supplying Packaged Fuel Lubricants, Grease, etc., Incl A to Memo, ANPB for Caribbean Def Comd, *et al.*, 7 Jul 44, OCT 334 ANPB.

[85] TC Pamphlet 5, 1 Jun 45, Pt. I, Sec. IV; Ch. II above, pp. 148–61.

[86] TC Pamphlet 5, 1 Apr 44, par. 7; ASF Manual M 415, 25 Aug 44, pars. 27 and 28; Hist of Plng Div ASF, Vol. II, Ch. 13.

partment. But the tendency of the commanders of active theaters fighting thousands of miles from their main source of supply was to place heavy requisitions in order to safeguard themselves against unforeseen supply requirements or an interruption in the line of communications. Sometimes their supply officers did not have an accurate record of the stocks on hand. Since the OSD's could not drastically reduce requisitions for supplies that the theaters insisted were necessary, and even ASF headquarters had to be very cautious in doing so, some oversea commanders accumulated larger stocks than they could administer properly, a situation that resulted in congestion and confusion at their depots and dumps. This situation, coupled with the willingness of the theaters to detain vessels for long periods and use them as floating warehouses, led the Chief of Transportation to assert that the accumulation of unnecessarily large stocks overseas was "one of the logistical mistakes of the war." [87] The theater commanders, he believed, should have placed greater reliance on the supply and transportation systems of the Army and scaled down their requisitions accordingly.

The Pacific area commands and the San Francisco Port of Embarkation gave the greatest concern to those in the War Department who were responsible for the supply of the oversea theaters. The situation became critical immediately after the Japanese attacked Pearl Harbor, and throughout the war it was adversely affected by a number of circumstances—the great distances and the slow and irregular turnaround of cargo ships, the limited amount of shipping available in the Pacific because of the higher priority given the transatlantic theaters, the many scattered and undeveloped bases that had to be supplied by direct shipments from the zone of interior, the rapidly developing strategic situation that made it difficult for commands to establish well-regulated base operations, and the lack of direct communication lines between some of the bases and the primary supply port. In addition, stocks were persistently low at western filler depots. Beyond that, and in some measure as a result of these conditions, the Oversea Supply Division at the San Francisco Port of Embarkation got off to a poor start and improved slowly.

During 1942 and 1943 complaints from the Pacific commands and from the technical services were frequent, and the OSD at San Francisco was subject to a number of investigations by ASF and Transportation Corps officers.[88] General Goodman, whom the Chief of Transportation sent to investigate the situation in November 1943, and again in April 1945, concluded that the deficiencies could be attributed in a large measure to the failure of the port commander to properly evaluate the mission of his oversea supply division and to give it the authority and support it needed. As a result, the division was undermanned, it did not have effective con-

[87] Final Report by Gen Gross, Nov 45 (hereafter cited as Gross Final Rpt), p. 59. For the shipping aspects, see Wardlow, *op. cit.*, pp. 287–99.

[88] OCT HB Monograph 27, pp. 184–200; Survey of Supply of Pacific Theaters, undated and unsigned, ordered by Dir of Opns ASF, 12 Oct 43, OCT HB Ex Supply of Oversea Theaters; Memo, Goodman for CG SFPE, 16 Nov 43; Ltr, Gross for Maj Gen Frederick Gilbreath, CG SFPE, 1 Dec 43; last two in OCT HB Ex Oversea Supply; Memo, CofT for Dir Plans and Opns ASF, 13 Dec 43, sub: Follow-up of Survey, OCT 523.06 Follow-up of Shipments; Memo, CG ASF for Cs of Tech Svs, 30 Oct 44, sub: Congestion of SWPA Shipments in Depots, OCT HB Wylie Supply and Shipping in Pacific 1944–45; Survey of Pacific Supply, by Stock Contl Div ASF and Contl Div OCT, 15 Jun 45, OCT HB SFPE OSD.

trol of the cargo that was loaded in vessels, and it did not receive communications from the theaters directly but through port channels.[89]

In mid-1944 Maj. Gen. Frederick Gilbreath, who had commanded the San Francisco Port of Embarkation up to that time, was assigned to the South Pacific Base Command and was suceeded at San Francisco by Maj. Gen. Clarence H. Kells. Kells had been in command of the Boston Port of Embarkation and had developed a good oversea supply division there, patterned on the one at New York. When he was assigned to the San Francisco Port of Embarkation, Kells was instructed to give the oversea supply aspect of the work his immediate attention. During his tenure of about a year at San Francisco Kells effected a number of improvements, but Pacific supply still was not up to the desired standard.[90] Accordingly, as soon as Germany had been defeated General Groninger was transferred from the command of the New York Port of Embarkation to command the San Francisco Port of Embarkation, and with him went General Goodman and about sixty-five officers from his oversea supply division. Kells replaced Groninger at New York. This shift reveals the high importance that ASF headquarters and the Chief of Transportation attached to the successful regulation of supply in the Pacific during the final drive against Japan, as well as the high estimate they placed on the services that Generals Groninger and Goodman had rendered at New York, where they had had primary supply responsibility for the principal transatlantic theaters.

The Oversea Supply Division at the New York Port of Embarkation, although it was required to handle the greater volume of freight, had certain advantages over its counterpart at San Francisco. The movements of vessels in the Atlantic were more regular than in the Pacific, there were not so many scattered and undeveloped oversea bases to be served, and the means of communications between the port and the theater supply officers were better. After the early months when the emergency in the Pacific held the spotlight, the transatlantic theaters had higher priority for both supplies and shipping. Proximity to Washington made it possible for the responsible officers in New York to maintain close personal contact with ASF headquarters and the chiefs of the technical services.

It is evident, also, that at New York the function of the Oversea Supply Division was more properly appraised. This is seen in the high caliber of personnel initially assigned to the division, the careful planning that was done to keep it abreast of all requirements, and the freedom the port commander gave it in maintaining direct contact with ASF headquarters, the technical services, and the theaters. Operating under these circumstances, the OSD was quick to recognize mistakes and correct them, and it was able to develop procedures that not only served its own purposes but became standard for all ports. It also had effective support from the port Water Division, headed by Col. Hans Ottzenn, and the Port Transportation Division, under Col. Krauth W. Thom. In assessing the results, General Groninger placed high value on the work of Brig. Gen. Calvin DeWitt, Jr., Deputy Port Commander, who was responsible for co-

[89] Ltrs, Goodman to author, 11 Mar 52, and to Lt Col Leo J. Meyer, 18 Mar 53; both in OCT HB PE Gen Oversea Supply.

[90] Ltr, Goodman to Gross, 9 May 45; Ltr, Gross to Kells, 11 May 45; both in OCT HB Gross Day File.

ordinating the work of these divisions so that they functioned smoothly as a team in bringing shipments to the port, planning the cargoes to be loaded, and dispatching the convoys on schedule.[91]

Transshipment of Cargo at the Ports

The smooth transshipment of cargo at the ports of embarkation involved careful long-range planning and efficient operation at the water front. The system for regulating the flow of shipments to the seaboard, which has been described, was essential to maintaining fluid port operations. The Transportation Corps was responsible also for providing a sufficient number of vessels of the required types to transport the supplies and equipment that the theaters needed. It was responsible for having enough cargo at the ports to assure the prompt and full loading of the vessels when they came to berth. It had to work out satisfactory methods of stowing the many types of matériel in order to make the best possible use of ship capacity and to safeguard the cargo en route. In these matters the Office of the Chief of Transportation and the ports of embarkation worked hand in hand, and close collaboration was necessary with a number of other agencies, both military and nonmilitary.

The effort to provide sufficient vessels of the right types began well in advance and had many ramifications. Since the shipping resources of the Allied nations were pooled to serve a common cause, planning for future needs involved the Combined Chiefs of Staff, the Combined Military Transportation Committee, and the Combined Shipping Adjustment Board, all of which were British-American agencies. On the national level, separate planning by the U.S. Army and the U.S. Navy was brought to a focus in the Joint Chiefs of Staff and in its subsidiaries, the Joint Logistics Committee and the Joint Military Transportation Committee. Such planning covered the number and types of vessels to be built and the manner in which the available shipping was to be employed. Programs for building additional ocean-going merchant vessels to meet military needs were co-ordinated with the U.S. Maritime Commission, which placed the contracts and supervised the construction work. Plans for the allocation of merchant shipping under U.S. control to lift military cargoes were worked out in conjunction with the War Shipping Administration, which under Presidential authority controlled the operation of all such vessels, except the relatively few that were directly operated by the military services. In the long-range planning for both ship construction and ship employment the Chief of Transportation's Planning Division had a leading role. Early in the war this division developed methods and data for translating projected military operations into terms of shipping requirements, which served the Army and other planning agencies to good advantage throughout the war.[92]

The assignment of specific ships to load Army cargoes at specific ports was accomplished through negotiations between the Chief of Transportation's Water Division, headed by Col. Raymond M. Hicks, and the War Shipping Administration. On the basis of information regarding mainte-

[91] Rpt, Status of Requisitions from European and North African Theaters, 7 Feb 44, indicates the strength of the system established at the NYPE and also points out failures in administering the system; Memo, Gen Groninger for Gen Ward, 23 Jan 53; both in OCT HB PE Gen Oversea Supply.

[92] Wardlow, *op. cit.*, pp. 18–23, 153–76.

nance and special-project tonnage to be moved, obtained from the oversea supply divisions at the ports, and information concerning initial troop equipment to be shipped, obtained from the Movements Division in the Office of the Chief of Transportation, the Water Division filed with the WSA a monthly statement of the number of vessels it desired for loading at each port. Adjustments in the program frequently were necessary because of the limited number of vessels available and other demands that the WSA had to meet. After the number of ships had been agreed upon, it remained for the WSA to nominate specific vessels to load at each port. Here again adjustments were necessary in order to avoid using ships uneconomically or because of changes in the Army's cargo situation. Nominations were worked out in daily meetings between representatives of the WSA, the Navy, and the Army. Usually the Army was represented in those meetings by the chief of the Ocean Traffic Branch, Water Division.[93] That office was held by Col. Norman H. Vissering through 1943, and thereafter by Col. Arthur G. Syran.

Just as each port was responsible for advance planning to handle the cargo for which it was responsible, so the Ocean Traffic Branch was responsible for "cargo planning" on a nationwide basis. The branch balanced statements from the ports regarding cargo on hand and en route against shipping expected to be available to the Army for loading at each port. If the cargo in sight at any port fell short of the capacity of the vessels designated to load at that port, it initiated action to get more cargo shipped by the technical services. If the shipping allocated or nominated to load at a particular port was found to be inadequate to lift the cargo scheduled to move through that port, the branch applied to the WSA for more vessels. When it was found that the facilities of a port were in danger of being overburdened, the branch took steps to divert some of the cargo and shipping to less active ports.

The "picture" was constantly changing. Shipments of troop impedimenta sometimes were delayed because in the final inspection the troop unit to which it belonged was found not ready for oversea duty. The technical services frequently were unable to ship material as early as had been expected because of production lags or unforeseen demands from other sources. Ships nominated for loading at a certain time were often delayed in arriving because of weather or enemy action, or were diverted to other employment because of changed priorities. The task of keeping cargoes and shipping capacities in balance with respect to numerous loading ports and numerous oversea destinations required a constant flow of information into the Ocean Traffic Branch, skilled analysis of that information, and quick action to make whatever adjustments in plans and schedules might become necessary.[94]

The War Shipping Administration often was unable to nominate as many ships as it had tentatively allocated to load Army cargo at a particular port, and the Army sometimes failed to provide as much cargo as had been forecast. Shortage of shipping was a chronic condition, for while the

[93] Wardlow, *op. cit.*, pp. 195–96.

[94] See numerous memos by Colonel Vissering and Colonel Syran, and weekly statement, Shipping Estimate and Cargo Set-up, in OCT HB Wylie Shipping and Cargo to UK 1942–44. See also Wardlow, *op. cit.*, pp. 171–72, concerning the work of the Joint Army-Navy-WSA Ship Operations Committee on the Pacific coast.

shipyards produced unprecedented numbers of vessels in 1943 and 1944, the requirements for expanding military operations and for lend-lease shipments were insatiable. Shortages of Army cargo were usually of brief duration and affected only a few vessels. During a considerable part of 1943, however, there was a persistent scarcity of cargo at east coast ports because the production of many items of Army supply had fallen behind schedule, whereas the output of new ships was setting records. This condition had been largely overcome by the beginning of 1944, but shortages of cargo still occurred occasionally when exceptional circumstances arose.[95]

In controlling the flow of traffic to the seaboard the Chief of Transportation's Traffic Control Division issued a permit to cover each shipment.[96] Requests for permits were made by the shippers (usually depots) either in response to calls from the ports, as in the case of supplies shipped against requisitions and initial troop equipment, or on receipt of directives from the Stock Control Division of ASF headquarters, as in the case of special operational projects. In instances where more than routine shipments were involved, the Control Branch of the Traffic Control Division, before issuing the permit, obtained assurance from the Water Division that ships would be available to load the cargo promptly. When emergency shipments were involved, a somewhat different procedure was employed in the interest of speed. The ASF Stock Control Division, after establishing that the desired supplies were available, ascertained from the Water Division when and at what port or ports the supplies could be loaded, and then directed the technical services to make shipments by express or fast freight as the circumstances might warrant. The technical services notified the Traffic Control Division when the shipment would be ready to move and from what depots. The Traffic Control Division then issued a permit and arranged for the necessary transportation to the ports. The Water Division kept the ports informed regarding such shipments.[97]

Large emergency shipments usually presented a number of special problems. The dispatch of 241 General Sherman tanks to North Africa in January 1943 is a good illustration. On 30 December 1942 an urgent message from General Eisenhower requested that 125 tanks for the British Eighth Army be shipped to arrive before 1 February 1943. The British Army Staff in Washington requested that this number be increased to 242. The tanks were to be accompanied by extra engines, spare parts, and ammunition. Later, ninety-six self-propelled gun mounts were added to the shipment. A convoy was scheduled to sail from New York to North Africa on 10 January, and the Water Division calculated that by adding two vessels to this convoy and rearranging loading plans it would be possible to accommodate the additional freight. The War Shipping Administration was requested to provide the vessels and it did so by speeding up repair work on two ships that had been scheduled for a later convoy. Since

[95] Wardlow, *op. cit.*, pp. 196–97; ASF MPR, Dec 43, Sec. 3, pp. 48–49; Ltr, WSA to Col Hicks, 13 Oct 44, OCT 563.5. Sometimes cargo shortages were due to the late nomination of vessels for Army loading, usually the result of reduced lend-lease or naval requirements.

[96] See above, pp. 267–73.

[97] Memo, CG ASF for Cs of Tech Svs, 12 Jul 43, sub: Rush Shipments to PEs, SPMOT 370.5 (12 Jul 43); ASF Memo S 55-23-43, 28 Aug 43, sub: Procedure for Release of Shipments (carload lots) to PEs, both in OCT HB PE Gen Cargo Shipts to Ports.

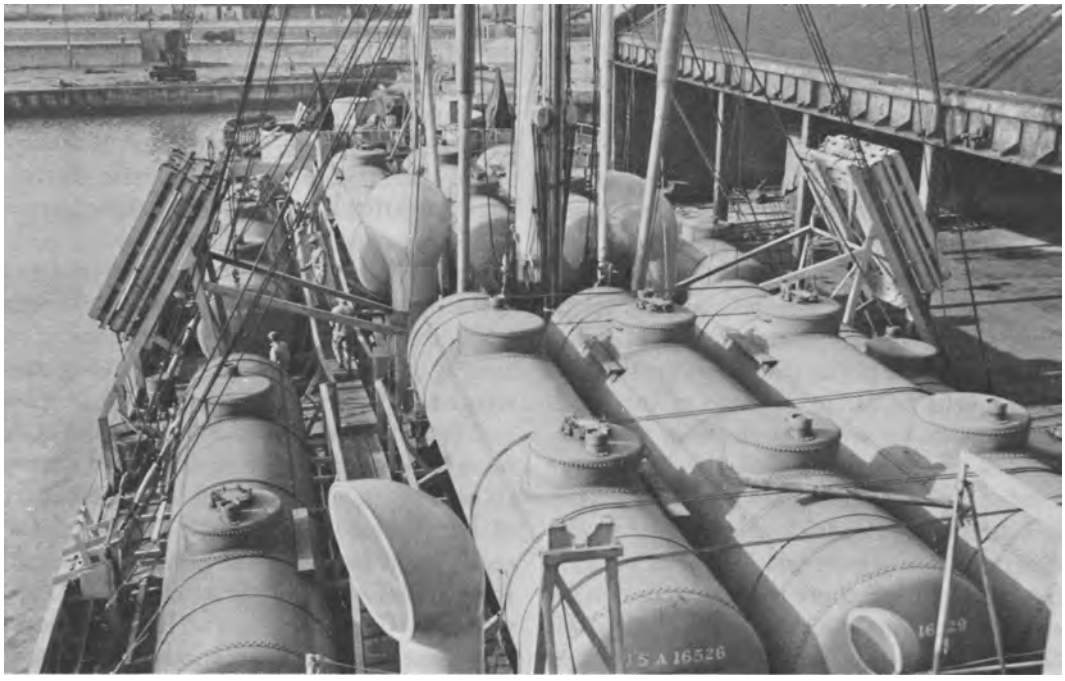


CRATED FREIGHT LOADED ON THE SS *WILLIAM S. CLARK, Los Angeles Port of Embarkation.*

the addition of two ships increased the number in the convoy beyond the maximum the Navy had approved, it was necessary to secure the Navy's concurrence. A search for 242 tanks that could be promptly shipped to New York resulted in the allocation of 169 from the Chester Tank Depot in Pennsylvania and 30 from the Toledo Tank Depot in Ohio; 42 were already at New York. Spare parts and other accessories were located at the Rock Island Arsenal in Illinois. Since waiting for these shipments would delay the sailing of the convoy by three days, the approval of the Operations Division of the War Department General Staff was necessary. The Traffic Control Division arranged for rail equipment to be immediately assigned and for special trains to be run from Toledo and Rock Island. It obtained a daily report on the status of all shipments and their progress toward New York. By 5 January all tanks had arrived at rail terminals in the port.[98] The convoy sailed on 13 January.

Responsibility for the preparation of stowage plans with a view to making the best possible use of ship space and deadweight capacity rested with the water divisions at the ports. The loading of "balanced" cargo was a continuing problem. Basically this was due to the fact that Army freight included so many items that were relatively bulky and light and so few that were dense and heavy. Two devices

[98] Memo, CofT for CG ASF, 31 Dec 42, sub: Tanks for UGF-4 and UGS-4, and related documents in OCT HB Wylie North Africa.



TEN RAILROAD TANK CARS ON THE FORWARD DECK *of a Liberty ship; an equal number was carried on the after deck.*

were employed to offset this handicap. Open deck spaces were used to the practicable maximum for both crated and uncrated equipment, although this device involved the development of special lashing and blocking methods and special processing for uncrated items. Wherever the Army considered it feasible from a military standpoint, heavy lend-lease items such as steel and canned goods were mixed with military freight on Army-loaded vessels, and bulky military equipment was shipped with lend-lease cargoes on vessels loaded by the War Shipping Administration and the British Ministry of War Transport. Despite these arrangements and careful planning throughout, Army-loaded vessels, although they might be "full," usually were not "down"—that is, their cargoes were not heavy enough to take them down to their legal load lines.[99]

The efforts to approximate balanced cargoes were handicapped by the necessity of shipping the matériel that had to go, rather than that which would stow most satisfactorily. This was especially true in the case of shipments made in response to urgent requisitions from the theaters and shipments of impedimenta that had to accompany troops. A number of special types of stowage were devised to meet special conditions in the theaters, and they also were usually inefficient from the standpoint of using ship capacity to good advantage.[100]

[99] Wardlow, *op. cit.*, pp. 272–79, discusses this problem.

[100] See below, pp. 372–74.

In stowing vessels the ports of embarkation not only had to aim at maximum use of the space and dead-weight capacity but also had to keep in view the conditions under which the cargo would be discharged overseas.[101] In the early part of the war the theater commanders complained frequently that high-priority cargo was stowed beneath routine supplies and hence was not immediately available. In the Pacific, where vessels sometimes called at two or more ports, the cargo for the first port might be at the bottom of the hold. These mistakes were the result of the pressure of time under which the cargo was loaded, inadequate marking, and failure to understand the theater's desires. As the Army system of oversea shipment became better organized there was less occasion for such complaints. Ships destined for primitive ports where there were no cranes or derricks could not carry items heavier than the ships' gear could handle. The quickest method of overcoming the handicap was to install heavier booms on the ships, and this was done extensively. As soon as they could be procured, floating and stationary cranes were installed at the oversea ports where they were most needed. Some of the floating cranes could lift as much as 200 tons.

The war called for the shipment of many difficult types of cargo. Some specialized ships were built, but these could be justified only when the freight they were designed to accommodate moved regularly and in large quantities. Ingenuity was therefore required at the ports of embarkation to move some of the larger items of Army equipment to the theaters. During the spring of 1944, for example, the New York Port of Embarkation shipped a large quantity of floating equipment—barges, car floats, and tugs—to Europe for use in the invasion of the Continent. Among the early shipments were ten 169-foot composite barges, which were too large to be placed on the decks of freighters and were not sufficiently strong to be towed across the Atlantic during heavy weather. Consequently, these barges were mounted on car floats, which were towed across.[102] Tugs were a critical item in the invasion, and more than 100 of them were sent from the United States. The largest of these tugs was 85 feet long and weighed about 200 tons; special cradles and lashings were devised and eighty-four were loaded on the after decks of Liberty ships, two to each voyage.[103] At the start of the invasion, although much of the equipment had not yet arrived, General Ross, Chief of Transportation, ETOUSA, wrote to General Gross: "It is no secret here that the Transportation Corps' floating equipment . . . saved the day."[104]

The possible need for specialized vessels to carry assembled aircraft, tanks, locomotives, and vehicles was discussed during 1941, but no concrete action was taken until after the United States had entered the war. The prototype of such vessels was the so-called seatrain, five of which were operated commercially before the war for transporting loaded railway cars between U.S. Atlantic and Gulf ports and to

[101] OCT Cir 85, 1Dec 42, sub: Vessel Opns at PEs. The difficulties experienced in the respective theaters are discussed in Bykofsky and Larson, The Transportation Corps: Operations Overseas.

[102] Memo, Wylie for Meyer, 25 Jan 44, sub: Barges for ETO, OCT HB Wylie Shipg and Cargo for UK; Hist Record, NYPE, First Quarter, 1944, pp. 42–53, describes in detail the preparation of these tows.

[103] Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, Mtg of Supts of Water Divs, 7 Jul 44, OCT HB Water Div Misc; OCT HB Monograph 19, p. 201.

[104] Ltr, Ross to Gross, 6 Jun 44, OCT HB Gross Day File.

Cuba.[105] Soon after Pearl Harbor the Army arranged with the Maritime Commission for the construction of fifty standard C-4 freighters with alterations to make them similar to the seatrain.[106] The demand for other types of ships was so heavy, however, that delivery of these vessels could not be expected before 1944, and other developments intervened so that the C-4 conversions were never undertaken.

During the spring of 1943 arrangements were made for the transportation of assembled aircraft on the decks of tankers, a procedure that reduced the number to be transported in other ways. Tanks, vehicles, and locomotives meanwhile were being satisfactorily transported in the holds or on the decks of regular cargo ships. The military authorities decided, nevertheless, to convert forty-eight Liberty ships (EC-2 freighters) for this special service, since Liberties were being built rapidly in large numbers. Under the program eight ZEC-2's, which were intended originally for the transportation of tanks but were used chiefly for aircraft, were completed in late 1943 and early 1944; twenty-eight ZEC-5's, which had larger hatches and were intended for aircraft, were delivered during 1945. The conversion project was halted by the cessation of hostilities.[107]

The oversea transportation of aircraft was a formidable undertaking. The larger types could be flown (ferried) to the theaters, but the remainder had to be moved by water. Whether they were shipped assembled or as crated parts, they were bulky cargo that required special attention in handling and stowing. While disassembling and crating before shipment simplified the transportation problem, it involved the establishment of assembly facilities overseas and a considerable loss of time between arrival and readiness for service. More than 85,000 aircraft were delivered to the oversea commanders during the war; about 56 percent of these were shipped by sea transport (both assembled and disassembled), and about 44 percent were flown to the theaters under their own power. *(Table 29)*

In the effort to meet the requirements for transportation by water, all possible methods of accommodating aircraft on ships were exploited.[108] During the early part of the war, since only a limited number could be carried on the decks of cargo ships and no provision had been made for stowing assembled planes below deck, attention had to be given to the development of a system of crating that would be satisfactory from the standpoint of handling and stowing and would also give adequate protection to the aircraft parts.[109]

[105] OCT HB Monograph 18, pp. 57–68. During the war two of these vessels were assigned to the Navy and two to the Army.

[106] Ltr, Chm Mar Com to Col Gross, 23 Jan 42, OCT HB Gross Seatrains; Ltrs, CofS USA to Chm Mar Com, 2 Feb 42 and 26 Feb 42, G-4/29717-133; JMTC 6th Mtg, 8 Apr 42; Memo, CofT for CofS USA, 11 May 43; Memo, CofS USA for CNO, 14 May 43, last two in OCT 452.1.

[107] Memo, Col Hicks for Col Warren, 7 Aug 43, sub: Alteration of EC-2 Cargo Vessels, OCT 564 EC-2 Vessels; Memo, Wylie for Styer, 30 Oct 43, OCT 564 Army Vessels; Memo, CofT for SFPE, 4 Aug 44, OCT 565.2 SF; JCS 1062, 23 Sep 44; JCS 1062/1, 28 Oct 44; Ltr, JCS to Chm Mar Com, 1 Nov 44, OPD ABC 564 (23 Sep 44); Rpt, Water Div OCT, FY 1945, p. 19, OCT HB Water Div Rpts.

[108] During the late 1930's experiments with the transportation of assembled aircraft were undertaken, but no plans for large-scale movements were made; see Memo, CG SOS for CG ASC, 11 Mar 42, G-4/29717-128.

[109] Memo, Somervell for Brig Gen Carl Spaatz, undated but evidently written in late December 1941 or early January 1942, sub: Crating of Aircraft; Memo, Trans Br G-4 for AAF, 19 Jan 42, sub: Crating and Loading of Airplanes; both in OCT HB Topic AAF; Memo, Gross for PEs, 23 Apr 42, sub: Stowage of Aircraft, OCT 452.

At the request of the Army Air Forces the Chief of Transportation investigated the possibility of using seagoing barges for transporting assembled planes to West Africa, but concluded that this method was not practicable.[110] As naval escort carriers entered service to protect merchant ship convoys, the Chief of Transportation, acting in accordance with a decision of the Joint Chiefs of Staff, arranged for the transportation of assembled aircraft on those vessels. The most productive method was that of loading aircraft on the decks of tankers, a method that came into extensive use beginning in March 1943.

The matter of transporting aircraft had become acute by the winter of 1942–43, and the decision to equip the decks of American and British tankers for this purpose was one of several features of an action taken by the Joint Chiefs of Staff to increase the movement of assembled planes.[111] Although several devices were employed, the most satisfactory was the "meccano" or false deck erected above the main deck, which provided an unbroken area for the stowage of aircraft and other light equipment. A Committee on Aircraft Transportation consisting of representatives of the Army Transportation Corps, the Army Air Forces, the Navy, the War Shipping Administration, and the British Ministry of War Transport was set up to implement all features of the JCS action.[112] At the same time the Chief of Transportation established a committee within his own office to deal with this and related matters, and later a special branch was established in the Water Division to handle aircraft transportation.[113] Difficulties were encountered by the Chief of Transportation in establishing effective liaison between his office, the Air Forces, and the tanker-operating agencies (Navy, WSA, and BMWT), and problems arose because of the inability of some oversea ports to discharge assembled aircraft and clear them through the city streets, but on the whole the arrangement worked out very satisfactorily and the added transportation capacity was a boon to both the Transportation Corps and the Air Forces.[114]

More than 600 tankers under American and British control were equipped to carry the smaller types of aircraft on deck, and they transported more than 20,000 to the oversea commands between March 1943 and the end of the hostilities.[115] Although the Committee on Aircraft Transportation

[110] Memo, CG ASF for CG SOS, 28 Aug 42, sub: Seagoing Barges; 2d Ind, CofT for ACofS for Matériel ASF, 10 Sep 42; both in OCT 561.1 Gen.

[111] JMTC 23d Mtg, 31 Dec 42; JCS 192, 11 Jan 43; JMTC 25th Mtg, 14 Jan 43; Memo, Stokes for Wylie, 22 Feb 43, OCT 452.1; JCS 192/1, 3 Apr 43; JCS 192/2, 17 Sep 43; DF, ACofS OPD for CG ASF, 24 Sep 43, G-4 561.

[112] Maj. (later Lt. Col.) Curtis F. Bryan of the Water Division, OCT, acted as executive secretary of this committee. Concerning progress under this action, see Memo, Maj Bryan for ACofT for Opns, 20 May 43, OCT 458.14 Army Vessels; Memo, CG ASF for OPD, 7 Sep 43, sub: Oversea Shipt of Aircraft, ASF SP 452.1 (4 Sep 43).

[113] Memo, Wylie for Franklin, 12 Mar 43, sub: Shipt of Fully Assembled Aircraft, OCT HB Meyer Staybacks; OCT Office Order 5-15, 23 Jun 43; Memo, C of Water Div to All Branch Chiefs, 14 Apr 44, sub: Aircraft and Troop Trans Br, OCT HB Water Div Misc.

[114] Memo by Tanker Div WSA, 27 Apr 43, sub: Trans of Fighter Planes, OCT HB Topic MC/WSA Opns; Memo, CofT for CG SFPE, 14 Aug 43, OCT 563.51–565.2 SF; Memo, CofT for CGs NYPE and HRPE, 4 Oct 43, sub: Deck Loading of Tankers for North African Discharge, OCT 563.51–565.1 Africa; Memo, CofT for CGs SFPE and LAPE, 13 Nov 43, sub: Deck Loading of Aircraft, and related documents in OCT 563.31 Tankers; Memo, CG ASF for CNO, 30 Mar 44, sub: Nondelivery of Deck-Loaded Army Planes, ASF Hq Navy; ASF Staff Conf, 27 Apr 44, p. 2.

[115] Table compiled for statistical volume of this series, based on data obtained monthly from the AAF and published in ASF MPR, Sec. 3. See especially ASF MPR, Apr 45, Sec. 3, pp. 42, 43.

TABLE 29—AIRCRAFT DISPATCHED TO THE ARMY AIR FORCES OVERSEAS, BY SEA AND BY AIR, CRATED AND UNCRATED: JANUARY 1942–JULY 1945 [a]

Period	Total Aircraft	Heavy Bombers	Medium Bombers	Light Bombers	Fighters	Gliders	Transport and Miscellaneous
Total	85,147	[b] 20,650	6,485	3,478	30,404	8,748	15,382
By Sea	47,851	.....	.....	1,664	29,146	8,748	8,293
1942	2,843	.....	.....	73	2,607	.....	163
1943	11,425	.....	.....	822	6,396	3,228	979
1944	23,004	.....	.....	680	13,774	4,264	4,286
1945 (January–July)	10,579	.....	.....	89	6,369	1,256	2,865
By Air	37,296	20,650	6,485	1,814	1,258	.....	7,089
1942	2,541	910	710	95	433	.....	393
1943	9,355	4,794	2,314	219	396	.....	1,632
1944	18,244	11,258	2,830	678	61	.....	3,417
1945 (January–July)	7,156	[b] 3,688	631	822	368	.....	1,647

[a] Data do not include aircraft assigned to other nations under lend-lease, which numbered over 44,000 according to statistics from the Bureau of the Census, Department of Commerce, in OCT HB Topic Lend-Lease.

[b] Includes 1,175 very heavy bombers dispatched in 1945.

Source: Data obtained from Office of Statistical Control, AAF, by Control Division, OCT, for ASF Monthly Progress Report, Sec. 3, Transportation, and republished in ASF *Statistical Review, World War II* (Washington, 1946), pp. 136–37.

exploited all other means, approximately two thirds of the aircraft shipped under its jurisdiction from March 1943 through April 1945 were carried on tanker decks. *(Table 30)* Comparison of the data in Table 30 with those in Table 29 will show that a substantial number of the aircraft shipped by water did not come under the cognizance of this committee; these were mainly crated aircraft shipped on regular cargo ships.

Although the transportation of assembled aircraft on the decks of tankers and cargo vessels and by escort aircraft carriers went a long way toward meeting the requirements so far as numbers were concerned, the most satisfactory method was by specialized aircraft transport such as the ZEC vessels. Below-deck stowage was preferable to transportation on the open deck because it obviated the danger of weather damage. The aircraft transports were equipped with shops and carried technicians so that the aircraft could be worked on during the voyage and landed in virtually fly-away condition.[116] Since aircraft transportation was their primary purpose, they could be sent wherever aircraft were needed, thus avoiding the handicap arising from the fact that the destinations of cargo vessels, tankers, and escort aircraft carriers were determined by other factors. These considerations were especially important in planning for the delivery of aircraft to the Pacific during the final stages of the war against Japan; hence the program for the acquisition of additional ZEC vessels during 1945 was undertaken. The ZEC-5's could take fighter planes as large as the P-47 below deck in

[116] Memo, Maj Bryan for ACofT for Opns, 5 Aug 43, OCT 564 EC-2 Vessels; Memo, Wylie for Styer, 30 Oct 43, sub: Cargo Ship Conversion to Airplane Carriers, OCT HB Water Div Aircraft Ships.

TABLE 30—ARMY AIRCRAFT TRANSPORTED OVERSEAS UNDER THE COGNIZANCE OF THE COMMITTEE ON AIRCRAFT TRANSPORTATION: MARCH 1943–APRIL 1945 [a]

Types of Vessels	Total	Assembled	Crated
All Types	29,206	25,320	3,886
Tankers	19,553	15,795	3,758
Escort Aircraft Carriers	4,175	4,175	. . . . .
Aircraft Transports (ZEC's)	2,071	1,943	128
Cargo Ships	3,407	3,407	(b)

[a] The committee was established in March 1943 to exploit all means not previously used to the limit in order to increase the transportation of assembled aircraft overseas.

[b] Crated aircraft shipped on cargo vessels did not come under the cognizance of the committee.

Source: ASF Monthly Progress Report, April 1945, Sec. 3, Transportation, p. 42; study based on records of Water Division, OCT.

assembled condition by removing the wing tips, propellers, and stabilizers.[117] The Liberty ships converted to aircraft transports could carry about 3,000 measurement tons of cargo in addition to aircraft.

Tanks also were a type of cargo with which the Army had had very limited experience. During the early months of the war those shipped on deck suffered heavy damage from the penetration of salt water and salt air, and the complaints from the oversea commanders were numerous. In the fall of 1942 the Chief of Ordnance requested the Chief of Transportation to avoid deck loading as much as possible, and the ports of embarkation were so instructed.[118] Nevertheless, tanks had to be carried on deck on some occasions because the number to be moved exceeded the number that could be economically stowed in the 'tween decks and the holds. Below-deck stowage involved a sacrifice of space because of the heavy blocking and bracing required and the unused space above the turrets. The amount of broken stowage was reduced, when suitable cargo was available, by placing a layer of solid cargo below the tanks and by stowing light packages around the turrets. In some instances false decks were built above the tanks, on which light cargo could be stowed, but this was not done extensively because of the cost in time and material. The feasibility of placing housing over tanks that were carried on deck was investigated, but the plan was not found practicable.[119]

As the war progressed the damage to tanks shipped as deck cargo was minimized by more effective processing at the Ordnance depots and final sealing at the ports, yet more than 90 percent of those shipped to the U.S. forces overseas were

[117] The number of aircraft of various types transportable below deck is given as computed for planning purposes in Misc Shipping Information, p. 14, OCT HB Plng Div Gen. This document indicates that thirty-nine P-47's could be carried below deck.

[118] Memo, CofT for PEs, 25 Sep 42, sub: Shipt of Tanks; Memo, CofOrd for CG SOS, 10 Oct 42; Memo, CofT for CofOrd, 1 Dec 42; Memo, CG SOS for CofT, 11 Dec 42; Memo, CofT for PEs, 21 Dec 42; all in OCT 470.8.

[119] Interviews with Daniel J. McKenzie and Edgar C. Seward, who were with the Stevedoring and Ship Facilities Branch, Water Division, OCT, during the war; see Memo for Record, 27 Feb 52, OCT HB PE Gen Stevedoring.



TRANSPORTING AIRCRAFT ON DECK. *Liberty ship leaves San Francisco with aircraft as a deck load (above). A tanker arrives at an Irish port with P-47's lashed to a false deck (below).*



carried below deck.[120] Regular cargo ships handled most of this traffic. The two seatrains in Army service were used only part of the time for tanks. Although eight Liberty ships (ZEC-2's) were fitted with large hatches and 30-ton booms to serve as specialized tank carriers, these vessels were used almost entirely as aircraft transports because the movement of assembled planes was so urgent. The Navy's LST's lifted some tanks from the zone of interior, but their principal employment was within the theaters.

The transportation of motor vehicles likewise presented troublesome problems. More than 1,500,000 were shipped overseas during the war—roughly one vehicle for every five men. Efforts were made to hold down the motor equipment sent to the theaters, but the oversea requirements seemed insatiable.[121] Whether vehicles were shipped fully assembled or partially disassembled and boxed, they were bulky in proportion to their weight and so contributed to the unbalance of Army cargoes. Although many vehicles were loaded on deck, the great majority had to be carried below deck where they added to the amount of broken stowage.

The theater commanders naturally preferred to receive vehicles that were fully assembled, but the shipping space required for transporting them in that condition was more than could be allowed in view of other requirements. The best method of conserving vessel space was to ship motor equipment completely knocked down (CKD), but that method involved the establishment of extensive assembling plants in the oversea commands, and in most instances this was not feasible. In order to meet the problem several methods of partially knocking down and crating vehicles were developed that used less ship space than fully assembled equipment and at the same time lightened the task of the theater commanders in putting the vehicles into serviceable condition. The semi-knocked-down (SKD) or medium knocked-down (MKD) method called for partial disassembling and crating. The single-unit pack (SUP) involved simply placing the wheels in the vehicle and inclosing it in a crate. The twin-unit pack (TUP) involved further knockdown and the combining of the parts of two vehicles in from two to five boxes. In considering the relative advantage of these methods it inevitably worked out that the greater the saving of shipping space, the greater the burden of reassembly imposed on the oversea commanders.

The conservation of space by shipping vehicles in the smallest practicable packages naturally found support in the Office of the Chief of Transportation, and it was strongly advocated by the Combined Shipping Adjustment Board (CSAB), a civilian British-American organization established early in the war to assist in the effective utilization of Allied shipping resources.[122] However, the determining factor was the situation in the area of destination—that is, the facilities for reassembling disassembled or partially

[120] OCT HB Monograph 19, p. 190; although not expressly stated, the data used in the compilation unquestionably include armored and tracked vehicles other than tanks.

[121] Memo, Marshall for Somervell, 23 Sep 42, and reply, 24 Sep 42, both in ASF Hq CofS.

[122] Memo, ACofS G-4 for ASW, 5 Mar 42, sub: Crating of Vehicles, G-4/33889; Memo, CSAB London for Chiefs of Staff, 19 Mar 42, OCT 563.5; Memo, CG SOS for ASW, 19 Jun 42, sub: Shipment of Vehicles, OCT 563.5; CCS Memo for Information 25, 10 Oct 42, and atchd Memo from CSAB Washington, 1 Oct 42; Memo, C of Water Div for Gross, 15 Oct 42, sub: Remarks on CSAB Memo, OCT HB Water Div Vehicles and Tanks.

knocked-down vehicles and the urgency of the need for serviceable equipment. Late in 1943 with large numbers of new ships entering service, ASF headquarters notified the Ordnance Department that vehicles larger than the 2½-ton truck could thenceforward be shipped on wheels—that is, unboxed. At that time the Chief of Transportation pointed out that on the average unboxed vehicles used three times as much ship space as those that were boxed.[123] Economy in the use of freight car space also was an important consideration. But the urgent need for service-ready motor equipment in the European theater in 1944 necessitated the shipment of many vehicles on wheels or in single-unit packs, and commanders in other theaters pressed for the same consideration, with the result that the transportation point of view was largely overruled.[124] The percentage of unboxed vehicles shipped in 1944 and 1945 increased appreciably as compared with 1943. *(Table 31)*

The ports of embarkation were responsible for processing all unboxed vehicles to protect them during the voyage and to obviate extensive reconditioning after arrival overseas.[125] The processing work, which was under the direction of the port ordnance officer, included cleaning and lubricating the vehicles, tightening body bolts, making necessary body and machinery repairs, spraying metal parts with a preservative compound, taping machinery joints, replacing missing tools and spare parts, and barricading the loose items to prevent pilferage. Vehicle processing, like the processing of troops at the staging areas, was a function that ordinarily would not have devolved upon the port commanders. But as a practical matter it was found desirable for the vehicles to be prepared for the ocean voyage after their arrival at the ports and immediately before they were placed on shipboard. In addition to general and special purpose wheeled vehicles, tracked vehicles, tanks, and artillery were processed. Used vehicles being shipped as troop unit equipment, as well as new vehicles, passed through the processing plants.

No vessels were especially converted in the zone of interior to transport vehicles, although some special types of loading were developed in order to move large numbers of vehicles to the Mediterranean and European theaters. The European theater converted about 200 Liberty ships to make each one capable of ferrying 120 loaded vehicles and tanks with their crews across the English Channel during the invasion of the Continent.[126] The conversion work on these so-called motor transport vessels (MTV's), involving chiefly the installation of bunks and sanitary facilities for the crews and some heavy lift booms, was accomplished in the United Kingdom. The 14th Port, stationed at Southampton, loaded 127,000 vehicles and tanks into MTV's between D Day and 31 January 1945. The number of such vessels in service naturally was reduced after the invasion had been successfully launched.

Locomotives were among the heavier items shipped to the theaters. Altogether

[123] Memo, C of Ocean Traf Br Water Div for CG NYPE, 19 Nov 43; Memo, CofT for CG ASF, 4 Dec 43, sub: Shipment of Boxed Vehicles; both in OCT HB Water Div Vehicles and Tanks.

[124] Memo, CofT for Stock Contl Div ASF, 2 Jun 44; 1st Ind, CG ASF for CofT, 12 Jun 44; both in OCT 505 Ordnance.

[125] See above, pp. 151–52, for discussion and documentation. For detailed description of the processing operation, see report on Emeryville Motor Depot, OCT HB SFPE.

[126] Memo, Meyer for Gross, *et al.*, 16 Feb 44, OCT HB Meyer Staybacks; A Two-Year History of the 14th Port, Feb 43–Feb 45, p. 20, OCT HB 14th Port.

TABLE 31—MOTOR VEHICLES TRANSPORTED TO THE OVERSEA COMMANDS: JANUARY 1943–JUNE 1945 *

Period	Total Vehicles	Boxed		Unboxed	
		Number	Percent	Number	Percent
Total (30 Months)	1,371,536	907,432	66	464,104	34
1943	495,201	376,388	76	118,813	24
1944	562,214	342,313	61	219,901	39
1945 (January–June)	314,121	188,731	60	125,390	40

* Data for other war months not available. Motor vehicles shipped under lend-lease to Allied nations are not included.

Source: OCT HB Monograph 19, p. 182, based on data obtained from the Vessel Operations Analysis Branch, Water Division, OCT.

2,030 locomotives were dispatched from U.S. ports to the forces overseas during the war.[127] The 2-8-0 Consolidation type, which was the one chiefly used by the Military Railway Service, weighed about 70 tons; the large diesel locomotives sent to Italy and Iran weighed as much as 127 tons. All were shipped as deck cargo except the small number moved on the seatrains. The transportation of locomotives on deck required the use of cradles to spread the load, heavy shoring in the 'tween decks, and shoring in the holds of some vessels.[128] The loading and discharging of steam locomotives was facilitated by the use of a lifting bar attached to the dome and the front of the boiler, which was a great improvement over the conventional sling. Like tanks and vehicles shipped on deck, locomotives required thorough processing to prevent weather damage. While much of the processing was done by the builders and by the holding and reconsignment points where many locomotives were stored before being shipped overseas, the ports made a final check to determine whether the equipment was adequately protected and corrected any deficiencies.[129]

Although the use of animals in theaters of operations was greatly reduced by the motorization of the ground forces, it was not entirely eliminated. Some horses and mules were procured in the theaters and others were dispatched from the zone of interior. No mounted cavalry units were sent overseas; hence no horses were shipped for that purpose. However, it was found that pack animals, particularly mules, could go places where the jeep could not penetrate, and approximately 7,800 such animals were shipped from the United States during the war.[130] Small shipments were made to various oversea bases, but the principal requirements were for use in the jungles of Burma and in the mountains of Italy. About 3,000 surplus horses and

[127] Data compiled for statistical volume of this series, now in preparation. In addition, 3,700 locomotives were shipped under lend-lease.

[128] Instructions, Unboxed Locomotives, received from NYPE, 26 Feb 43, OCT HB NYPE Water Div.

[129] Instructions, Preparation of Steam Locomotives for Storage and Ocean Transit, undated, OCT HB Rail Div MRS; TC Cir 75-1, 1 Jan 44.

[130] Risch and Kieffer, *The Quartermaster Corps: Organization, Supply, and Services*, Vol. II, Ch. X. In addition, 3,500 mules were shipped from the United States to the United Kingdom under lend-lease. The 1,900 war dogs shipped overseas presented no transportation problems.

mules were moved from Australia to Calcutta for the American and Chinese forces during the last half of 1944.[131]

One chartered Dutch ship and seventeen American freighters were converted to animal transports; two of them were sunk, one in the Indian Ocean and one in the Pacific. The standard capacity was 320 animals, but several of the vessels carried more; the largest capacity was 679.[132] Stalls were erected on deck in some cases, but most animals were shipped in 'tween-deck spaces. Temporary accommodations were installed also for the personnel of a veterinary detachment and for animal attendants. The New Orleans Port of Embarkation loaded most of the animals shipped from the east coast; those shipped from the west coast were loaded at San Francisco and Los Angeles.

Refrigerator ship space fell short of Army requirements throughout the war.[133] Although substantial amounts of perishable foods were shipped to the forces overseas, the freezer and chilled space available did not enable the Army to dispatch the quantities of fresh meats, vegetables, fruits, milk, butter, and eggs that its program called for. Additional ships with full or partial refrigeration could be provided only at the expense of more than a proportionate amount of general cargo space and the time required for conversion, and for those reasons the increase of "reefer" space was held to a minimum until late in the war. The shortage of cold storage warehouse space in many oversea areas resulted in vessels with perishable supplies being held in ports for abnormally long periods, with a corresponding reduction in their ability to deliver additional cargoes.[134] Civilian requirements were substantial in some areas and competed with military requirements for ship space.[135] In the Pacific, where the problem was particularly acute because of the climate, the distances, and the absence of refrigeration facilities on shore, there was competition between the Navy's requirements for the Pacific Ocean Areas and the Army's requirements for the Southwest Pacific Area.[136]

The Army depended almost entirely on the War Shipping Administration for reefer space. The Navy had a considerable number of reefer ships under its control, but they were heavily committed. Army commanders in the Pacific, the Mediterranean, and the European theaters were constantly pressing for more refrigerator-ship capacity, not only for the delivery of supplies from the zone of interior but also for intratheater movements. Various devices were employed in the effort to meet these requirements. During 1941 the Army began to use refrigerator boxes with about 360 cubic feet capacity that could be carried on the

[131] Ltrs, Col Hicks to WSA, 1 May 44, 21 Jul 44, and 14 Sep 44; Memo, CofT for CG ASF, 25 Jan 45, sub: Equipment of Animal Carriers; all in OCT 454 India.

[132] List, Animal Transport Conversions by WSA for Army Use, prepared by Water Division OCT, 7 Apr 47, OCT HB Water Div Misc.

[133] Memo, Col Syran for Col Bryan, 12 Oct 45, OCT HB Water Div Reefer Ships; Memo, CG SFPE for CofT, 18 Sep 45, p. 13, sub: Report on Accomplishments and Handicaps, OCT HB SFPE Gen.

[134] Msg, Casablanca to AGWAR, 8 Feb 43, CM-IN 4017; Msg, Somervell to AFHQ, FREEDOM Algiers, 11 Feb 43, CM-OUT 3982; Msg, CofT for CG SOS NATOUSA, 1 Dec 43, CM-OUT 487.

[135] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, morning session, 9 Jul 44, p. 29, OCT HB PE Gen Port Comdrs Conf; Ltrs, Col Hicks to WSA, 11 and 13 Jul 44, OCT 561.1 England.

[136] Memo, Gross for CNO, 9 Feb 44, sub: Reefer Ships for SWPA; Memo, Gross for Rear Adm William W. Smith, 17 Nov 44, sub: Reefer Vessel Problem; both in OCT 565.4 Refrigerator Vessels.

decks of cargo vessels and put ashore at destination. Use of such boxes was continued during the war, and larger portable refrigerator "warehouses" were employed in the same way.[137] Small freight vessels and barges were converted in the Pacific area commands to carry perishable supplies to outlying bases.[138] The Chief of Transportation built 100 steel nonpropelled reefer barges 112 feet in length, and converted 5 larger barges.[139] In the Southwest Pacific, where many of these barges were in service, they were used as cold storage warehouses at advance bases as well as for transportation between bases.

In July 1944, on the assumption that the major military effort would be turned against Japan in 1945, the Joint Logistics Committee reviewed the reefer-ship situation. The study disclosed that on 31 May 1944 there were 148 wholly or partially refrigerated ocean-going vessels under U.S. control, with a total of 15,601,000 cubic feet of reefer space.[140] The program at that time called for the addition within the next twelve months of 218 fully or partially refrigerated vessels with a total of 8,475,000 cubic feet of reefer space. In the light of estimated requirements of the armed forces during 1945, the committee submitted a recommendation, which the Joint Chiefs of Staff approved, that the Maritime Commission be requested to provide an additional 1,200,000 cubic feet of reefer space distributed among seven large-sized and eight medium-sized freighters to be completed in 1945. As late as May 1945, with the fighting in Europe finished, the need for general cargo ships and the delay to delivery caused by the installation of refrigerating equipment were still factors in holding down the number of new freighters to be converted for the transportation of perishables.[141]

Aside from the problems of handling and stowage resulting from the character of Army cargo, shipping operations were complicated by the use of a number of special types of loading that were designed to facilitate the unloading and distribution of the cargoes overseas. The significance of such special loading to the Transportation Corps lay in the fact that it involved an unusual amount of broken stowage or an unusual detention of the vessels in the theaters, or both. These were disadvantages that had to be accepted in order to give maximum support to military operations in active combat areas.

It was advantageous to have organizational equipment and supplies accompany troops to their new oversea stations, and the type of loading employed depended on the use to be made of the troops upon their arrival in the theaters. When it was desirable only that the troops and their impedimenta should arrive at the same time, convoy loading or unit loading was employed. Convoy loading implied only that the impedimenta should move in the same convoy with the troops, and it usu-

[137] Memo for Record, Col Cordiner, sub: Digest of Activities—Transportation Division, 29 Mar 41, p. 10, OCT HB OQMG Water Transport Br; Msg, SOS Hq, Washington, to FREEDOM Algiers, 11 Feb 43, CM-OUT 3754; Memo, CofT for CofEngrs, 11 Nov 44, sub: Reefer Warehouses on Liberty Ships, OCT 568 Liberty Vessels.

[138] Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–47, pp. 394–402; Army Port and SvC, Honolulu, TC Weekly News Letter, 15 Nov 44, OCT HB Central Pacific.

[139] Rpt, Army Small Boat Construction, 1 Jul 40–31 May 45, p. 51, OCT HB Water Div Small Boats.

[140] JCS 966, 24 Jul 44. The total included 47 fully refrigerated and 80 partially refrigerated merchant vessels, and 21 naval provision ships; 102 were under WSA control, 43 under Navy control, and 3 under Army control. Vessels with 10,000 or more cubic feet of reefer space were considered partially refrigerated.

[141] Ltr, JCS to Mar Com, 5 May 45, OPD 561, Sec. III.

ally called for no unusual methods of stowage. Unit loading meant that the troops and their impedimenta were loaded in the same ship, and if the troops were likely to see early action their vital equipment was stowed so that it would be readily accessible. This type of loading frequently resulted in unbalanced cargoes and an unusual amount of broken stowage. Combat loading was employed when units were to be landed in assault operations. Equipment and supplies required in the assault were loaded in the same ship with the troops and were stowed so that they could be discharged quickly and in the order in which they would be needed. This type of loading might involve a sacrifice of as much as 35 percent of the cargo space.[142] Most amphibious assault forces were mounted in the theaters, but there were some notable exceptions. General Patton's Western Task Force, which landed in northwest Africa, and General Middleton's 45th Division, which participated in the assault on Sicily, were combat loaded at Hampton Roads.[143] The expedition against Attu was mounted at San Francisco. Some small units of the Okinawa invasion force were embarked at San Francisco and Seattle.

The necessity of moving many fully assembled vehicles within the Mediterranean for the assault on southern France led to a special type of stowage known as flatting. When the ships were being loaded at U.S. ports, ammunition and heavy rations beyond the theater's immediate requirements were placed deep in the holds to serve as ballast. They were covered over with a solid wood floor on which vehicles were placed. More than 150 vessels were loaded in this manner. The vehicles were discharged as soon as the vessels arrived in the theater, but the flatted cargo remained while the vessels made several intratheater trips with additional vehicles. The ammunition and rations were discharged when they were needed by the theater, and in any case before the vessels returned to the zone of interior.[144] This type of loading was used also in moving vehicles from the European theater to the Pacific after V-E Day. The Liberty ships used to transport vehicles from the United Kingdom to the Continent in the invasion of northern France did not carry flatted cargo but were ballasted with sand.

Block loading was a system used in the Pacific beginning in late 1943 for the resupply of invasion troops. It involved loading vessels with carefully organized blocks of supplies of the kind troops were likely to require soon after landing. The blocks were discharged when and where they were needed. The system assured the ready availability of rations, ammunition, and other supplies in invasion areas, and since the supplies could be ordered by block numbers it dispensed with the detailed work of requisitioning item by item. It also avoided the necessity of establishing storage operations ashore during the early stages of the invasions. Loading was done according to a standardized stowage plan so that needed commodities could be readily found. Block loading, since it involved the use of ships for storage pur-

[142] Wardlow, *op. cit.*, pp. 12–14; WD FM 55-105, 25 Sep 44, pp. 35–36, sub: Water Transportation—Ocean-going Vessels.

[143] *The Road to Victory,* A History of Hampton Roads Port of Embarkation, ed., Maj. William Reginald Wheeler, 2 vols. (Newport News, Virginia, 1946, printed by the Yale University Press, New Haven, Connecticut), Vol. I, Chs. VII and IX.

[144] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, Mtg of Superintendents of Water Divs, 7 Jul 44, pp. 3 and 4, OCT HB PE Gen; Rpt, Water Div OCT, FY 1945, p. 23.

poses, was contrary to the general doctrine of the Chief of Transportation that vessels should be discharged as quickly as possible, but it met an urgent need at many forward Pacific bases.[145] A similar system was utilized in the invasion of Normandy, although in that case it was called prestowing. During the period May–July 1944 fifty-four prestowed ships were dispatched from the zone of interior to the United Kingdom, where they were held until they were called to the Continent for discharge.[146]

Commodity loading was a plan devised specifically for the invasion of the European continent, where the requirements for supplies were expected to be extremely heavy and also somewhat unpredictable. Entire ships were loaded with commodities of a particular type such as ammunition, clothing, rations, and engineer materiel. Some commodity-loaded ships carried a combination of signal and medical supplies. Here again the ships were to be used for storage purposes until adequate storage facilities were established on shore. Having a limited range of supplies in each ship facilitated discharge and simplified the transfer of the matériel from the beaches and ports to dumps and depots.[147] Some of these cargoes, of course, failed to utilize the entire dead weight of the ships, while others left an abnormal amount of unused cubic capacity.[148]

The principal complaint of the Chief of Transportation, however, stemmed from the length of time commodity-loaded ships were held in the theater. Delayed discharge was inherent in the plan, but it was greatly increased by the congestion that developed at French ports during the summer and fall of 1944 and by the delay in providing adequate storage facilities ashore.[149] From May through December 1944 more than 700 commodity-loaded vessels were dispatched from the United States to northern Europe. A larger number had been contemplated, but because of the backlog of ships awaiting discharge at French ports, the program was reduced late in 1944.[150] At the end of February 1945 General Somervell, with a view to making "the fullest and most efficient use of all cargo space available in all Army-allocated ships," undertook to discontinue commodity loading.[151] But the theater still wanted this type of loading, and it was continued on a limited scale for several months.

Army mail was a type of cargo that required careful handling at all times, and at certain periods it attained considerable bulk. Since the prompt delivery of letters and packages was an important factor in maintaining troop morale, ports of embarkation required large plants and organizations not only physically to handle the mail, but also to maintain records of the locations of troop units, to provide cor-

[145] See Stauffer, The Quartermaster Corps: Operations in the War Against Japan, Ch. IV.

[146] Min of Port and Zone Comdrs Conf, Chicago, cited n. 144, ASF MPR, Dec 44, Sec. 3, p. 56; Comments by Gen Goodman on the original manuscript for this volume, p. 7, OCT HB PE Gen Oversea Supply.

[147] The problem of unloading vessels carrying a wide variety of commodities had been pointed out by the North African theater in July 1943, when the build-up of supplies at North African ports for the invasion of Sicily and Italy was under way; see Msg, Algiers to NYPE, 5 Jul 43, CM-IN 3163.

[148] ASF MPR, Aug 44, Sec. 3, p. 55.

[149] Wardlow, *op cit.*, pp. 287–90.

[150] Memo, Wylie for Gross, 12 Oct 44; Memo, Gross for Somervell, 4 Jan 45; both in OCT HB Meyer Staybacks; Msg, COMZONE ETOUSA to WD, 11 Jan 45, CM-IN 10111; ASF MPR, Dec 44, Sec. 3, p. 56.

[151] Msg, Somervell to Gen Lee, CG COMZONE ETOUSA, 28 Feb 45, CM-OUT 45333.

rect labels for mail incompletely or inaccurately addressed, and to insure that it was dispatched promptly and to the correct oversea destinations.[152] When General Somervell visited the North African theater in January 1943, he reported that the mail situation there was unsatisfactory and implied that this was not an isolated case.[153]

Responsibility for improving the service rested only partly with the Chief of Transportation; it was shared by the Army Postal Service, the U.S. Post Office Department, and the originators of mail, who in a surprising number of cases were either uninformed or grossly negligent in affixing addresses. Ports of embarkation were instructed to be sure that all mail sacks were correctly labeled, that they were placed on the ships that would deliver them to their destinations at the earliest time, that they were distributed over a number of ships in convoys so that a large quantity of mail would not be lost in the sinking of a single vessel, that they were given top stowage to facilitate immediate discharge, and that they were safeguarded against pilferage at all times. It was important to keep the mail flowing regularly, since interruptions and deliveries out of sequence inevitably brought complaints from soldiers and their families.[154]

The volume of Army mail to be shipped overseas increased greatly with the approach of each Christmas season. The peak came in the fall of 1944; in October of that year the ports of embarkation dispatched 162,900 measurement tons of mail, and in November they dispatched 178,800 measurement tons.[155] During the 1944 Christmas mailing period the New York Port of Embarkation shipped about 2,600,000 sacks of mail and the San Francisco Port of Embarkation about 750,000 sacks. Some mail could be loaded in broken stowage without actual loss of ship space, but the Chief of Transportation in a report to General Somervell stated that Christmas mail for that year had cost the armed forces the equivalent of about twenty-one ships that would otherwise have been available for military cargoes.[156] This report expressed no criticism of the program, but there was a feeling among those concerned with finding sufficient shipping to meet military needs that a more drastic restriction should have been placed on the size of parcels and that the quantity of Army printed matter shipped as mail should have been reduced.

From December 1944 through May 1945 with the strength of the forces overseas at its highest level, mail shipments by water averaged about 65,000 measurement tons a month. During this period it was necessary to ship some air mail to Europe by surface carrier because of the shortage of space on aircraft. Consideration was given to a special lightweight form for Army air mail, but it was not

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[152] Memo, CG SOS for PEs, 23 Jun 42, sub: Mail Handling at PEs, AG 311.1 (6-23-42); Organizational Manual NYPE, 1 Jul 44, Sec 311.00, OCT HB NYPE Gen; Information Concerning NYPE Army Post Office, undated, OCT HB NYPE Army Post Office.

[153] Memo, Somervell for Styer, 23 Jan 43, par. 10, OCT HB Wylie Urgent Matters.

[154] For a discussion of these problems, see Msg, NYPE to OCT, 14 Oct 44, OCT HB Wylie Staybacks; Memo, CG ASF for CG NYPE, through CofT, 14 Feb 45, sub: Handling of Mail for ETO, AG 311.1 (1-4-45).

[155] Memo, Statistics and Progress Br, Control Group OCT, for Hist Unit, 29 Jan 47, OCT HB PE Gen Mail Shipped. For an analysis of the mail shipped by the NYPE, from September 1942–April 1945, see Summary, NYPE, Dec 41–Apr 45, pp. 22–23, OCT HB NYPE Gen.

[156] Memo, Gross for Somervell, 20 Nov 44, sub: Christmas Mail to Overseas, ASF Hq Shipping 1944.



MAIL ON TRUCKS AT THE SAN FRANCISCO PORT OF EMBARKATION

adopted because V-mail had not been popular and the Army Postal Service foresaw difficulty in introducing the new idea.[157]

It is clear that the problems that confronted the Transportation Corps in transshipping military equipment and supplies at the ports of embarkation during the war were very different from those encountered during peacetime. The composition of the matériel was different, and the difficulties of matching shipping space and cargoes, providing special types of vessels and special types of stowage when necessary, avoiding delay in the sailing of ships and convoys, and meeting emergency requests from the theaters as they arose involved many departures from the normal methods of commercial operation. The aim of the Chief of Transportation and the port commanders was to utilize well-tested commercial methods wherever practicable, but they were obliged to disregard them often in order to meet the needs of the theater commanders.

Shipment of Ammunition and Explosives

No aspect of his responsibility gave the Chief of Transportation greater concern than the handling of ammunition and explosives.[158] The crux of the problem was

[157] Memo, Dir Army Postal Sv for TAG, 27 Jan 45; Memo, TAG for Styer, 29 Jan 45; Memo, CG ASF for CG NYPE, 14 Feb 45; all in AG 311.1 (1-4-45).

[158] The term "explosives" is often used in this discussion to cover live ammunition, except small arms ammunition, as well as bulk explosives.



SORTING MAIL AT THE NEW YORK PORT OF EMBARKATION

at the ports where transshipment from the inland to the ocean carriers took place. The volume to be moved to the U.S. forces overseas was unprecedented, and in addition large quantities were sent to the British and the Soviet Union on lend-lease. All of the principal U.S. ports were required to handle this traffic, and a number of the smaller ones were used also. The size and explosive power of artillery shells had been increased greatly in recent years, and huge aerial bombs were an entirely new element of the traffic. With the Black Tom and Halifax disasters of World War I still in memory, the need for extraordinary care was recognized even before the United States became an active belligerent in World War II.[159]

Numerous agencies were concerned with this traffic. While the Army procured and shipped the largest volume, the Navy also made heavy shipments from west coast ports.[160] The Bureau of Explosives, an element of the Association of American Railroads, maintained a continuous inspection service and aided in the enforcement of the regulations affecting the inland carriers. In this it collaborated with the Bureau of Safety of the Interstate Commerce Commission. The establishment and enforcement of standards of safety in the transportation of dangerous

[159] AR 55-155, 27 Nov 42, Sec. IV, and AR 55-470, 30 Dec 42, were the basic Army regulations affecting the transportation of explosives, inflammables, and chemical materials.

[160] For the relative bulk of Army, Navy, and lend-lease shipments during 1944, see Rpt, Ammunition and Explosives, Port Performance and Capacity, in OCT HB PE Gen Explosives.

cargoes by water was a responsibility of the U.S. Coast Guard. As the agencies controlling the bulk of the shipping used for the transportation of these cargoes, the War Shipping Administration and the British Ministry of War Transport were directly concerned. Within the Army the Chief of Transportation and the Chief of Ordnance were the principal parties at interest. Safeguarding the movement of explosives was therefore a broad co-operative undertaking. But since the Army was the principal shipper and the bulk of the traffic passed through the Army ports of embarkation, General Gross considered his responsibility especially heavy.

World War II brought forth an entirely new concept of handling explosives at U.S. ports. In World War I ships had been loaded chiefly at anchor. The Black Tom disaster took place at a railway terminal on the New Jersey shore, where ammunition was being transferred from cars to barges for loading on ships anchored at Gravesend Bay. Although this method was employed to some extent in 1940 and 1941, it was objectionable because it involved double handling. The preferable method was to transfer explosives directly from the inland carrier to the ship, but the general adoption of this method was complicated by the fact that the docks capable of handling large ships were located near centers of population and hence involved exceptional hazards.

During 1940 shipments of explosives were made chiefly from New York, New Orleans, and San Francisco. At New York, some ships were loaded at the new Bayonne Terminal, which was in the lower bay on the New Jersey shore; others were loaded at anchor at Gravesend Bay; and a few vessels took on small quantities at commercial piers.[161] Shipments through New Orleans were loaded at isolated anchorages. Benecia Arsenal on the eastern side of San Francisco Bay had a small wharf, but the depth of water did not permit large ships to go alongside and consequently explosives were moved by barge or rail to the Army port of embarkation at Fort Mason. The small shipments made from other ports were loaded at commercial docks or at anchorages.

By the beginning of 1941 it was evident that the volume of explosives to be transported would increase rapidly and that special facilities for handling them would be needed. In January the commandant of the U.S. Coast Guard brought the situation to the attention of the governmental agencies concerned, and his contention that additional facilities would be needed was strengthened by the passage of the Lend-Lease Act in March.[162] The Ordnance Department took steps to provide two-berth docks adjacent to its depots at Charleston, South Carolina, and San Jacinto, Texas, and also to improve the wharf at Benecia and to dredge for deeper water alongside. Two railroads provided small docks below New Orleans where explosives could be loaded on outbound ships.[163]

In the summer of 1941 the situation at New York, which was the principal shipping point for both Army and lend-lease explosives, became serious because of the Navy's acquisition of the Bayonne Terminal for development into a supply and re-

[161] Interv with Mr. Harry A. Campbell, Chief Inspector, Bur of Explosives, 10 Dec 43, OCT HB TC Gen New Facilities.

[162] Memo, Rear Adm Russell R. Waesche for Secy of Treas, 22 Jan 41; Memo, ACofS G-4 for USW, 3 Mar 41; Memo, OUSW for Carl W. Fischer, Advisory Commission to the Council of National Defense, 11 Jun 41; all in OCT HB TC Gen New Facilities.

[163] OCT HB Monograph 8, pp. 27-28.

pair base.[164] A strong protest by the Army failed to stop this action, and since the facility would no longer be available for loading Army and lend-lease explosives, prompt steps were necessary to provide another suitable dock. Loading in Gravesend Bay continued, and as a temporary measure arrangements were made to use part of the Claremont Terminal of the Lehigh Valley Railroad. Finding a wholly acceptable site for a new explosives dock was difficult. Any place inside the Narrows was uncomfortably close to densely populated areas. Sites outside the Narrows were objectionable because loading operations would be subject to interruptions by high seas. With considerable misgivings a decision was made to build a new six-berth finger pier at Caven Point, just north of the Claremont Terminal and much closer to Manhattan and Jersey City than the Bayonne Terminal.[165] The work was authorized in August 1941 with a prospective completion date of 1 June 1942, a date that was very nearly met.

While the Caven Point project was being planned to meet the urgent need at New York, it was evident to the Army that this was only the beginning of a much broader program. It was foreseen that many ports would be required to transship the explosives that would move overseas if the United States should enter the war. This was particularly true since the prevailing practice was to load limited quantities on many ships, rather than large quantities on fewer ships, in order to limit the effect of any explosion that might take place in port and the amount of ammunition that might be lost through the sinking of a ship at sea. It was also foreseen that special explosives storage facilities would be needed back of the ports in order to avoid accumulating shipments in railroad yards and on docks where protection against sabotage, fire, and accident was more difficult.[166] When war came on 7 December 1941, the construction of explosives loading docks at Boston and Baltimore had been approved, and The Quartermaster General, with concurrence of the Chief of Ordnance, had recommended the construction of explosives docks and backup storage facilities at a number of other Atlantic, Gulf, and Pacific coast ports. This program was approved by the Chief of Staff on 19 December, and the Chief of Engineers was promptly directed to undertake the work.[167] *(Table 32)*

The selection of sites for the new docks encountered more than the usual difficulties. In addition to the safety of nearby communities, transportation, engineering, and operating factors had to be given consideration. Compromise of the various points of view was necessary in order

[164] Memo, Trans Br G-4 for Comdr Bertram J. Rodgers, USN, 5 Jul 41, OCT HB Gross Day File. This was one of several instances of ocean terminals being acquired for nontransportation purposes that led to an agreement that no waterfront facilities would be taken over by the Army or the Navy until clearance had been obtained through the Ocean Shipping Section of the Joint Army and Navy Munitions Board; see Wardlow, *op. cit.*, pp. 177–78.

[165] Memo, C of Trans Br G-4 for ACofS G-4, 7 Aug 41, OCT HB Gross Day File.

[166] Memo, CofOrd for ACofS G-4, 21 Jul 41, sub: Depots to Facilitate Movement of Am; Memo, ACofS G-4 for CofOrd, 25 Jul 41; both in G-4/32697-2; Conf, Trans Div OQMG and Ord Dept, 28 Nov 41, sub: Defense Aid Constr Program, OCT HB TC Gen New Facilities.

[167] Memo, TQMG for ACofS G-4, 4 Dec 41, sub: Additional Trans and Stg Facilities, QM 500 T-E, OCT HB TC Gen New Facilities; Memo, ACofS G-4 for CofS, 11 Dec 41, G-4/32697-2; Memo, Defense Aid Dir WDGS for TAG, 30 Dec 41; Memo, TAG for CofEngrs, 31 Dec 41; last two in AG 600.12 (12-11-41). These explosives facilities were financed chiefly with defense aid (lend-lease) funds, as were the holding and reconsignment points that were being constructed at the same time.

to get ahead with the urgent project. As at New York, the location selected for the dock at Boston created hazards that later resulted in limitations being placed on the extent to which the facility could be used for loading ammunition.

There also were differing opinions regarding the design of the docks, and in the decision on this matter the views of Mr. Harry A. Campbell, Chief Inspector of the Bureau of Explosives, weighed heavily. The docks were built without transit sheds, since it was believed that any covered storage would encourage the accumulation of ammuntion at the waterfront that should have been held at the backup storage facilities or returned to storage when immediate loading to ships could not be accomplished. A proposal to depress the railway tracks was rejected, and the docks were built with flush decks in order that they might be more effectively guarded from fire and sabotage and have greater flexibility of use.[168]

Less difficulty was experienced in finding sites for backup storage facilities. Where Ordnance depots already existed near the ports—as at Raritan, New Jersey; Charleston, South Carolina; San Jacinto, Texas; and Benecia, California—they were used to back up the explosives piers, and in some cases additional igloos were constructed to provide sufficient capacity for that purpose. The new storage facilities were all remote from population centers.

Some of the new storage facilities were used extensively, while others were less active. When the backup storage plan was inaugurated, interruption of railway transportation by enemy action was considered a possibility; if that had occurred the existence of stocks of ammunition near the ports would have greatly aided the Army in keeping the forces overseas supplied. Since such interruptions did not occur, the need for the backup facilities was less than had been anticipated. Ammunition held at those facilities for only a short time pending call to the ports was retained in the railway cars rather than being unloaded and placed in the igloos.[169]

While construction was in progress the question arose whether the explosives docks and backup storage facilities should be operated by the Chief of Ordnance or by the Chief of Transportation, whose office was created early in March 1942. Since the installations were to handle explosives moving overseas, it was decided that they should be under the direct control of the commanders of the ports of embarkation and under the general supervision of the Chief of Transportation, except in those cases where they were part of or adjacent to existing Ordnance installations and could be readily controlled by the commanders of those installations. In the beginning the explosives docks at Baltimore, Charleston, San Jacinto, and Benecia, and the new igloos at Raritan, Charleston, San Jacinto, and Benecia were operated under control of the Chief of Ordnance, and all others under control of the Chief of Transportation.[170] In 1943 the docks at Baltimore and Charleston, as well as the additional igloos that

[168] Many memos relating to the selection of sites and progress of construction are in OCT HB TC Gen New Facilities; see particularly analysis of requirements and description of facilities prepared by the Chief of Ordnance, 25 May 42. See also comments on pier design in Interim Rpt, Army-Navy Committee for Study of Facilities for Shipment of Explosives, Oct 45, p. 5, OCT HB PE Gen Expl.

[169] Interv with Chester V. Parker, Ord Dept, 1 Apr 52, OCT HB PE Gen Expl.

[170] Memo, CG SOS for PEs, CofOrd, CofEngrs, CofT, 16 Aug 42, SPX 825.1 (7-7-42).

TABLE 32—SPECIAL ARMY PIERS AND BACKUP STORAGE FACILITIES FOR EXPORT AMMUNITION AND EXPLOSIVES

Port	Construction Begun	Original Project Completed	Number of Ship Berths
Boston (Castle Island)	2 February 1942	31 July 1942	[a] 7
New York (Caven Point)	2 November 1941	10 June 1942	6
Earle, New Jersey (Leonardo)	[b]	[b]	4
Philadelphia (Hog Island)	3 March 1942	9 June 1942	[c] 6
Baltimore (Hawkins Point)	11 March 1942	31 August 1942	4
Newport News	9 March 1942	31 July 1942	2
Charleston, South Carolina	5 July 1941	7 March 1942	2
Mobile (Theodore, Alabama)[d]	29 April 1942	31 October 1942	2
Houston (San Jacinto)	1 July 1941	31 July 1942	2
Los Angeles (Long Beach)	15 June 1942	15 March 1943	2
Benecia, California [e]	20 June 1941	31 July 1942	4
Portland, Oregon (Beaver)	17 February 1942	15 August 1942	2
Seattle (Mukilteo)	16 March 1942	30 September 1942	4
Prince Rupert, British Columbia	13 April 1942	31 December 1942	2

Storage Location	Construction Begun	Original Project Completed	Number of Igloos
Maynard, Massachusetts	23 March 1942	15 August 1942	50
Raritan, New Jersey	16 March 1942	30 September 1942	[f] 50
Oyster Point, Virginia	21 April 1942	31 August 1942	20
North Charleston, South Carolina	14 March 1942	30 September 1942	[f] 50
Theodore, Alabama [d]	29 April 1942	31 October 1942	20
Slidell, Louisiana	29 April 1942	15 October 1942	20
Fontena, California (Rialto)	25 March 1942	28 June 1942	20
Benecia, California	7 July 1941	23 May 1942	[f] 109
Beaver, Oregon	10 April 1942	15 August 1942	20
Marysville, Washington	27 April 1942	30 September 1942	20
Prince Rupert, British Columbia	25 March 1943	31 August 1943	20

[a] The original project was for four berths. In June 1942 a three-berth extension was authorized at the request of the Lend-Lease Administration. The addition was considered desirable because of the intention to load airplanes and other cargo at this terminal. For the same reason, transit shed space of 265,000 square feet was provided.

[b] The Navy projected a two-berth dock at this location. In February 1944 the Army requested that it be increased to four berths for joint use, the Navy to operate the entire facility. Army vessels began loading at Earle in August 1944.

[c] Original dock had two berths; it was extended in 1944.

[d] The pier and storage facilities at Theodore, Alabama, were turned over to the Navy in May 1944.

[e] Beginning date is for reconstruction of an old one-berth pier, and completion date applies to entire four-berth project.

[f] Igloos added to existing ordnance installations especially for export shipments.

Source: Table C in OCT HB Monograph 8, slightly modified as result of further research.

had been constructed at Charleston, were transferred to the control of the Chief of Transportation.[171]

Although the explosives facilities authorized by the Army early in the war then appeared adequate for all purposes, some

[171] OCT HB Monograph 8, p. 33.

additional facilities were provided later. In the spring of 1944, in anticipation of a heavy increase in the flow of ammunition to the European Theater of Operations and the desirability of limiting the quantities loaded at Boston and New York because of the locations of the Castle Island and Caven Point piers, a railway pier was leased at Searsport, Maine, and placed under the jurisdiction of the Boston Port of Embarkation for the loading of explosives.[172] The Navy had begun the construction of an explosives pier at Earle, New Jersey, a short distance outside the entrance to New York Harbor, and the Army, although not favorably impressed with the location because of its exposure to weather, arranged for the construction of two additional berths for Army use—a further measure to lighten the load on Caven Point.[173] To the same end, the explosives dock at Philadelphia was enlarged from two to six berths.[174]

Because the facilities at Benecia were limited and unsatisfactory, Parr Terminal No. 1 at Richmond, California, was leased and used for explosives loading by the Army beginning early in the war. During 1944 the desirability of building a new explosives dock and backup storage facilities in the San Francisco Bay area, to replace or at least to relieve the facilities at Benecia and Richmond, was considered. Early in 1945, in anticipation of the end of the war in Europe and the shifting of the military effort to the Pacific, the Army advocated the construction of a six-berth pier at California Point. There was strong opposition to the proposal largely because of the disastrous explosion that had occurred at the naval ammunition depot at Port Chicago, California, in July 1944, and when construction began it was limited to two berths. The facility at California Point was not completed before the end of hostilities and was then abandoned.[175]

In addition to the Bureau of Explosives and the U.S. Coast Guard, several boards and committees studied the operations at the ports and the backup storage facilities with a view to increasing safety. The Joint Army-Navy Ammunition Storage Board, an advisory body established by an act of Congress in 1928, found the scope of its interest greatly broadened by developments of the war. Its jurisdiction was accordingly defined as covering safety problems "wherever explosives are handled by the War and Navy Departments."[176] The board, which consisted of Army and Navy ordnance officers, was frequently critical of the facilities that had been provided for loading explosives and recommended that new and more favorably located facilities be developed. In order that the problem might be thoroughly studied from a transportation as well as an ordnance point of view, the Joint Army-Navy Board on Port Facilities for Handling and Loading Ammunition and Explosives was

[172] Memo, CG SOS for CG BPE, 21 Apr 44, sub: Estab of Cargo Port at Searsport, SPX 323.3 (17 Apr 44).

[173] Ltr, SW for SN, 3 Feb 44; Ltr, Actg SN for SW, 15 Feb 44; both in OCT HB TC Gen New Facilities; Memo, CofS ASF for CofT, 1 Jul 44, ASF Hq Trans; Memo, CofT for CG ASF, 27 Jul 44; Memo, McIntyre for Williamson, 16 Sep 44; last two in OCT HB Wylie Expl.

[174] A backup railway storage yard at Newark, Delaware, was authorized but was not completed; ASF Cir 161, 30 May 44, Sec. 1,

[175] Memo, CG ASF for ACofS G-4, 20 Jan 45; Memo, ACofS G-4 for CG ASF, 2 Feb 45, sub: California Point Am Facility; both in WDGDS 825.1; Memo, JANASB for Ord Dept, 17 Apr 45; Memo, SN for SW, 21 Apr 45; last two in OCT HB TC Gen New Facilities; Rpt, Rail Div FY 1945, p. 27, OCT HB Rail Div Rpts; OCT Opns Mtg, 13 Aug 45, OCT HB Dir of Opns.

[176] WD Cir 372, 13 Sep 44, Sec. IV.

established in September 1944.[177] Late in the war the storage board was renamed the Army-Navy Explosives Safety Board, and shortly after the war it took over the functions of the port facilities board.[178]

General Gross lost no opportunity to stress the necessity for utmost care and foresight on the part of Transportation Corps personnel concerned with the movement of explosives, particularly the commanders of the ports of embarkation. This necessity was underscored by a fire that started on the SS *El Estero* while it was loading explosives at Caven Point in April 1943. The ship was towed into the bay and scuttled, thus avoiding an explosion, but the incident brought a strong reaction from state and municipal officials and the public. Gross pointed out that while "everyone wants to kibitz," including local officials and the boards and committees concerned with safety, the Transportation Corps had to plot its own course. Since it was responsible for transporting ammunition to the theaters, it had to decide what risks were necessary to meet the oversea requirements. But he emphasized that the Transportation Corps was "absolutely naked in its responsibility" and would have to accept the blame for any disasters that might originate at its facilities. He therefore demanded "utter vigilance," which in case of a disaster would at least satisfy conscience that all had been done that could have been done to prevent it.[179] Recognizing the great anxiety of the communities where explosives facilities were located and the tendency of the public to criticize the Army for endangering civilian lives, the Chief of Transportation wrote to one of the port commanders: "We not only must be eternally careful, but must guard against even the appearance of carelessness." [180]

While stressing the necessity for taking every feasible precaution in the interest of safety, the Chief of Transportation, with the support of the commander of the Army Service Forces, was unwilling to be rushed into providing the additional facilities the Joint Army-Navy Ammunition Storage Board recommended, since the existing Transportation Corps facilities had established excellent safety records.[181] Considering both war requirements and civilian safety, the only explosives facilities at the ports to be graded "poor" by a special joint committee that made an investigation late in 1944 were those located on San Francisco Bay—the Ordnance facility at Benecia and the Navy docks at Richmond and Mare Island.[182] As has been noted, the Army immediately took steps to provide a new explosives pier at California Point.

In addition to impressing upon the port commanders their inescapable responsi-

[177] Memo, JANASB for SW and SN, 8 May 44; Interim Rpt, undated, covering discussions of the joint board on port facilities during October 1944, both in OCT HB PE Gen Expl; Rpt of board on port facilities to SW and SN, 20 Jan 45, OCT HB Gross Expl.

[178] Ltr, SW to SN, 28 Aug 45; Ltr, SN to SW, 2 Oct 45; Memo for Record by McIntyre, 17 Oct 45; all in OCT 825.1 Am Loading Facilities; WD Cir 311, 10 Oct 45.

[179] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 79–80, OCT HB PE Gen Port Comdrs Confs; Conf on Am Loading Situation in N.Y. Harbor, 3 Jan 44, OCT HB PE Gen Expl.

[180] Ltr, CofT to LAPE, 18 Jun 43, OCT HB Gross Day File.

[181] Memo, JANASB for SW and SN, 15 Aug 44, WDGDS 825.1; 1st Ind, CG ASF for ACofS G-4, 6 Sep 44 and atchd draft prepared in OCT, OCT HB Gross Day File.

[182] Exhibit A to Rpt of Subcommittee of Joint Army-Navy Board on Port Facilities for Handling and Loading Ammunition and Explosives, which appears as Tab A in Rpt of that board, 20 Jan 45, OCT HB Gross Expl; Memo, CG ASF for ACofS G-4, 30 Apr 45, sub: Recommendations Regarding Am Ship Loadings, OCT 523.8.

bility for the careful handling of explosives, the Chief of Transportation arranged for close supervision of all phases of this traffic by his own office. General Wylie, who as Director of Operations was charged with supervision of all matters relating to internal security and accident prevention, exercised a general oversight, and his staff included an explosives control officer to deal with the details and day-to-day developments. General McIntyre, as Deputy Director of Operations, had a major role in this activity and represented the Chief of Transportation on several boards and committees that dealt with the problems arising out of the transportation of explosives.[183]

The primary step in the effort to avoid a major disaster was to forestall the accumulation of large quantities of explosives on the docks and in their supporting railroad yards. Early in the war the Chief of Transportation directed the port commanders not to hold carloads of explosives at the piers or on the adjacent railroad sidings in excess of the number that would be unloaded during the next twenty-four hours, and not to hold loaded cars in backup railroad yards in excess of the number that would be needed during the next forty-eight hours. Explosives could not be shipped to the ports except on call of the port commanders, and they were instructed to make the arrival of shipments at the ports coincide as nearly as possible with the berthing of vessels.[184] The ports were required to make daily teletype reports to the Chief of Transportation, stating the number of cars of ammunition (Army and lend-lease separately) at the piers, in railroad yards, at the backup storage facilities, and en route to the ports, and the number of cars unloaded at the piers during the past twenty-four hours.[185] When excessive accumulations were indicated by these reports, the port commanders were instructed to reduce them.

Early in 1944 specific numbers of cars were established as ceilings applicable to the piers and railway sidings at the respective ports. These numbers ranged from 25 cars at Seattle and Portland to 150 at New York. The ceilings could not be exceeded without express authorization of the Chief of Transportation.[186] With greatly increased shipments of ammunition to the European theater expected as the date for the invasion of the Continent approached, plans were laid for restricting the flow of such shipments through New York by making capacity utilization of the other Atlantic coast explosive piers, and if necessary of piers in the Gulf.[187]

Other safety measures taken at the ports can be mentioned only briefly.[188] Tugs were required to stand by during loading operations to assist in evacuating vessels from piers in case of emergency. The Coast

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[183] TC Pamphlet 1, Org Manual, 1 Jul 44, Sec. 102.03.

[184] Memo, CofOrd for CG SOS, 24 Nov 42; Memo, CofT for Somervell, 27 Nov 42; both in OCT HB Gross Day File; Memo, CofT for PEs, 14 Jan 43, sub: Contl of Mvmt of Am, OCT 523.8 1942-44; Min of Port Comdrs Conf, Boston, 30 Aug 43, pp. 67-72, OCT HB PE Gen Confs; Memo, CofT for PEs, 13 May 44, sub: Shipts to PEs, OCT 523.8 NY; Memo, CofOrd for CofT, 10 Jun 44, OCT HB PE Gen Expl.

[185] Memo, CofT for PEs, 2 Mar 43, OCT HB PEs Gen Expl; TC Cir 50-63, 20 Feb 45, sub: Contl of Mvmt of Explosives, and revision, 19 Mar 45.

[186] Memo, CofT for CG SPE, 11 Jan 44, sub: Limitations on Number of Cars of Am, OCT 523.8 1942-44.

[187] Memo, Wylie for Gross, 18 May 44, OCT HB Wylie Staybacks; Ltr, Gross to Groninger, 2 Jun 44, OCT HB Meyer Staybacks.

[188] For a fuller discussion, see Memo, Gross for Somervell, 13 May 44, with Tabs A-E, OCT 825.1 Am Handling Facilities. See also TC Cir 45-4, revised 26 Jan 45, sub: Shipside and Dockside Protection.



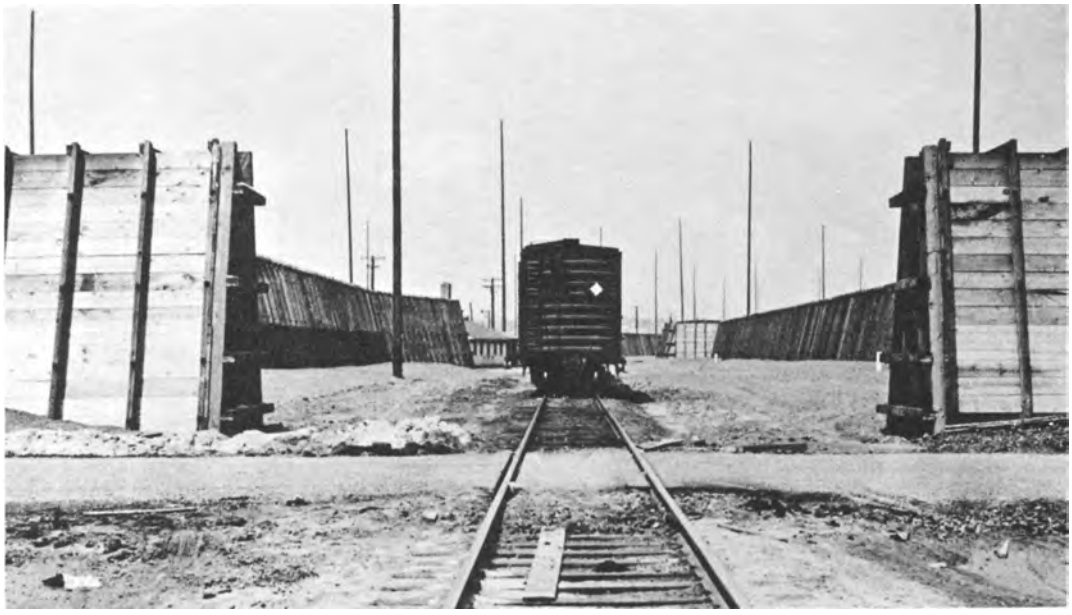
SPECIAL EXPLOSIVES LOADING PIER *at Mukilteo, Washington, a facility of the Seattle Port of Embarkation.*

Guard was required to have personnel present to supervise the handling of explosives, and Chemical Warfare Service representatives were on hand when chemical ammunition or supplies were being loaded. Minimum guarding standards were established, and the port commanders were instructed to use only military police (rather than civilian guards) for security functions on or near the explosives piers. The work at these piers frequently was on a round-the-clock basis, and full lighting was required as essential to efficient guarding and to the prevention of accidents in handling dangerous cargo. Fire protection was carefully planned, continuous training was decreed, and the Chief of Transportation arranged for officers concerned with this activity to receive instruction at the Coast Guard training station at Fort McHenry, Maryland.[189] When the location of railroad storage tracks for the explosives piers made it desirable, barricades were built around them to minimize the effect of any explosions that might occur. To supplement the inspections made by the joint boards, the Chief of Transportation assigned an inspector to visit the ports at regular intervals.[190] Safety "audits" were made by the Safety and Security Branch of the Ordnance Department.

The Commandant of the Coast Guard was responsible under law for safeguarding vessels and water-front facilities, and

[189] Memo, OCT for PEs, 22 Aug 44, sub: Special Course in Fire Fighting, OCT HB PEs Gen Expl.

[190] Copies of inspection reports made by Col Theodore L. Dunn and Lt Col Raymon C. Buell are in OCT HB Wylie Expl Contl.



BARRICADED STORAGE TRACK *near Caven Point explosives pier in New York Harbor.*

the Chief of Transportation was responsible under Army regulations for the ships and the shore facilities operated under his command. The necessity for co-ordinating their activities to assure efficiency and avoid unwarranted overlapping was soon apparent. An agreement between these officers was signed in June 1943. Broadly speaking, the Army port commanders were assigned full responsibility for the protection and safeguarding of the water-front facilities that they operated and of all vessels operated by or allocated to the Army while they were moored at such facilities, except in regard to waterside hazards. The Coast Guard Captain of the Port was assigned responsibility for all other water-front facilities and vessels, and for waterside protection of all facilities and all vessels whatsoever. The Captain of the Port was authorized to inspect all ships, except those manned and operated by the Army, to determine whether they were safe for loading explosives and had competent crews; he was also authorized to pass on the competency of all longshoremen engaged in handling explosives and to issue certificates of competency, or so-called red cards. Constant co-operation between Coast Guard and Army port officials was enjoined.[191]

One of the concrete results of this co-operation was the preparation of a disaster control plan for each port. After study of the reports covering the destructive explosion and fire that occurred at the water front in Bombay, India, in April 1944, the Chief of Transportation and the Coast Guard commandant directed that

[191] Agreement Defining the Responsibility of the Commandant, U.S. Coast Guard, and the Chief of Transportation for the Protection of Vessels and Waterfront Facilities Under Jurisdiction of the Chief of Transportation, 7 Jun 43, OCT HB Int and Security Div

these plans be reviewed and elaborated.[192] The basic feature of the disaster control plan was the establishment of a single point from which all activities could be directed.[193] When the war ended "walkie-talkie" radio sets were being provided to facilitate communication between the piers and Coast Guard fireboats.[194]

Although most explosives were handled at piers specially built or specially operated for that purpose, many shipments, usually small ones, were loaded at regular piers.[195] Moving a vessel from a commercial pier where general cargo had been taken on to an explosives pier to complete loading, or vice versa, involved expense and loss of time, and, when the amount of ammunition to be loaded was relatively small, the Army believed that enforcement of the regulation against the use of regular piers should be relaxed. The situation was complicated by the existence of state and local as well as federal regulations.[196] In case of national emergency, however, the federal authority was overriding, so that actual control lay with the U.S. Coast Guard, which was charged with the enforcement of the navigation and ship inspection laws. Therefore the loading of explosives at a pier that had not been designated for that purpose involved obtaining a waiver from the Coast Guard. In case a waiver was denied in the first instance, the Coast Guard would grant it upon certification by the Secretary of War that the military urgency outweighed the marine hazard involved. The Secretary of War delegated the authority to issue the certificates to the Chief of Transportation, who in turn delegated it to the port commanders, so that in the end the port commanders determined when the prohibition against loading explosives at commercial piers was to be set aside.[197]

The general practice during the early part of the war was to move explosives overseas in small consignments; theater requirements could be met in that way and distribution of the shipments over a number of vessels decreased the hazard.[198] Later, when the theater demands for ammunition were much heavier, larger consignments and even full cargoes became a necessity. The only rule restricting the amount of ammunition placed in a single ship was that the explosive content should not exceed 2,000 tons, and since the ratio of the explosive content to the total weight was low, this rule imposed no real limitation.[199] The heavy requirements of the U.S. forces in the invasion of continental Europe necessitated the dispatch of many vessels with full explosives cargoes to that theater from New York and its outports, including some carrying exclusively aerial

[192] Memo, JANASB for SW and SN, 17 Jan 45, OCT HB Wylie Expl; Joint Memo for PEs and Dist Coast Guard Off, 22 Mar 45, sub: Plans for Joint Army-Coast Guard Fire-Fighting Operations, OCT HB Int and Security Div.

[193] See Memo, NYPE for Int and Security Div, OCT, 25 Apr 45, and atchd disaster control plan, with photos; also plans for other ports in OCT HB Int and Security Div.

[194] Memo, C of Int and Security Div OCT for Ex OCT, 5 Jun 45, OCT HB Int and Security Div.

[195] The extent to which piers other than those specially operated for explosives loading were used is shown by reports received from certain ports in September 1945, filed in OCT HB PE Gen Expl.

[196] CMTC 20th Mtg, 4 Jun 42, and subsequent meetings.

[197] Memo, Dist Coast Guard Off, 3d Naval Dist, for NYPE, 6 Jul 43, sub: Explosives Loading at Certain Piers, OCT HB Meyer Staybacks; TC Cir 114, 14 Sep 43; TC Cir 55-1, 1 Jan 44, par. 4; Memo, CG NYPE for Dir of Opns OCT, 18 Sep 45, OCT HB Wylie Expl.

[198] Memo, ACofT for LAPE, 26 Sep 43, OCT HB Meyer Staybacks. The British and the Russians continued this practice throughout the war in loading lend-lease explosives at U.S. ports.

[199] Memo, McIntyre for Gross, 3 Jan 44, OCT HB Wylie Expl; Memo, Meyer for McIntyre, *et al.*, 10 Feb 44, OCT HB Meyer Staybacks.

bombs. Numerous full cargoes of explosives for the Pacific areas were loaded at San Francisco.[200]

The peak of the oversea movement of explosives came in the winter of 1944–45, and it was occasioned chiefly by the heavy expenditures of ammunition in the European theater in the drive into Germany. The ammunition situation in that theater reached critical proportions in November 1944. At that time the War Department in public statements pointed out that the troops under General Eisenhower's command were firing a thirty-five-day supply of heavy ammunition every ten days, and were using more mortar shells in an average day than had been used in an average month in the North African campaign.[201] The heavy expenditure was being made for the dual purpose of defeating the enemy as quickly as possible and of holding down U.S. casualties.

Late in November a delegation of officers representing General Eisenhower came to Washington to work out the solution to two critical problems affecting his command—the ammunition supply, and the congestion of shipping at northern Continental ports.[202] The two problems were related, for while the volume of ammunition available in the zone of interior for shipment to the ETO had become low, there also had been delay in getting ammunition aboard ships in European waters speedily discharged and made available to the troops due to the congestion at the ports then in Allied hands. The War Department with the co-operation of the War Production Board took vigorous steps to increase the production of critical items of ammunition, even to the extent of placing additional plants in operation. Equally vigorous measures were taken to improve the port situation in the ETO and to speed up the delivery of critical items to the theater. The German counteroffensive in the Ardennes in December gave additional impetus to these efforts.

The acceleration of the movement of ammunition to the European theater called for special procedures all along the supply pipeline. Studies made by representatives of ASF headquarters and the theater had allowed sixty days for delivery from factories to firing lines. The Chief of Transportation pointed out that with the volume of ammunition to be moved, and assuming the maintenance of the usual standards of safety, such delivery could be assured only for the critical items, not for the entire ammunition movement. By employing special trains and fast ships and by expedited handling at all points, he estimated that critical items could be moved from production plants to the troops in from forty-eight to fifty-five days.[203] By arranging for shipments to move directly from plants to shipside, enlisting the aid of the railroads in expediting transit to the seaboard, and providing prompt handling

[200] Reports covering the period January 1942–August 1945 indicate the following breakdown of total number of vessels that loaded Army explosives at each port and the number that loaded full cargoes:

Port	*Total Vessels*	*Full Cargoes*
New York	1,193	36
Searsport	70	13
Boston	311	0
Charleston	134	71
San Francisco	1,364	88
Los Angeles	249	4

See reports dated September and October 1945 in OCT HB PE Gen Expl. Satisfactory data for other ports not available.

[201] WD press releases, 13 Nov 44, 28 Nov 44, and 6 Dec 44.

[202] Memo, ACofS OPD for Somervell, *et al.*, 25 Nov 44; OCT HB Gross ETO.

[203] Memo, Gen Wood, ASF Hq, for Gross, 28 Nov 44, and reply, undated, both in OCT HB Wylie Expl.

at the ports, the average time was reduced to 46.7 days.[204] The opening of the port of Antwerp to Allied traffic late in November contributed to this reduction.

During the war—that is, from December 1941 through August 1945—the Army shipped a total of more than 9,488,000 short tons of ammunition and explosives to its forces overseas. *(Table 33 and Chart 12)* In addition, about 1,979,000 short tons of lend-lease ammunition were loaded at Army-controlled piers, making a total of 11,467,000 tons.[205] The largest amount, 2,713,000 short tons, was loaded at New York. San Francisco, Hampton Roads, Baltimore, and Philadelphia each loaded over a million tons. The peak month for such shipments was December 1944, when 685,000 short tons were placed in ships at all ports.[206]

The return of surplus and defective Army ammunition and captured enemy ammunition from overseas also created safety problems on the ships and at the discharge ports despite the control exercised over this traffic by the War Department.[207] In the spring of 1944 the Chief of Transportation informed the commanders of the Pacific areas that they must use more care in the stowage of ammunition returned to the zone of interior, give a full and accurate description of each item on the ship's manifest, and otherwise observe the regulations. In ensuing months fuller instructions were sent to all theaters.[208] As additional control measures, the theater commanders were required to obtain the approval of the Commanding General, Army Service Forces, or the Commanding General, Army Air Forces, before returning any artillery ammunition or aerial bombs to the United States, and to obtain authority of the Chief of Transportation before loading ammunition or explosives on any vessel destined for the United States or another theater. In order to discourage the shipment of small quantities on many vessels, the minimum load on any ship was placed at 500 long tons.[209]

During the summer of 1944 a joint committee was set up to develop safety methods and standardize the practices for the return of explosives by both the Army and the Navy, and its work eventually led to a comprehensive agreement.[210] The safety problem involved not only the handling of ammunition and explosives manifested as such but also the detection and disposition of unmanifested items that were inadvertently shipped with salvaged vehicles,

[204] Memo, Gross for Somervell, 3 Jan 45, sub: Am for ETO, OCT HB Meyer Staybacks; Opns Council Mtg, 4 Jan 45, OCT HB Dir of Opns; Rpt, Rail Div OCT, FY 1945, p. 25; ASF *Annual Report for the Fiscal Year 1945,* p. 38.

[205] A detailed analysis prepared by USCG, Summary Rpt of Vessels and Tonnages of Explosives and Ammunition Handled Under Coast Guard Supervision, 1 Jan 40 to 15 Aug 45, 27 Nov 45, includes Navy as well as Army and lend-lease shipments and distinguishes ports and terminals; in OCT HB PE Gen Expl.

[206] On the basis of estimates computed in June 1945, shipments to Pacific commands were expected to reach a peak of 780,000 tons in June 1946, of which 350,000 tons were to be for ground forces and 430,000 for air forces, assuming that industry could produce that amount and that shipping would be available; Memo, Maj Archie G. Pease for McIntyre, 7 Jun 45, OCT HB PE Gen Expl.

[207] AG Memo 471 (2 Jun 43), 8 Jun 43, sub: Return of Live Ammunition.

[208] Memo, CofT for CGs SWPA, SPA, and CPA, 22 Apr 44, OCT 523.8 1942-44; Memo, CofT for CG NATOUSA, 7 Aug 44, with note indicating that same letter was sent to other theaters, OCT HB Wylie Expl Contl.

[209] Msgs, WD to Theater and Base Comdrs, 8 Aug 44, CM-OUT 77625, and 18 Aug 44, CM-OUT 82813; WD Cir 370, 12 Sep 44, Sec. III; WD Cir 56, 19 Feb 45, Sec. II.

[210] Mtg, Joint Com on Return of Army and Navy Am from Overseas, 4 Jul 44, OCT HB Wylie Expl; Rpt, Rail Div, FY 1945, p. 26; WD Memo 850-45, 17 Jul 45.

TABLE 33—ARMY-PROCURED AMMUNITION AND HIGH EXPLOSIVES SHIPPED OVERSEAS FROM ARMY-CONTROLLED PIERS AT U.S. PORTS: DECEMBER 1941–AUGUST 1945 [a]

(Short Tons) [b]

Ports	Total	Army	Lend-Lease
All Ports	11,467,346	9,488,671	1,978,675
Atlantic and Gulf	8,979,837	7,130,435	1,849,402
Searsport	435,573	435,573	0
Boston	457,626	457,426	200
New York	2,713,280	1,532,306	1,180,974
Earle	513,968	513,753	215
Philadelphia	1,344,307	1,063,326	280,981
Baltimore	1,130,214	773,803	356,411
Hampton Roads	1,284,271	1,282,130	2,141
Charleston	457,223	455,743	1,480
Mobile [c]	5,160	3,240	1,920
New Orleans	469,244	444,164	25,080
San Jacinto	168,971	168,971	0
Pacific	2,487,509	2,358,236	129,273
Los Angeles	368,464	354,664	13,800
San Francisco	1,310,714	1,298,374	12,340
Portland	293,071	230,846	62,225
Seattle	415,672	374,764	40,908
Prince Rupert	99,588	99,588	0

[a] Excludes small arms ammunition. In addition to tonnage shown here, 60,000 tons of Army explosives and 340,000 tons of lend-lease explosives were shipped from piers not under Army control at New York, Philadelphia, Norfolk, Savannah, Jacksonville, Miami, Tampa, and Seattle.

[b] Tonnages were obtained by converting carloads on the basis of forty tons to a carload through July 1944, thereafter forty-five tons to a carload.

[c] The explosives pier and storage facilities built by the Army at Mobile (Theodore) were turned over to the Navy in May 1944.

Source: Monthly reports compiled by Explosives Control Office, OCT, from daily teletype reports received from the ports of embarkation, reworked for statistical volume of this series.

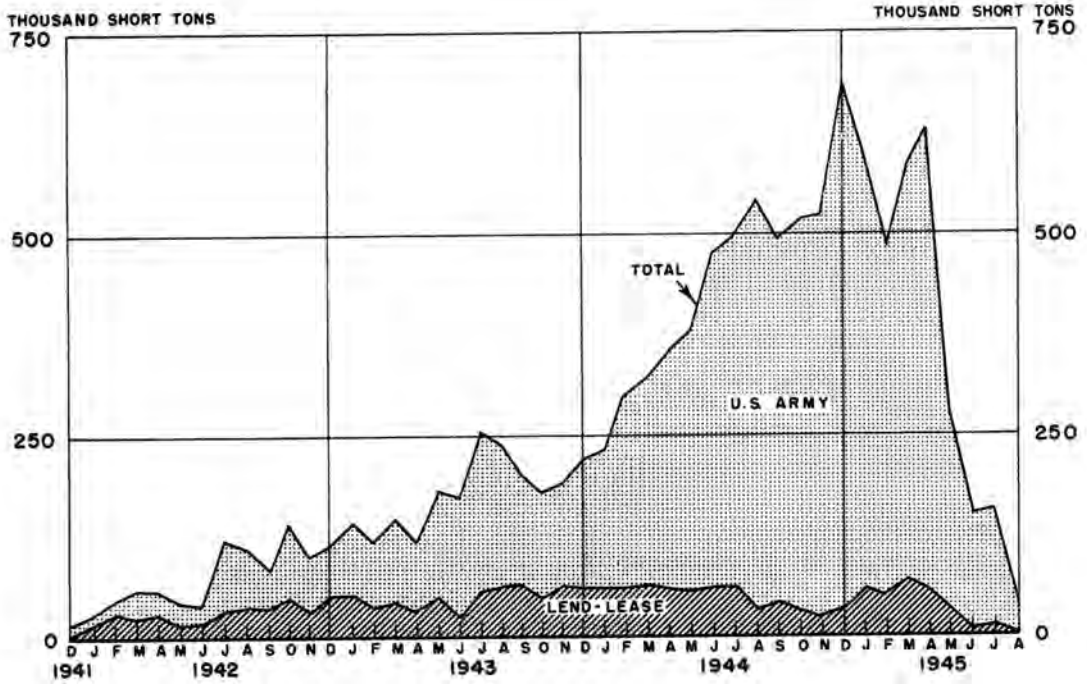
tanks, weapons, and other combat equipment.[211]

Special precautions were also necessary in moving inflammables and chemicals overseas. Shipment of these commodities on the same vessels with large quantities of ammunition was avoided whenever possible, and under all circumstances they were segregated during loading and stowed in different holds. The preparation and ventilation of ships' holds for the transportation of chemical warfare gases and liquids were prescribed in Army and Coast Guard regulations.[212] The Army required that gases carried below deck be accompanied by an officer or enlisted man of the Chemical Warfare Service, who acted as technical adviser to the ship's master, made sure that sufficient gas masks, protective clothing, and neutralizing agents were on board, and instructed the crew in their use.

[211] TC Cir 45-8, 19 Jan 45, and revision, 22 May 45, sub: Screening the Oversea Salvage and Return Cargo.

[212] AR 55-470, 30 Dec 42, pars. 24, 25, 39–41, and Changes 3, 1 Nov 43.

CHART 12—ARMY-PROCURED AMMUNITION AND HIGH EXPLOSIVES LOADED AT ARMY-CONTROLLED PIERS FOR DELIVERY OVERSEAS: DECEMBER 1941–AUGUST 1945*



* See footnotes to table 33.

Source: Monthly reports compiled by Explosives Control Office, OCT, from daily teletype reports received from the ports of embarkation, reworked for statistical volume of this series.

Despite the volume of dangerous commodities handled, no disasters occurred at facilities operated by the Army. Fires started at a number of the piers, but they were quickly extinguished. Several ammunition ship explosions occurred at foreign ports, and there were a number of explosions of ammunition moving by rail in the United States.[213] These incidents, together with the Port Chicago disaster, kept the Transportation Corps constantly alert to the necessity of exercising extreme care in the handling of hazardous shipments.

Packing, Marking, Documentation, and Security

The Chief of Transportation, in addition to developing policies and procedures to govern the actual transportation of Army supplies and equipment, took an active interest in the development of the practices and procedures that were necessary to insure the timely and safe delivery of matériel overseas. The packaging, packing, processing, marking, and documenting of shipments were primarily the concern of Army Service Forces headquarters and the respective procuring and shipping services, but they bore so directly on the proper performance of the transportation function that General Gross considered these matters definitely within

[213] Ltr, Bur of Explosives to author, 28 Mar 52, OCT HB Int and Security Div.

his purview.[214] The protection of cargo while it was being loaded and during the voyage clearly was his responsibility.

In Army parlance "packaging" refers to the original container in which the product is placed, while "packing" refers to the exterior or shipping container, which may consist of one or many packages. Successful packaging and packing served a number of purposes: they preserved the product from deterioration; they withstood the rigors of transportation and so protected the product from damage; and they afforded a unit of cargo that could be handled readily and stowed in a minimum of ship space.

The Chief of Transportation naturally desired that supplies be properly packed before they reached the ports of embarkation, but although progress toward this goal was made during the war it was never fully achieved. There were several reasons. The Army's packaging and packing specifications at the outset were woefully inadequate to meet the conditions that World War II imposed, and time was required to establish new standards. Metal and wood were scarce commodities and less sturdy substitutes had to be used wherever possible. Manufacturers did not always fully comply with the Army's specifications, which were unlike those used in commercial practice. The requirements varied from theater to theater.

The inadequacy of the Army's packaging and packing methods was apparent as soon as supplies began moving overseas after Pearl Harbor. Transportation under wartime pressure sometimes involved rough handling and faulty stowage. Metal parts that were not properly protected corroded as the result of contact with salt air or salt water during the ocean voyage. After discharge overseas, supplies frequently were stored in open dumps, uncovered or ineffectively covered by tarpaulins. There was universal complaint because the cardboard containers that were extensively used did not stand up under weather and hard usage.[215] The assault landings in North Africa emphasized the fact that many supplies were not suitably packed for that type of operation.[216] Strong complaints were received even from the United Kingdom, where transportation and storage conditions were more nearly normal than in any other oversea command.[217]

Within the scope of his authority General Gross took early steps to correct this situation.[218] In February 1942, as Chief of the Transportation Branch, G-4, he appointed an expert consultant to study packing and packaging from the standpoint of transportation and to recommend improvements.[219] Soon after the Office of

[214] For a general discussion, see ASF Hist Monograph, Storage Operations, December 1941–December 1945, Ch. 8, ASF Storage Div; *Logistics in World War II,* Final Report of the Army Service Forces (Washington, 1948), pp. 77–78.

[215] Ltr, Brig Gen William H. Harrison to Gen Clay, 6 Jan 43, written during a visit to NATOUSA; Memo, Col Ralph I. Glasgow for CofT, undated, written after a visit to NATOUSA in March 1943, both in OCT 322–352.9 Africa; Memo, Somervell for Styer, 3 Oct 43, par. 22, written after a visit to the Pacific theater, OCT HB POA Insp Trips; Stauffer, The Quartermaster Corps: Operations in the War Against Japan, Ch. V.

[216] Memo, Ross for Somervell, 15 Jan 43, sub: Observations in North Africa, par. 1*j*, OCT HB Wylie Urgent Matters.

[217] Memo, CG SOS for CofT, 26 Sep 42, sub: Difficulties in Shipping Supplies Overseas, OCT HB Water Div Packing and Packaging.

[218] For a fuller discussion than can be given here, see OCT HB Monograph 19, Ch. 6.

[219] Memo, Gross for NYPE, 13 Feb 42, OCT HB Wylie Staybacks; Memo, Capt Malcolm J. Odell for C of Development and Liaison Br OCT, 25 Jul 42, sub: Report on Packing and Crating, OCT HB Development and Liaison Div.

the Chief of Transportation was set up, a unit that eventually became the Packaging and Packing Section of the Water Division was created to deal with these problems.[220] This unit had general supervision over activities at the ports of embarkation; it consolidated their reports into recommendations for improving methods, and maintained liaison with the corresponding units in ASF headquarters and in the several technical services.[221] In view of the great variety of supplies procured and shipped by the Quartermaster Corps, the Chief of Transportation obtained from The Quartermaster General the loan of an expert who had spent two and a half months making a study of the problems of packing and packaging in relation to Quartermaster matériel.[222]

The ports of embarkation afforded the best opportunity to study packing and packaging in relation to transportation, and the port commanders were instructed to co-operate fully with the representatives sent out by the Chief of Transportation and also to add packing experts to their own staffs.[223] These experts, who were known as shipment surveyors, inspected freight as it passed through the ports, directed the repacking or recoopering of shipments that were found to be unfit for loading aboard ships, and reported their observations and recommendations to the Chief of Transportation, who passed them on to the technical services concerned. Although the shipment surveyors could inspect only a small part of the freight handled at the ports, their activities made a substantial contribution to the improvement of Army practices. They revealed the sources of improperly packed shipments and the nature of the deficiencies, as well as the extent to which the condition of shipments on arrival at the ports could be attributed to improper handling during transportation by rail or truck.[224]

It was soon evident to the Chief of Transportation that this problem should be attacked on a broader basis than his authority would permit, and in June 1942 he recommended that the Commanding General, Services of Supply, establish an agency to provide general supervision and over-all co-ordination of the packing and packaging activities of the technical services; he also recommended that any of the services that had not already done so be required to engage qualified personnel to deal with packing and packaging.[225] Immediate action was taken to carry both recommendations into effect. A Packing and Crating Unit was established in the Procurement and Distribution Division, Services of Supply, which later became the Packing and Packaging Section, Procurement Division, Army Service Forces. This section dealt with the subject as it related to production points; it supervised

[220] OCT Adm Memo 78, 13 Jul 42, Sec. III; Memo, CofT for Cs of All Divs, 1 Dec 43, sub: Transfer of Functions; OCT Off Order 5-28, 4 Apr 44, Packaging, Packing, and Processing, and revision, 22 Apr 44; all in OCT HB Water Div Packing and Packaging.

[221] See remarks of Maj John K. Mount, C of Packing and Packaging Sec, then part of Port and Field Agencies Div, at ZTO Conf, Washington, Sep 43, pp. 103-06, OCT HB Zones Gen.

[222] Memo, CofT for TQMG, 5 Apr 43, sub: Report of Col Paul P. Logan; Memo, CofT for Lutes, 5 Apr 43; both in OCT HB Meyer Staybacks.

[223] Memo, CofT for CG NYPE, 1 May 42, sub: Supervision Over Packing, OCT HB Wylie Staybacks.

[224] Memo, CofT for PEs, 11 Jul 42, sub: Shipt Surveyors, OCT HB Devel and Liaison Div; TC Cir 50-44, 14 Jul 44, sub: Rpts of Insp, and revision, 7 Dec 44; OCT Misc Ltr 37, 22 Jul 44, sub: Shipt Surveyors' Rpts, OCT 400.162; Packing and Packaging Conf, Montgomery, Ala., 14-17 Mar 44, pp. 23-36, OCT HB Water Div Packing and Packaging.

[225] Memo for CG SOS, 20 Jun 42, sub: Central Control of Packing and Crating, OCT 400.162 Central Control.

the preparation of specifications for packing and packaging and co-ordinated the inspection activities of the several services. The ASF Storage Division had a corresponding section, which dealt with the subject from the standpoint of depot operations.[226] Since the packing of organizational equipment by troop units about to be moved overseas was often faulty, the service commands were directed to establish packing squads to instruct and assist units in this work.[227]

Early in 1945 an Army Packaging Board was set up that included the chief of the ASF Packing and Packaging Section as chairman, a representative of the Assistant Chief of Air Staff as vice chairman, and a representative of each technical service.[228] At the same time a Joint Army-Navy Packaging Board was established to develop so far as practicable uniform specifications and methods for the armed forces. The shipment surveyors at the ports of embarkation took on the added function of policing the execution of the specifications and other instructions issued by these boards, and the Packing and Packaging Section in the Office of the Chief of Transportation undertook corrective action whenever the surveyors' reports indicated that need for such action existed.[229]

Before they were packed many items of supply and equipment had to be processed to prevent deterioration en route and to avoid the necessity of reconditioning after reaching the theater. Normally processing was done by the manufacturers or at technical service depots, but often it was necessary for a holding and reconsignment point or a port of embarkation to perform the task.[230] Although in the earlier part of the war processing was haphazard and inadequate, the technical services under the direction of ASF headquarters gradually worked out detailed instructions relating to the cleaning, spraying, and sealing of principal items before they were packed. The instructions pertaining to complicated machinery were necessarily detailed, covering the removal and wrapping of detachable parts, the preparation and packing of spare parts, the removal of fuel and lubricants in the case of engines, the coating of metal surfaces and electrical wiring, and the taping of openings and joints.

The theaters also had their problems with packaging, packing, and processing. Some supplies were beyond rehabilitation when they arrived from the zone of interior, and others had to be repacked or reprocessed. The Chief of Transportation supplied the theaters with copies of the specifications approved by the War Department and requested them to notify him when shipments were received that did not conform to these specifications.[231] During 1943 he sent officers skilled in this field to the principal theaters to report on the condition of supplies when they arrived and on the effectiveness of the methods

[226] Memo, CG SOS for Procurement and Distribution Div, 24 Jun 42; Memo, CG SOS for Cs of Tech Svs, 6 Jul 42, sub: Central Control and Co-ordination; both in OCT 400.162; ASF Cir 29, 13 May 43, sub: Staff Responsibilities for Packing and Packaging.

[227] SOS Memo S 55-4-43, 9 Feb 43, sub: Packing Unit Equip; SOS Memo S 55-7-43, 27 Mar 43, sub: Org of Packing Squads; WD Cir 128, 31 May 43.

[228] ASF Cir 44, 7 Feb 45, Sec. VIII; WD Cir 80, 13 Mar 45, Sec. II. The War Production Board had a Container Coordinating Committee to establish standards among all federal agencies; see Russell Jones, "The Packaging Problem," *Army Transportation Journal,* August 1946, pp. 6–7.

[229] OCT Misc Ltr 229, 6 Jul 45, OCT HB Water Div Packing and Packaging.

[230] The processing of vehicles and other unboxed equipment at the ports is discussed briefly above, pp. 151–52.

[231] Memo, CofT for SOS ETOUSA, 7 Nov 42, OCT 461 England; the basic directive was Army-Navy General Specifications for Packing and Packaging Oversea Shipments, US Army 100-14.

used by the several technical services.[232]

Most of the assaults against enemy-held shores were mounted in the theaters, and a considerable part of the materiel used in those assaults was packed or repacked overseas. In June 1943 the Chief of Transportation, ETOUSA, created traveling packing squads to train troop units in this work.[233] On request ASF packing teams were sent from the zone of interior to assist theater personnel. In anticipation of the enormous packing job that would have to be performed in the ETO and the MTO when redeployment began, training for this activity was started in the theater early in 1945 with special emphasis on the packing of supplies destined for tropical areas in the Pacific.[234]

Closely allied to the subject of packing was that of palletization. The principle of palletization was well established in warehouse operations as a means of saving time and labor and facilitating the moving and stacking of commodities. For warehousing purposes it involved only the placing of boxed, bagged, or other regularly shaped packages on wooden pallets that could be moved and stacked by fork-lift trucks. The adaptation of palletization to military use took three forms. What the Army called palletized loads differed from the warehouse palletized loads only in that the supplies had to be fastened to the pallets. Palletized unit loads were supplies strapped or otherwise fastened to pallets that had been especially designed for particular commodities, such as various types of ammunition. Skidloads were supplies fastened to pallets or platforms that were so constructed that they could be used as sleds and drawn across beaches in assault landings.[235]

Palletized loads and palletized unit loads presented both advantages and disadvantages from the standpoint of the Chief of Transportation. If not too bulky, they were easily handled at rail and shipping terminals and were quickly loaded into ships. But there was a tendency on the part of the technical services to make the loads large and heavy, in which case it was difficult to move them into the wings of the hold and they could only be stowed in the square of the hatch. Some such pallet loads had to be broken up after arrival at the ports. Overseas, palletized cargo could be effectively handled only at ports that had fork-lift trucks or other suitable gear, and there were many that were not so equipped.[236] Moreover, the pallets themselves took up ship space, and when small packages were made into big ones the amount of filler cargo available at the loading ports was reduced and the amount of broken stowage was increased.

In view of the problems that palletization created the Chief of Transportation feared that the tendency toward palletization would get out of hand. He contended that only certain commodities should be palletized, that the size of the palletized loads should be limited, and that palletized cargo should not constitute more than 25 percent of the total cargo on any

[232] Rpt, Shipping Procedures Br, Port and Field Agencies Div, OCT, 28 Oct 43, par. 4, OCT HB Port and Field Agencies Div.

[233] Ltr, Wylie for Ross, ETOUSA, 8 Jun 43, OCT HB Wylie Staybacks.

[234] WD Memo 700-45, 25 Apr 45, sub: Co-ordination of Packing; TC ETOUSA Weekly Ltr, 14 May 45, OCT HB TC Gen Redeployment; Capt. F. W. Koepnick, "Wrap It Up," *Army Transportation Journal,* September 1945.

[235] See Ltr, C of Water Div OCT to British Army Staff, Washington, 2 Apr 45, OCT HB Water Div Packing and Packaging.

[236] For a time shipment of palletized cargo to the United Kingdom was stopped on this account; see Memo, CofT for Storage Div ASF, 30 Jun 44, OCT HB Water Div Packing and Packaging.

ship.[237] ASF headquarters, on the other hand, pressed for greater use of palletization in moving supplies from manufacturers and depots to oversea commands, and urged the technical services to keep the matter under constant study.[238] Consideration of the extension of palletization sometimes brought clashes between ASF and OCT officials, but in the end the governing factor was the facility with which palletized loads of various compositions and sizes could be handled by the railroads and at shipping terminals, and accordingly the shipment of palletized cargo to the ports was subject to the approval of the Chief of Transportation.[239] A joint Army-Navy committee was set up to coordinate the procedures of the two departments with regard to palletization.[240]

Skidloads of ammunition and other supplies were used in the invasion of Attu in May 1943, and a few months later in the invasion of Sicily. The advantages were at once apparent, although it was obvious that further study of design and handling methods was necessary. A report on the landing of skidloads of Quartermaster supplies (rations, gasoline, oil, and water) in the Sicilian invasion indicated that the operation had been very successful and that the time for delivery of these commodities to the dumps had been reduced about 50 percent.[241] Skidloads were used in subsequent amphibious operations whenever the circumstances warranted.

The marking of shipments to identify them and to indicate their destinations, like many other procedures that had been set up for peacetime operations, underwent a thorough revamping after the United States entered the war. The inadequacy of the existing system of marking, as well as the unreadiness of the supply services to carry it into full effect, was apparent at San Francisco during the feverish effort to reinforce the Philippines just before the Japanese attack.[242] The development of a satisfactory marking system made slow progress, for there were a number of interests to be served—those of the shippers, those of the Transportation Corps, those of the oversea commands, and the over-all interest of military security.

During late 1942 and early 1943 the European theater protested that the marking system devised in the zone of interior did not meet its needs. The theater had a difficult experience with marking during the invasion of North Africa and wanted an improved marking system for shipments to that area. It also wanted more complete markings on shipments to the

[237] Ltr, Wylie for Ross, ETOUSA, 8 Jun 43, OCT HB Wylie Staybacks; Memo, CofT for NYPE and HRPE, 24 Jun 43, OCT HB Meyer Staybacks; Interv, Harold Larson with Maj Mount, 24 Jun 44; Interv with Edgar C. Seward, 4 Apr 52; last two in OCT HB Water Div Packing and Packaging.

[238] Memos, CG ASF for C of Tech Svs, 19 and 24 Jul 44; Memo, CofT for PEs, 1 Aug 44; all in OCT 400.162 Palletization; Memo, CG ASF for CofT, 14 Jul 45; 1st Ind, CofT for CG ASF, 17 Aug 45; last two in OCT 400.162.

[239] Memo, CG ASF for CofT, 24 Nov 44, sub: Limitation of Weight of Pallet Loads; Memo, CofT for Dir of Supply ASF, 7 Dec 44; both in OCT 400.162 Palletization; OCT Misc Ltr 99, 24 Mar 45, sub: Palletized Unit Load Shipments, OCT HB Water Div Packing and Packaging.

[240] Joint Army-Navy Conf on Palletization, 12 Jan 44, OCT HB Wylie Cargo.

[241] Memo, Maj Albert J. Lorion for Dir of Storage ASF, 20 Oct 43; Memo, Col Albert R. Drake, Storage Div ASF, for Dir of Supply ASF, 22 Nov 43; Memo, CofT for Storage Div ASF, 30 Jun 44; Memo, Brig Gen William A. Borden for Lutes, 14 Jul 44; all in OCT HB Water Div Packing and Packaging.

[242] Wardlow, *op. cit.*, pp. 143–44; Memo, Somervell for Gross, 5 Feb 42, and reply, 7 Feb 42, OCT HB Water Div Code Marking.

United Kingdom, where the depot situation, the crowded condition of the port areas, and the overburdened transportation lines created special problems in the reception and consignment of cargoes. A plan that the European theater proposed was at first rejected by ASF headquarters and the Chief of Transportation because they considered it too detailed and burdensome. But the theater persisted and in the end got substantially what it wanted.[243]

For marking purposes Army shipments fell into two broad classes: those that accompanied troop organizations moving to oversea destinations, and those that moved separately to meet the needs of the forces already overseas. Although the procedures finally evolved were necessarily complex in order to meet the needs of all parties at interest, the descriptions given below cover the basic features.[244]

The coded oversea address for separate shipments, which was stenciled on each box, crate, or other container, consisted of five parts.[245] The first part was the shipping designator, which was a code name of four letters indicating the port of discharge or the general destination of the shipment. The second part, or time indicator, was a single letter that gave the priority of the shipment by indicating the month and the half of the month in which the shipment would be forwarded from the United States. The third part consisted of an abbreviation of the name of the shipping service (Ord, QM, et cetera) and a Roman numeral indicating the class of supply. The fourth part, known as the consignee combination, was a group of letters and digits that identified separately packed components of an assemblage or supplies that would have to be brought together to serve a special mission. The fifth and final part of the oversea address was a combination of letters and digits that identified the shipment with the requisition against which it was made, showed the depot from which it originated, and indicated the number of the shipment when several shipments were made on separate shipping documents from a single depot against a single requisition. Under this system the oversea address marked on a package might read as follows: BOBO-A-ORDII-GT3-A302RA3.

In order that the matériel of the respective technical services might be identified on sight, each service was given a color that appeared as a band on packages shipped by certain services and as a corner triangle in other cases. The color markings were especially helpful overseas, where they aided native longshoremen and porters in segregating the matériel of the several services without reference to code markings. Some unique color markings

[243] For early developments, see OCT HB Monograph 19, pp. 239–68; for the ETO proposal, see Ruppenthal, *Logistical Support of the Armies*, Vol. I, Ch. III, Sec. (3).

[244] Developments in the system are found in the following basic directives: AG 400.161 (7-25-42), 26 Jul 42, sub: Requisitioning and Marking Supplies; AG 311.5 (10-10-42), 11 Oct 42, sub: Policy and Procedures; SOS Memo S 5-43-43, 23 Feb 43, sub: Marking by Contractors; AG 400.161 (3-19-43), 23 Mar 43, sub: Assignment of Code Combinations; AG 400.161 (5-10-43), 1 Jun 43, sub: Requisitioning and Marking Supplies; AG 400.161 (27 Oct 43), 28 Oct 43, sub: Special Color Marking; AG 400.161 (8 Jul 44), 15 Jul 44, sub: Identification of Separate Shipments; WD TM 38-414, Army Marking Directive, May 1945. For a review of developments, see OCT HB Monograph 19, pp. 239–68.

[245] Description based on WD TM 38-414, May 1945, which consolidates previous directives. Code markings were shown on the extract requisitions sent from ports to sources of supply.

were used to identify special shipments.[246]

Other markings appeared on the containers and care had to be taken to prevent them from obscuring the coded oversea address. Markings to indicate weight and cubic contents and data concerning the procurement contract were allowed to appear on only one or two sides of the container and were confined to specified areas. If the contents of a package were uniform and could be described by a simple term, this information was stenciled on the container, but if the contents were complex they were stated only in the packing list, one copy of which was affixed to the outside of the container while the other copy was placed inside. When the component parts of an assemblage were shipped in two or more containers that had to be kept together, a disc in the color of the procuring service was marked on the container to indicate that it was part of a set, the number assigned to the set was placed below the disc, and below that the number of that container and the total number of containers in the set were shown. When equipment was shipped unboxed, the markings were stenciled directly on the article, if possible, rather than being committed to a tag or sticker that might become detached.[247]

Organizational equipment, individual equipment, and initial supplies moving with troop units were not marked with the coded oversea address but with a shipment number. To the few persons permitted to know its meaning, this four-digit number identified the troop unit to which the matériel belonged, the oversea destination, and the approximate time of embarkation. When a large unit moved on a single shipment number, a letter after the number indicated the component to which the materiel pertained. A shipment number was used only once and hence had only one meaning. Sometimes initial maintenance supplies accompanying troop units were to be delivered to a depot overseas rather than to the unit itself. In this case, the shipment number was followed by letters indicating the procuring service to whose depot or dump the matériel was to be moved from the port of discharge. When ready to receive such supplies, the unit requisitioned them in the usual manner.[248]

In the summer of 1942, when the shipment marking problem was being widely considered, the War Department established a Code Marking Policy Committee to give the subject continuing study from the Army point of view and to provide desirable co-ordination with the Navy and also with the British, who were transporting lend-lease supplies on their ships and were receiving increasing quantities of U.S. Army supplies at their ports. The committee included representatives of the Operations Division and G-2 of the War Department General Staff, the Services of Supply headquarters, the Army Air Forces, the Transportation Corps, and the U.S. Navy. The Chief of Transportation's representative on this committee was Col.

[246] OCT Cir 135, 20 Oct 43, sub: Marking for Allied Military Government and Office of Strategic Services Shipments; OCT Misc Ltr 77, 6 Sep 44, sub: Color Marking; OCT Misc Ltr 146, 10 Nov 44, sub: Special Color Design; last two in OCT 400.161.

[247] Col Coe, lecture on code marking at Atlantic Coast TC Officers Training School, Fort Slocum, N.Y., Jun 43, OCT HB Water Div Code Marking. For variations from this system used in shipping AAF technical supplies and for clear markings that were permitted in some circumstances, see WD TM 38-414, Secs. XI, XII.

[248] Coe lecture, cited n. 247. Shipment numbers were assigned in the movement orders.

Noble M. Coe, who continued to be active in the matter throughout the war. At the same time the Chief of Transportation established a unit in his office to deal with code marking.[249] Eventually ASF headquarters directed the chiefs of all technical services to designate officers to co-ordinate the activities of their organizations pertaining to marking and related subjects with like activities of the other services and with ASF headquarters.[250]

The Chief of Transportation not only had an active part in formulating code marking procedures, but he also had the chief responsibility for policing their execution. In the early weeks of the war with the object of bringing deficiencies to the attention of the technical services concerned, he instructed the port commanders to report to him whenever they found that the prescribed procedures had not been observed by depots or contractors or that the markings were illegible.[251] In September 1942 General Gross reported that about 25 percent of the shipments received at the ports of embarkation were so poorly marked that the ports had to assume the heavy burden of remarking them.[252]

The second object of policing was to prevent the compromise of shipping designators and shipment numbers. This might occur when both code and clear markings were placed on the same package or when code-marked packages were shipped on the same vessels with packages marked in the clear. The latter contingency arose chiefly in connection with the shipment of Army cargo and lend-lease cargo on the same ship. Various instructions were issued to reduce the likelihood of compromise, but it was recognized that shipping designators, which were used repeatedly, afforded only partial security. The shipment numbers, used only once when supplies accompanied specific troop units, provided better protection.[253]

The arrangements that General Gross made to provide "positive action" on code marking violations embraced both the ports of embarkation and the transportation zones. The port commanders were directed to set up staffs, including the shipment surveyors, to scrutinize markings to insure that they were in accordance with War Department regulations; they were also directed to report important violations by telegraph to the zone transportation officers in whose territories the offending shippers were located, with a copy of the telegram to the Chief of Transportation, and to report all violations in writing at weekly intervals. The latter reports were sent to the appropriate zone transportation officers when they related to the ASF technical services or the service commands, and to AAF intransit depots when they related to AAF shipments, with copies to the Chief of Transportation in all cases. The zone transportation officers were directed to take up with the offending shippers, in the case of

[249] Memo, ACofS OPD for CG SOS, 25 Jul 42, OPD 311.5 (7-25-42); 1st Ind, CG SOS for OPD, 5 Aug 42; 2d Ind, OPD for CG SOS, 27 Aug 42; Memo, Wylie for Ex OCT, 12 Sep 42; all in OCT 400.161; Rpt by Maj Kenneth T. Boughner, C of Code Marking Br, 10 Nov 42, OCT HB Port and Field Agencies Div Rpts.

[250] ASF Cir 99, 11 Apr 44, Sec. VII; ASF Cir 167, 2 Jun 44, Sec. VI.

[251] Memos, CofT for PEs, 11 Feb 42 and 14 Mar 42, OCT HB Water Div Code Marking.

[252] Min of ASF Staff Conf, 9 Sep 42, p. 6.

[253] Memo, CofT for PEs, 7 Sep 42, sub: Marking of Supplies for Oversea Shipts; Memo, CofT for PEs, 4 Nov 42, sub: Secrecy of Oversea Troop and Cargo Mvmts OCT HB Water Div Code Marking; OCT Cir 29, 23 Feb 43; OCT Cir 150, 12 Nov 43, and revision, 11 Dec 43; TC Cir 90-6, 4 Apr 44.

separate shipments, the violations reported by the ports and to assist shippers in understanding and complying with the code marking system. In the case of shipments accompanying troop units, the zone transportation officers took up violations with the appropriate service commands, which were responsible for instructing troop units regarding the marking of their impedimenta.[254] In June 1944 the Chief of Transportation was able to report that compliance with the code marking regulations had improved to an extent that warranted curtailment of his enforcement activities; nevertheless, sufficient policing at the ports to deal with serious violations or persistent violators was continued.[255]

The Navy used a marking system similar to that of the Army but different in some respects. The two departments agreed that in the case of joint operations the commander of the operation should decide which system would be used, or whether the Army and the Navy would use the systems that each normally employed.[256]

A great saving of labor and expense was accomplished by the introduction of the War Department shipping document and the vendor's shipping document. Many agencies along the route between the manufacturers and the consumers of Army supplies and equipment required identical or almost identical information regarding the shipments, and in the early part of the war separate documents were made out for each purpose. These documents were known variously as shipping tickets, packing lists, depot tallies, tally-outs, tally-ins, dray tickets, dock tallies, hatch lists, and so forth. There was general recognition of the desirability of committing all or most of the needed information to a single form to be filled out by the originators of shipments, with sufficient copies to serve the purposes of those who would handle the shipments subsequently. The devising of such a document was a formidable task, requiring consultation with many agencies and the harmonizing of many points of view, but the project was pushed to a conclusion by a War Department procedures committee headed by General Styer, Chief of Staff, Army Service Forces. After trial at a limited number of installations in the spring of 1943, the War Department shipping document was placed in effect at all ASF installations. Work on the development of the vendor's document was begun as soon as the War Department document was found to be practicable.[257]

The War Department shipping document was designed for use in shipping matériel of the ASF technical services from depots, arsenals, ammunition loading plants, holding and reconsignments points, ports of embarkation, or other storage points under the control of those services.[258] It was also the basis for somewhat different procedures used in making shipments from posts, camps, and stations, in making shipments within or from oversea theaters, and in shipping the technical

[254] WD Cir 128, 31 May 43; OCT Cir 79, 11 Jun 43, and revision, 15 Jul 43; Min of ZTO Conf, Washington, Sep 43, pp. 95–98, OCT HB Zones Gen.

[255] TC Cir 90-7, 10 Jun 44.

[256] WD Memo W 55-44, 9 May 44.

[257] Remarks by Col Coe in Min of Port Comdrs Conf, Boston, Aug 43, pp. 146–53, and in Min of ZTO Conf, Washington, Sep 43, pp. 98–100; Memo, Chm Procedures Committee for CofT, 12 Apr 43, sub: Installation of WD SD on Experimental Basis; Memo, Styer for Cs of Tech Svs, 18 Sep 43, sub: WD SD Covering Shipts from Manufacturers; last two in OCT HB Contl Div Procedures Br; Memo, Somervell for Under Secy of Navy, 28 Feb 44, ASF Hq Navy.

[258] ASF Manual M 401, 25 Jan 44, WD Shipping Document.

supplies of the Army Air Forces.[259] The vendor's shipping document was used in connection with shipments from vendor's plants on contracts or purchase orders negotiated by the ASF technical services, including government-owned contractor-operated establishments; in addition to being a shipping document, it was set up to serve as a basis for fiscal control.[260] As finally constituted, both documents could be used for either domestic or oversea shipments, and both could be used in connection with movements of lend-lease matériel as well as matériel intended for Army use.

Very detailed instructions were necessary to enable Army installations and manufacturers to properly utilize these complex documents, and the new system was placed in operation gradually and not without many mistakes. Staff supervision of the utilization of the shipping documents was assigned to the ASF Control Division. The chiefs of the ASF technical services were responsible for compliance with the procedures by the installations under their control and by their contractors.

With documentation, as with packing and marking, responsibility for the policing of performance rested mainly with the Chief of Transportation.[261] The ports of embarkation and the holding and reconsignment points were directed to maintain sufficient inspection service to determine whether the documents were being properly prepared and distributed, and to report violations. The port agencies, which represented the Chief of Transportation in connection with lend-lease shipments, also reported violations. The zone transportation officers were instructed to aid Army installations and contractors in their respective areas in understanding and utilizing the documents and to take up with the appropriate officers specific reports of violation.[262]

Teams of Transportation Corps officers were sent to the European and Mediterranean theaters to ascertain how the War Department shipping document was meeting their needs. These officers found that, while the general plan was working out well, the information contained in the documents was not always reliable. A common complaint was that the copies used as packing lists did not agree with the contents of the boxes. Such discrepancies created confusion in theater depot records. The errors, usually attributable to the shippers in the zone of interior who prepared the documents, were not readily detectable at the ports of embarkation, although the technical service officers at the ports made an effort to discover and correct discrepancies so far as practicable. Errors were also found in shipping documents prepared at the ports of embarkation to cover shipments received without such documents. The investigation emphasized the need to train personnel in the procedures and to give constant supervision to the work.[263] Officers were also sent

[259] ASF Manual M 403, 1 Sep 43, Sec. IV, Station Supply Procedure; WD TM 38-413, Feb 45, Theater Shipping Document; WD Memo 55-45, 6 Feb 45, Documentation of AAF Oversea Shipments.

[260] ASF Manual M 410, 5 May 44, Vendor's Shipping Document.

[261] ASF Cir 94, 2 Oct 43, Sec. II; ASF Cir 136, 17 Apr 45, Sec. III.

[262] TC Cir 50-42, 29 Jun 44, sub: Policing WD SD, and revision, 3 Oct 44; TC Cir 50-41, 29 Jun 44, sub: Policing VSD, supp. 1, 25 Aug 44, and supp. 2, 30 Oct 44; Conf on Policing WD SD and VSD, Chicago, 10–12 Jul 44, OCT HB Contl Div Procedures Br; TC Cir 90-15, 21 Feb 45, sub: Shipping Document Violations.

[263] Memo, CofT for ACofS OPD, 6 Oct 43, sub: Visits by TC Officers; Memo, Lt Col Vancel R. Beck for CofT, 31 Jul 44, sub: Inaccuracies in WD SD, and atchd rpts; all in OCT 523.06.

overseas to instruct theater personnel in the proper use of the theater shipping document.[264]

The adoption of the War Department shipping document aided the ports of embarkation in satisfying the theaters' requirements regarding ships' manifests. From the early days of the war the supply officers in the oversea commands had complained that the cargo information in the manifests prepared at the loading ports was not properly organized and not sufficiently detailed for their purpose.[265] The War Department shipping document provided this detailed information, and the ports of embarkation had merely to transmit it to the consignees. As a first step, copies of the shipping documents were sent to the oversea commands by air as advance information. Then, under a new procedure that became effective early in 1944, two types of manifests were prepared for each voyage. The transportation manifest included only the summary information required by the transportation agencies concerned.[266] The supply manifest, prepared expressly for the use of the supply officers overseas, consisted of a copy of the transportation manifest supported by copies of the shipping documents covering the manifested cargo.

The divergent shipping procedures of the Army and the Navy, including documentation, were a cause of confusion, particularly in the Pacific, where ships and shore facilities were often used jointly. In April 1944 officers representing the two departments, after attending a conference held at San Francisco to study the situation, recommended that an effort be made to adopt joint procedures. Several months of intensive work on this problem, in which the Control Divisions of ASF headquarters and the Office of the Chief of Transportation took the lead, resulted in the publication of a joint manual, Ocean Shipping Procedures, in March 1945.[267] Uniform procedures were adopted whenever practicable, and where different methods seemed unavoidable they were presented separately and fully so that all instructions would be included in one volume. The manifesting procedure agreed on followed the plan already in use by the Army. Procedures relating to passenger traffic as well as freight traffic were covered.[268] An important feature of the joint procedure was a system for supplying shipping information to the theaters and obtaining information from them, a system designed to overcome a handicap that the Chief of Transportation long had felt, especially with respect to the Pacific.

From the spring of 1943 onward the Office of the Chief of Transportation included a unit that devoted itself exclusively to the study of shipping procedures for the purpose of improving them, and to the supervision of activities of the Transportation Corps field installations in applying and policing these procedures. In

[264] Memo, Goodman for Maj E. M. Card, Jr., 31 Aug 44; Memo, Maj Card for CG NYPE, 13 Dec 44, sub: Report of Documentation Team to NATOUSA; both in OCT 523.06 Med; Memo, Col Elliott C. Goodwin for CG ASF, 18 Oct 44, sub: ASF Shipt Procedure Team, OCT 300.7 (TM 38-413).

[265] Memo, Somervell for TQMG, 21 Jan 42, G-4/33893; Memo, CofT for PEs, 26 Sep 42, sub: Preparation of Manifests, OCT HB Contl Div Procedures Br.

[266] WD TM 38-412, Standard Supply and Transportation Information From PEs to Oversea Theaters, 21 Mar 44, pp. 12, 17; Ltr, Col Beck to Gen Ward, 25 Mar 53, in OCMH Files. On the general subject, see OCT HB Monograph 19, pp. 269–76.

[267] WD TM 38-412/OPNAV 39-H3, OSPRO; Memo, Wylie for Gross, 27 Apr 44, OCT HB Meyer Staybacks; Memo, Robinson for Somervell, 8 May 45, OCT HB Contl Div Procedure Br.

[268] Wardlow, *op. cit.*, p. 211.

the beginning this unit dealt with packing, packaging, code marking, and documentation.[269] Later the work was divided, with packing, packaging, and code marking being assigned to the Water Division, and documentation to the Control Division along with all other procedures pertaining to Transportation Corps field installations. After February 1944 the Procedures Branch of the Control Division was aided by an advisory procedures committee, consisting of representatives of all divisions that had responsibilities in connection with traffic movements, as well as representatives of the Fiscal, Personnel, and Control Divisions.[270]

The security of cargo up to the time it was delivered to the theater commanders at oversea ports was a problem to which the Chief of Transportation and his port commanders gave much attention; they had some success, but the problem was never solved to their full satisfaction. In the fall of 1942 the practice was begun of placing cargo security officers on vessels carrying large Army shipments. These officers were expected to be present during the loading and discharging operations to prevent mishandling, damage, and pilferage and to make regular inspections of accessible cargo while at sea. They were also responsible for the prompt delivery of manifests, stowage plans, and other documents to the proper authorities at oversea ports and for reporting to the commanders of home ports any irregularities discovered during the trips.

Cargo security officers were placed on the great majority of vessels carrying Army cargo, but not on all. They were not considered necessary on troopships that had permanent transport commanders. They were not assigned to vessels carrying less than 1,000 measurement tons of Army cargo unless the Chief of Transportation expressly authorized them. Their assignment to vessels carrying only organizational equipment was at the discretion of the port commanders.[271] Cargo security officers were not placed on vessels operated by the U.S. Navy or on vessels controlled by the British Ministry of War Transport. The British were asked to grant this privilege, but they maintained that under their practice the loading agents and the ships' masters were fully responsible and that the presence of U.S. officers on board would inevitably lead to friction.[272]

The object in assigning cargo security officers was to have someone on each vessel whose sole duty was to look after the safety and prompt delivery of the Army's property. However good in theory, the plan encountered a variety of difficulties in practice. The officers who could be spared for this work were in most cases lieutenants, and usually they were entirely without experience in shipping matters. Even such junior officers were not always available, and the port commanders were authorized to use casual officers who might be traveling on the freighters, and

[269] Hist Record, Shipping Procedures Branch, Port and Field Agencies Div, undated, OCT HB Port and Field Agencies Div Rpts.

[270] TC Cir 5-9, 8 Feb 44, sub: TC Procedures Committee, and revision, 16 Dec 44; Memo, Maj Frederick L. Krueger for Wardlow, 7 Jul 44, OCT HB Contl Div Procedures Br.

[271] Memo, Somervell for CofT, 16 Oct 42; Telg, CofT for PEs, 19 Oct 42; both in OCT HB Wylie Staybacks; WD Cir 337, 28 Dec 43, Sec. V; WD FM 55-105, Water Transportation, 25 Sep 44, pp. 23, 39, 53, 59; TC Pamphlet 24, 11 Oct 44, and revisions, 6 Feb 45 and 29 May 45.

[272] Memo, British Army Staff for Wylie, 9 Oct 43, OCT 563.5; Memo, Wylie for PEs, 23 Oct 43, sub: Cargo Security Officers British Vessels, OCT 323.36 PEs.

to use enlisted men of the first four grades when certain types of cargo were being carried.[273] In the early stages of the undertaking the young officers assigned to the task frequently were ineffective because of a lack of initiative, stamina, or interest. The training the port commanders could give them before they sailed was limited.[274] Sometimes the ships' masters were antagonistic and not infrequently the officers at oversea ports were un-co-operative.

In the beginning there was considerable doubt whether the benefits from this plan justified the withdrawal of the officers from other activities, but as the cargo security officers gained experience the results of their work became progressively better. After a time the Chief of Transportation concluded that the undertaking had been worth while, and in order to increase the prestige and effectiveness of these officers their title was changed to ship transportation officer, their duties were increased, and they were described as "representatives of the Chief of Transportation" for the performance of those duties.[275]

Various other measures were taken by the Chief of Transportation to improve the security of cargo. Ports of embarkation were instructed to deliver to the cargo security officers personally any small packages containing valuable articles. Shipments that were considered especially subject to pilferage, such as tobacco and candy, were to be stowed in places where they would not be readily accessible to members of the crew or passengers. To facilitate such stowage, shipments of this kind were to be marked for "special attention" on the shipping documents.[276]

Although pilferage on board was a frequent occurrence creating a situation that The Inspector General on one occasion described as a "most disgraceful impairment to morale," the greatest loss of cargo was at oversea ports.[277] This was particularly true at ports where native labor was used extensively and in parts of the world where respect for private property had no place in the moral code. There the problem was essentially one for the local commanders to cope with, but cargo security officers were instructed to request the assignment of additional military police during discharging operations when the need was apparent. The Chief of Transportation urged that requests of theater commanders for additional military police for this purpose be given favorable consideration by the War Department.[278] The demands for military police were multifarious, however, and oversea commanders frequently gave other responsibilities higher priority than the guarding of cargo. As a result, the records of the theaters in dealing with the problem varied widely. Reports of cargo security officers indicated that, when the oversea port commanders adopted a strong policy in the detection and punish-

[273] Memo, Wylie for ACofT for Pers and Tng, 26 Mar 43, OCT HB Wylie Staybacks; Memo, Col Meyer for Col Allan L. Hanstein, 21 Apr 44, OCT HB Meyer Staybacks.

[274] Memo, CofT for CG NYPE, 1 May 43, sub: Cargo Security Officers, OCT HB PE Gen Cargo Security; Min of Port Comdrs Conf, Boston, 30 Aug 43, App. 6, OCT HB PE Gen Confs.

[275] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 112–23, OCT HB PE Gen; WD Cir 141, 12 May 45, Sec. II.

[276] Memo, CofT for PEs, 22 Sep 42, sub: Pilferage of Stores En Route, OCT HB Meyer Staybacks; OCT Cir 96, 26 Jul 43, sub: Care of Valuable Cargo; Memo, CofT for CG ASF, 6 Nov 44, sub: Identification of Pilferable Cargo; 1st Ind by CG ASF, 15 Nov 44; last two in OCT 400.161.

[277] Memo, Styer for CofT, 19 Sep 42, OCT HB Meyer Staybacks.

[278] Memo, CofT for CG SOS, 22 Sep 42; Memo, CofT for ACofS OPD, 21 Feb 43; both in OCT HB Meyer Staybacks.

ment of pilferage, good results could be accomplished.

Adjustments at the End of Hostilities

Because of the volume of freight in the supply pipelines leading to the theaters, it was foreseen that victory in Europe and then in the Pacific would necessitate quick adjustments in the flow of traffic if huge waste was to be avoided. For all technical services this meant adjustments in the procurement and distribution of supplies. For the Chief of Transportation it also meant a sweeping change in the direction and volume of freight movements and in the employment of transportation facilities. In accordance with policies laid down by ASF headquarters, concrete though tentative plans were developed by the Transportation Corps during the summer and early fall of 1944.[279]

In order to avoid congestion at the ports and railway terminals, the plans provided for the prompt disposition of all supplies that were in process of shipment when V-E Day arrived. During a period of about six months before V-E Day all requisitions from and shipments to the European and Mediterranean theaters and other transatlantic areas were marked either "SHP" or "STO." STO indicated that the shipments would be stopped and not forwarded overseas when V-E Day was announced, and SHP meant that the shipments would be allowed to continue to their destinations. In the early spring of 1945 when it was evident that the German surrender was not far off, SHP and STO shipments were loaded in different cars and different ships wherever practicable.[280]

The problem of holding and disposing of STO shipments was a complicated one. After the machinery had been made ready, a trial run was held on 25 March 1945. The results were generally satisfactory, although it was evident that some details required further attention.[281] A conference for final instruction and orientation was held in Chicago on 1 and 2 May 1945, and was attended by representatives of the Chief of Transportation, the port commanders, the zone transportation officers, and the traffic and operating departments of the railroads.[282]

The impact of V-E Day was not as severe as might have been expected.[283] This was due not only to the thorough planning that had gone before but also to the fact that the readjustments in cargo movement were effected gradually rather than abruptly. The first step was to curtail requisitioning as soon as the end of the campaign could be visualized. A considerable cutback in requisitions from the ETO

[279] Min of Port and Zone Comdrs Conf, Chicago, 6–9 Jul 44, morning session, 7 Jul 44, pp. 75–89, OCT HB PE Gen Confs; Memos, Wylie for the respective ports, 30 Aug 44; Memo, CofT for the respective ports, 16 and 18 Sep 44, sub: Proposed Port Missions; Memo, Meyer for Wylie, 16 Sep 44, sub: Traffic Control Depot Control Room; Memo, CG AAF for CofT, 18 Sep 44; 1st Ind, CofT for CG AAF, 20 Sep 44; all memos in OCT HB Meyer Staybacks; Agreement between OCT and AAR for Holding and Releasing Cars, 26 Sep 44, OCT 387 Demobilization Planning—Freight Rates; comments by Gen Goodman on manuscript for this volume, pp. 7–10, OCT HB PE Gen Oversea Supply.

[280] AG Memo 400.161 (30 Sep 44), 12 Oct 44, revised 6 Apr 45, sub: Advance Marking of Oversea Shipments To Effect Embargo On or About V-E Day; TC Cir 90-12, 7 Dec 44, same sub, and revisions, 17 Feb 45 and 23 Apr 45; Memo, Groninger for CofT, 18 Sep 45, sub: Rpt on Accomplishments and Handicaps, p. 9, OCT HB SFPE Gen.

[281] Memo, CofT for CG ASF, 25 Mar 45, sub: Info Pursuant to Action 28, OCT 387 Action 28; Memo, Gross for Lutes, 29 Mar 45, sub: Trial of V-E Day Actions, OCT 387 Trial Run.

[282] Memo, CofT for PEs and ZTOs, 16 Apr 45, OCT 387 Redepl Conf.

[283] The supply policy after defeat of Germany is stated in AG Memo 400 (30 Oct 44), 4 Nov 44, sub: WD Policies and Procedure Governing Redeployment upon Cessation of Hostilities in Europe.

had been made during the fall of 1944, when the offensive against Germany was going well, but this cutback was more than offset by the heavy increases necessitated by the German counteroffensive in December and January. After the failure of that counteroffensive and the resumption of the Allies' steady advance into Germany, curtailment of requistioning could again be given attention. In April there were some substantial cutbacks. Beginning on 2 May, with the early capitulation of the German Army assured, actions to stop the flow of supplies already started to Europe were taken on a progressive basis. The readjustment in traffic therefore was well under way when V-E Day actually came.[284]

In accordance with advance planning, all railroad cars stopped as the result of instructions from Washington were immediately reported to a control room that had been established in the Traffic Control Division. In order to provide instructions for the prompt disposition of all stopped shipments, representatives of each of the ASF technical services and the AAF had been assigned to this room. Between 2 and 11 May, a total of 7,112 cars of freight was reported as being held at east coast ports or as stopped en route to the ports. Of these, 1,668 cars were reported by the railroads and 5,444 by the ports. The aim was to provide instructions for the disposition of these cars within twenty-four hours of the receipt of the reports. This aim was achieved for all but ninety-four cars. Soon after the operation was completed, Mr. Charles H. Buford, Vice President of the Association of American Railroads, wrote to General Gross regarding the V-E Day arrangements as follows: "In all of the good work that the Army had done throughout the war I don't believe anything was accomplished that surpassed the plans for stopping and changing the flow of business on the railroads." [285]

The changes that the end of the fighting in Europe would necessitate in the use of shipping were anticipated, and the War Shipping Administration was alerted to them.[286] The Water Division kept a current record of all vessels and their cargoes en route to or awaiting discharge in the European and Mediterranean theaters. Beginning on 1 May it received daily reports from east coast ports regarding cargo being loaded and the scheduled disposition of all vessels that would be affected by the announcement of V-E Day.[287] The following tabulation shows the actual disposition made of 369 such vessels: [288]

Disposition	*Number of Vessels*
Total	369
Ships at sea that proceeded to destination and ships loading at U.S. ports that sailed as scheduled	234
Ships loading at U.S. ports that were partially discharged, reloaded, and dispatched to original destination	8
Ships loading at U.S. ports that were completely discharged and rescheduled	16
Ships stopped at sea and returned to U.S. ports for discharge	37
Ships already in the theater that were ordered back to U.S. ports for discharge	25
Ships en route to Europe that were diverted to Pacific destinations	49

[284] OCT HB Monograph 23, pp. 118–19.

[285] Rpt by Col Randall, C of Contl Br Traf Contl Div OCT, 17 May 45, sub: Summary of V-E Day Activities Regarding Army Cargo; Ltr, Buford to Gross, 14 May 45; both in OCT HB TC Gen Redeployment; ASF MPR, May 45, Sec. 3, p. 12.

[286] Ltr, Col Hicks to WSA, 28 Mar 45, OCT 565.2.

[287] Memos by Col Syran for Demob Plng Unit, OCT, 12 and 16 May 45, OCT HB TC Gen Redepl; Memo, Col Syran for Hist Unit OCT, 11 Jun 45, OCT Water Division Rpts.

[288] Tabulation by Ocean Traf Br, 31 May 45, sub: Final Report, Results of Activities in Connection with Redeployment, OCT HB TC Gen Redepl.

In the midst of this effort to make the readjustment of shipping necessitated by the German surrender, the Chief of Transportation began the final phase of his planning for the utilization of ports in support of the war in the Pacific.[289] Careful estimates had been made of the capacity of west coast ports to handle the traffic of both the Army and the Navy when operations against Japan reached their height, and it was decided that Gulf and Atlantic ports would be used to a certain extent. Aside from the fact that the transcontinental railroads were already operating near capacity, east coast loadings were desirable because there would be a steady transfer of ships from the Atlantic to the Pacific and there were large stocks of supplies in eastern depots. Under these circumstances and in view of the heavy pressure from higher authority to inactivate east coast port installations as rapidly as possible, a careful survey of the available facilities and the probable requirements for discharging cargoes from Europe and for loading cargoes for the Pacific was necessary.[290] The basis for this survey was established at a meeting between representatives of the Chief of Transportation and the port commanders on 8 May.

Instructions regarding SHP and STO markings to aid in the adjustment of cargo movements following the surrender of Japan were not issued until early August, and consequently few shipments were so marked when August 14 arrived. The Chief of Transportation and the railroads had arranged that the permits for shipments that were not to be stopped would be marked "VDJ," and this simplified the adjustment so far as inland movements were concerned. The west coast ports, however, had no instructions as to which of the shipments already in their hands should be forwarded overseas and which should be held, and so found it necessary to use their own discretion.[291]

Adjustments in westbound traffic were started a few days before the Japanese capitulation became an actuality. On 10 August orders were issued by ASF headquarters to stop the loading of ammunition ships and to stop the movement of ammunition toward the ports. It was not considered necessary at that time to cancel outstanding permits for other shipments to Pacific coast ports since the number of permits recently issued had been small. At 7:05 P.M. on August 14, ASF headquarters directed that all V-J Day actions be put into effect at once. The railroads were immediately requested to stop and hold all cars en route to west coast and Gulf ports, with predetermined exceptions, and to report the held cars to the Traffic Control Division in Washington.[292]

As a result of the actions begun on 10 August, 6,113 cars loaded with Army freight en route to the ports were stopped and reported to Washington. Of these, 3,045 were permitted to continue to the ports and 3,068 were diverted to interior storage points in accordance with decisions by the respective technical services channeled through the Traffic Control Division control room. In addition, 9,430 carloads

[289] Concerning earlier planning, see Wardlow, *op. cit.*, pp. 179–80.

[290] Conf, Washington, 8 May 45, OCT HB TC Gen Redepl.

[291] AG Memo 400.161 (3 Aug 45), 8 Aug 45, sub: Marking Procedures; OCT Misc Ltr 226, revised 9 Aug 45, OCT HB TC Gen Redepl; Memo, CG SFPE for CofT, 18 Sep 45, sub: Rpt on Accomplishments and Handicaps, p. 10, OCT HB SFPE Gen.

[292] Ltrs, Col Messersmith to J. J. Kelly, AAR, 10 and 14 Aug 45, OCT 523.095 Embargo; Memo for Record by Gen Wylie, 19 Aug 45; WD press release, 22 Aug 45; last two in OCT HB TC Gen Demob.

of freight that were in the port areas, on wheels or in storage, were reconsigned to interior storage points. The latter dispositions were spread over a period extending from 14 August to 18 September.[293]

Evidence of the careful screening of oversea shipments during the weeks preceding the Japanese surrender, despite the lack of SHP and STO markings, is seen in the effect V-J Day had on the employment of vessels. Of 290 ships that were on berth in U.S. ports or en route from the United States to Pacific destinations, 25 that were being loaded were ordered to discharge, 44 that were being loaded were ordered to complete loading and sail as scheduled (some after partial discharge), 18 that were at sea were ordered back to the United States, and 203 at sea were allowed to proceed as scheduled. A total of 221 vessels that were loading at European ports for Pacific destinations or were en route from Europe to the Pacific were affected. Of the 32 ships on berth in Europe, 1 was ordered discharged, 1 was ordered to complete loading and proceed to Casablanca, and 30 were ordered to complete loading and sail to the United States. Of the 189 ships en route from Europe to the Pacific, 21 were ordered to the United States and 168 were directed to proceed to their original destinations.[294]

The Return Cargo Movement

Although some Army matériel that had been shipped overseas was returned to the zone of interior during the war and this tonnage increased considerably at the end of the fighting, the volume of homeward cargo never amounted to more than a fraction of that which had been moved outward.

There was a gradual increase in homeward shipments during 1943 and 1944, with receipts reaching a peak of 352,000 measurement tons in July 1944.[295] The cargoes consisted chiefly of supplies and equipment returned for rehabilitation, scrap returned to bolster the dwindling reserves of metal, rubber, and other strategic materials, captured enemy equipment returned for study, and ammunition that had deteriorated or was in excess of theater needs; a small amount of naval matériel was included. The War Department controlled the types of matériel to be returned and defined the responsibilities of the Army commanders at U.S. ports for discharging and inspecting the shipments and forwarding them to depots or other inland destinations.[296]

The principal difficulty encountered by the Army port commanders was to obtain sufficient advance information from the theaters to enable ports to plan for the discharge of cargoes and to obtain instructions for their disposition.[297] Getting the theaters to pack, segregate, manifest, and stow the shipments properly also

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[293] Memo, Col Dunwoody, C of Demob Plng Unit, for CofT, 20 Sep 45, OCT HB TC Gen Redepl; OCT HB Monograph 23, pp. 119–23.

[294] Tabulation by Ocean Traf Br, 4 Sep 45, sub: Results of Activities Following Japanese Surrender, OCT HB TC Gen Redepl.

[295] Monthly reports of outbound and inbound cargoes from PEs to Water Div OCT, tabulated for statistical volume of this series.

[296] WD Memo W 30-5-42, 7 Oct 42, sub: Collection and Return of Salvage; WD Memo W 30-2-43, 10 Jan 43, sub: Plan for Return of Rubber Scrap and Cartridge Cases; WD Memo W 30-16-43, 8 May 43, sub: Policy Relating to Return of Salvage and Scrap; ASF Cir 289, 4 Sep 44, Sec. I; TC Pamphlet 36, 11 Apr 45, sub: Procedure for Processing Shipments Returned From Overseas.

[297] Monthly Vessel Utilization Summary, 25 Jun 45, OCT HB PE Gen Cargo Inbound.

proved to be something of a problem.[298]

The increase in the amount of matériel returned from Europe after V-E Day was limited by a number of U.S. policies. Large quantities of American equipment and supplies were to remain overseas to aid in the recuperation of the war-exhausted countries. Serviceable matériel needed in the Pacific was to be shipped directly from Europe, since direct shipment would avoid transshipment at U.S. ports, relieve the heavily burdened American railroads, afford the most efficient use of shipping, and assure arrival of the matériel in the Pacific with as little delay as possible. Specific items were designated as eligible for return to the United States if they were economically repairable, and indications were given to the theater commanders regarding the proportion of ship space to be used for the matériel of the respective technical services. About 50 percent of the total was to be used for Ordnance matériel, and 25 percent for Engineer matériel.[299] During the redeployment period the volume of cargo discharged at Army ports of embarkation reached a new monthly peak of 780,000 measurement tons in June 1945.

The return of matériel from the Pacific increased after the sudden surrender of Japan, but not as rapidly or to the extent that might have been expected. Time was required to decide what items and amounts would be needed in the occupation of Japan and other captured territories. Much of the equipment was in poor condition because of hard usage and inadequate maintenance. The depots in the zone of interior were full, and the feasibility of transporting and storing matériel for which there was no visible need and with which obsolescence would quickly catch up was at least dubious. In January 1946, when the largest monthly volume of returned cargo—1,127,000 measurement tons—was received at Army ports in the United States, only 447,000 measurement tons came from Pacific areas while 680,000 measurement tons came from Atlantic areas. An analysis of cargo received from overseas during the war and in the immediate postwar period is given in Table 34.

The return of ammunition and explosives to the United States created problems of safety even when the shipments were relatively small. After V-E Day when the traffic became considerable, the problem of receiving and reforwarding such cargo at U.S. ports became critical. This was due in part to the increased volume of the traffic and the difficulty of getting the theaters to pack, stow, and manifest the shipments properly, and in part to the increasingly strict enforcement of safety measures. Realizing that a disaster originating with the handling of returned explosives near centers of population would lack the justification of war necessity, the Army and Navy Explosives Safety Board stopped the use of explosives piers located near large cities and restricted this activity to a few facilities that had the advantage of isolation. In December 1945 and January 1946, when the return movement of ammunition was approaching its peak, the approved facilities on the east coast were unable to handle the traffic promptly, and storage facilities also were short. Early in January fifteen vessels with full cargoes of

[298] Memo, CofT for PEs and Port Agencies, 4 Sep 44, OCT HB PE Gen Cargo Inbound; TC Cir 15-16, 2 Jan 45, sub: Return Cargoes.

[299] AG Memo 400 (18 May 45), 21 May 45, sub: Initial Priorities for Return of Equipment and Supplies.

TABLE 34—CARGO RETURNED FROM OVERSEAS AND DISCHARGED AT ARMY PORTS IN THE UNITED STATES: 1942–1946 [a]

(Thousands of Measurement Tons)

Type of Cargo	Total	1942	1943	1944	1945	1946
All Types	17,277	291	1,069	3,354	6,863	5,700
Army Service Forces	12,589	129	615	2,158	5,053	4,634
Chemical Warfare Service	355	(c)	9	25	170	151
Corps of Engineers	1,488	13	68	359	635	413
Medical Department	134	(c)	4	15	38	77
Ordnance Department	6,740	6	102	780	2,875	2,977
Quartermaster Corps	2,983	101	368	840	1,022	652
Signal Corps	637	9	17	48	241	322
Transportation Corps	252	. . . . .	47	91	72	42
Army Air Forces	1,923	6	125	358	884	550
U.S. Navy	224	3	39	75	82	25
Miscellaneous [b]	2,541	153	290	763	844	491

[a] Includes all cargo discharged at U.S. ports from vessels under Army control and Army cargo discharged from other vessels; also small amounts of cargo discharged at Army subports at Prince Rupert, British Columbia, and Juneau, Alaska, and at Vancouver, British Columbia, where there was no Army port organization.

[b] Miscellaneous cargo includes troop equipment and personal property, automobiles and household goods of military personnel, salvage, mail, Army Exchange and Special Services property, and some other items.

[c] Less than 500 measurement tons.

Source: Monthly reports of outbound and inbound cargo, from ports of embarkation to Water Division, OCT, tabulated for a statisical volume of this series.

ammunition and eleven with part cargoes were reported to be at anchor off Cape May. This backlog fortunately was cleared up without incident, and the flow of returned ammunition from the ETO and the MTO was reduced by dumping or scuttling a considerable tonnage at sea.[300]

The volume of returned ammunition received at U.S. ports reached a monthly peak in March 1946, when 203,949 long tons were discharged. The movement declined rapidly thereafter and in June 1946 the receipts were only 36,171 long tons. During the thirty-month period January 1944–June 1946, explosives discharged by the Army ports of embarkation totaled 1,776,321 long tons—that is, 150,225 tons in 1944, 842,602 tons in 1945, and 783,494 tons in the first six months of 1946.[301]

International Aid Shipments

In addition to shipping a large volume of freight overseas for the use of U.S. forces, the Army was concerned with the transportation of supplies under several forms of international aid. The Army's transportation responsibilities varied with the different forms of aid, and the procedures

[300] OCT Opns Mtgs, 30 Aug 45, 3 Jan 46, and 1 Apr 46, OCT HB TC Gen Dir of Opns, Opns Council Mtgs; WD press release, 18 Dec 45, OCT HB PEs Gen Explosives.

[301] Rpts of ammunition and explosives returned, rendered by PEs to Explosives Contl Off OCT, tabulated for statistical volume of this series.

had to be worked out as the emergency progressed and new developments took place in international relations.[302]

International aid shipments fell into two broad categories—lend-lease, and civilian aid. Lend-lease shipments under the Lend-Lease Act of 11 March 1941 began before the United States entered the war and ceased when the fighting was over. Except as noted below, the Army was responsible for the transportation of lend-lease supplies only until they were loaded in vessels at U.S. ports, for the bulk of this traffic was moved on vessels under the control of the War Shipping Administration, the British Ministry of War Transport, and the Soviet Union. However, in order to obtain more balanced cargoes, some lend-lease matériel consigned to Allied governments was transported on vessels under Army control.[303] Also, some lend-lease supplies were shipped on vessels under Army control and consigned to the U.S. commanders in the oversea areas, because distribution could be best effected in that way; these were known as commanding general shipments.[304] Civilian aid shipments for the relief of the populations of former occupied countries and former enemy countries began soon after the Allied armies invaded North Africa and continued long after the war was over. The Army's wartime responsibility included transportation of such cargoes to the oversea ports. The Army also distributed the supplies so long as the military situation made this procedure desirable, but when it became feasible distribution was turned over to civilian agencies.[305]

The commanding general and civilian aid shipments involved no unusual procedural difficulties for the Chief of Transportation since they moved on vessels under Army control and were handled in much the same manner as shipments intended for the use of the U.S. forces. The chief problem was that of shipping space. During the winter of 1943 General Eisenhower in North Africa gave high priority to these shipments. Civilian aid supplies were needed to relieve distress and as a bulwark against native unrest. Military matériel was urgently needed so that French units could be rearmed and made ready to co-operate with the Allied forces. In the beginning the plan was to ship civilian aid supplies as filler cargo on vessels carrying military supplies and thus to avoid having them displace matériel that had been requisitioned by the U.S. oversea commanders. But civilian aid shipments to North Africa reached such volume that they inevitably competed with military supplies for ship space. The criterion then was to insure that civilian aid supplies did not move to the detriment of Allied military operations, rather than that they did not

[302] There were numerous foreign countries involved, and also numerous American agencies. The story is a complicated one and only enough can be presented here to show what the Chief of Transportation's responsibilities were and how they were met. For a broad discussion of international aid, see Leighton and Coakley, *op. cit., passim.* See also A Guide to International Supply, prepared by International Div ASF, 31 Dec 45.

[303] Wardlow, *op. cit.*, pp. 193-95.

[304] See Leighton and Coakley, *op. cit.*, Chs. X, XVIII, XIX.

[305] Although this procedure was already in effect, responsibility for shipping and distribution was formally assigned to the Army by the President in Ltr, President to SW, 10 Nov 43, OCT HB Wylie Lend-Lease. Numerous civilian agencies were involved, the largest being the United Nations Relief and Rehabilitation Administration (UNRRA), established in November 1943; see Charles P. Taft, "Scope and Functions of UNRRA and its Relations with Other Agencies," *Department of State Bulletin,* March 4, 1945, pp. 368-72. For other aspects, see *Logistics in World War II,* pp. 234-38.

displace any military cargo. The problem was a continuing one for the Chief of Transportation, and in March 1945 General Gross expressed grave concern lest the growing demand for ships to move civilian aid supplies to Europe should handicap the Army in bringing the war against Japan to a speedy conclusion.[306]

The movement of lend-lease supplies was the source of numerous problems for the Chief of Transportation. This was due partly to the volume of the traffic and partly to the fact that the Chief of Transportation did not have the same degree of control over lend-lease shipments that he had over supplies consigned to U.S. Army commanders. The Treasury Department and the Department of Agriculture, as well as the War Department, procured and shipped a large volume of lend-lease matériel, and their interests had to be respected. The War Shipping Administration provided a substantial part of the shipping for lend-lease movements, and it also was charged by the President with insuring that the supplies he agreed from time to time to furnish to the British, the Russians, the Chinese, and others were delivered according to plan. The WSA established its own machinery for controlling the shipment of such supplies to the ports, and the activities of its representatives and those of the Transportation Corps had to be carefully co-ordinated. The beneficiary governments had agencies in the United States with which the Chief of Transportation had to maintain close working relationships, and their interests did not always coincide with those of the Army. In addition to WSA vessels, British and Soviet ships were used to lift lend-lease supplies, and the cargoes moved over commercial piers. Under these circumstances the Chief of Transportation found it advisable to maintain special offices, commonly known as port agencies, at the principal ports to represent his interests.[307]

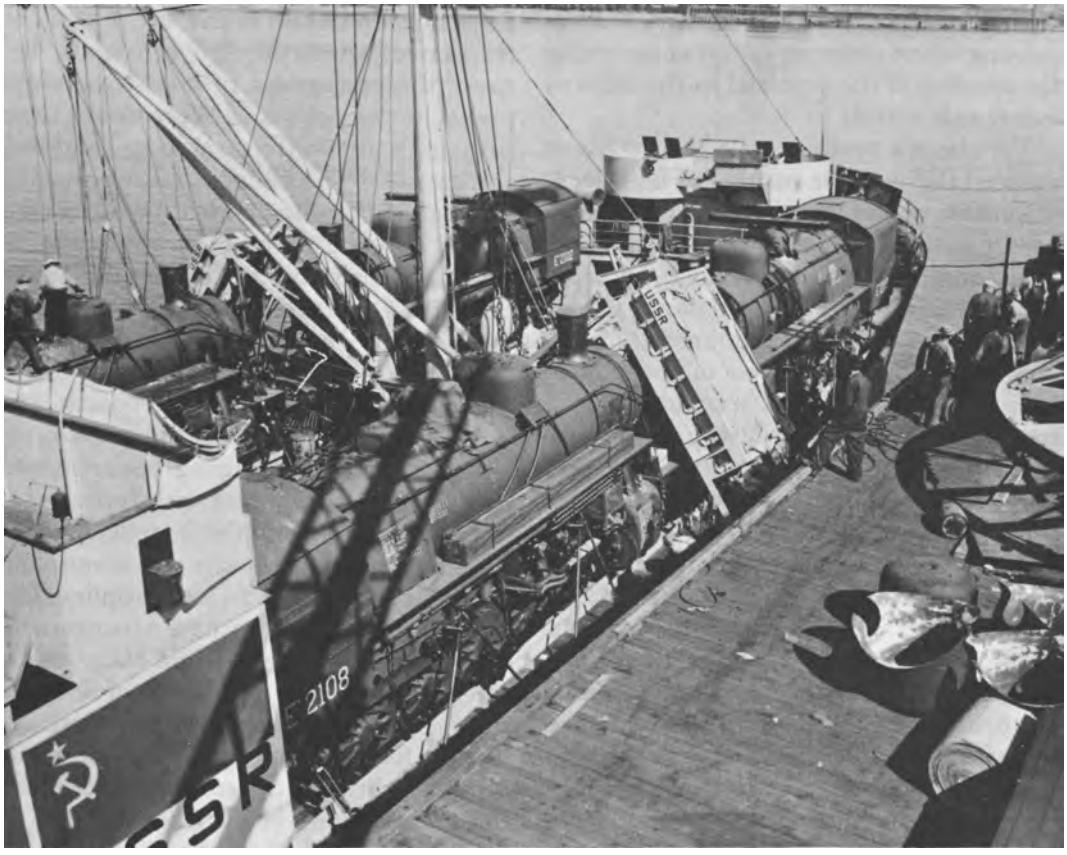
A basic responsibility of the Chief of Transportation in connection with the export of lend-lease supplies was to prevent shipments from accumulating at the ports and creating a state of congestion that would adversely affect the movement of military supplies. To this end, port-bound shipments of lend-lease supplies procured by the War Department had been subjected to the same release system as shipments destined for U.S. forces overseas when that system was installed in August 1941. In the spring of 1942, when an overall release or shipping permit system based on authority vested in the Office of Defense Transportation was adopted, the Chief of Transportation was given the added responsibility of issuing permits for shipments of lend-lease supplies procured by other governmental departments.[308]

The port agencies were the channels

[306] Leighton and Coakley, *op. cit.*, Ch. XVIII; Memo, C of Water Div for NYPE, 19 Nov 42, OCT HB Topic Lend-Lease; Memo, Wylie for Brig Gen John R. Deane, 6 Jan 43; Memo, CG ASF for CofT, 13 Apr 43, sub: Shipments of French Rearmament Matériel; last two in OCT 563.5 Africa; Memo, CG ASF for Dir of Plans and Opns ASF, 31 Mar 44, sub: Planning for Furnishing Supplies to Civilian Populations, ASF Hq Dir of Plans and Opns; Ltr, Gross to Ross, 22 Mar 45, OCT HB Gross Day File.

[307] The port agencies, initially called commercial traffic agencies and late in the war district transportation offices, were independent of the Army ports of embarkation; see Wardlow, *op. cit.*, pp. 111-12, 122, 425. Numerous directives were issued to define procedures; the following are basic: Memo, CG SOS for C of Sup Svs. 4 Dec 42, sub: Procedure for Shipment of WD Lend-Lease Matériel, SPX 400.3295 (11-29-42); ASF Cir 194, 27 Jun 44, Pt. III, sub: Procedure for Shipment of Materials Consigned to the CG of a US Army Force; TC Pamphlet 13, 4 Jul 44, and revisions, sub: Lend-Lease Procedures; ASF Cir 423, 27 Dec 44, Pt. III, sub: Procedures for Water-Borne Export and Lend-Lease Materials.

[308] See above, p. 273.



U.S.-BUILT BROAD-GAUGE LOCOMOTIVES FOR THE USSR *loaded on a Soviet freighter at the Portland Subport of Embarkation.*

through which the Chief of Transportation's Traffic Control Division satisfied itself that shipping was available before it released lend-lease shipments for movement to the ports. The port agencies also represented the Chief of Transportation in policing traffic conditions to insure that rail cars and trucks were unloaded promptly on arrival at the ports, that excessive or improper use was not made of port storage, that supplies were loaded aboard vessels promptly and in accordance with priorities, and that any shipments that could not be exported within a reasonable time were moved out of the ports.[309] The port agencies had other duties with respect to lend-lease supplies procured by the War Department (other than commanding general shipments), which were War Department property until they were loaded on the ships; these duties included policing the marking and documentation of the shipments, pro-

[309] TC Pamphlet 1, Org Manual, revised 1 Jun 45, Sec. 502, par. 12. Concerning organization of port agencies, see TC Cir 130-1, 6 Dec 44, and Functional Chart of Baltimore Port Agency, 22 Feb 45, both in OCT HB Zones Gen Port Agencies.

viding for repacking, processing, and repairing when necessary, and supervising the stowing of the matériel in the ships to insure safe transit.[310]

For about a year after the United States entered the war the control of lend-lease shipments to and through the ports was in a state of flux. Originally such shipments were consigned to agents of the beneficiary governments at the loading ports. Under this arrangement U.S. commercial freight forwarders were deprived of the opportunity of handling lend-lease traffic, which together with strictly military traffic constituted the bulk of the wartime export tonnage. In response to appeals from these concerns, a bill was introduced in Congress late in December 1941, the obvious purpose of which was to enable the freight forwarders to handle lend-lease shipments. The Quartermaster General, then responsible for Army transportation, watched the progress of the bill with close interest; he saw in it a potential threat to the control that had been set up over the port-bound movement of Army-procured lend-lease shipments and also to the effectiveness with which the port agencies—at that time called commercial traffic agencies—carried out their responsibilities for keeping lend-lease traffic moving smoothly to ship-side. Despite Army opposition the bill was passed with some modifications and was approved by the President on 14 March 42.[311]

Discussion between the War Department, the War Shipping Administration, and other interested agencies regarding a *modus operandi* under the new act continued over a period of several months, and the procedure was not finally settled until November 1942. Under this procedure "war forwarding corporations," designated by the WSA to perform forwarding functions on behalf of the WSA and the respective beneficiary governments, became the consignees of lend-lease shipments at the ports and represented their principals in matters relating to transshipment.[312] The Chief of Transportation through his Traffic Control Division continued to issue permits for shipments to start from their points of origin; the Transportation Control Committee continued to exercise an over-all supervision of traffic conditions at the ports and on the transportation lines feeding the ports; the Army's port agencies, together with agencies of the other procuring departments, continued to co-operate with representatives of the WSA and the beneficiary governments in regard to the movement and transshipment of lend-lease supplies. The WSA also instituted a new arrangement for synchronizing the arrival of cargoes at the ports with the readiness of ships to receive them. Shippers were required to obtain forwarding authorization serial numbers through the respective forwarding corporations before they applied to the Chief of Transportation for shipping permits.[313]

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[310] Min of ZTO Conf, Sep 43, pp. 138–40, OCT HB Zone Gen.

[311] Memos, Wardlow for Dillon, C of Trans Div OQMG, 23 and 29 Jan 42, OCT HB Topic Freight Forwarders Foreign; Memo, ACofS G-4 for CofS USA, 25 Feb 42; Ltr, SW for Dir Bur of Budget, 28 Feb 42; last two in OCS 17304-55 to 17497-7; PL 498, 77th Cong.

[312] The Chief of Transportation was opposed to consigning WD lend-lease shipments to the war forwarding corporations and favored consigning them to the Army's port agencies, but he conceded this point during the final stages of the discussion; see draft letter, ASW to WSA, 21 Oct 42, marked by Gross "not sent by McCloy"; Memo, Douglas, Deputy WSA, for Somervell, 26 Nov 42 and reply, undated; last three in OCT HB Wylie Lend-Lease.

[313] OCT HB Monograph 23, pp. 77–79; WSA Opns Regulation 23, Forwarding Regulation 1, 25 Nov 42, OCT HB Wylie Lend-Lease.

The control of port-bound shipments of lend-lease freight, which included establishing routes, issuing permits to ship, and ordering diversions when necessary, involved certain difficulties that were not encountered in oversea movements of matériel for the U.S. forces. Ship schedules for lend-lease movements, whether they were for WSA, British, or Soviet vessels, were less stable than for Army-controlled vessels. Old ships under the Soviet flag employed in the Pacific were especially troublesome in this respect, since they were often delayed en route and frequently required extensive repairs after arrival at U.S. ports. The advance information regarding arrivals and sailings of vessels of foreign registry often was inadequate. Lend-lease cargoes were loaded at numerous commercial piers that were under different managements, so that there was nothing comparable to the integrated control that Army port commanders exercised over all operations under their jurisdiction. The agencies responsible for lend-lease operations at the ports rarely had large open and closed storage spaces at their disposal, and were inclined to hold freight in rail cars longer than was desirable in order to have the advantage of direct transshipment from cars to ships and to avoid the cost of extra handling and storage. The beneficiary governments made frequent changes in priorities, requiring adjustments in the plans for port-bound movements. Availability dates for lend-lease supplies were to a considerable extent based on manufacturers' estimates and were less reliable than the dates furnished by Army depots. The issuance of permits for Army matériel was subject to close day-to-day co-ordination between the Traffic Control Division, the Water Division, the ports of embarkation, and the technical services, but in the case of lend-lease shipments the Traffic Control Division had to be guided largely by the Transportation Control Committee's monthly block releases and the War Shipping Administration's FAS's, and such information as it could obtain through the port agencies. Both the Traffic Control Division and the International Division in the Office of the Chief of Transportation considered the control exercised over lend-lease shipments less satisfactory than that exercised over Army shipments to its own oversea forces.[314]

The International Division, headed by Col. Marvin H. Dixon, was the general co-ordinating agency for the Chief of Transportation in all matters affecting the movement of international aid supplies.[315] It was responsible to the Director of Operations, who had over-all responsibility for co-ordinating movements with which the Transportation Corps was concerned. It maintained liaison with the International Division, ASF, and the corresponding divisions of the technical services concerning policies, procedures, and instructions regarding particular shipments. It also maintained liaison with other branches of the United States Government concerned with international aid, and with agencies of the beneficiary foreign governments located in the United States. It was responsible for keeping the Army port agencies informed on procedural matters and special requirements.[316]

[314] TC Monograph 23, pp. 74–77; Rpt, International Div OCT, 28 Sep 45, sub: Accomplishments and Handicaps, p. 5, OCT HB International Div.

[315] The unit handling this work was a branch of the Movements Division until 1 July 1944, when it became the International Division.

[316] TC Pamphlet 1, Organizational Manual, 1 Jul 44, Sec. 204.00; Rpts of International Div, FY 1943–44, FY 1944–45, 28 Sep 45, 1 Jul 45–15 Aug 46; all in OCT HB International Div.

Shipments of lend-lease freight (except explosives), whether procured by the War Department or other federal departments, were often stored at the holding and reconsignment points pending the readiness of the ports to transship them. This procedure was in accordance with the early planning for these points. The tendency of the agents of the beneficiary governments to accumulate large banks of many types of supplies at the ports in order to be in a position to meet the frequently changing requirements of their principals presented a constant threat to the fluidity of the larger ports; the ability of the holding and reconsignment points to accommodate large quantities of such freight and to deliver it to the ports within a few hours greatly aided the Transportation Control Committee and the Traffic Control Division in their effort to avoid congestion at the seaboard. The Transportation Control Committee had authority, delegated by the Office of Defense Transportation, to divert lend-lease shipments to holding and reconsignment points when it considered this desirable. When such shipments were moved out of the points new FAS numbers and new unit permits were obtained. The Army's railroad open storage yards were used in a similar manner.

The larger quantities of lend-lease ammunition were transshipped at the special explosives piers operated by the Army, and when necessary they were accommodated temporarily at the Army's special backup storage facilities. In addition to the other control measures, all shipments of lend-lease explosives had to be cleared by the port agencies, and those agencies were authorized to divert such shipments to backup storage when immediate loading in vessels was not possible. Ordnance depots and other shippers of explosives were required to notify the port agencies by wire on the day of shipment, giving all information necessary to proper handling on arrival at the ports. Close co-ordination obviously was necessary between the port agencies and the Army ports of embarkation that operated the explosives facilities.

Civilian aid shipments transported overseas by the Army, the record for which begins with July 1943, totaled 6,769,000 long tons up to the end of the war—that is, through August 1945. The heaviest shipments during this period were in the months immediately following the German surrender, and for obvious reasons they went predominately to Europe and the Mediterranean; only about 3 percent of the total went to the Pacific.[317] The principal commodities were foodstuffs and coal. Civilian aid shipments during the year 1945 totaled 4,902,407 measurement tons; in 1946 they totaled 3,147,297 measurement tons. Beginning in March 1946 substantial quantities were sent to Japan and Korea.[318]

Total tonnage figures for the cargoes shipped overseas under lend-lease are not available, so the extent of the movement can be indicated only in dollars. The total value of lend-lease aid from 11 March 1941 through December 1945 was approximately $50,000,000,000, of which 46.9 percent was classified as munitions.[319] The War Department placed the value of the matériel it furnished to other nations under lend-lease at $24,510,915,000; of that amount, $19,837,425,000 represented

[317] ASF *Statistical Review, World War II,* pp. 41, 42, 150.

[318] ASF Monthly Progress Reports and WD Progress Reports (monthly), Transportation, OCT HB MPR.

[319] The President, *Twenty-Second Report to Congress on Lend-Lease Operations* (Washington, 1946), pp. 17–19.

direct shipments, $1,075,800,000 commanding general shipments, and $3,597,690,000 transfers from Army stocks in the theaters.[320] Shipments of the last two categories moved on vessels under Army control, while the bulk of the direct shipments moved on nonmilitary vessels. From January 1944 through August 1945 the lend-lease cargoes transported on nonmilitary vessels totaled 23,630,375 long tons.[321]

Theater Requirements Met

As a general appraisal it is fair to say that the Army was successful in maintaining an adequate and orderly flow of supplies and equipment to the forces overseas. This general statement is subject to many qualifications. The over-all shortage of shipping limited the amount of cargo that could be moved to particular destinations. For a period there were shortages of some items of supply, so that requisitions for those items from low-priority theaters could not be filled promptly, and some ships sailed with less than capacity cargoes. In the early part of the war the shipping procedures were inadequate, and even after improved procedures had been worked out the observance was sometimes faulty. Automatic supply had its shortcomings and time was required for the theaters to establish a sound basis for requisitioning. The multitude of supply items, changing priorities, and uncertain communications rendered full understanding between the theaters and the ports of embarkation responsible for their supply difficult of attainment. But these conditions were not unexpected in the rapid unfoldment of a global war, and theater commanders who complained bitterly during their campaigns because particular shipments were delayed, or because of the condition of the material when it was delivered, in the end agreed that the over-all job of keeping them supplied had been well done.

Many of the circumstances adversely affecting the supply of the theaters were not under the control of the Chief of Transportation. The amount of shipping available for particular routes was governed by commitments made on the highest levels of national and international strategic planning. Shortages of supply items were the result of inaccurate planning or production lags. Shipping procedures had to take into account the interests of the procuring and shipping agencies and the theaters of destination as well as those of the transportation service. Cooperation between the ports of embarkation and the theaters was a two-way affair, and failures were attributable to omissions on the part of the oversea commands as well as errors in the zone of interior. There were, however, certain responsibilities that rested directly on the Chief of Transportation and his port organizations.

The ports of embarkation had the principal operating responsibility. They were expected to keep the arrival of cargo at the seaboard commensurate with the capacity of the ships consigned to them for loading. They were required to load vessels efficiently and dispatch them according to schedule. They had to exercise technical skill and ingenuity in handling the many heavy, bulky, and irregularly shaped items of military equipment that were required in theaters. The transshipment of large quantities of high explosives

[320] Statistics, Lend-Lease, p. 10, compiled for a statistical volume of this series, now in preparation.

[321] Rpts, Lend-Lease Cargo Shipped on Nonmilitary Vessels, by International Div, OCT, tabulated for statistical volume of this series.

called for extraordinary safety measures as well as technical proficiency. The processing of vehicles, tanks, and other equipment at the ports of embarkation rather than at depots and home stations was found to be the best way of assuring their arrival overseas in good condition. Emergency requests from the theaters had to be met through intensified efforts and sometimes through hastily improvised methods. The oversea supply divisions at the ports had an intricate and exacting task in editing theater requisitions and working with ASF headquarters and the technical services in getting the requisitioned items shipped in accordance with the priorities and schedules. Peacetime terminal operations cannot be compared with the wartime operation of a military port in the amount of tonnage handled, the variety of the cargoes, the pressure of the time element, or the problems of security. Peacetime standards therefore were not applicable to military ports. As wartime establishments the ports of embarkation won many commendations from officials of the War Department and the oversea commands.

The role of the Chief of Transportation and his staff in Washington was essentially one of planning, co-ordination, and supervision. While the port commanders were responsible for moving matériel to particular theaters, the Chief of Transportation's responsibility embraced all ports and all theaters. His work in calculating the Army's requirements for shipping to carry out strategic plans and in allocating the available vessels to the best advantage was basic to the success of the entire supply program. Having obtained the vessels, he was expected by the commander of the Army Service Forces to bring pressure to bear on the procuring services whenever they showed signs of falling behind in their efforts to move enough matériel to the ports to fill the available cargo space. His machinery for controlling the shipment of freight to the ports by the issuance of permits was indispensable in avoiding congestion at the seaboard. He studied the methods employed in the field, helped the field agencies work out improvements, and undertook to establish uniform methods when this was considered practicable. He co-operated with ASF headquarters and the technical services in developing adequate systems for packing, marking, and documenting shipments and in enforcing the prescribed procedures. The Chief of Transportation and his headquarters staff must be credited with a high level of performance in these matters.

In all these activities the Transportation Corps functioned under the supervision of ASF headquarters. In technical transportation matters the Chief of Transportation and his port commanders and other field representatives had virtually a free hand so long as they got satisfactory results. The controversy between ASF headquarters and the Chief of Transportation over the supervision of the oversea supply divisions at the ports stemmed partly from the conflict between supply and transportation considerations and partly from a broader problem of organizational relationship—to be discussed in the concluding chapter—that had to be worked out step by step.

CHAPTER VI

Military and Technical Training

When the transportation service was created as an element of the new Services of Supply in March 1942, it was looked upon primarily as an agency to move the Army's troops and matériel; little thought was given to its training function. Yet that function developed into one of great importance, and during the course of the war the Chief of Transportation trained 765 Transportation Corps troop units comprising 179,400 officers and men, trained 36,700 replacements, gave schooling to 11,600 officers and officer candidates, and arranged for the technical training of about 1,000 enlisted men at civilian schools and factories. This personnel was needed to perform transportation functions in the oversea commands, and without it military operations would have been greatly handicapped. In addition, the Chief of Transportation trained 37,700 officers and men of other services to function as units and perform duties at the ports and on troop transports and hospital ships. Because of his late start, the Chief of Transportation could not provide troop organizations as rapidly as they were needed, and consequently 200 Transportation Corps units, aggregating almost 37,000 officers and men, were activated and trained overseas, using personnel obtained from Infantry, Artillery, and various technical service units.[1]

Two types of units that were subsequently assigned to the Transportation Corps were being trained in limited numbers by other agencies during the rearmament period. Those required for the operation of oversea ports were organized and activated by The Quartermaster General and were trained at the ports of embarkation. When the ports were placed under the control of the new Transportation Service, this training function naturally passed to its jurisdiction, although the organizations continued to be designated Quartermaster units until the transportation service became the Transportation Corps in July 1942. Units required for the operation of military railways were organized and trained by the Chief of Engineers until November 1942, when the Military Railway Service was transferred to the Transportation Corps. These older types of units required some revamping to meet the conditions that World War II presented, and the need quickly developed for a number of other types to carry on transportation activities overseas.

To fulfill his training responsibilities, the Chief of Transportation had to develop a headquarters staff to determine requirements, prepare mobilization training

[1] Data from 1st Ind, CofT for Hist Div WDSS, 8 Aug 47, sub: Statistics on Tng During World War II, OCT HB Tng Div Rpts.

programs, establish tables of organization and equipment, formulate training doctrine, and supervise training activities in the field. He had to expand the training facilities for port and railway troops and establish additional facilities for the new types of units. He had to develop methods for obtaining personnel with which to activate units and to fill needs of oversea commanders for individual transportation officers, and this in the environment of a growing manpower shortage in both the military and the civilian fields. Not the least of the problems confronting the Chief of Transportation was that of establishing a satisfactory working basis with the headquarters of the Services of Supply (SOS), which had supervision of the training activities of all of the technical services, and a workable division of responsibilities between his office and the service commands.

Transportation Corps units were military organizations, although their tasks were essentially technical. They were intended to function in the communications zones overseas rather than in the combat zones, but this did not mean that they were remote from combat activity. Any strategic point along a line of communications was subject to air attack; if near the combat zone it might be attacked by a motorized enemy force, and if on the coast it might be the object of a commando raid. Numerous Transportation Corps port companies performed their tasks under aerial attack, and some under artillery fire. Some port companies, amphibian truck companies, and harbor craft companies participated in assaults on enemy-held shores, and many more were present during the support phases. Military Railway Service troops were called upon to keep trains running and to repair tracks close to the line of combat. Transportation Corps troops, therefore, had to be trained as soldiers as well as in the technical aspects of their service. Some Transportation Corps units won honors and citations and many of the officers and men were singled out for individual awards.

Although they performed a distinctly transportation function, motor transport troop units were not included in the Transportation Corps. Throughout the war the organization and training of these units were supervised by The Quartermaster General, and actual training was given by various agencies of the Army. The Chief of Transportation believed that truck operating units should be part of the Transportation Corps, but his recommendation in the summer of 1942 that they be placed under his jurisdiction did not receive the approval of SOS headquarters. In the course of the war the chiefs of transportation in the theaters used such units extensively in providing over-the-road truck service. In some cases they activated and trained the units, using whatever personnel might be made available to them by the theater commanders. They also found that truck units trained in the zone of interior for service with tactical troops required further training for over-the-road operations. In July 1946, as a result of wartime experience, truck companies and a number of other motor transport units were transferred to the jurisdiction of the Transportation Corps.[2]

Distribution of Training Responsibilities

A somewhat scrambled situation with regard to training responsibilities existed

[2] Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, p. 66.

during 1942, largely as a consequence of the reorganization of the War Department that took place soon after the United States entered the war. The establishment of the Services of Supply interposed a new echelon between the technical services and the General Staff. The nine service commands, successors to the corps areas, were the field agencies of the new and powerful SOS. The training of technical service troops, which up to then had been a minor and routine task, became one of great scope and urgency, with emphasis on the preparation of units as distinguished from individual replacements. Under the reorganization directive the responsibility of the Commanding General, Services of Supply, for the operation of training centers and schools for SOS personnel was unequivocal, and the headquarters organization that he set up included a staff division to deal with training.[3] It remained to be seen what part of its responsibility SOS headquarters would delegate to subordinate agencies and what roles it would assign to the technical services and the service commands, respectively. Disagreement between technical service chiefs, who previously had had full responsibility, and SOS headquarters was soon evident.

It is of interest that in the early part of the war responsibility for the training of service troops was a matter of dispute between the Services of Supply and the Army Ground Forces. The initial arrangement was that the AGF and the AAF would train the service units normally employed in close support of combat troops, and that the SOS would train the service units normally employed in the zone of interior or in the communications zones of theaters. This arrangement resulted in both the AGF and the SOS training certain types of organizations that could be employed either in combat or in noncombat activities, and there was a sharp difference of opinion as to how the duplication should be eliminated. Following an investigation by The Inspector General and a study of the problem by G-3 late in 1942, the War Department decided against any major change in the program but transferred the responsibility for training certain types of units from the AGF to the SOS and certain types from the SOS to the AGF.[4] No Transportation Corps units were involved in this shift, for the Chief of Transportation had strongly urged that all Transportation Corps units be activated, trained, and controlled by his office.[5] The adjustment led to better understanding and co-operation between the AGF and the SOS. Beginning in January 1944 a further reduction in duplication of effort was achieved by providing in the troop basis for the training of a particular type of unit by only one command.[6] ASF headquarters nevertheless was of the opinion that a better plan would have been for all service units to have been activated and trained in their service functions by ASF, and then turned over to the AGF or the AAF for combat training before being assigned to duty.[7]

[3] WD Cir 59, 2 Mar 42, par. 7; Initial Directive for Org of SOS, 9 Mar 42. For brevity the word "training" is often used to cover the entire field of military and technical instruction, although the instruction of individuals was more precisely known as schooling.

[4] Memo, DCofS for TIG, 5 Nov 42, sub: Survey of Sv Units; 1st Ind, TIG for DCofS, 5 Dec 42; Memo, G-3 for CofS, 30 Dec 42, sub: Tng Sv Units; Memo, G-3 for SOS and AGF, 5 Jan 43; all of above and other related documents are in AG 353 (12-30-42).

[5] Memo for C of Opns SOS, 24 Oct 42, sub: Service Units, OCT HB Dir of Mil Tng.

[6] Palmer, Wiley, and Keast, *The Procurement and Training of Ground Combat Troops*, pp. 303–07.

[7] *Logistics in World War II*, p. 116.

In the distribution of training responsibilities it was clear that certain functions should be retained by SOS headquarters. The Training Division in that headquarters, later known as the Office of the Director of Military Training, established training policies, co-ordinated and approved training doctrine and programs, and supervised the training activities of all technical services. The Mobilization Division, as it was developed in ASF headquarters, prepared the over-all program for the activation of ASF units within the troop basis, correlated the preparation of tables of organization and tables of equipment by the technical services, and dealt with the General Staff, the Army Ground Forces, and the Army Air Forces regarding the assignment of ASF units to particular missions.[8] It was clear also that primary responsibility for the establishment of training doctrine and training programs in their respective fields should rest with the chiefs of the technical services. But there was a difference of opinion as to who should control the training centers. The responsible officers in SOS (and later ASF) headquarters preferred that the control of these installations should be in the service commands. Some of the chiefs of the technical services, including the Chief of Transportation, felt strongly that this control should rest with them.

The Army regulation defining the functions of the service commands, published in December 1942, should have eliminated all uncertainty as to the training responsibilities, but it did not do so. During the ensuing months a number of SOS and ASF directives were issued to clarify a situation that admittedly was confused.[9] The net result was that the chiefs of technical services controlled training activities only at the installations that were under their command for the performance of other functions, while the service commanders controlled the training centers. The technical services continued to be responsible for the preparation of training doctrine and training programs and for the establishment of student quotas.

The Chief of Transportation was not as widely affected by this development as were most of the other technical service chiefs since some of the training of port and marine units was being done at his ports of embarkation, a large training center at New Orleans was left under the command of the commander of the New Orleans Port of Embarkation, and military railway units were receiving their technical training on the commercial railroads. However, a training center at Indiantown Gap Military Reservation, Pennsylvania, which was originally set up as a Transportation Corps activity, was transferred to the control of the Third Service Command, and a center for the training of amphibian truck companies and harbor craft companies, soon to be established at Camp Gordon Johnston, Florida, was placed under the control of the Fourth Service Command.

The objections that the technical service chiefs had to this arrangement were aired at a conference held in July 1943.[10] Some of them felt that pride of service, which had great morale value, could be more effectively instilled at training centers con-

[8] SOS Org Manual, 15 Feb 43, Sec. 302.07 and Sec. 302.11, par. *c*(5); ASF Manual M 301, Organization. 15 Jan 44, Secs. 201.04, 203.00, 203.01; see also ASF Manual M 4, April 1945, sub: Mil Tng.

[9] AR 170-10, 24 Dec 42; SOS Memo S 350-5-43, 3 Feb 43, sub: Tng Responsibility of SvCs; ASF Cir 28, 12 May 43, sub: Designation of Tng Activities; ASF Cir 37, 4 June 43, same subject.

[10] Min of ASF Conf of CGs of SvCs, 22–24 Jul 43, pp. 355–62.

trolled entirely by the technical services than at service command installations where technical service distinctions could not be emphasized. When the technical service chiefs had direct control of the training installations, they could more freely move equipment and personnel around and try experiments to improve the training methods. When they had to work through the service commands to have their doctrines and programs effectively carried out, they often encountered resistance to their ideas and consequent delays. Since the blame for inadequately trained units fell on the technical service chiefs in any case, they felt that they should have complete control of the training activities. At this conference the Director of Military Training, ASF, expressed the view that the desired results could be obtained equally well by either method if the technical services and the service commands would co-operate fully. The purpose in giving the service commands control of training centers, he explained, was to economize on manpower and equipment. General Somervell, after listening to the views of the technical service chiefs, indicated that he intended to go forward with the plan recently placed in effect.

In the spring of 1944, ASF headquarters made a significant change in the method of training troops. Instead of units being activated before the troops had received basic military or basic technical training, the troops thereafter were to pass through a period of preactivation training, during which they would receive individual instruction in basic military and technical subjects. After completing this training as individuals, they would then be given basic unit training as members of an organization, or basic team training as replacements.[11] To carry out this program, unit training centers and replacement training centers were combined when they were located at the same posts, and the combined activities were designated ASF training centers. The purpose of the new plan was to give more emphasis to individual instruction; it was expected to reduce the number of personnel adjustments necessary after units had been activated, assist in getting better results from unit training, and promote economy in the use of training personnel and training equipment.[12] As a general rule the training centers remained under the control of the service commands, but the commander of the New Orleans Port of Embarkation continued to command the extensive training facilities that had been developed under his jurisdiction.

From the standpoint of economy and uniformity the ASF plan of placing training activities under the control of the service commanders had obvious advantages, but the Chief of Transportation never was convinced that these outweighed the disadvantages. His Training Division, in a report rendered at the end of the war, referred to its lack of direct control over the technical training of troops at certain training centers as "one of the greatest difficulties encountered."[13] The division objected particularly to an arrangement under which it was held responsible for the failure of units to pass The Inspector General's final inspection when it had not had full control of the technical training of those units. This was an especially acute problem for the Chief of Transportation

[11] ASF Cir 104, 15 Apr 44, Sec. III; ASF Cir 135, 11 May 44, Sec. IV; ASF *Annual Report for the Fiscal Year 1944*, p. 286.

[12] *Logistics in World War II*, p. 116.

[13] Rpt, Tng Div OCT, 28 Sep 45, sub: Difficulties and Accomplishments, OCT HB Tng Div Gen.

because Transportation Corps troop units embraced a greater number of military occupational specialties—128 types of specialties, mostly in the field of marine and railway operations—than the units of any other technical service.[14]

The staff that the Chief of Transportation built up in his headquarters to supervise training activities had a very modest beginning. On 1 April 1942 a Training and Intelligence Branch was established with one officer, Col. Llewellyn W. Oliver, dividing his time between these two activities. As the training responsibility expanded and a number of schools and training centers became necessary, the headquarters staff was expanded to meet the new requirements. Eventually, as the Military Training Division, this staff consisted of forty-four officers and civilians.[15] During the formative period it was headed in succession by Lt. Col. Edward H. Connor, Jr., Col. John F. Davis, and Col. George B. Norris. In January 1943, shortly after the training responsibility had been greatly broadened by the addition of the Military Railway Service to the Transportation Corps, Col. Frank C. Scofield was designated chief of the division. Scofield held the position until March 1945, when he was appointed president of the new Transportation Corps Board. Col. Geoffrey C. Bunting headed the Military Training Division during the remainder of the war and well into the postwar period. Colonels Scofield and Bunting also carried the title Director of Military Training. Both had come to the Transportation Corps with training experience gained while serving with the Coast Artillery Corps.[16]

The field organization for training began to expand in the early summer of 1942, when it was apparent that the ports of embarkation with their other heavy responsibilities could no longer be relied on to turn out the number of units and replacements that would be needed overseas. A training center for port troops was authorized in July 1942 at the Indiantown Gap Military Reservation. A training center at New Orleans was authorized in November 1942, which in addition to port troops trained many other types of units and replacements. When the Transportation Corps took over the Military Railway Service in November 1942, it also took over training responsibilities that required the use of facilities at Camp Claiborne, Louisiana, Camp Shelby, Mississippi, and later Fort Francis E. Warren, Wyoming. The growing need for troop units to operate small boats and amphibious trucks and to carry on other types of marine activities led to the establishment of a training center at Camp Gordon Johnston, Florida, in December 1943. Meanwhile, the Transportation Corps had started several schools for officers and an officer candidate school under the supervision of the port commanders at New York, New Orleans, and San Francisco. The ports of embarkation continued to train certain types of Transportation Corps units, and a number of other installations were used in a limited way for training purposes.[17]

[14] See MOS listed in Rpt, Mil Tng Div, 1 Jul 45–15 Aug 46, Exhibit 8, OCT HB Tng Div Rpts.

[15] Rpt, Mil Tng Div, 1 Jul 45–15 Aug 46, Exhibit 6, OCT HB Tng Div Rpts.

[16] For the organization of the division at the end of the war, see Mil Tng Div, 30 Jun 45, Exhibit A, and preceding discussion, OCT HB Mil Tng Div Rpts.

[17] A comprehensive list of installations that were in use or available for immediate use in training Transportation Corps troops is given in Rpt, Mil Tng Div, 30 Jun 45, pp. 21–23, OCT HB Tng Div Rpts; the list indicates the type of units trained at each installation and whether military, technical, and/or unit training was given.

The commander of the New Orleans Port of Embarkation had a prominent role in the Transportation Corps training program. He had direct supervision of the largest training center for Transportation Corps units and replacements and of a school for officers and officer candidates. Since the New Orleans port commander was responsible to the Chief of Transportation and was in general sympathy with his aims and programs, this arrangement was preferable to that which obtained at other unit and replacement training centers, where the service commands had direct control. Yet the arrangement at New Orleans was not without its problems. The Director of Military Training in the Office of the Chief of Transportation believed that the necessity of communicating with the training center and the school through the port commander deprived him of the direct contact with the activities at those installations that he needed to make his policies fully effective. Brig. Gen. Fremont B. Hodson, the port commander, had had staff supervision over Transportation Corps training activities while he was a member of General Gross's staff in Washington. He therefore had a good background for this phase of the port commander's responsibility when he assumed command of the port in September 1943. Difficulties and delays arose, however, when the port commander and the Director of Military Training did not agree on points of policy or on methods, and the latter felt that he was placed at a disadvantage. There was a feeling also that an officer should not be required to divide his attention between the operation of an active port and the conduct of a training center and a school. General Hodson vigorously opposed the suggestion that the training activities at New Orleans be brought under the direct supervision of the Director of Military Training, and this was not accomplished until after the war.[18]

Schooling for Officers and Officer Candidates

A shortage of competent officers was a persistent problem for the Chief of Transportation throughout the war. This was a condition experienced by other elements of the Army, but as a new service the Transportation Corps felt the shortage with special keenness. Unlike the well-established services, the Transportation Corps had had no opportunity to build up and train a nucleus of officers during the prewar rearmament period. Although it drew some of its personnel from other services, the other services also were in need of officers and to a large extent the Transportation Corps had to fend for itself. Its needs were met, though never adequately, by schooling officers who lacked technical background in the skills they would require, schooling men newly commissioned from the transportation industry in basic military subjects, and developing junior officers in an officer candidate school.

The demand for transportation officers arose from three sources. Transportation officers were required to staff the rapidly expanding organization of the Transportation Corps in the zone of interior; they were required for the many types of Transportation Corps troop units that were being activated for oversea service; and they were required by the oversea commanders for their headquarters and base section staffs. The oversea requirement was met

[18] Interv with Col Bunting, 19 May 52, OCT HB Dir Mil Tng; Memo, CofT for CG NOPE, 20 Nov 45, OCT HB Wylie Tng.

in part by transferring experienced officers from Transportation Corps headquarters and field installations, and in part by furnishing officers trained in the schools.[19] During the first two years of the war the drain on the Transportation Corps establishment in the zone of interior, especially the ports of embarkation, was heavy. Nevertheless, the theaters were not satisfied with the number or the quality of the officers sent them. The situation was relieved somewhat after the Transportation Corps School had been functioning for a time, but up to the end of the war in Europe the number of officers available to the Chief of Transportation was never sufficient to enable him to weed out drastically those who had failed to prove their competency.

Initially all schooling for officers was provided at the ports of embarkation, since at that time port headquarters and port battalions were the only units for which the Chief of Transportation was responsible. As the number and types of units charged to the Chief of Transportation increased it was evident that additional schooling arrangements would have to be made.[20]

The first schools for Transportation Corps officers were established in September 1942 at Fort Slocum, New York, and Camp Stoneman, California.[21] Fort Slocum and Camp Stoneman also served as staging areas for the ports of embarkation at New York and San Francisco, and the new schools were placed under the supervision of the commanders of those ports. The purpose of the schools was to provide orientation and basic military indoctrination for inexperienced officers, particularly officers recently commissioned from civilian life and reserve officers called to active duty.[22] The Atlantic Coast Transportation Corps Officers Training School at Fort Slocum received officers from installations in the eastern part of the United States and from recently activated units of the Military Railway Service. The Pacific Coast Transportation Corps Officers Training School at Camp Stoneman schooled officers from installations west of the Mississippi. Classes usually consisted of 100 officers, but some classes were larger, and some were smaller because of the inability of installation commanders to meet their quotas without handicapping their operations.[23] The normal duration of the course was six weeks.

The goal toward which these schools worked is well expressed in the words of Col. Bernard Lentz, commandant at Fort Slocum. To each class he made it clear that the primary aim was to teach "soldiering" to officers drawn from civilian occupations and to imbue them "with the military virtues that an officer must fully understand if he is to function properly in any branch of the military organization."[24] The Chief of Transportation insisted that the indoctrination should inculcate a pride in and an enthusiasm for the Transportation Corps. He referred to surveys of Army Service Forces troops that had revealed a "deplorable lack of enthusiasm" and "a disposition to prefer other branches of the service to the one in which

[19] Wardlow, *op. cit.*, p. 85.

[20] OCT HB Monograph 26, pp. 8–11.

[21] OCT Tng Memo 2, 14 Sep 42, in OCT HB Wylie Tng; Hist Rpt of Mil Tng Div to 30 Dec 42, Tab II, OCT HB Tng Div Rpts.

[22] See Master Program of Instruction for Fifth Course, in Mil Tng Div Rpt, 30 Jun 43, Tab 16, OCT HB Tng Div Rpts.

[23] Remarks by Col Scofield in Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 56, OCT HB PE Gen.

[24] Bernard Lentz, "Military Railway Officers Train at Fort Slocum," *Railway Age*, 30 Jan 43.



MAJ. GEN. FREDERICK GILBREATH, *Commander of the San Francisco Port of Embarkation, inspecting the officers' school at Camp Stoneman.*

they were." [25] These were attitudes that General Gross wanted the schools to correct so far as transportation officers were concerned.

During 1943 the need to give technical training to officers became increasingly pressing. Officers assigned to the Military Railway Service were in most cases railroaders by profession, but the officers of port, harbor boat, amphibian truck, and other types of Transportation Corps units frequently were without qualifying experience. The schools at Fort Slocum and Camp Stoneman were not equipped to give technical training, and some other provision had to be made. The school at Stoneman was closed in February 1944, and the one at Slocum in the following October; between them they had given instruction to more than 3,000 officers.[26] In February 1944 the Chief of Transportation established the Transportation Corps School at New Orleans, with divisions for officers and officer candidates, to operate under the supervision of the commander of the New Orleans Port of Embarkation.[27]

The courses initially given in the officer division of the Transportation Corps School were of eight weeks' duration. They dealt with water activities (port and allied operations), stevedoring, troop movements, and traffic regulation for railways, highways, and inland waterways.[28] Later, a two-week course for post transportation officers was added and a four-week course for ship transportation officers (originally called cargo security officers). Through August 1945 a total of 1,412 officers was graduated from these courses.[29] The instruction included classroom work and practical experience on ships and in shops. The practical work was necessarily limited and a poor substitute for actual operating experience, but it was helpful.

A basic problem at the school was the difficulty of obtaining satisfactory instructors. Often it was a choice between an experienced man who had no teaching ability and a competent teacher without practical experience. In such a situation the latter was chosen, since it had been found that the instructor that was able to organize and present his material well got the better results. New instructors assigned to the school first took an instructor's guidance course and then were gradually given teaching responsibility.[30]

Technical training for officers was not confined to the Transportation Corps School; it was continued at the ports of embarkation after the establishment of the school and was given also at certain unit training centers where the requisite facilities and instructors were available. Courses in stevedoring were given at the training center at Indiantown Gap, and courses in coastwise piloting and navigation, marine engines, and amphibian truck operations were given at the training center at Camp Gordon Johnston.[31] While this distribution of the load had the advantage of utilizing instructors and equip-

[25] Ltr, CofT to Lentz, 26 Jul 43, OCT HB Gross Day File.

[26] Slocum held eighteen classes with a total attendance of 2,122; Stoneman held twelve classes with a total attendance of 914; see 1st Ind, CofT for Hist Div WDSS, 8 Aug 47, sub: Statistics on Tng, Tabs 1*a* and 1*b*, in OCT HB Tng Div Rpts.

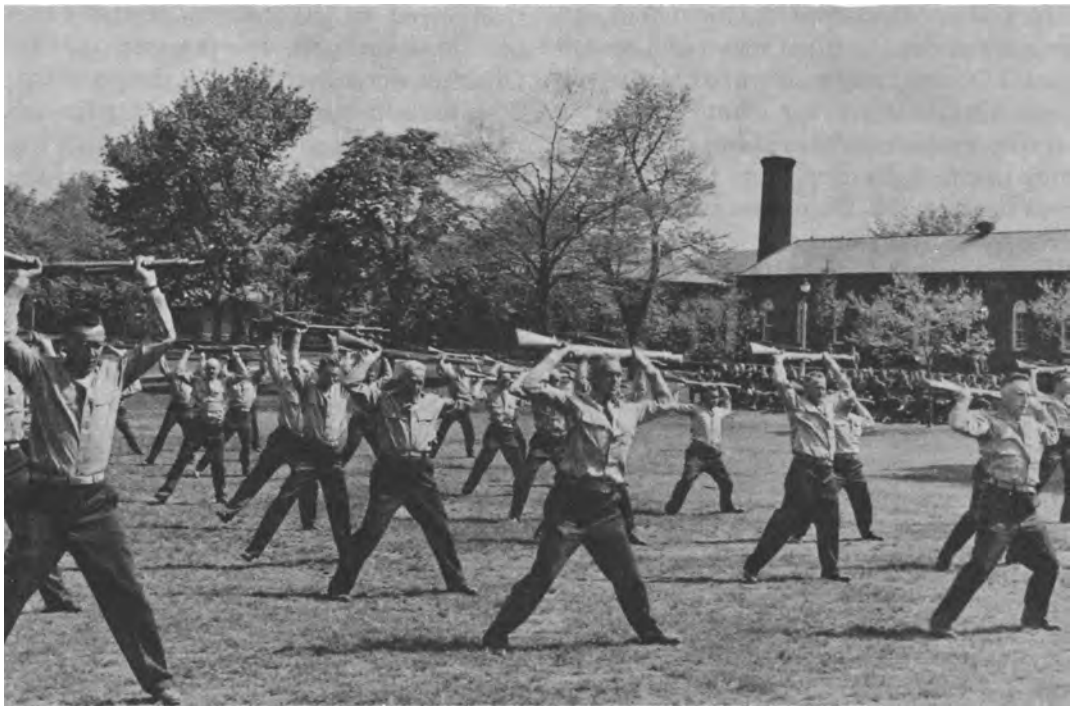
[27] Memo, Dir Mil Tng ASF for CofT, 6 Dec 43, SPTEE 352 (Trans, 22 Nov 43), sub: TC Sp Sv Sch; Memo, CofT for PEs, *et al.*, 15 Jan 44; TC Cir 35-1, 25 Feb 44, sub: TC School; all in OCT HB Tng Div, TC School NO.

[28] TC Cir 35-1, revised 17 Jun 44; Min of Port Comdrs Conf, New Orleans, 11-14 Jan 44, pp. 69-70; Memo, CG NOPE for CofT, 18 Sep 45, sub: Accomplishment and Handicaps, p. 5, Exhibit A, OCT HB NOPE Gen.

[29] 1st Ind, CofT for Hist Div WDSS, cited n. 26, Tab 1*a*.

[30] OCT HB Monograph 26, p. 26.

[31] OCT HB Monograph 26, pp. 11-26, describes the courses briefly and indicates the manuals and other texts used.



TRAINING TRANSPORTATION OFFICERS, *commissioned directly from civilian life, at Fort Slocum, New York.*

ment that were already available and in use for other purposes, it had the disadvantage of not permitting officers to acquire experience in co-ordinating the operations of different types of Transportation Corps units, although such co-ordination would be required during their service in the oversea commands.[32] The Chief of Transportation took steps to rectify this shortcoming, but the necessary adjustments were not accomplished until after the end of the war.

The establishment of an officer candidate school was one of the proposals put forward by the Chief of Transportation in June 1942, when he recommended that the Transportation Service be converted into the Transportation Corps in order to better fulfill its mission.[33] Such a school was the only visible means of meeting the need for junior officers to serve with Transportation Corps troop units. The schooling of officer candidates began in the fall of that year and the activity can be divided into two periods—the first, when the emphasis was on administration, and the second, when military and technical instruction were stressed.

In response to the Chief of Transportation's recommendation, the General Staff made provision for the schooling of officer candidates for the Transportation Corps at Army Administration School, Branch No. 4, located at Mississippi State College,

[32] For example, co-ordination between port units, amphibian truck companies, and small boat companies was necessary in port and beach operations.

[33] Memo, CG SOS for CofS USA, 30 Jun 42, sub: Reorg of Trans Sv, OCT 020 Org of TC.

Starkville, Mississippi.[34] This school, operating under the supervision of The Adjutant General and concerned chiefly with administration, was not what the Chief of Transportation had asked for, but it was a step in the right direction. The capacity was fixed at 750, the course was of twelve weeks' duration, and a new class of about 250 was enrolled at intervals of four weeks. The first class reported on 17 October 1942. The Adjutant General furnished instructors for the administrative subjects, which occupied eight weeks of the course, and the Chief of Transportation furnished instructors for the technical subjects, which were dealt with in the last four weeks.[35]

The Chief of Transportation was not satisfied with the school at Starkville and considered it only a temporary expedient. The emphasis on administrative subjects did not fit in with the urgent need that he foresaw for junior officers capable of leading transportation troops in the theaters. Inadequate basic military training on the part of many candidates was a further handicap. The standards of admission, which permitted men capable of only limited service and without any practical or technical background to enter, also fell short of the Chief of Transportation's desires. The location of Mississippi State College, which had no shipping facilities and was not adjacent to an airport, was not favorable to the teaching of practical transportation. The lack of military atmosphere and the fact that the school was not a Transportation Corps installation limited the opportunity to inculcate in officer candidates the pride of service on which General Gross placed great emphasis.[36]

Two steps were taken to overcome these handicaps. The school at Starkville was transferred to the control of the Chief of Transportation in January 1943.[37] Changes were then made in the qualifications for admission and in the curriculum to bring them more into line with the Transportation Corps' needs.[38] In June 1943 the school was transferred from Starkville to New Orleans and was redesignated the Transportation Corps Officer Candidate School (OCS).[39]

The new OCS was operated first at the New Orleans Staging Area, where the unit training center was located. In February 1944 it was moved to the Army Air Base where it became the Officer Candidate Division of the Transportation Corps School, which was established at that time. Further changes were made in the curriculum in order to stress technical subjects and military leadership. The course was lengthened to seventeen weeks. Full use was made of the opportunity to visit and study the various types of commercial transportation facilities available at New Orleans.

The number of officer candidates at the school varied greatly. From a starting capacity of 750, to accommodate three classes of 250 each, the capacity was increased to 1,000 in the fall of 1943, only to be drastically cut early in 1944 to conform to a new War Department policy. The summer of 1944 brought a heavy

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[34] Memo, DCofS USA for CG SOS, 17 Jul 42, OCT 020 Org of TC; Memo, CofT for PEs, 9 Sep 42, OCT HB Tng Div OCS; WD Memo 350-94-42, 22 Sep 42, sub: Estab of Brs of Army Adm Sch.

[35] OCT HB Monograph 26, pp. 27–34.

[36] Memo, CofT for Dir Mil Tng ASF, 29 Mar 43, sub: Change in Location of OCS, OCT HB Tng Div OCS; Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 58.

[37] WD Memo 350-6-43, 7 Jan 43.

[38] Rpt, Mil Tng Div, 1 Jan–30 Jun 43, pp. 3–4, OCT HB Tng Div Rpts.

[39] WD Memo W 350-136-43, 24 May 43.

demand from Europe and the Pacific for junior officers, and the capacity was raised to 2,250. The largest classes were graduated in November and December 1944, with 764 and 604 graduates respectively.[40]

Officer candidates who could not keep up with their classes were set back a class, and those who did not soon demonstrate proper qualifications were relieved. The strictness with which this policy was enforced naturally depended somewhat on the demand for junior officers at the time, but the Chief of Transportation's instruction was to "weed out the duds." The forty-one classes that had completed the OCS course up to 15 August 1945 had a total enrollment of 9,901. This figure includes about 1,800 candidates who were set back, so that the actual number of candidates was smaller. Of the 1,280 who were not graduated, 333 were relieved for academic reasons, 501 for lack of leadership qualities, and 446 for other reasons. The number graduated and commissioned was 6,865. Upon graduation about 3,100 were assigned to ports of embarkation for duty or further practical training; about 3,000 were assigned to officer replacement pools, 222 were considered ready for immediate assignment to troop units, and the remainder were sent to other Transportation Corps offices and installations.[41]

Troop Units for the Operation of Oversea Ports

The potential need for troops to operate oversea ports at which there was an inadequate native labor force was recognized during the rearmament period, but the extent of the requirement was not visualized because the extent of American involvement was not foreseen. In February 1941, G-4 expressed the opinion that at least one port battalion should be activated, probably at San Francisco, although no provision had been made in the troop basis for such a unit.[42] A much more realistic approach to the subject was presented in April by Colonel Dillon, chief of The Quartermaster General's Transportation Division, who recommended that personnel and a training center be provided as soon as possible for the activation and training of from thirty-five to forty port battalions.[43] In this matter Dillon evidently was "a prophet without honor," for it was more than a year before a training center for port troops was authorized and the activation of new port organizations proceeded slowly. Up to 1 July 1941 only two port battalions had been placed in training. From that date to 9 March 1942, when the transportation service was established, four port headquarters and eight and a half port battalions were activated.[44]

It was natural that in the beginning port units for oversea service should have been activated and trained at ports of embarkation, since they had the required facilities and experienced personnel to serve as instructors. But the ports had other responsibilities that became extremely heavy as soon as the United States entered the war, and it was not practic-

[40] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 67–68; History of the TC Officer Candidate School, tabulation of classes through No. 37, OCT HB Tng Div Rpts; OCT HB Monograph 26, p. 36.

[41] Rpt, Mil Tng Div, 1 Jul 45–15 Aug 46, Exhibits 14 and 16. These tabulations contain some minor discrepancies that cannot be explained.

[42] Memo, G-4 for G-1, 10 Feb 41, sub: Various Actions in Connection With Ports of Embarkation, par. 5*a*, G-4/32544.

[43] Memo, Col Dillon for Maj Gen Edmund B. Gregory, TQMG, 15 Apr 41, OCT HB OQMG Gen.

[44] Mil Tng Div, Summary of Units Activated, 1 Jul 41–30 Jun 43; Rpt, Mil Tng Div, 1 Jan 43–30 Jun 43, Exhibit 45; both in OCT HB Tng Div Rpts.

able to require them to provide military as well as technical training for the large number of units that would be needed.[45]

Accordingly, in June 1942 the Chief of Transportation recommended that a training center with capacity for four battalions be established, and that it be located in the general vicinity of the New York Port of Embarkation so that officers and key enlisted personnel might have an opportunity to visit the port and observe longshore operations.[46] At about the same time General Gross indicated that twenty port battalions and two port companies had been authorized, which were already overseas or committed, and he recommended the authorization of twelve additional battalions to meet requirements in the United Kingdom and in the Pacific.[47] In July the War Department authorized the establishment of a unit training center at the Indiantown Gap Military Reservation, with initial capacity for 2,200 trainees and provision for enlargement to 5,000 as required.[48] The new center was placed under the supervision of the Chief of Transportation, and he, in turn, placed it under the direct control of the Commanding General, New York Port of Embarkation. As already noted, this facility was transferred to the control of the Third Service Command in January 1943.

Until July 1942 port units were activated under tables of organization established by The Quartermaster General, and they were designated Quartermaster battalion, port, and headquarters and headquarters company, port. The Chief of Transportation had been responsible for their training since the creation of his office in March 1942, because the ports of embarkation had been placed under his control at that time. When the Transportation Corps was established on 31 July 1942, these units were transferred to the new Corps and the Chief of Transportation became responsible not only for their activation and training, but also for the preparation of tables of organization and equipment, training doctrine, and training programs.[49]

The training activity at Indiantown Gap had scarcely gotten under way when it became apparent that additional capacity for the training of port battalions would be needed, and also that provision would have to be made for the training of harbor craft companies and other types of units, as well as replacements. A location on the seaboard was desirable, and the New Orleans Staging Area was available since the New Orleans port was not being used for the shipment of troops to the extent that had been anticipated. Accordingly, a unit training center at New Orleans was authorized in November 1942, with an initial capacity for 619 officers and 10,000 enlisted men.[50] The installation, which later

[45] Program for training port units at ports of embarkation is given in OCT Tng Memo 1, 18 May 42, OCT HB Tng Div Units Port.

[46] Memo, CofT for CG SOS, 10 Jun 42, sub: Estab of Unit Tng Center, OCT 323.5 Misc.

[47] Memo for CG SOS, 26 Jun 42, sub: Additional Reqmts, OCT HB Tng Div Units Port.

[48] AG Memo 320.2 (7-8-42), 10 Jul 42, sub: Trans Sv Training Center.

[49] WD GO 38, 31 Jul 42; GO 46, 17 Sep 42. Memo, CG SOS for CofT, 4 Sep 42, OCT 322, listed units transferred from the QMC to the TC as follows: 12 headquarters and headquarters companies, 37 port battalions (17 white and 20 Negro), and 2 port companies. The transfer of 7 aviation boat companies listed in the memo was rescinded by WD GO 46, 17 Sep 42. The 22d and 23d Ports of Embarkation listed were activated in SWPA and were more in the nature of pools that could be drawn on for personnel for assignment to various ports than they were operating organizations; see Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–47, pp. 103–05.

[50] AF Memo 320.2 (11-1-42), 10 Nov 42; WD GO 84, 6 Dec 43.

was renamed Camp Plauché, was called a SOS (later an ASF) training center, but from the beginning it was under the control of the Chief of Transportation who, in turn, placed it under the direct supervision of the Commanding General, New Orleans Port of Embarkation.

In the beginning troop units to perform longshore labor were activated and trained as battalions, but later they were activated and trained as companies. The battalion, consisting of four companies and a headquarters and headquarters detachment, was a larger unit than was needed at many oversea ports, and the Chief of Transportation concluded that greater flexibility would be possible if these troops were trained as companies. The companies could be assigned singly to very small ports, or several could be assigned to a larger port with a headquarters and headquarters detachment, or the required number of port companies could be attached to a headquarters and headquarters company, which was trained to administer and supervise extensive port operations. Accordingly, in June 1943, all port battalions in the zone of interior were broken up and the port companies and headquarters and headquarters detachments were numbered separately.[51]

The general plan was that port companies would receive their basic military and technical training at the unit training centers, and then receive further training at the ports of embarkation. At the training centers "land ships" and "dummy cargo" were used, and it was hoped that if each unit spent a short time at a port of embarkation before going overseas it would be able to acquire some experience with "live" ships and real cargo. This hope was realized only to a limited extent, for the labor unions objected to the use of soldiers to load ships when civilian longshoremen were available, and the port commanders often preferred to use them for other work such as cleaning gear, sweeping piers, and unloading railway cars.[52]

A port headquarters and headquarters company was the overhead organization of a port of embarkation in miniature. Under The Quartermaster General, these units were known as mobile ports, presumably because they might be moved from place to place to meet changing needs. Under the Chief of Transportation, they became known as major ports or medium ports depending on the task to which they were assigned, the number of port companies and other service units employed, and the size of the headquarters organization required to supervise the operation. A major port was capable of supervising the transshipment of 300,000 measurement tons of cargo and 50,000 troops per month; a medium port was expected to supervise the transshipment of up to 150,000 measurement tons and 25,000 troops per month. The major port had an authorized strength of 109 commissioned officers (including a brigadier general and 11 colonels), 1 warrant officer, and 409 enlisted men. The authorized strength of the medium port was 76 commissioned officers (including 3 colonels) and 231 enlisted men.[53] Whenever practicable the officers and enlisted men for an

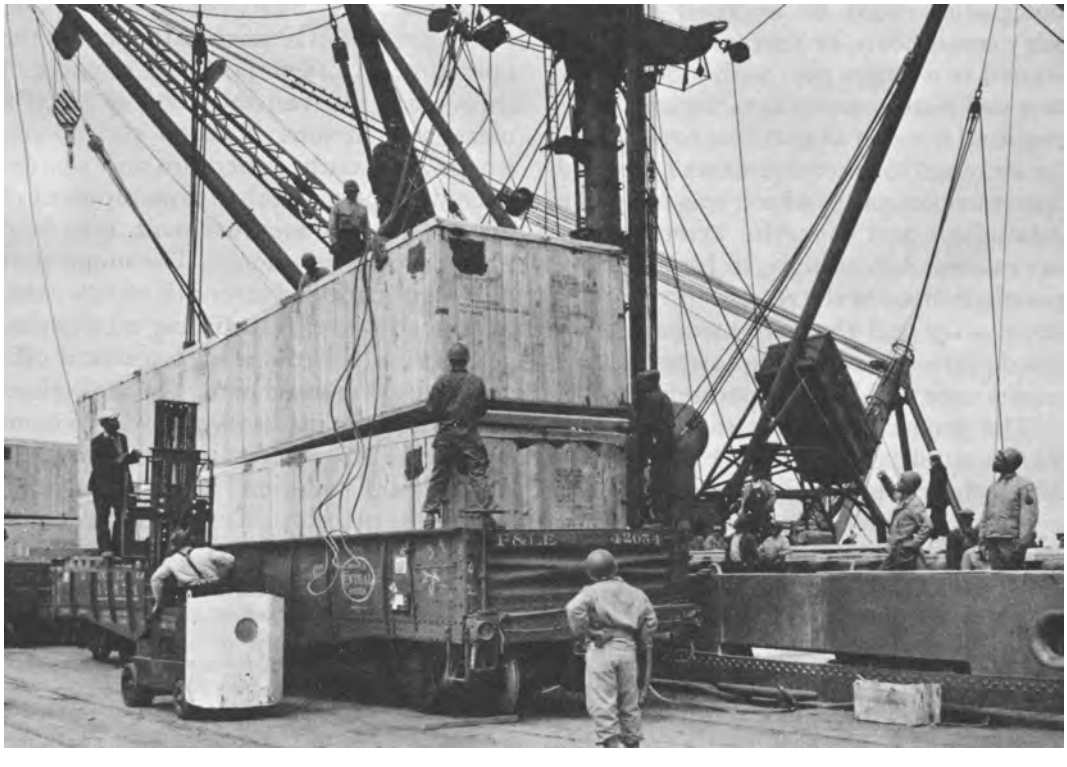
[51] AG Memo 322 (10 Jun 43), 17 Jun 43, sub: Redesignation and Reorg of TC Units.

[52] Comment by Col Bunting, 17 Jun 52, OCT HB Tng Div Units. Concerning the organization, mission, and training of port companies, see T/O&E 55-117, 31 Jul 44; MTP 55-3, 12 May 43; TC Pamphlet 37, Jun 45, sub: Port Companies, Stevedoring and Operations.

[53] T/O&E 55-110-1, 20 Nov 43; T/O&E 55-120-1, 13 May 44; TC Pamphlet 30, 21 Dec 44, sub: Hq and Hq Co, Major and Medium Port (Overseas).



PORT COMPANIES IN TRAINING *use "land ships" at the Unit Training Center, Indiantown Gap, Pennsylvania (above). Enlisted men with the co-operation of civilian stevedores gain experience in handling heavy lifts at San Francisco (below).*



oversea port headquarters were drawn from the personnel of ports of embarkation in the zone of interior so that they would have at least a general familiarity with water-front operations. But often such personnel was available only for the key positions. In any case, those headquarters were activated and trained at the ports of embarkation.[54]

A summary of the personnel of several major ports and their attached units will give an idea of the military strength required for large oversea operations. On 1 September 1944, the 4th and 12th Major Ports, stationed at Cherbourg, had attached to them nine port battalions, two port marine maintenance companies, four harbor craft companies, one base depot company, three engineer fire-fighting platoons, two engineer utilities detachments, two finance disbursing sections, and two medical disposition sections; these units aggregated a total of 10,534 military personnel, and in addition 922 civilians were employed.[55] On 24 November 1944, the 16th Major Port, stationed at Le Havre, had attached nine port battalions, two separate port companies, nine amphibian truck companies, two harbor craft companies, one military police battalion, one port marine maintenance company, one postal regulating station, one Army postal unit, one engineer utilities detachment, two finance disbursing sections, two harbor entrance control posts, one signal radar maintenance unit, one medical composite section, one special services detachment—a total of 8,919 officers and enlisted men (employed civilians not stated).[56] On 24 March 1945, the 6th Major Port, stationed at Marseille, comprised, in addition to the headquarters and headquarters company, nine port battalions, five separate port companies, four military police companies, and some other small units, making a total of 9,749 military personnel; in addition, this port employed 10,555 civilians and 4,496 prisoners of war.[57] At Tacloban, Leyte, the port headquarters—not a full major port—had attached three port battalions, four harbor craft companies, one amphibian truck battalion, one port marine maintenance company, and some small units, making a total of 4,843 military personnel; it employed 2,210 civilian laborers and clerical workers.[58]

During the early part of the war it was impossible for the Chief of Transportation to supply all the port units required by the oversea commanders because of his late start in training, the difficulty of foreseeing future needs sufficiently in advance, and the limited troop basis. Under the expanded training program that got well under way in 1943, the number of units available for oversea assignment increased rapidly; but the demand also increased, and since the European and Mediterranean theaters had the higher priorities the Pacific commands could not be adequately supplied with port units until after Germany's surrender. That fact is reflected in Table 35. It is worth noting that the three port headquarters in the Southwest Pacific Area and one of the two port

[54] For the training program, see MTP 55-5, 30 Apr 43.

[55] History of 4th Port, 15 August–1 September 1944, OCT HB Maj Ports. Major ports also used Quartermaster truck companies, but they were usually attached to base sections and allocated to the ports as needed.

[56] Histories of Units and Sections of 16th Port, November 1944, OCT HB Maj Ports.

[57] History of 6th Port Headquarters, November 1944–March 1945, Exhibit S-1, OCT HB Maj Ports.

[58] History of TC, Philippine Islands, July 1945, pp. 5 and 6, OCT HB SWPA PI.

TABLE 35—PORT UNITS IN OVERSEA AREAS: 31 MARCH 1945

Areas	Headquarters and Headquarters Company, Port	Headquarters and Headquarters Detachment, Port Battalion	Port Companies
Total	23	86	406
European Theater of Operations	13	36	179
Mediterranean Theater of Operations	5	14	52
Pacific Ocean Areas	2	15	55
Southwest Pacific Area	3	17	94
Asiatic (China, India-Burma)	0	2	10
North American	0	2	16

Source: Rpt, TC Personnel, 31 Mar 45, OCT HB Dir of Pers.

headquarters in the Pacific Ocean Areas in the spring of 1945 had been activated in the theater rather than in the zone of interior. This was also true of a goodly number of the port companies.

The port headquarters and operating units trained by the Chief of Transportation in the zone of interior during the war had an aggregate strength of about 107,000 officers and men. They accounted for approximately 60 percent of the total strength of Transportation Corps units trained by the Chief of Transportation. Similar units that were activated and trained as elements of the Quartermaster Corps and transferred to the Transportation Corps, or were activated and trained as Transportation Corps units in the oversea commands, had an aggregate strength of approximately 20,830. *(Table 36)*

The effectiveness of port units when they arrived overseas varied greatly. In the beginning there were numerous complaints from the theaters.[59] After training doctrine and methods had been improved and the technical and unit training periods had been lengthened, there was less cause for dissatisfaction.[60] Unfortunately, many port headquarters and port companies had to be sent overseas before their training had been completed. Unfortunately, also, the plan to have port companies get some practical experience in loading ships at domestic ports was not carried out in most cases. Relatively few of the men had had previous experience with water-front operations, and many were in the low aptitude classification. Port companies composed of Negro personnel, which predominated after 1942, on the average learned more slowly than white companies because the men had less suitable educational and occupational backgrounds.[61]

After reaching their oversea stations the

[59] Memo, CofT for RTC, New Orleans, *et al.*, 22 Feb 43, sub: Tng of Stevedore Pers, OCT HB Tng Div Units Port; Memo, Gross for Wylie, 12 Nov 43, par. 7, OCT HB Wylie Gross Ltrs.

[60] Technical and unit training at first occupied nine weeks, then eleven weeks, and under the ASF plan of preactivation training introduced in April 1944 it was fourteen weeks.

[61] Of a total of 462 port companies in being on 31 March 1945, 350 were Negro and 112 were white; of 90 headquarters and headquarters detachments, 50 were Negro and 40 were white; Rpt, TC Pers, OCT HB Dir of Pers.

TABLE 36—TRANSPORTATION CORPS TROOP UNITS ACTIVATED DURING WORLD WAR II [a]

Type of Unit	Activated and/or Trained by Chief of Transportation in Zone of Interior [b]				Activated Overseas or Transferred to Transportation Corps While Overseas or En Route [c]			
	Units	Officers	Warrant Officers	Enlisted Men	Units	Officers	Warrant Officers	Enlisted Men
All Types	765	7,685	768	170,974	217	2,625	192	39,785
Major and Mobile Port, Headquarters and Headquarters Company	18	1,391	49	7,035	6	453	17	2,606
Medium Port, Headquarters and Headquarters Company	2	152	0	460	5	380	0	1,145
Port Company	420	1,814	0	94,718	70	338	0	15,333
Stevedoring Company	. . .	. . .	0	. . .	1	4	. . .	115
Port Battalion, Headquarters and Headquarters Detachment	73	237	150	986	19	78	38	322
Staging Area Company	4	24	0	756	4	24	. . .	755
Staging Area Battalion	1	26	0	457	. . .	. . .	. . .	. . .
Amphibian Truck Company	51	316	0	9,028	19	118	0	3,367
Amphibian Truck Detachment	. . .	. . .	. . .	. . .	1	1	0	51
Amphibian Truck Battalion, Headquarters and Headquarters Detachment	3	12	0	39	12	66	6	223
Harbor Craft Company	46	1,057	496	11,085	11	125	107	2,707
Harbor Craft Platoon	. . .	. . .	. . .	. . .	1	10	4	85
Harbor Craft Crew (Class A)	5	25	5	63	1	5	1	13
Port Marine Maintenance Company	9	54	0	1,836	4	24	0	816
Army Marine Ship Repair Company	8	40	0	882	2	10	0	214
Boat Maintenance Platoon	1	1	0	42	. . .	. . .	. . .	. . .
Traffic Regulation Group	15	851	0	4,558	15	342	0	2,325
Traffic Regulation Battalion	. . .	. . .	. . .	. . .	4	212	0	888
Regulating Station, Headquarters and Headquarters Company	4	168	4	570	1	42	1	141
Headquarters and Headquarters Company, Highway Transport Service	. . .	. . .	. . .	. . .	1	28	1	101
Base Depot Company	10	50	0	1,550	9	45	0	1,246
Floating Spare Parts Depot	2	10	0	110	. . .	. . .	. . .	. . .
Warehouse Platoon	. . .	. . .	. . .	. . .	3	9	0	186
Transportation Corps Service Company	. . .	. . .	. . .	. . .	1	7	0	178
Transportation Corps Service (Headquarters only)	. . .	. . .	. . .	. . .	4	8	0	52
Transportation Corps Service Battalion, Headquarters and Headquarters Detachment	7	28	0	91	3	12	0	38
Transportation Corps Service Group, Headquarters and Headquarters Detachment	. . .	. . .	. . .	. . .	7	28	0	119
Transportation Corps Service Group, Headquarters and Headquarters Company	. . .	. . .	. . .	. . .	1	16	0	170
Military Railway Service, Headquarters and Headquarters Company	2	56	2	361	1	32	6	165
Railway Guard Division, Headquarters and Headquarters Company	12	311	0	810	. . .	. . .	. . .	. . .
Railway Operating Battalion	32	769	41	26,691	6	152	10	4,977
Railway Operating Detachment	. . .	. . .	. . .	. . .	1	13	0	391
Railway Transportation Company	. . .	. . .	. . .	. . .	1	5	0	325
Railway Operating Company	. . .	. . .	. . .	. . .	2	11	0	325
Railway Shop Battalion	11	263	21	7,254	1	27	1	406
Hospital Train Maintenance Platoon	5	5	0	135	. . .	. . .	. . .	. . .
Hospital Train Maintenance Section	5	0	0	54	. . .	. . .	. . .	. . .
Railway Workshop Mobile	8	8	0	204	. . .	. . .	. . .	. . .
Railway Track Maintenance Platoon	11	17	0	1,199	. . .	. . .	. . .	. . .

[a] Includes prewar emergency period.

[b] Includes some units activated by The Quartermaster General and the Chief of Engineers and transferred to the Transportation Corps before completion of training.

[c] Includes some units activated by The Quartermaster General and the Chief of Engineers in the zone of interior and transferred to the Transportation Corps while en route to or after arrival in oversea commands.

Source: 1st Ind, CofT for Hist Div WDSS, 8 Aug 47, Tab 6, OCT HB Tng Div Rpts.

men learned as they worked. Their development into efficient units then depended heavily on the leadership exhibited by their officers, but climate and other conditions naturally had an influence on their discharge performances.[62] Many organizations stationed at oversea ports during critical military operations, often working under hazardous conditions and for abnormally long shifts, performed herculean tasks in handling cargoes and constituted an indispensable element of the military machine.

Although port companies were intended primarily for oversea service, enough were trained to provide insurance against a shortage of civilian longshoremen at U.S. ports.[63] The possibility of such a shortage was visualized in the fall of 1943, and on the recommendation of the Chief of Transportation sixty port companies were added to the training program for 1944. This enabled more of these units to be held at the ports of embarkation than otherwise would have been the case. But the units were to be employed in the loading of ships only when there were not enough civilian longshoremen available, or when special security arrangements had to be made for the loading of particular cargoes. Otherwise, they were to be held in a training status until they were required for oversea service. As it developed, troops were not needed for any large-scale stevedoring operations at domestic ports but were used principally for other work. The Director of Military Training admonished the port commanders to give these troops jobs that would contribute to their knowledge of cargo handling and not to assign them exclusively to other kinds of labor, but as has been indicated the port commanders were able to do this to only a limited extent.[64] There were forty-two port companies stationed at the ports of embarkation on 30 April 1945.

Troop Units for Military Railways

The importance of effective railway service for mass movements in theaters of operations was first demonstrated in the War Between the States and again in World War I. As a rule, the Military Railway Service (MRS) functions in the communications zone and delivers troops and supplies to the combat forces at railheads, whence they are moved forward by means of transport under the control of those forces. The military operation of railroads in theaters is desirable because of the need for secrecy, the danger of sabotage, the shortage of native equipment, and the insufficiency or doubtful loyalty of native workers. Under some circumstances the railways must be operated exclusively with military personnel, as when the MRS first followed the invading armies into Germany. Usually a variable amount of civilian labor can be used with troops filling in where needed; this was the case in North Africa, Sicily, Italy, France, India, Burma, and Luzon, and in Germany after the surrender of that country. During World War II the U.S. Army operated railways in two areas where there was no military activity. The MRS was employed as a means of increasing the capacity of the Iranian State Railway for

[62] See Wardlow, *op. cit.*, p. 298, for summary data on rates of discharge, and Bykofsky and Larson, The Transportation Corps: Operations Overseas, *passim*, for discussion of cargo-handling problems in the several theaters.

[63] Wardlow, *op. cit.*, p. 264.

[64] Min of Port Comdrs Conf, New Orleans, 11-14 Jan 44, p. 59. Colonel Bunting was of the opinion that most units deteriorated while at the ports of embarkation because of lack of suitable work; see his comment, 17 Jun 52, OCT HB Tng Div Units Misc.

the movement of lend-lease supplies to the Soviet Union. In Alaska, military management and troop labor were utilized to get heavier traffic moved on railroads that in peacetime were called on for only limited service.[65]

At the beginning of the year 1939 the Military Railway Service of the U.S. Army existed only as a number of reserve units, each unit composed of personnel employed by the commercial railroad by which it was sponsored. Because of the long period of inactivity, the *esprit de corps* was at low ebb. In view of the situation in Europe the Chief of Engineers, who at that time was responsible for this branch of Army transportation, took steps to revitalize the service. Col. (later Maj. Gen.) Carl R. Gray, Jr., an executive of a western railroad who held a reserve commission, was called to active duty as Manager, Military Railway Service, with headquarters at Fort Snelling, Minnesota. Col. (later Brig. Gen.) Charles D. Young, an executive of an eastern rail line, was placed on duty in the Office of the Chief of Engineers. These officers took early steps to build up reserve units to full strength, to extend the interest of the railroads in sponsoring such units, and to prepare for future expansion.[66]

The first MRS unit was placed in active status in June 1941. At that time the 711th Railway Operating Battalion was activated at Fort Belvoir, Virginia; in August it was transferred to Camp Claiborne, Louisiana, to undertake its first real railroading task. That task was to construct and operate a single track railroad from Camp Claiborne to Camp Polk, a distance of about fifty miles, with terminal, repair, and dispatching facilities. Operations on the road began in December 1941, when the first locomotive was received, and the initial construction work was completed in the following July. In addition to the training that the 711th derived from building and operating the Claiborne and Polk Military Railway, the line was visualized as a training site for MRS units that might be activated later.[67]

When the United States entered the war General Gray's headquarters and this railway operating battalion were the only elements of the MRS that had been activated. The units in reserve status included five railway grand divisions, twenty railway operating battalions, and three railway shop battalions.[68] The activation of additional units began in April 1942.

The original organization of the MRS units was based on established principles of American railroading; modifications as to detail were made as the result of experience in the theaters. The headquarters and headquarters company, Military Railway Service, was an administrative organization corresponding to the office of the general manager of a large railroad system. The headquarters and headquarters company, railway grand division, also an administrative organization, corresponded to the office of the general superintendent. The railway operating battalion, which was capable of operating and maintaining 120 miles of right of way, corresponded to the railway division. The railway shop battalion was organized and

[65] MRS operations in the several areas are discussed in Bykofsky and Larson. The Transportation Corps: Operations Overseas.

[66] Maj. Gen. Carl R. Gray, Jr., "The Military Railway Service," *Army Transportation Journal,* May–June 1948.

[67] Pamphlet, Claiborne and Polk Military Railway, prepared by the 711th Ry Opng Bn, 11 Jul 42, OCT HB Rail Div MRS; "The First Army Railway Battalion Builds a Training Railroad," *Railway Age,* August 1, 1942.

[68] OCT HB Monograph 26, p. 51.

equipped to make heavy repairs on locomotives and cars.[69] In addition to these larger units, the MRS included smaller organizations known as railway work shops (mobile), base depot companies, and hospital train maintenance detachments.

Discussion of the desirability of transferring the Military Railway Service from the jurisdiction of the Chief of Engineers to that of the newly created Chief of Transportation began in the spring of 1942. Although some functions were shifted earlier, complete transfer was not made until the following November.[70] The twenty-five operating and shop units that had been activated, General Gray's headquarters, certain overhead personnel, and the pertinent railway equipment were included in the transfer. Some of the units were already overseas and some were en route, but most of them were still in the zone of interior.[71] After 16 November the Chief of Transportation was responsible for the organization, training, and assignment of these and such additional units as the oversea commanders might require. The invasion of North Africa had just begun, and it was foreseen that that theater would give the Military Railway Service its first real test. The heaviest requirement, of course, would come after the Allied armies had established themselves on the European continent.

The MRS units activated in the zone of interior by the Chief of Transportation had a total authorized strength of 38,201 officers and enlisted men. In addition, units aggregating 6,846 officers and men were activated by the Chief of Engineers and transferred to the Chief of Transportation or were activated overseas. *(See Table 36.)* The total strength of the Military Railway Service on 30 June 1945 was 44,084 officers and men, of whom 43,231 were overseas and 853 (a railway operating battalion recalled from Alaska) were in training status in the zone of interior. In considering the following distribution of MRS units as of 30 June 1945, it should be borne in mind that the number of railway troops in the Mediterranean theater and in Alaska had been considerably reduced by that date and that a reduction had been begun in the Persian Gulf Command:[72]

Area	*Personnel*
Total	43,231
European Theater of Operations	28,828
Mediterranean Theater of Operations	3,207
Persian Gulf Command	3,473
India-Burma Theater	4,036
Southwest Pacific Area	2,772
Alaskan Department	915

Soon after the Chief of Transportation took control of the Military Railway Service it was arranged that all MRS units should be activated and should receive their basic military training at the unit training center at New Orleans. When the program became especially heavy late in 1943, Fort Sam Houston, Texas, was used to relieve New Orleans. In the fall of 1944, with the railway training program nearing completion, this activity was transferred to Fort Francis E. Warren, Wyoming.

[69] Article cited n. 66. T/O&E's for these units were numbered respectively 55-302, 55-225, 55-235. T/O&E's of the same series were issued for the component companies of the larger units and for some smaller MRS units.

[70] Wardlow, *op. cit.*, pp. 62–65; Memo, CofEngrs for CG SOS, 10 Jun 42, OCT 322 Ry Bns Tng and Deferment; WD GO 60, 5 Nov 42.

[71] AG Memo 320.2 (11-25-42), 1 Dec 42, sub: Designation of Certain Railway Units; Memo, C of Mil Ry Br OCT for CofT, 19 Nov 42, sub: Situation Rpt on Ry Tr Units, OCT HB Rail Div MRS.

[72] Rpt, Rail Div, FY 1945, pp. 6–7; cf. Rpt, Rail Div, FY 1944, pp. 12–13.

After completing military training, the units received technical training either on the Claiborne and Polk Military Railway or on one of the commercial railroads. In view of the limited capacity of the Claiborne and Polk line and the advantages of having troops trained on a busy right of way beside experienced civilian workers, the Army policy was to use the commercial railroads to the greatest possible extent. Throughout this training the troops were stationed at conveniently located military installations.[73]

During the first year of the war General Gray, as Manager, Military Railway Service, was the field agent responsible for the supervision of all training of railway troops. Early in 1943 he and his headquarters were transferred to the North African theater and a different arrangement had to be made. Technical training was then placed under the supervision of the Commanding General, New Orleans Port of Embarkation, and a Director of Railway Training was assigned to assist him in fulfilling this responsibility.[74] When the railway function was moved from New Orleans to Fort Francis E. Warren, the office of Director of Railway Training was abolished and direct supervision was assumed by the Office of the Chief of Transportation.[75]

Two divisions in the Office of the Chief of Transportation were concerned with railway troop training—the Military Training Division, which had general responsibility, and the Rail Division, which exercised technical supervision. In the beginning this dual interest resulted in some misunderstanding and duplication of effort, but later the role of each division was more clearly defined.[76] The Rail Division included many officers and civilians with practical railroad experience; it was in direct contact with the commercial railroads on other matters; and it maintained close liaison with the MRS units that were in service overseas. The Rail Division was therefore in an advantageous position to determine the organization and equipment of units that would best meet the theaters' needs, to outline technical training programs to prepare the troops for the tasks they would be called upon to perform, and to determine the extent of the oversea requirements. After the position of Director of Railway Training was discontinued, the Rail Division inspected troops during technical training to determine their progress and the effectiveness of the methods used. Late in the war it was authorized to establish an inspection branch, with headquarters in Baltimore, to carry this work forward.[77] The Military Training Division supervised the military training of railway units and replacements and co-ordinated the activation, training, and assignment of these units with the over-all program.

After the usual six weeks of basic military training, headquarters organizations were given eleven weeks of technical and unit training, operating battalions were given fifteen weeks, and shop battalions were given nineteen weeks. Military Railway Service units were exempted from the ASF preactivation plan that was placed in effect in the spring of 1944, and, instead of going through a period of individual

[73] OCT Cir 49, 5 Apr 43, sub: Tng Ry Trs; Memo, Rail Div for Hist Unit OCT, 16 Sep 44, OCT HB Tng Div Units Rail. Some base depot companies received their technical training at the Marietta Holding and Reconsignment Point.

[74] OCT Cir 49, 5 Apr 43.

[75] TC Cir 35-4, revised 6 Dec 44.

[76] Memo, Col Hodson for Gross, 21 Apr 43, sub: Responsibility for Mil Pers Activities and Tech Tng Pertaining to the MRS, OCT HB Rail Div Misc.

[77] TC Cir 5-20, 6 Jun 45.

technical training before units were activated, MRS troops took all their technical training as units. This arrangement recognized the fact that most of the men assigned to railway units had had the equivalent of basic technical training as railroad employees, and that their chief need was for unit training to prepare them to undertake military railroading as well-knit organizations.[78]

Until 1944, MRS units were composed almost entirely of personnel with railroad experience. Thereafter it was necessary to complete the units with a considerable percentage of inexperienced enlisted men, although most officers still had a railroading background. After taking responsibility for the Military Railway Service, the Chief of Transportation naturally was desirous that all experienced railroaders inducted under selective service should be made available to him. Time was required, however, for the Transportation Corps' interest in these men to become generally understood at induction stations, reception centers, and replacement training centers, and many selectees who would have been of great value as railroad troops were assigned to other services.[79]

The Military Railway Service established an excellent record in the oversea areas where it operated. Some units naturally were more proficient than others, but the general level was high. This success may be attributed chiefly to the fact that a large proportion of the officers and enlisted men had been railroaders in civilian life, and the further fact that most units were sponsored or trained by large American railroads. These circumstances contributed not only to technical proficiency but also to *esprit de corps.* Not all units could be sponsored by railroads, because as the war progressed the carriers came to the point where they could no longer give up the large numbers of men required for operating battalions and shop battalions. The Chief of Transportation then made "affiliation agreements" with individual railroads covering units whose personnel had been drawn from various sources.[80] In addition to good training, this arrangement provided the lift to morale that came from identification with an important rail line.

Crews for Small Boats and Amphibious Trucks

During the early part of the war civilian crews for small boats, like crews for the transports the Army operated, were trained at the ports of embarkation. By 1943, however, the calls from the theaters for crews to operate the vessels required for their harbor, coastwise, and interisland services had become so heavy that the port commanders could no longer be expected to carry the training load. Also, there was a growing demand for military crews, particularly for vessels to be used in the forward areas. At about the same time the recently developed 2½-ton amphibious truck, labeled DUKW during the experimental period and commonly called the "duck," was placed in production.

[78] Rpt, Mil Tng Div, Jan–Jun 44, p. 6, OCT HB Tng Div Rpts. For the training program under the Chief of Engineers, see Memo, C of Mil Ry Br for CofT, 19 Nov 42, OCT HB Rail Div MRS.

[79] Wardlow, *op. cit.*, p. 65.

[80] Memo, Gross for Somervell, 20 Jan 44, sub: Current and Anticipated Problems, problem 9, OCT HB TC Gen Misc. The sponsorship and affiliation of MRS units that completed training during the period July 1943–June 1945 is shown in Rail Div Rpts, FY 1944, pp. 7–8, FY 1945, pp. 5–6, OCT HB Rail Div Rpts.



TRAINING TROOPS FOR THE MILITARY RAILWAY SERVICE. *Replacements for railway operating battalions repair trestle at Lake Ponchartrain, Louisiana (above). Members of railway shop battalion put on side rod in repair shop at Bucyrus, Ohio (below).*



This vehicle was quickly found useful in the Pacific for moving cargo from ships at anchor to dumps on or back of the beaches, and in the invasion of Sicily it proved its value in assault operations. The Army increased its original order and decided to place military crews on this type of equipment when it was used overseas. During hostilities the Chief of Transportation trained forty-six harbor craft companies and five separate harbor craft crews, with a total of 12,731 officers and enlisted men; he trained fifty-one amphibian truck companies and three headquarters detachments, totaling 9,395 officers and men. Some additional units were activated and trained overseas. *(See Table 36.)*

Military crews for the Army's small boats—that is, vessels up to 200 feet in length—were activated and trained as harbor craft companies, a company providing personnel for a number of crews. The first harbor craft units were based on a Quartermaster Corps table of organization for aviation rescue companies. After study of the types of vessels being built by the Chief of Transportation for the theater commanders and the types being acquired overseas, the Water Division and the Military Training Division developed tables of organization for a variety of crews. These tables were published in August 1943.[81]

The first harbor craft companies were activated early in 1943 and trained at the Charleston Port of Embarkation, which was not carrying as heavy a traffic load as most of the other ports. Basic military training at first occupied four weeks, but was soon extended to six; basic technical training and unit training were given in nine weeks. After completion of this training the troops were sent to more active ports for advance training and actual experience in operating various types of vessels. The latter arrangement was of unquestionable value, but the desired results were not always achieved, sometimes because the ports were too busy to give the trainees adequate attention and sometimes because the crews had to be dispatched overseas soon after the completion of their basic training.[82]

The summer of 1943 brought such heavy requests from the Southwest Pacific Area for small boat crews that new training arrangements had to be made.[83] A similar situation existed with respect to amphibian truck companies, and it was decided that these two types of units could be trained at the same installation. A survey of possible sites was made, and in September 1943 the Chief of Transportation, somewhat against his better judgment, agreed with ASF headquarters on the use of Camp Gordon Johnston at Carrabelle, on the Gulf coast of Florida.[84] As already stated, the activity was placed under the control of the Commanding General, Fourth Service Command. The Chief of Transportation was responsible for the establishment of training doctrine, programs, and quotas, and for inspections. As a general rule, troops were to receive their basic military training at the unit training center at New Orleans before being sent to Carrabelle for technical training.

[81] T/O&E 55-500, 17 Aug 43, which included many types of small units, is discussed below, p. 451.

[82] Rpt, Mil Tng Div, Feb 45, sub: Tng of Units, pp. 15–40, OCT HB Tng Div Rpts.

[83] Concerning the over-all problem of manning small boats and the use of military, civilian, and Coast Guard crews, see Wardlow, *op. cit.*, pp. 255–61.

[84] Memos, CofT for Dir Mil Tng ASF, 3 Jun 43 and 16 Jun 43, included as Ex 46 and 47 in Rpt, Mil Tng Div, Jan–Jun 43; Rpt, Mil Tng Div, Quarter Ending 30 Sep 43, p. 2 and Ex 3, OCT HB Tng Div Rpts; AG Memo 322 (23 Sep 43), 27 Sep 43, sub: Estab ASF Tng Center.

At Camp Gordon Johnston the technical training period for harbor craft companies was originally eleven weeks, of which eight were devoted to basic technical training ashore and three to unit training afloat. In the spring of 1944 unit training was extended to six weeks, making a total of fourteen weeks. The training ashore was organized to develop twelve types of administrative specialists and eighteen types of technical specialists. During the period afloat each member of the trainee crew worked alongside the corresponding member of the trainer crew, and toward the end the trainee crew handled the vessel completely. The basic problem at Camp Gordon Johnston was to develop competent technical specialists in eight weeks from men wholly unfamiliar with marine equipment. Lack of officers with marine experience was a particularly acute problem. Since the crews were small, the proportion of officers to enlisted men was unusually high. The training center drew heavily on the Transportation Corps School for officers, but no matter how thorough the schooling, it was not an adequate substitute for actual experience at sea.

The amphibious truck was a new type of equipment and the training of troops to handle it was a pioneer undertaking. Since the Transportation Corps had had an active part in the development of the DUKW, it was well aware that a specialized type of training would be needed by those who operated and those who maintained this vehicle. The first such training was undertaken in January 1943 at Fort Story, Virginia, under the supervision of the Commanding General, Hampton Roads Port of Embarkation. In March the activity was transferred to the control of the Charleston Port of Embarkation, which had more housing than was needed for transient troops and also had suitable beaches at Sullivan's Island near Fort Moultrie. The Amphibious Vehicle Training School at Charleston had a capacity of 350, and the plan was to give three weeks of specialized training to officers and enlisted men who had already had basic military training, were experienced vehicle drivers, and were able to swim.[85]

It was soon evident that this program would fall far short of the requirements in the number of men trained, their technical proficiency, and their military qualifications. The period of technical and unit training was then extended to seventeen weeks, and in June the Chief of Transportation recommended the establishment of a large center where amphibian truck companies, as well as harbor craft companies, could be trained. Camp Gordon Johnston was favored by ASF headquarters and training began there in December 1943. The Charleston Port of Embarkation continued to operate the Amphibious Vehicle Training Center (formerly School) until the summer of 1944.[86]

Since amphibian truck companies might be used in assault operations or in resupply service in forward areas, adequate military training was a prerequisite. The minimum period of basic military training was six weeks, and it was hoped that the men received at Camp Gordon Johnston would all meet that qualification, but frequently this was not the case. If tests showed that the men were slow

[85] Memo, CofT for Dir Tng SOS, 16 Mar 43, OCT 352 Trans; 1st Ind, CG ASF for CofT, 24 Mar 43; Memo, TAG for CG CPE and CofT, 7 Sep 43; last two in AG 322 (3 Sep 43); statement prepared in Contl Div OCT, 12 Oct 43, sub: TC Amphibious Vehicle Tng Center, OCT HB Tng Div Unit Tng.

[86] Memo, Actg Dir Plng ASF for TAG, 26 Jul 44, AG 322 (3 Sep 43).

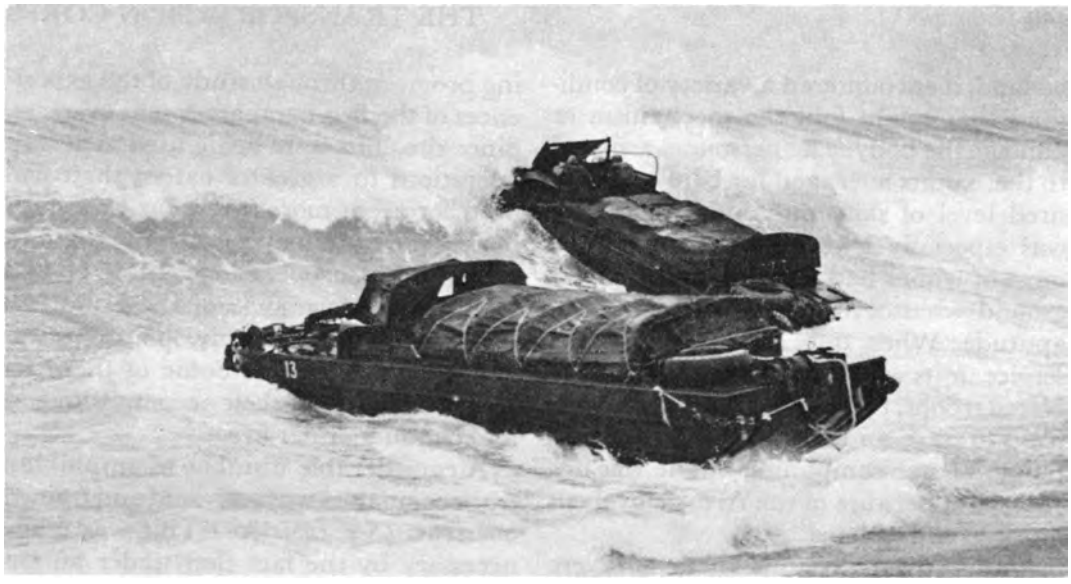
learners and were not qualified after six weeks of training, military instruction was continued. The first two groups received at Camp Gordon Johnston, comprising twelve companies and eight companies, respectively, had been transferred from other services. Their military qualifications were tested on arrival. The first group was given credit for only two weeks of military training, and four additional weeks were prescribed; the second group was given credit for four weeks, and two additional weeks were prescribed. But in each case tests made after completion of the additional period showed that they were not yet ready, and three further weeks of military training were required.[87]

Basic technical training and unit training were laid out for twelve weeks and five weeks respectively, but because of the preponderance of substandard troops the total period was eventually lengthened to twenty weeks. During basic technical training the qualifications of the men were determined by aptitude tests, and they were designated for instruction as drivers, mechanics, and so forth. A training officer was assigned to each company. At the beginning of basic technical training, six vehicles were assigned to each company with one enlisted instructor for each vehicle. Later in the training period additional vehicles were assigned, but the number of enlisted instructors was not increased. During basic unit training one training officer was assigned to each company and one enlisted instructor to each platoon. This training included several two-day continuous ship-to-shore cargo-handling operations, with the troops working in twelve-hour shifts; several two-day problems, involving combined operations with the Navy in the use of LST's; and several bivouacs, during which each company was wholly responsible for its own administration and supply and for the operation and maintenance of its equipment under field conditions.[88]

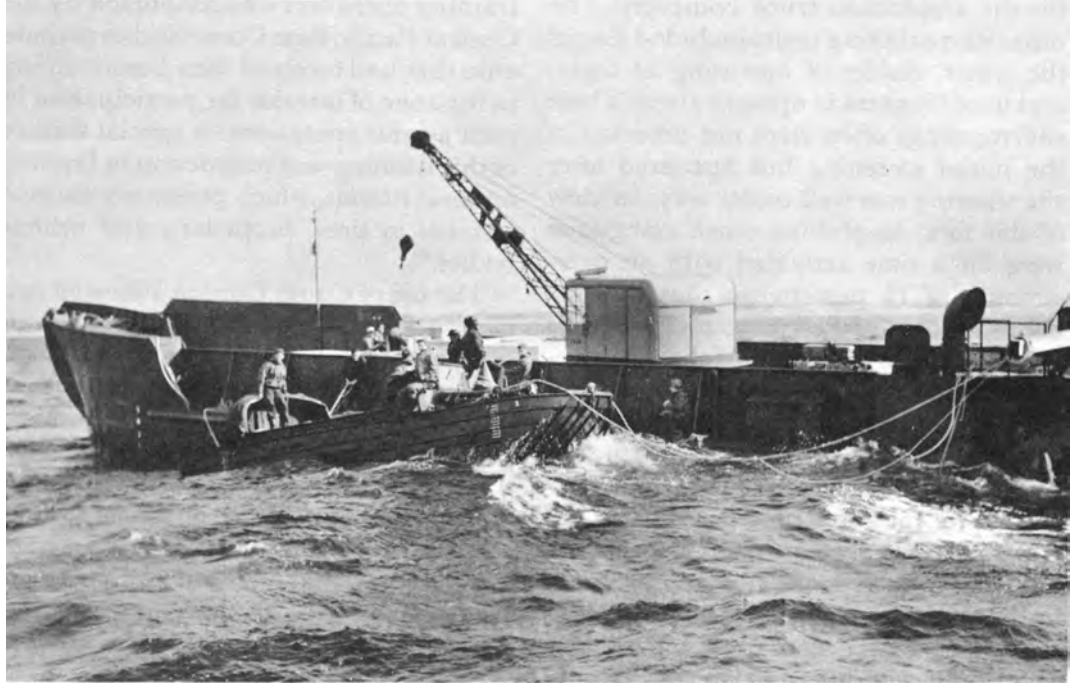
In the beginning the training of amphibian truck companies at Camp Gordon Johnston suffered from the lack of satisfactory equipment. The production of DUKW's was not large and the demand from the theaters was heavy, so that not enough vehicles were allotted to the training center. This deficiency was not overcome until February 1944. The old freighter that was anchored offshore for use in training troops to moor their vehicles alongside and receive cargo from the ship's boom was in such poor condition that it was soon replaced by a barge equipped with Liberty ship cargo gear. The barge did not roll as a ship at anchor would do, and therefore did not afford realistic training in the most difficult part of the operation—that is, receiving cargo alongside a vessel at anchor in an open roadstead. There also was a scarcity of replacement parts so that maintenance of the vehicles was difficult.[89]

The problem of turning out competent amphibian truck companies was intensified by two circumstances—the degree of technical skill and judgment required for the proper operation and maintenance of this new vehicle, and the unsatisfactory quality of the troops assigned to these units. The DUKW was a more complicated mechanism than the ordinary land vehicle, it had not been perfected by years of engineering study and development, and it could not take the amount of abuse that the standard Army truck was able to withstand. Operating both in water and

[87] Rpt, Tng of Units, cited n. 82, pp. 50–51.
[88] *Ibid.*, p. 52.
[89] OCT HB Monograph 26, pp. 71–72.



AMPHIBIAN TRUCK COMPANY TROOPS IN TRAINING. *DUKW's practice entering a heavy surf (above); a DUKW in choppy water receives cargo over the side of a training barge (below).*



on land, it encountered a variety of conditions that might foul the mechanism or damage the body. The personnel assigned to these units averaged far below the desired level of skill and initiative.[90] This was especially true of Negro personnel, most of whom had no mechanical background whatsoever and low mechanical aptitude. When it became evident that service units would be made up largely of Negro troops, the Chief of Transportation tried to have an exception made of amphibian truck companies, but he was unsuccessful because of the Army's over-all manpower problems.

Under these circumstances a severe screening process was adopted to eliminate enlisted men who did not have the required intellectual or technical qualifications, or who were otherwise unqualified for the amphibian truck company. The other disqualifying traits included fear of the water, dislike of operating at night, and unwillingness to operate alone. These shortcomings often were not detected in the initial screening but appeared after the training was well under way. In view of this fact, amphibian truck companies were for a time activated with an overstrength of 15 percent, so that replacements for disqualified personnel would be immediately available and the effectiveness of unit training would not be impaired.[91] In 1944, much to the dissatisfaction of the Chief of Transportation, the overstrength was limited to 5 percent.

Despite the unsatisfactory start in the training of amphibian truck companies, caused by the lack of a training program and unsatisfactory personnel and equipment, the results eventually achieved were good. This was due in part to the careful weeding out of unsuitable individuals, and in part to the improvement of the training program through study of the experiences of the first companies sent overseas. Since the units were being used in assault operations to a greater extent than had been foreseen, more attention was given during the training period to the requirements of these operations. In 1944 and 1945 the performance of these units in both assault and resupply operations was generally satisfactory. Some of them received citations for their accomplishments and conduct under fire.

A considerable number of amphibian truck companies was activated and trained overseas. *(See Table 36.)* This was made necessary by the fact that under an enlarged program DUKW's were produced and shipped overseas more rapidly than soldiers could be trained in the zone of interior to man them. Also, an extensive training operation was conducted by the Central Pacific Base Command to prepare units that had received their basic training in the zone of interior for participation in joint assault operations. A special feature of this training was instruction in landing on coral islands, which presented unusual hazards to tires, propellers, and vehicle bodies.[92]

The use of Camp Gordon Johnston as a facility for the training of harbor craft companies and amphibian truck companies, and of replacements for both types of units, involved a number of handicaps. It was designated for this purpose, contrary to the desires of the Chief of Transportation, because it was no longer needed by the Army Ground Forces to train engi-

[90] Memo, Gross for Somervell, 20 Jan 44, sub: Current and Anticipated ASF Problems, Item 5 of atchd list, OCT HB TC Gen Misc.

[91] Rpt, Tng of Units, cited n. 82, pp. 47–50.

[92] TC Journal, issued by Army Port and Service Command, Honolulu, 30 Jun 45, p. 2.

neer special brigades for participation with the Navy in amphibious assault operations.[93] Aside from the fact that the buildings were primitive and not suitable for the accommodation of troops over a long training period, the water facilities were very unsatisfactory. The harbor was small and the channel was narrow, so that only the smaller boats could enter. Vessels too large to enter the harbor were anchored outside, and this meant that considerable time was lost in transporting personnel between the camp and the anchorage. The gulf was nearly always calm, and the troops therefore had no opportunity to become familiar with the problems of operating small vessels and DUKW's in rough water. There was no surf, which was a prerequisite for the proper training of amphibian truck companies.[94]

As noted earlier, the Chief of Transportation was not happy about the arrangement that placed Camp Gordon Johnston under the control of the Commanding General, Fourth Service Command. He believed that the training of Transportation Corps troops should be under his direct control. He felt that this view was particularly valid with respect to harbor craft companies and amphibian truck companies, since these were new types of military units and their training had to be modified from time to time in order to meet conditions encountered overseas. Under these circumstances a direct and intimate relationship between the chief of service and the commander of the training center would have been advantageous. But Army Service Forces headquarters favored placing training activities under the service commands as a matter of general policy, and there was the further consideration that Camp Gordon Johnston was not used exclusively for Transportation Corps troops.

Other Types of Units

The greater part of the Transportation Corps' troop strength was accounted for by the types of units already discussed, but during the course of the war the Chief of Transportation was called upon to organize and train other types that were needed by the commanders overseas for their transportation operations.[95]

Traffic regulation groups (later called traffic regulation units) were needed in the active theaters to insure the prompt and orderly movement of troops and supplies in the communications zone and the economical use of transportation equipment.[96] They were made up of teams specially trained to deal with traffic moving by railway, highway, inland waterway, or air. As a general rule, they functioned under the control of the commanders of base, inter-

[93] When the Army and the Navy agreed in March 1943 that the Navy would thereafter provide amphibious training for ground troops, Camp Gordon Johnston was made available to the Navy, but it did not consider the site suitable. See Study 22, Hist Sec AGF, 1948, sub: The Amphibious Training Center, pp. 10–17, 37–70; Memo, G-3 for CofS, 11 Feb 43, sub: Navy Use of Carrabelle, WDCSA 370.5; agreement reached in conference 8 March 1943, signed by Admiral King and General McNarney, OCT HB Tng Div Units Amph Truck.

[94] Colonel Bunting states that only the boat crews that made long training trips had experience with waves and swells; some DUKW companies were sent to the east coast of Florida to become familiar with operating in the surf. Interv with Bunting, 16 Jun 52, OCT HB Dir Mil Tng.

[95] This brief discussion is based chiefly on Rpt, Training of Units, cited n. 82, pp. 63–66, and OCT HB Monograph 26, pp. 79–82. For numbers trained, see Table 36 above.

[96] TC Pamphlet 19, 12 Sep 44, Traffic Regulation Units.

mediate, and advance sections. The traffic regulation groups that were activated in the zone of interior received their basic military and technical training at New Orleans. Because of the urgency of the need, a considerable number of these units were activated and trained overseas.

Regulating stations performed a function similar to that of the traffic regulation groups, except that they dealt with traffic moving from the communications zone to the combat zone. Their mission was to regulate the flow of supplies from communications zone railheads to the various elements of the forces in the forward areas. They were designated Army Service Forces units, but the table of organization was drawn up by the Chief of Transportation and the units that were activated in the zone of interior were trained under his supervision at New Orleans.

Marine ship repair companies were trained to operate the shops on special repair ships that were equipped and controlled by the Transportation Corps. These vessels moved from place to place in the oversea theaters and performed whatever marine repair and heavy maintenance work was required. Such requirements arose because many of the oversea ports where vessels under Army control were stationed or at which they called to load or discharge cargo had no marine repair facilities, or the facilities were inadequate. Since this type of unit was required first in the Pacific, the early units were activated and trained at the San Francisco Port of Embarkation. Later they were trained at Camp Gordon Johnston. As the result of an arrangement with the Selective Service System, under which drafted shipyard workers were assigned to the Chief of Transportation and then placed in marine ship repair companies, the need for technical training for these units was reduced to a minimum.[97]

Port marine maintenance companies performed a function similar to that of the marine ship repair companies, but they were stationed on shore. For the most part these units received their basic military training at Camp Plauché, and their technical and unit training at Camp Gordon Johnston.

Base depot companies were organized to handle Transportation Corps supplies in the theaters. The need for such troops was first felt by the Military Railway Service, and the first units activated were accordingly trained by American railroads. The organization later was revised and the training was broadened so that the troops were prepared to handle all types of Transportation Corps supplies. Concurrently, it was arranged that the technical training relating to the handling of railway supplies would be given at the Marietta Holding and Reconsignment Point, and that training in the handling of port and marine supplies would be given at the Voorheesville Holding and Reconsignment Point, since these were the principal depots for the respective types of supplies.[98]

The staging area company was not, strictly speaking, a transportation unit, but it was assigned to the Chief of Transportation for organization and training because he supervised the troop staging areas in the zone of interior. These units were intended for use at troop staging areas in the theaters, and mess personnel made up 70 percent of the total. The tech-

[97] TC Pamphlet 28, 14 Dec 44, Marine Maintenance Org, pp. 3–5.

[98] TC Pamphlet 25, 11 Oct 44, Base Depot Co.

nical training of this personnel was given at established schools for Army cooks and bakers.

The floating spare parts depot was the last new type of unit organized by the Chief of Transportation. Such units were placed on vessels that had been specially equipped to serve as supply ships and to issue marine and railway spare parts to forces at the more remote stations in the Pacific. The two units of this type that were activated in June 1945 received their military training at Camp Plauché, and their technical training at the Montgomery Holding and Reconsignment Point, where a Transportation Corps depot was located. Each spare parts ship was equipped with two amphibious trucks and two launches for use in making ship-to-shore deliveries.

During 1943 it was found that the theater commanders were not familiar with the many skills embraced in the Transportation Corps training program, and also that they often required technicians in units of less than company strength. This was particularly true in the Pacific, where the forces were distributed among many widely separated bases and islands. To meet this situation, the Chief of Transportation issued a composite table of organization setting forth more than sixty small units and teams of trained technicians that could be put together and dispatched to the theaters quickly. The publication of this composite table, from which various combinations of technical organizations could be built up, simplified the problem of the theater commander in getting troops to meet his requirements and the problem of the Chief of Transportation in supplying what the oversea commands requested. It also eliminated the waste of personnel involved in ordering larger units than were necessary. The composite table covered five types of headquarters units, five types of mess teams, two land vehicle repair teams, thirteen maintenance and repair teams for marine and rail equipment, three types of stevedoring units, three types of amphibian truck units, four types of depot units, four types of traffic regulation units, two types of operating units for railway trains, eleven types of crews for small boats, and nine types of crews for other marine equipment such as barges, floating cranes, and marine tractors.[99]

In addition to training Transportation Corps troops, the Chief of Transportation trained personnel of other services that he employed in fulfilling his responsibilities. As a general rule, this personnel already had received basic military and technical training, and the Chief of Transportation's task was to prepare them to function as units at the ports and on the troop transports and hospital ships. This training was given chiefly at the ports of embarkation and the period of instruction was short. The types of units and the number of officers and men involved are shown in Table 37.

Cadres, Fillers, and Replacements

The first obligation of the Chief of Transportation, as of other chiefs of services, was to provide trained units to meet the needs of the oversea commanders, but the training of individuals or teams for use as cadres, fillers, and replacements eventually developed into a sizable operation. Cadres were the nucleus around which the green troops of newly organized units were

[99] TC Pamphlet 26, 7 Nov 44, Service Organizations (T/O&E 55-500).

TABLE 37—TROOPS OF OTHER SERVICES TRAINED AT TRANSPORTATION CORPS INSTALLATIONS: 1 AUGUST 1942–1 SEPTEMBER 1945

Service and Type of Unit	Number of Units	Number of Troops			
		Total	Officers	Warrant Officers	Enlisted Men
All Types	816	37,720	3,855	68	33,797
Medical Corps					
Malaria Control Unit	94	1,128	94	0	1,034
Malaria Survey Unit	113	1,469	226	0	1,243
Station Hospital	42	6,135	761	0	5,374
Hospital Ship Complement	32	5,504	544	32	4,928
Hospital Ship Platoon	420	7,980	840	0	7,140
Portable Surgical Hospital	3	111	12	0	99
General Hospital	14	5,814	597	14	5,203
Adjutant General's Department					
Postal Regulating Station	16	496	48	0	448
Replacement Depot	5	1,090	145	10	935
Replacement Battalion	21	2,760	381	0	2,379
Special Service Company	3	363	15	0	348
Base Post Office	8	272	24	0	248
Machine Records Unit	3	126	9	0	117
Finance Department					
Finance Disbursing Section	10	190	20	0	170
Quartermaster Corps					
Fumigation and Bath Company	18	1,548	54	0	1,494
Sterilization Battalion	3	1,959	45	0	1,914
Headquarters and Headquarters Detachment, Quartermaster Truck Battalion	6	132	18	12	102
Headquarters and Headquarters Detachment, Quartermaster Service Battalion	2	30	6	0	24
Laundry Company	1	267	5	0	262
Bakery Company	1	160	5	0	155
Ordnance Department					
Ammunition Company	1	186	6	0	180

Source: 1st Ind, CofT for Hist Div WDSS, 8 Aug 47, Tab 7, OCT HB Tng Div Rpts.

assembled and from which those troops received a certain amount of instruction. Fillers, or filler replacements, were individuals with particular skills who were used to complete understrength units, either before or after they were moved

overseas. Replacements, more precisely known as loss replacements, were needed by theater commanders to replenish units that had been depleted through battle casualties, injuries, sickness, or other causes, and the demand for these troops naturally expanded as the number of Transportation Corps units overseas increased.[100]

Until well into 1943 cadres for port units were provided under the "parent unit" plan. When a port unit was activated, it was given 15 percent overstrength, with the intention that 10 percent would be used as a cadre for a unit to be activated later and that 5 percent would offset normal attrition. The cadre personnel was not selected until late in the training period, and up to that point the men were trained as members of the parent unit. This plan was attended by several problems. The success of the new unit obviously depended to a considerable degree on the quality of the cadre, yet the commander of the parent unit naturally resisted giving up his more competent men. Some commanders went further and tried to use the formation of a cadre as the occasion for getting rid of some of their less desirable personnel. It was found also that, while cadremen might have the desired degree of technical proficiency, they often were poor instructors. An attempt to replace those who proved to be poor instructors resulted in the personnel of the unit being in different stages of training.[101]

The parent unit plan of supplying cadres for port organizations was necessary during the first year of the Transportation Corps' existence because the Corps had no adequate plan for training loss replacements. Such a plan got under way in the spring of 1943, and after July of that year cadres were no longer taken from units but from personnel that had exhibited suitable qualifications during training as replacements. The latter plan worked out much more satisfactorily.

The experience with cadres for amphibian truck companies, harbor craft companies, and other types of Transportation Corps organizations was much the same as with port units. Until replacement training centers were established, units that were completing training were required to provide cadres for units that were being activated. After replacement training centers were set up, cadres were selected from personnel undergoing training at those centers.

The selection of cadres for rail units was relatively simple because the personnel consisted largely of experienced railroaders. When these men were inducted into the Army, they were sent immediately to the training center where rail units were activated. There they were formed into provisional battalions for messing and housing, while the records of their civilian experience were being studied. On the basis of this study the best qualified men were designated as cadremen to be assigned to new units as soon as the activation orders were received. This method was employed throughout the war. It naturally did not apply to units that were sponsored by particular railroads and were made up of personnel supplied by those roads.

The amount of training required by fillers depended on the stage of the units' training at which they were introduced. The most important phase of the problem was the filling of vacancies in units that had completed training and were about to sail for oversea stations. Troop organiza-

[100] The discussion in this section is based largely on Rpt, Mil Tng Div OCT, Jan 45, sub: Tng of Repl, Fillers, and Cadres, OCT HB Tng Div Rpts.

[101] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 126–38, OCT HB PE Gen.

tions often arrived at the port staging areas with less than full strength, and while at the staging areas members were likely to be withdrawn on account of illness, physical defects, or other causes. The port commanders were responsible for filling all vacancies before the units sailed. To this end they maintained pools of enlisted personnel covering a wide range of military occupational specialties, and gave these men such additional training as the port facilities would permit. To a large degree the pools were made up of men left behind by units that had sailed earlier and who in the meantime had recovered from illnesses, satisfied requirements regarding the firing of weapons, completed periods of punishment, or otherwise removed disqualifications. The quality of these men was below average, and, as casuals who had spent abnormally long periods at the staging areas, their morale was likely to be low. But since fillers usually constituted a small percentage of the strength of a unit, their shortcomings were not difficult to overcome or to absorb.[102]

A replacement training center at New Orleans, authorized in February 1943, was the first and largest such facility for Transportation Corps troops.[103] It had an initial capacity of 3,000 trainees, and this capacity was increased to more than 5,000 as the demand for replacements mounted. The principal job was to train replacements for port units. This training included four (later six) weeks of basic military training, and nine (later eleven) weeks of basic technical and team training. The center at New Orleans also gave basic military training to troops that were to receive technical training as replacements for rail units, amphibian truck companies, and harbor boat companies at other centers. Its total output was 26,002. A replacement training center set up in June 1944 at Indiantown Gap turned out 1,362 Negro replacements for port companies.

Camp Gordon Johnston was used for replacement training, as well as for unit training, for amphibian truck companies and harbor craft companies beginning in December 1943. Largely, but not exclusively, the basic military training of these troops was given at New Orleans, so that the center at Camp Gordon Johnston could devote itself mainly to technical and team training.[104] The output of enlisted replacements at this center was 2,705.

The need for technically trained replacements for railway units was first met by two so-called railway schools, located at Camp Claiborne, Louisiana, and Camp Shelby, Mississippi.[105] This training activity was concentrated at Camp Claiborne in January 1944, and some months later it was transferred to Fort Francis E. Warren, Wyoming. From late 1944 onward the latter station provided all military and technical training for railway troops except the technical unit training that was given on commercial railroads.[106] The combined output of rail replacements at the three installations was 6,634.

[102] The port commanders were responsible for filling vacancies in all units being staged, not in Transportation Corps units alone, and the size of the pool depended on the total number of troops staged.

[103] AG Memo 320.2 (2-18-43), 20 Feb 43, sub: Estab TC RTC.

[104] Memo, CofT for Dir Mil Tng ASF, 12 Jul 44, sub: Rev Loss Repl Req, OCT 320.3 Gen.

[105] 1st Ind, CG ASF for CofT, 11 Apr 43; Memo, CofT for Dir Mil Tng OCT, 9 Dec 43; both in OCT 352 Trans.

[106] AG Memo 354.1 (4 Jan 44), 7 Jan 44, sub: Estab of TC RTCs; AG Memo 352 (1 Jan 44), 6 Jan 44, sub: Discontinuance of Ry Sch Camp Shelby; AG Memo 352 (3 Jan 44), 8 Jan 44, sub: Discontinuance of Ry Sch Camp Claiborne; ASF Memo SPX 353 (19 Oct 44), 20 Oct 44, sub: Capacities of ASF Tng Centers.

The replacement training centers at New Orleans and Camp Gordon Johnston were located at installations where there were already unit training centers for Transportation Corps troops. Under the plan of preactivation training that the Army Service Forces instituted in April 1944, the independent operation of replacement training centers and unit training centers was discontinued, and troops received basic military training and basic technical training before being assigned to units or to teams for training as replacements. After this plan went into effect the team training of Transportation Corps replacements covered a period of three weeks, during which the men were kept in bivouac under conditions approximating those that they would encounter in the field. At this stage all troops received instruction in preventive maintenance, safety precautions, night operations, field sanitation, and protective measures against air and chemical attack; the specialists also received further training in their respective specialties. For reasons that have been stated, the preactivation plan was not applied to the training of railway troops.

The preactivation training plan simplified the problem of providing competent cadres and replacements, but it did not in itself meet the most difficult phase of that problem—the shortage of good noncommissioned officers. In view of that shortage, ASF headquarters directed that all installations where replacements were trained set up leadership courses for the development of noncommissioned officers. The participants were selected from among the trainees who had shown the best leadership qualifications; the number was not to exceed 3 percent of the established capacity. The nine-week course was broken down into a three-week period for theoretical training, and a six-week period of practical application with the leadership trainees acting as corporals.[107]

The Transportation Corps was late in setting up an adequate replacement training program. The first such program was authorized in February 1943 and started two months later at New Orleans.[108] Up to that time troops for replacements had been obtained wherever they could be found, with the ports of embarkation providing the largest number. The obvious explanation is that the entire training program under the Chief of Transportation was late in getting started because the Transportation Corps itself was not created until the end of July 1942, and because its training responsibility was not fully defined until November 1942. As has been pointed out, the pressing need in the beginning was for troop units with which to fill requisitions from the oversea commands, and the training of replacements had to wait until that basic requirement had been met.

Civilian Schooling for Specialists

Under arrangements made by the Chief of Transportation, 1,000 enlisted men and 65 commissioned officers were given the benefit of special technical training at schools operated by industrial concerns or other private institutions. During the courses the men had the opportunity to work with equipment that was not available at the Transportation Corps training

[107] Memo, CG ASF for CofT, 15 Mar 44; Memo 11, TC RTC, New Orleans Army Air Base, 20 Apr 44, sub: Estab Leadership Tng Course; both in OCT 352.11 Camp Plauche; ASF Cir 150, 20 May 44, Sec. I.

[108] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 58, OCT HB PE Gen.

centers and under the direction of highly skilled instructors.[109]

Men were selected to attend these courses after they had completed basic military training and had demonstrated technical aptitudes. Since some would be required to instruct other enlisted men after returning to their units and others would be used as instructors at the training centers, their ability as instructors and their leadership qualifications were important.

The amphibious truck—a type of equipment that had not been used previously for either military or commercial purposes—was unfamiliar to all the men when they were first assigned to amphibian truck companies, and expert instruction was necessary to enable them to perform satisfactory maintenance and repair work on these vehicles. This need was accentuated by the large number of men assigned to such units who had had no experience whatsoever with automotive mechanics. The General Motors Corporation, which manufactured the DUKW, offered a course in its War Products School that met the Chief of Transportation's requirements. Beginning in October 1943, one maintenance officer and a number of enlisted mechanics from each DUKW company were sent to this school. During the next nine months 32 officers and 270 enlisted men completed the three-week course.

During World War II the Army began using diesel locomotives for the military railways in certain oversea areas. The number of railroaders inducted into the Army with adequate training in the maintenance and repair of these locomotives was far short of the need, and neither the equipment nor the instructors for this training were available at the Transportation Corps training centers. The Chief of Transportation therefore arranged for two builders of diesel locomotives to provide the necessary instruction. These were the Whitcomb Locomotive Company, Rochelle, Illinois, and the Buda Company, Harvey, Illinois. In the beginning two weeks were spent at one plant and one week at another, but later these courses were consolidated into one of three weeks. This training, which began in May 1944 and ended the following November, was provided for 25 officers and 432 enlisted men.

Specialists in marine diesel and gasoline engines were required in large numbers by the harbor craft companies, and an inadequate number of men with civilian experience in these fields was available to the Chief of Transportation. As in the case of the DUKW units, the answer to the shortage was to provide training above the training center level for a limited number of carefully selected soldiers. This training was given at three locations: Chrysler Corporation, Detroit, Michigan; Cummins Engine Corporation, Columbus, Indiana; and Hemphill Diesel Engine School, Los Angeles, California. The period of instruction varied from one week to five weeks. Between January and July 1944 this special instruction was given to 8 officers and 148 enlisted men.

Among the specialists required for the port maintenance and ship repair companies were boilermakers, riveters, and steam fitters, for which the Army did not have adequate training facilities. Such companies were trained at Camp Gordon Johnston, Carrabelle, Florida, and ar-

[109] Section based on Rpt, Mil Tng Div, Jan 44, Schooling of Enlisted Men, and 1st Ind, CofT for Hist Div WDSS, 8 Aug 47, Tabs 3 and 4; both in OCT HB Tng Div Rpts.

rangements were made for courses in these specialties, which were given at the Duval County Vocational School, Jacksonville, Florida, to be available to men sent over from Carrabelle. The instruction lasted six weeks in the case of riveters, and eight weeks in the case of boilermakers and steam fitters. Fifty men completed each course, all during the period July–September 1944.

Since the men who took these specialist courses were selected with careful regard for their potentialities, had the advantage of better equipment and more experienced instructors than were available at the training centers, and passed the knowledge they acquired on to other soldiers at the training centers and in the units to which they belonged, the value of this instruction to the Transportation Corps cannot be measured simply by the number of the men who received it. It was an arrangement that had cumulative benefits.

Final Inspection of Units

Units were not sent overseas until they had been subjected to a final inspection by The Inspector General. The Inspector General's reports took into account personnel strength, completeness of equipment, and status of training, and were based on minimum requirements established by the Army Service Forces. Unit commanders made semimonthly status reports that were expected to give an accurate picture of the condition and progress of the troops so that the commanders of the training stations and the Chief of Transportation could follow the progress of each unit and take steps to overcome any apparent deficiencies.[110]

The Army Service Forces headquarters did not commit units to overseas service unless the status reports indicated that they would be ready, yet these units frequently failed to pass The Inspector General's examination. This situation reached a point in the summer and fall of 1943 that led the ASF commanding general to require all technical services to take drastic action. Currently The Inspector General was rejecting more than a third of the ASF units committed.[111]

The number of Transportation Corps units rejected in the final inspection had not been outstandingly large, but the Chief of Transportation took measures to improve the situation. He established an inspection branch in his Military Training Division to examine units in training at centers under the control of the service commands, to follow their progress, and to make suggestions for overcoming deficiencies.[112] He also admonished the commanders of ports of embarkation, under whose supervision many of the port and marine units completed their training, regarding their responsibilities in this matter. Despite the demand for units in the theaters, the port commanders were advised to guard against too optimistic status reports, since such reports encouraged too early commitment.[113]

[110] Memos, CofT for PEs, 27 Sep 42, 22 Oct 42, 1 Apr 43, and 27 Nov 43, OCT HB Mil Tng Div Status Rpts; ASF Memo S 350-37-43, 30 Apr 43; ASF Cir 168, 30 Dec 43.

[111] Memo, CofT for PEs, 26 Jul 43, sub: Adverse IG Rpts, OCT 370.5 POM; Memo, Styer for Dir of Opns ASF, 16 Aug 43, sub: Unsatisfactory Condition of ASF Units, ASF CofS file, Dir of Opns; Memo, TIG for DCofS WDGS, 13 Oct 43, sub: Readiness of Units OCT 370.5 (Readiness Dates); Memo, Styer for CofT, 28 Nov 43, sub: Tng of T/O Units, OCT 353 Gen.

[112] Rpt, Mil Tng Div, Quarter Ending 31 Dec 43, p. 13, OCT HB Tng Div Rpts.

[113] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 61, OCT HB PE Gen.

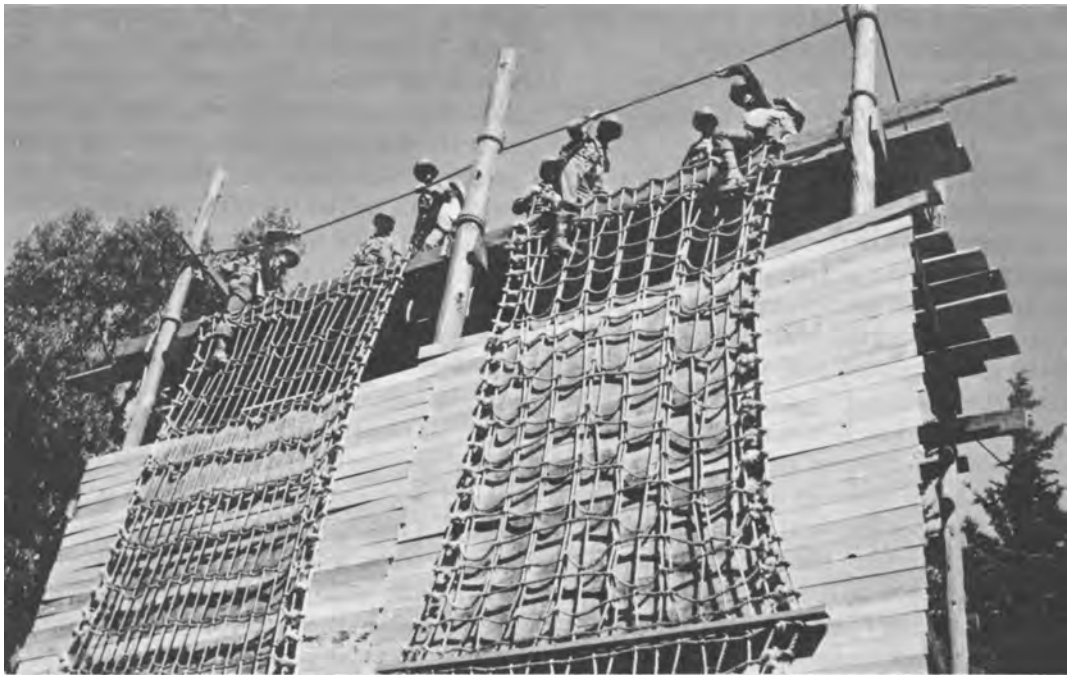


PORT COMPANY TROOPS *training for assault operations.*

Inspections during the first quarter of 1944 resulted in twelve out of nineteen Transportation Corps units inspected being found not ready. This apparently bad record can be explained on the ground that many units had been ordered to the European theater, in response to the theater's urgent requests, before they had completed their training programs. Later, the Army Service Forces adopted a different basis of judgment, and when units were ordered overseas at their "current status of training" they were considered "not ready" only when they failed to meet the requirements of the movement orders. On the new basis the record for the year 1944 showed only 12 Transportation Corps units rejected out of a total of 102 inspected. This rate of rejections (11.8 percent) was slightly higher than the average for all ASF units (10.1 percent). During the last quarter of 1944 and the first five months of 1945, no Transportation Corps units were rejected by The Inspector General. By that time the extreme pressure for the delivery of units to Europe had disappeared and training programs did not have to be cut short.[114]

One aspect of the difficulty of having units ready to meet oversea requirements was the uncertainty of the Transportation Corps troop basis. The Chief of Transportation complained of the failure of higher authority to authorize increases in the troop basis promptly enough to enable him to spread the activation dates, avoid

[114] Min of ASF Staff Conf, 13 Apr 44, pp. 1–3; ASF MPR, 31 Dec 44, Sec. 9, Training, p. 15, and 31 May 45, p. 13.



TROOPS PRACTICE GOING OVER THE SIDE *on a debarkation net.*

peaks and valleys in the training load, and so insure best training results.[115] This was a problem that he shared with the other technical services. The quarterly troop basis was set up by the Chief of Staff after consideration of the requests submitted by all branches of the Army. Against the background of a general manpower shortage, requests of the AGF and the AAF were in a favored position as compared with those of the ASF. ASF headquarters had to distribute its troop allotment among the several technical services, and it was always a case of distributing a deficit. Under these circumstances and in view of the unpredictable extent of oversea requirements for some types of units, it is not surprising that the Chief of Transportation's frequent requests for an increased troop basis should have met with delays and that the increases should have come unevenly.

It is impossible to judge how far the Chief of Transportation's experience with adverse reports on the readiness of Transportation Corps units can be attributed to the fact that many of the units received their training at installations that were not under his direct control. But to the end of the war he held the opinion that his inability to deal directly with the commanders of those installations concerning training programs and methods, and to order immediate changes in the training of particular units when his inspectors

[115] Memo, CofT for CG SOS, 31 Aug 42, OCT 322 Activation of Units; Memo, Gross for Somervell, 20 Jan 44, sub: Current and Anticipated ASF Problems, Item 7, OCT HB TC Gen Misc.

found that such changes were desirable, was a definite disadvantage.

Review of Training Problems

Two circumstances affected practically everything undertaken by the Chief of Transportation in the field of training—his late start in the activity, and the steady broadening of his responsibilities during the first year of the war. As Colonel Scofield later pointed out, when he came to the Transportation Corps at the beginning of 1943 it had no tables of organization or tables of equipment of its own but was using those of other services.[116] There were no up-to-date technical manuals for use as training guides. Mobilization training programs were still to be worked out or brought into line with the requirements of the theater commanders.[117] A plan of collaboration between the Military Training Division and the several operating divisions in establishing appropriate training doctrine and methods was yet to be developed. The training organization in the Office of the Chief of Transportation was still in its infancy, and the establishment of training centers for the various types of Transportation Corps units and replacements was not yet complete. Yet requests were already pouring in from the oversea commands for greater numbers of units than could be promptly supplied, and it was inevitable that those requests should increase. The Chief of Transportation, therefore, began his major training effort with a heavy backlog and several handicaps.

The scarcity of officers who were competent to guide the troops in the performance of their technical tasks, and at the same time provide capable military leadership, was a keenly felt handicap. The Chief of Transportation's organization suffered particularly because it had no peacetime background and its personnel had been assembled from many sources after the war began. At a conference of his principal officers at New Orleans in January 1944, when training was one of the main topics for discussion, General Gross called attention to reports from overseas indicating that too many officers with Transportation Corps units were failing to fulfill their responsibilities, and urged that officers who did not display the proper qualifications during training be eliminated promptly. He warned that training would never make a leader out of a man who did not have innate officer qualities of character, and that passing such men down from unit to unit would only delay the day when they would be sent overseas to discredit the Transportation Corps.[118] The demand for officers was such that this policy could not be fully enforced.

The lack of technical qualifications could be overcome to a certain extent by longer training, and the extension of the courses at officer and officer candidate schools and the lengthening of the unit training periods were helpful. But actual experience in transportation or an allied field gave an officer a competence that no amount of training could equal. The Chief of Transportation therefore felt that the restriction placed on the commissioning of technicians from civilian life by the War

[116] Remarks in Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, p. 60, OCT HB PE Gen.

[117] In the above discussion of the several types of units no attempt has been made to account for all T/O&E's, MTP's, and TM's; these are dealt with in periodical reports of the Military Training Division, filed in OCT HB Tng Div Rpts; see also list of T/O&E's, 1 Nov 45, OCT HB Tng Div T/O&E.

[118] Min of Port Comdrs Conf, New Orleans, 11–14 Jan 44, pp. 55, 57, 73, OCT HB PE Gen.

Department, beginning in 1943, was a severe blow to his organization.

The Chief of Transportation protested repeatedly because of the quality of the enlisted personnel that he was given to train. There were slow learners and very slow learners among the white troops, but there was a much larger percentage of them among the Negro troops that made up most of the port companies and amphibian truck companies activated after 1942. A survey of 1,000 Negro troops received at the unit training center at New Orleans in the summer of 1944 disclosed that only 10.7 percent had completed elementary school; 52.2 percent were in grade IV, and 42 percent were in grade V, as rated by the Army general classification test.[119] Mechanical aptitude tests produced equally unsatisfactory results since so large a proportion of the men had had no previous experience with machinery. The introduction of a special mobilization training program for substandard port and amphibian truck companies, with a lengthened period of technical training, was helpful but did not wholly offset the basic disadvantage.[120]

Negro units had unusually high rates of attrition, which were due mainly to AWOL offenses and venereal disease. In view of the attrition rate during training, the Chief of Transportation sought to obtain reauthorization of 15 percent overstrength for these units at the time of their activation, but he was not successful because of the manpower shortage, which in 1944 was being severely felt by all branches of the military service.[121]

Reports from the theaters indicated that port units and the several types of marine units were often required to operate together, but they had had no training for combined operations when they arrived overseas. Since the various types of units received their training at different installations, the deficiency could not be readily corrected during the war, although a proposal to that end was made early in 1944. In May 1945 the Chief of Transportation recommended that, in the postwar Military Establishment, Fort Eustis, Virginia, be assigned to the Transportation Corps for use as a combined training center. This was done early in 1946, and later that year the Transportation Corps School also was transferred to Fort Eustis, which then became the center for all types of Transportation Corps training activities.[122]

The training of railway units gave the Chief of Transportation less concern than the training of other major types of units, because so large a percentage of both officers and men in rail units had had experience in the railroad industry, and because the technical training of most of the units was accomplished on the commercial railroads. The plan of having particular railroads sponsor, provide personnel for, and train certain units proved so advantageous that it was extended to other branches of the transportation industry early in the postwar period.

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[119] Memo, Col Frederick W. Huntington for CG NOPE, 21 Aug 44, sub: Test Scores, OCT 353 Camp Plauché; concerning similar test at Indiantown Gap UTC, see Rpt, Tng of Units, Feb 45, p. 6, OCT HB Tng Div Rpts.

[120] Rpt, Mil Tng Div, to 31 Dec 43, p. 5 and Ex 7 and 8, OCT HB Tng Div Rpts.

[121] Memo, CGs AAF, AGF, ASF, 20 Jan 44, AG 320.2 (15 Jan 44); Memo, Gross for Somervell, 20 Jan 44, sub: Current and Anticipated ASF Problems, Item 8 on atchd list, OCT HB TC Gen Misc; Memo, TAG for CGs SvCs, 25 Mar 44, sub: Overstrength Engr and TC Units, AG 320.2 (22 Mar 44).

[122] Wardlow, *op. cit.*, pp. 133–34; Rpt, Mil Tng Div, FY 1945, p. 4 and Ex B; Rpt, Mil Tng Div, Jul 45–Aug 46, pp. 39–40, 46, 52; last two in OCT HB Tng Div Rpts.

CHAPTER VII

The Supply Program and Its Execution

The theme of the Transportation Corps supply story is very much like that of the training story and some others—a theme of handicaps resulting from a late start and of a laborious effort to overcome those handicaps. The late start resulted chiefly from the fact that the Transportation Corps was a new organization, and that it acquired its supply functions after the war was already under way. The effort to attain an effective performance was laborious because the Chief of Transportation had to assemble his staff after the field of technical personnel had been well combed by other branches of the armed forces and by rapidly expanding industries, and because he had to start almost from scratch in developing effective plans and procedures for the establishment of programs, the placing of contracts, the control of production, and the improvement of designs.[1]

The need during peacetime for an integrated Army transportation service, which would make carefully considered plans for emergencies and provide a nucleus of trained officers ready to carry those plans into effect, had been clearly foreseen by those who were responsible for military transportation in World War I; but Congress had disregarded recommendations to that end and had discontinued the Transportation Service that had been built up during 1918–19.[2] The unfortunate results of that decision were nowhere more glaringly apparent than in the difficulties that the Chief of Transportation in World War II encountered in fulfilling his supply responsibility.

Scope of the Responsibility

During the prewar emergency responsibility for the procurement of marine equipment and materials-handling equipment for water-front use rested with the Transportation Division in the Office of The Quartermaster General, but actual procurement was accomplished chiefly by the ports of embarkation. Procurement authority covering equipment for military and utility railways was in the hands of the Chief of Engineers, although The Quartermaster General established the requirements for utility railroads. The Chief of Transportation took over responsibility for the design and procurement of marine and materials-handling equipment when his office was established in March

[1] This chapter draws heavily on OCT HB Monograph 28, prepared in consultation with Transportation Corps supply officers immediately after the war.

[2] Wardlow, *The Transportation Corps: Responsibilities, Organization, and Operations*, pp. 34–35.

1942, and at the same time absorbed The Quartermaster General's Transportation Division in his headquarters organization. Responsibility for the design and procurement of railway equipment remained with the Chief of Engineers until November 1942, when it was transferred to the Chief of Transportation. At that time some technical personnel was transferred, though the number was not as large as the Chief of Transportation had expected.[3] Responsibility for the procurement of marine, rail, and materials-handling equipment carried with it responsibility for the procurement of the supplies and spare parts that were necessary for operation and maintenance. Some minor items were added to the Chief of Transportation's procurement responsibility as the war progressed.

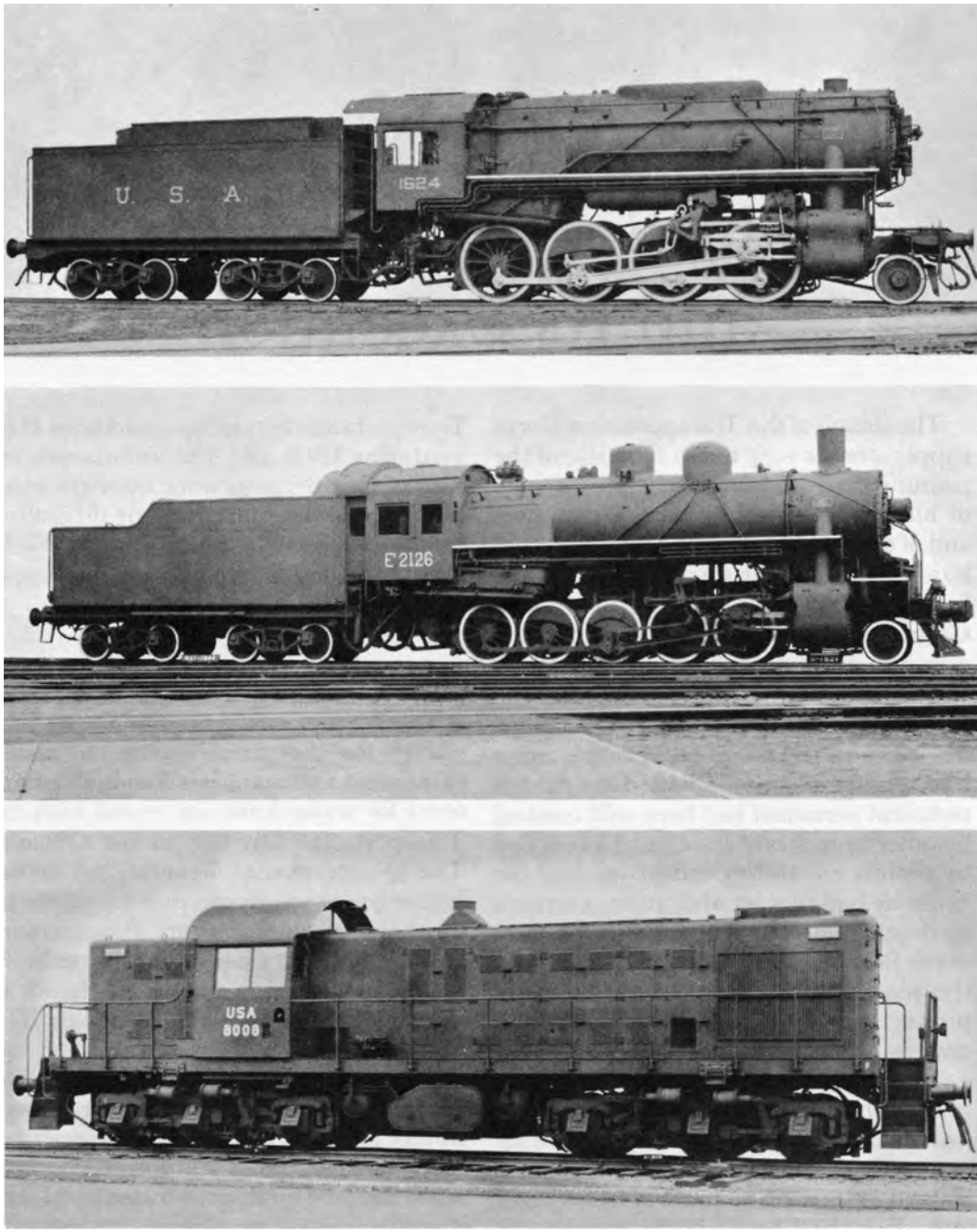
There were a number of exceptions to this general division of supply responsibility. The Chief of Engineers continued to procure the floating equipment required for his work on rivers, harbors, and fortifications, and he procured small assault and reconnaissance boats required by his tactical troops. The Chief of Engineers prepared the specifications and provided the funds for barrage balloon equipment and certain bridge and wharf construction equipment, which the Chief of Transportation procured and inspected. A similar division of responsibilities was made between the Air Forces and the Chief of Transportation in regard to aircraft crash rescue boats. In September 1942 the procurement authority for materials-handling equipment was divided by SOS headquarters between the Chief of Engineers and The Quartermaster General, but locomotive cranes became a responsibility of the Chief of Transportation when he took over the military railways, and he was subsequently charged with the procurement of gantry cranes and stiff-leg derricks for port operations.[4] In the early months of the war the Chief of Transportation procured several types of landing craft for amphibious operations, but in September 1942 the Joint Chiefs of Staff agreed that thereafter such craft would be procured by the Navy. Under the Merchant Marine Act of 1936 the Maritime Commission was charged with the upbuilding of the American merchant marine, and accordingly the Army limited its procurement to non-ocean-going vessels—that is, vessels of not more than 1,000 tons gross or 200 feet in length.[5]

No attempt can be made in this chapter to discuss the procurement of particular items of equipment, but a general summary will give an idea of the scope of the Chief of Transportation's procurement responsibility. The marine equipment that he procured included cargo vessels, combination cargo and passenger vessels, tugs, towboats, rescue and salvage boats, small landing boats, mine planters, mine yawls, crane barges, barrage balloon barges, refrigerator barges, and many other types of barges and lighters for general and special purposes. The railway equipment included steam, diesel, and gasoline locomotives, numerous types and sizes of freight, passenger, and hospital cars, locomotive cranes, and maintenance-of-way rolling

[3] Wardlow, *op. cit.*, pp. 63–64.

[4] OCT HB Monograph 28, pp. 3–8. Assignments of specific items to specific services for procurement were reported weekly by the ASF Procurement Assignment Board and published as ASF circulars or memos. See also WD Procurement Regulations, 600 series, concerning interagency and interdepartmental purchases.

[5] Memo, Asst to Chm of Mar Com for Strategic Shipping Bd, 6 Jan 42, OCT HB Topic Strategic Shipping Bd; AG Memo 561 (1-30-42), 31 Jan 42, Acquisition of Vessels Under 1,000 Tons; WD Memo W 55-9-42, 4 Dec 43.



U.S.-BUILT LOCOMOTIVES FOR SERVICE OVERSEAS. *The 2-8-0 standard-gauge steam locomotive procured by the Military Railway Service (top); the 2-10-0 broad-gauge steam locomotive procured for shipment to the Soviet Union under lend-lease (middle); the 127-ton diesel locomotive of the type used by the MRS in Italy and Iran (bottom).*

stock.[6] The materials-handling equipment was of few types and constituted only a small part of the total procurement. In addition, the Chief of Transportation purchased about 50,000 items of spare parts and expendable supplies.

The total value of the equipment and supplies procured by the Chief of Transportation and delivered to him during the years 1942–45 was $2,072,523,000. *(Table 38)* This figure does not include the considerable amount of matériel for which the Chief of Transportation determined requirements and provided funds but which he obtained through other procuring agencies such as the Navy, the Maritime Commission, and other Army technical services. (See Table 39 for budget estimates for all equipment and supplies.)

Of the total matériel accepted by the Transportation Corps or its predecessors up to the end of 1945, almost one quarter, valued at $516,000,000, was shipped to Allied governments under the Lend-Lease Act of 11 March 1941. Railway equipment valued at $452,000,000 accounted for the larger part of the lend-lease shipments. Of this amount, $240,000,000 went to the Soviet Union, $140,000,000 to the United Kingdom, and $72,000,000 to other countries.[7] A considerable part of the locomotives and rolling stock delivered to the United Kingdom during the period when U.S. forces were being built up there was moved to the Continent after the invasion.

Taking over this large procurement responsibility after the war was well under way, and being confronted immediately with heavy and urgent demands for equipment needed in the theaters of operations, the Chief of Transportation had many problems to solve before he could meet the requirements. He had to establish an organization in his headquarters that was capable of setting up a procurement program, supervising the execution of that program, and dealing with the technical questions involved. A considerable field organization was necessary to maintain liaison with contractors scattered throughout the country, to inspect the work in progress, and eventually to accept the finished products. Methods had to be developed for scheduling production and assuring that the schedules were kept. Steps had to be taken to standardize equipment whenever possible in order to simplify procurement and maintenance. A depot system and a method of controlling the issuing and reordering of stocks had to be established. Technical study was necessary to improve old equipment and develop new items to meet the needs of forces scattered throughout the world.

The Headquarters and Field Organizations

A full-fledged headquarters and field organization to deal with supply matters was not achieved until after the United States had been at war for more than a year. There were several reasons for this. The procurement personnel that the Chief of Transportation had acquired from The Quartermaster General and the Chief of Engineers provided a meager foundation on which to build the large staff that became necessary. The extent of the theaters'

[6] Designs Active as of April 1, 1943, OCT HB Dir of Sup Program; Pamphlets, Marine Equipment, and Railway Equipment, both issued on 31 March 1943, describe the principal items; in OCT HB Dir of Sup Publications.

[7] ASF Rpt, International Aid Statistics, World War II, through 31 Dec 45, pp. 8, 23, 32, 40. The above figures include only direct shipments to the beneficiary countries; they do not include transfers from Army stocks in the theaters, which amounted to $37,000,000.

TABLE 38—ESTIMATED VALUE OF TRANSPORTATION CORPS EQUIPMENT AND SUPPLIES ACCEPTED: CALENDAR YEARS 1942–1945 [a]

(Thousands of Dollars)

Type	Total	Calendar Years			
		1942	1943	1944	1945
All Types	$2,072,523	$169,234	$540,143	$992,893	$370,253
Railway Equipment	807,494	65,229	226,633	315,564	200,068
Marine Equipment	1,238,527	104,005	307,840	659,052	167,630
Materials-Handling Equipment	26,502	0	5,670	18,277	2,555

[a] Estimated from physical quantities delivered and standard dollar weights, which for most items were unit costs as of 1945. The figures therefore reflect physical volume—for comparison between years and technical services—rather than cost to the government; they do not take into consideration price changes or contract renegotiations. Supplies covered by budgetary category "Miscellaneous Supplies" (*Table 39*) are distributed among the three types shown in this table.

Source: Statistics, Procurement, p. 20, compiled for a statistical volume of this series, now in preparation.

needs for marine and rail equipment and related supplies unfolded only gradually as the strategy of the war took shape. Another reason was the difficulty experienced in obtaining the services of competent men to handle the technical phases of this activity. These circumstances had a direct bearing on the crisis in Transportation Corps supply operations that developed in the summer and fall of 1943.[8]

In addition to getting a late start, and partly on that account, the Chief of Transportation's supply organization was subject to frequent revampings both at headquarters and in the field. Changes were inevitable in a structure that was being built from the ground upward to handle a rapidly developing work load, but to a large degree the reorganizations were the result of differing views held by the several Transportation Corps officers who headed the activity, and of the efforts of ASF headquarters to have the supply operations of the several technical services conform to certain procedures.

The Chief of Transportation's first supply responsibility, which he took over from The Quartermaster General in March 1942 when his office was created, was for the design and procurement of marine equipment. In the beginning this responsibility was assigned to the Water Division, but the need for a separate procurement organization was foreseen. During the spring and summer steps were taken to assemble personnel for such an organization, and in July the establishment of a Requirements and Procurement Division was announced, with Maj. William B. Bunker as chief. The new division was charged with the determination of requirements and the letting of contracts for marine equipment, but responsibility for the design of this equipment remained with the Water Division. Minor supply functions, which had been assumed by other divisions while the Office of the Chief of Transportation was in its formative stage, were also transferred to the

[8] See below, p. 470.

TABLE 39—BUDGET ESTIMATES FOR TRANSPORTATION CORPS EQUIPMENT AND SUPPLIES: FISCAL YEARS 1942–1946 [a]

(Thousands of Dollars)

Type	Total	Fiscal Years				
		1942	1943	1944	1945	1946
All Types	$3,193,705	$256,562	$713,063	$1,196,161	$733,788	$294,131
Marine Equipment	1,107,437	101,439	306,443	518,924	124,586	56,045
Railway Equipment	997,830	147,437	224,470	345,869	230,669	49,385
Materials-Handling Equipment	234,554	(b)	69,613	87,968	66,328	10,645
Miscellaneous Supplies	853,884	7,686	112,537	243,400	312,205	178,056

[a] Includes estimates for marine equipment and supplies prepared by The Quartermaster General for the fiscal year 1942 and estimates for railway equipment and supplies prepared by the Chief of Engineers for the fiscal years 1942 and 1943 before such procurement was transferred to the Chief of Transportation. Estimates include matériel procured by other agencies—Navy, Maritime Commission, Ordnance Department, etc.—at the request and for the account of the Transportation Corps, as well as matériel procured directly by the Transportation Corps.

[b] Data not available.

Source: Final Report of the Chief of Transportation, Army Service Forces, World War II, 30 November 1945, p. 90; based on data supplied by the Director of Matériel and Supply for that report.

Requirements and Procurement Division.[9]

In September 1942, with marine requirements mounting rapidly and the transfer of railway procurement authority to the Chief of Transportation in prospect, Col. Harry A. Toulmin, Jr., an Air Service veteran of World War I and a patent attorney with scientific and industrial contacts in civilian life, was named chief of the Requirements and Procurement Division, with Major Bunker as his assistant. In November, with the transfer of the railway procurement function assured, Colonel Toulmin was designated Assistant Chief of Transportation for Supply, and as such was one of the three principal assistants to the Chief of Transportation. Bunker, then a lieutenant colonel, was named Executive for Supply.

Colonel Toulmin thus became responsible for all aspects of the supply activity—determination of requirements, establishment of designs and specifications, placement of contracts, supervision of production, and other supply matters.[10] But in regard to requirements and designs for marine and railway equipment, the Assistant Chief of Transportation for Supply was directed to work in close collaboration with the Water Division and the Rail Division, which were responsible for maintaining liaison with the theaters on this equipment and for reviewing their requisitions.[11]

The need for a field organization to assist the headquarters staff in placing and administering contracts was early apparent, and in October 1942 the Chief of Transportation established five zone procurement offices. The new offices were located in the Army port agencies at

[9] OCT Adm Memo 79, 14 Jul 42, OCT HB Dir of Sup Gen.

[10] These changes are reflected in Adm Log of TC, and TC Org Manual, in OCT HB TC Gen.

[11] Memo, Ex OCT for Gen Franklin, 19 Jun 43, sub: Division of Responsibility, OCT 400.13 Procurement Policy.

Boston, Philadelphia, New Orleans, and San Francisco, and in the Army Transportation Agency at Chicago.[12] The ports of embarkation previously had assisted the headquarters organization in placing contracts for marine equipment, making inspections, and expediting deliveries. Under the new arrangement the ports were to be relieved of those responsibilities, but they were to make their technical staffs available to the zone procurement officers to the extent that they were needed. The port commander at San Francisco protested against this arrangement, partly because he thought it unwise and partly because he had not been consulted in advance. In reply, the Chief of Transportation conceded that the arrangement regarding procurement zones had been made hastily as the result of the urgency of the oversea demand for marine equipment and "pressure from above," and stated that a more adequate plan was being formulated.[13]

The new plan for a field supply organization, to which the Chief of Transportation referred, was a part of a broader plan to bring all Transportation Corps field agencies, except the ports of embarkation and the training activities, under the supervision of nine zone transportation officers. In addition to supervising Transportation Corps activities pertaining to the movement of troops and supplies in his area, each zone transportation officer was directed to establish a supply division to deal with such matters as the Assistant Chief of Transportation for Supply might delegate to him. The transportation zones were coextensive with the service commands, and the zone transportation offices, which were established as of 1 December 1942, were located in Boston, Massachusetts; New York, New York; Baltimore, Maryland; Atlanta, Georgia; Columbus, Ohio; Chicago, Illinois; Omaha, Nebraska; Dallas, Texas; and Salt Lake City, Utah. Later, the supply division of the ninth zone was transferred from Salt Lake City to San Francisco. Certain zones had subordinate district offices, and in areas where there were many Transportation Corps contractors, district supply officers were appointed.[14] While the zone transportation offices were establishing supply divisions to perform the bulk of the field work, the ports of embarkation were directed to designate supply officers to determine the requirements of those installations for Transportation Corps equipment, to oversee the transshipment, storage, and issue of the equipment, and to carry out such local procurement as might be authorized by the Chief of Transportation.[15]

Concurrently with the establishment of the zone supply divisions, a Transportation Corps Supply Plan, which outlined the responsibilities of each element of the headquarters and field organizations and the procedures to be followed, was issued.[16] This was an attempt to explain, and at the same time give an atmosphere of sta-

[12] WD Cir 341, 10 Oct 42, Sec. IV; OCT Cirs 61, 14 Oct 42, and 62, 19 Oct 42; Memo, CofT for Field Representatives of Requirements and Procurement Division, 21 Oct 42, OCT HB Dir of Sup Gen.

[13] Memo, CofT for Col John H. Mellom, SFPE, 19 Oct 42; Ltr, Gen Gilbreath to Gross, 24 Nov 42, and reply, 27Nov 42; all in OCT HB Gross SF.

[14] SOS Cir 91, 1 Dec 42, sub: Reorg of TC Field Agencies; TC Cir 5-5, 8 Jan 44. For the background of ZTO's, see Wardlow, *op. cit.*, pp. 111–14. Considerable information regarding the activities of zone supply divisions will be found in their annual reports for the fiscal year 1944. OCT HB Dir of Sup Rpts.

[15] Memo, CofT for PEs, 15 Jan 43, sub: Sup Divs, OCT 323.3 PEs.

[16] TC Supply Plan, 1 Jan 43, OCT HB Dir of Sup Org. This document was supplemented by TC Supply Manual, 1 May 43, dealing with procedures. Both were rescinded by OCT Cir 158, 9 Dec 43, Supp. 1.

bility to, an organization that up to then had been extremely fluid and not well understood by other elements of the Transportation Corps. But for some time stability remained a goal rather than a fact. Under the supply plan the number of divisions in the headquarters organization had been increased from three to five, yet within a few weeks Colonel Toulmin proposed a further reorganization on the basis of eight divisions. Maj. (later Col.) Luke W. Finlay, executive for General Gross, informed Toulmin that, while the Chief of Transportation wanted him to have a free hand in organizing his staff, Gross had misgivings with regard to increasing the number of divisions, since each new self-contained division increased the amount of executive and clerical personnel required.[17] This particular reorganization did not take place, but other changes were to follow soon.

In June 1943, four of the five divisions of the Chief of Transportation's supply organization were moved to Cincinnati, Ohio. They were the Engineering Division, the Procurement Division, the Production Division, and the Controlled Materials Plan Division, which was subsequently absorbed by the Production Division. At that time the War Department was urging the removal of activities from the overcrowded Washington area.[18] From the Chief of Transportation's point of view, Cincinnati had certain advantages: it provided a better labor market from which technical and clerical personnel could be drawn, and a more centrally located base from which to maintain contact with contractors and prospective contractors. In setting up the Field Service Group, as the Cincinnati office was designated, 16 officers and 213 civilians were transferred from Washington. The addition of technical personnel and several administrative units brought a steady increase in the roster of the Field Service Group, and on 30 June 1944 it included 63 officers and 707 civilians.[19] This office, although it was geographically separate, remained organizationally a part of the Office of the Chief of Transportation.

Although the growth of the organization at Cincinnati was chiefly in the operating divisions, a considerable administrative staff was found necessary. Provision was made in the beginning for an administrative division to handle such matters as personnel, procedures, custody of property, security, transportation orders, mail, and records, but other requirements soon developed. The procurement and management of civilian personnel was so persistent a problem that the Civilian Personnel Division in Washington could not deal with it properly at long range, and consequently set up a branch in the Field Service Group early in 1944. It was found also that legal and fiscal matters in connection with procurement could not be satisfactorily handled from Washington, and branches of the Legal and Fiscal Divisions were accordingly established in Cincinnati. The emphasis that Army Service Forces headquarters placed on control through statistical analysis and procedural studies led to the establishment of a Control Branch in the Field Service Group.[20]

[17] Memo, Finlay for Toulmin, 16 Mar 43, sub: Expansion of Sup Org, OCT HB Ex Staybacks, Dec 42–Dec 44.

[18] Memo, CG SOS for Cs of Svs, 1 Mar 43, sub: Removal of Activities From Washington, OCT 323.11.

[19] ASF Memo S 210-12-43, 15 Jun 43; OCT Off Order 25-2, Changes 11, 24 Jul 43; Annual Rpt, Field Sv Gp, 30 Jun 44, section dealing with Adm Div, pp. 1–3, OCT HB Dir of Sup Rpts.

[20] The activities of these branches are discussed in Annual Rpt, Field Sv Gp, FY 1944, OCT HB Dir of Sup Rpts.

Despite the removal of four divisions to Cincinnati, the supply organization remaining in Washington was substantial and it continued to grow, totaling 325 military and civilian personnel in February 1945.[21] The Requirements Division was the only major element to remain in Washington when the Field Service Group was set up in Cincinnati; that division could not be moved because it had to work constantly with the Water and the Rail Divisions in formulating the Transportation Corps supply program and also with ASF headquarters. Colonel Toulmin soon found it necessary to add a Technical Staff to advise him on technical matters, to prepare technical manuals, and to act as consultants on matters of design and construction. A Liaison Staff was also established to maintain working relations with ASF headquarters, the technical services, the Navy, the Maritime Commission, and other governmental and private agencies concerned with the design and procurement of transportation equipment. In addition, a control staff and an administrative staff were maintained in the Office of the Assistant Chief of Transportation for Supply.

While recognizing that Cincinnati offered certain advantages to the Field Service Group, the Chief of Transportation felt that these were more than offset by the handicaps that the division of the organization entailed. In addition to the increased personnel requirements, he believed that full co-ordination and efficiency could not be attained while the staff was functioning in two locations. After a period of trial he proposed a relaxation of the War Department policy against increasing the personnel in Washington to permit the return of the Field Service Group to his headquarters.[22] This permission was not obtained during the war.

In May 1943 the Army Air Forces approached the Chief of Transportation regarding the possibility of obtaining the transfer of Colonel Toulmin to the Air Service Command, because of his air experience. General Gross responded unfavorably, explaining that Toulmin was doing a fine job and that the young Transportation Corps supply organization was hard pressed to meet the Army's rapidly growing demand for marine and rail equipment. But in October ASF headquarters, which disagreed with Toulmin on some aspects of the supply operation, intervened and the transfer was made. At that time General Gross was on a long tour of the theaters with General Somervell. When he returned to Washington and learned of this development, Gross voiced his keen displeasure and expressed admiration for Toulmin's "outstanding accomplishment" in the launching of a huge procurement program.[23]

For several months the Transportation Corps supply organization functioned under the direction of Colonel Bunker, but in January 1944 Brig. Gen. Burton O. Lewis was designated Director of Supply, with Bunker as his deputy.[24] General Lewis came to the position with long experience in the supply activities of the Ordnance Department. Just before he was assigned to the Office of the Chief of Trans-

[21] Wardlow, *op. cit.*, p. 74.

[22] Memo, Gross for Somervell, 20 Jan 44, Item 10, OCT 319.1 Current and Anticipated ASF Problems.

[23] Ltr, Gross to Brig Gen Elmer E. Adler, ASC, 29 May 43; Ltrs, Gross to Toulmin, 4 Nov 43 and 16 Oct 44; all in OCT HB Gross Day File.

[24] OCT Off Order 25-2, Changes 14, 25 Oct 43; Changes 17, 15 Nov 43; Changes 22, 6 Jan 44.

portation he had been chief of the Boston Ordnance District.

During this interval ASF headquarters made a survey of the Transportation Corps supply organization and activities. Although oriented particularly toward the problem of spare parts, the survey led to several developments that affected the general supply operation—the establishment of a Stock Control Division (in Washington) to assume full responsibility for maintaining a balance between the demand for and the supply of Transportation Corps matériel, the establishment of a Maintenance Division (in New York City) to develop spare parts lists and maintenance procedures, and the creation of a more complete depot system for the storage and issue of matériel.[25]

The organizational adjustments that were made by General Lewis during the early months of his incumbency evidently did not achieve all that was desired. In November 1944, Brig. Gen. Ephraim F. Jeffe was designated Deputy Director of Supply with the specific mission of studying the organization and procedures and initiating such changes as might seem desirable. General Jeffe was an electrical engineer by training and had been a public utilities executive in civilian life. He was serving as Executive Vice Chairman of the War Production Board when his transfer to ASF headquarters was arranged. His assignment to the Chief of Transportation followed within a few weeks.[26]

Several changes in the headquarters organization resulted from General Jeffe's work. A reorganization of the Cincinnati office was made in which the Engineering, Procurement, and Production Divisions were merged, and the revamped organization was redesignated the Procurement Division. The Stock Control Division in Washington was redesignated the Distribution Division. The Maintenance Division in New York was renamed the Technical Publications Branch and made a part of the Distribution Division.[27] In March 1945, a directive was issued to transfer the Distribution Division from Washington to Cincinnati, but the order was rescinded before it was carried into effect.[28]

While these changes were being worked out in the OCT headquarters supply organization, ASF headquarters took steps to simplify the Chief of Transportation's field procurement machinery. The ASF officers objected particularly to the dispersion of procurement activities to so many zone and district offices, on the ground that this increased the number of personnel required and made co-ordination of activities difficult. While recognizing that there had been reasons for the dispersion during the early stages when both contracting and production were beset with many difficulties, ASF headquarters believed that the time had come to reduce the number of field procurement offices and to make them responsible directly to the OCT Director of Supply—rather than to the zone transportation officers—and to limit procurement by the ports of embarkation more severely.[29] These adjustments were

[25] Rpt 146, Spare Parts for Trans Equip, Dec 43, OCT 020 Org of TC Sup Activities.

[26] OCT Info Bull 78, 1 Nov 44; WD Biographical Statement, as of 23 Jun 45; both in OCT HB Dir of Sup Gen.

[27] OCT Info Bull 99, 22 Dec 44, OCT HB Dir of Sup Org; TC Cir 5-23, 30 Dec 44.

[28] OCT Misc Ltr 86, 13 Mar 45, and Changes 1, 31 Mar 45, both in OCT HB Dir of Sup Org.

[29] Memo, CG ASF for CofT, 15 Feb 45, sub: Procurement, OCT HB Dir of Sup Org.

initiated by the Chief of Transportation in March 1945, but about two months were required to carry them fully into effect. The procurement activities of the zone and district offices were consolidated into four new procurement offices. The zone transportation officers at New York and Chicago served also as heads of the procurement offices in those cities; the procurement offices at New Orleans and San Francisco were at first attached to the district transportation offices located there, but soon became independent of them.[30]

The many changes that took place in the supply organization—only the principal ones have been recounted—brought it at the end of the war to a fairly simple structure. The Director of Matériel and Supply then had five divisions functioning under his supervision. The Requirements and Distribution Division, the Research and Development Division, the Maintenance Division, and the Property Disposal Division were located in Washington; the Procurement Division was located in Cincinnati. The four field procurement offices were responsible to the Procurement Division; four depots and three subdepots were under the supervision of the Requirements and Distribution Division.

One fact is clearly evident in the Chief of Transportation's experience with his supply organization—the handicap under which a chief of service functions when he undertakes a large wartime operation without the benefit of seasoned personnel, tested organizational pattern, and established procedures. The shortage of technical personnel was the basic difficulty. In the beginning the Chief of Transportation had to concentrate on building up a staff to deal with the heavy movements of troops and matériel that were necessary. When authorization was obtained to employ a sizable staff of engineers, designers, and other technical experts, such men were difficult to obtain because of the heavy demand in other fields. This was particularly true of marine technical personnel because of the large naval and merchant ship construction programs.[31]

Setting Up the Supply Program

The establishment of a supply program for the Transportation Corps involved two basic steps—estimating the requirements of various elements of the armed forces in the zone of interior and overseas for the items for which the Chief of Transportation had procurement responsibility, and getting those requirements approved by ASF headquarters and incorporated in the Army Supply Program. When formulating the program it was necessary not only to take into account the prospective needs, but also to consider the availability of materials and component assemblies under priorities set up by the War Production Board, the capacity of manufacturing plants to produce the desired items, and the decisions of joint (Army-Navy) and combined (British-American) agencies regarding the types or quantities of matériel needed to support the approved strategy.

There was little precedent on which to base estimates of Army requirements for transportation equipment. Not only was the fighting on a much broader scale than in any earlier war, but it was of a different character. The progressive move-

[30] TC Cir 5-8, 9 Mar 45, sub: Consolidation of Zone and District Procurement; OCT Misc Ltr 166, 18 May 45; TC Cir 5-8, Changes 3, 17 Jul 45.

[31] Interv with Col Bunker, 3 Nov 52, OCT HB Dir of Sup Gen.

ment of forces from island to island, or from continent to continent, called for a great variety of floating equipment with which to carry out amphibious assaults, to support the assault forces after they had gained a foothold in areas formerly held by the enemy, and to operate the ports through which established garrisons were served. There was no static land warfare in the manner of World War I, and the forces operating in continental areas moved fast and far in their pursuit of the enemy, requiring large numbers of American locomotives, railway cars, and motor vehicles to supplement such native equipment as might have escaped destruction in aerial attacks or by enemy demolition. The requirements for certain types of military equipment might be calculated from the projected troop basis, but with transportation equipment many other factors had to be considered that were much more difficult to evaluate.

The greatest difficulty in establishing requirements was with marine equipment. In the early part of the war the Chief of Transportation got but limited help from the theaters in setting up a long-range program. Since he headed a new service, his working relations with some of the theaters were in the developmental stage. The theater commanders found it difficult to estimate their needs far in advance since strategic plans were exceedingly fluid and the amount of transportation equipment available locally was uncertain. Yet the Chief of Transportation had to prepare his program and place orders well ahead of actual need because of the long lead time on many vessels—that is, the long period between the placing of contracts and final delivery.[32] In some cases the lead time was as much as twelve months.

Several circumstances contributed to slow production. Not only were vessels large and complicated items of military equipment, but they called for scarce materials and subassemblies that were controlled by priorities. The subassemblies usually came from numerous manufacturers, and delay in the delivery of any one component meant delay in the completion of the end product. Because the marine industry had been fully committed by the Navy and the Maritime Commission before the Chief of Transportation entered the field in a large way, he found it necessary to place contracts with small and in many cases entirely new boatbuilding and engine building concerns, which had neither the personnel nor the plant facilities necessary for fast construction. Under these circumstances the Chief of Transportation could not wait for the theaters to submit requisitions for critical items; he had to get a program approved and place contracts far ahead of theater requests in order to avoid harmful delays in filling these requests.[33]

Because of the heavy early demand, the late start in ordering against that demand, and the scarcity of raw materials and certain types of machinery, no stockpile of marine equipment existed during the greater part of the war. Early in 1943 the Chief of Transportation was ready to start building stockpiles of certain types of equipment in order to lighten the burden of heavy requisitions that were expected to come in later. But the necessity of

[32] See Memo, Toulmin for CofT, 28 Dec 42, for first comprehensive forecast of requirements in the Pacific; in OCT 561.4 Army Shipbuilding Program.

[33] Memo, Toulmin for CofT, 6 Jan 43, sub: Acceleration of Army Shipbuilding Program; Memo, Gen Clay, ACofS for Matériel SOS, for ACofS for Opns SOS, file copy not dated; Memo, CofT for ACofS for Opns SOS, 22 Feb 43; all in OCT 561.4 Army Shipbuilding Program.



VESSELS PROCURED BY THE TRANSPORTATION CORPS. *143-foot diesel electric ocean-going tug, used extensively in theaters of operations (top); 182-foot tanker for intratheater use (middle); 125-foot derrick barge (bottom).*

rationing metals, as well as engines and other components, so as best to serve the war program as a whole made this impossible.[34] There was also pressure from the War Department Procurement Review Board on ASF headquarters and the technical services to scale down their proposed supply programs, since some surpluses had been discovered overseas.[35] Not until 1944 were reserves of certain marine end items possible, and they existed only for launches and a few other types of vessels that were in general use. The late stages of the war found Transportation Corps depots with limited stocks of replacement parts.

Although the Requirements Division, under the Director of Supply, and the Water Division collaborated in making estimates of future theater requirements, such estimates involved a large amount of guesswork as to the numbers and types of vessels that would be needed. As new information came to hand, earlier estimates were revised, usually upward. Inability to provide concrete justification for these estimates was the main reason for ASF criticism of the Transportation Corps supply program in 1943.[36] Later the difficulty was eased by more forehanded planning on the part of the theater commanders, and by better understanding of theater requirements gained through experience on the part of the Chief of Transportation's staff.[37]

Not all marine equipment was intended for the theaters; about 27 percent of the vessels and other floating equipment under control of the Chief of Transportation at the end of the war was assigned to commands in the zone of interior—ports of embarkation, service commands, defense commands, the Army Air Forces, the Chief of Engineers, the Coast Artillery Corps, and a few other governmental agencies.[38] Generally speaking, the domestic requirements were established without difficulty because of ready communication between the requisitioning agencies and the Chief of Transportation, but there were emergency requirements and also requests for changes in designs. This was particularly true of vessels requisitioned by the Army Air Forces.[39]

In addition to the difficulties experienced in satisfying ASF headquarters regarding requirements for marine equipment, the Chief of Transportation's program encountered criticism from other sources. The Navy was one of the critics. The Army and the Navy were competitors for raw materials, engines, and other equipment for small vessels and naturally held divergent views on some matters.

This divergence became apparent first in connection with landing craft. In the spring and early summer of 1942, as part of the preparations for an emergency cross-Channel attack in the fall of that year if circumstances should demand it,

[34] Documents cited in n. 33; Memo, ASF ACofS for Matériel for CofT, 22 Feb 43, sub: Production Conf, pars. 2 and 7, and reply by CofT, 26 Feb 43, sub: Recommendations, both in OCT 400.17.

[35] Memo, Gross for Proc Review Bd, undated but accompanied by compilation dated 28 Jul 43; Memo, Dir ASF Plng Div for Dep Dir of Opns, 21 Aug 43, sub: Rpt of McCoy Bd; both in OCT HB Gross McCoy Bd.

[36] Interv with Col Bunker, 8 Jul 52, OCT HB Dir of Sup Gen.

[37] For an outline of the work and problems of the Requirements Division, covering both Army and international aid requirements, see appropriate section of Rpt, Dir of Sup, FY 1944, OCT HB Dir of Sup Rpts.

[38] Wardlow, *op. cit.*, pp. 250–51, gives distribution of 12,466 units of marine equipment under TC control in August 1945.

[39] Memo, CG AAF for CofT, 14 Mar 43, sub: AAF Floating Construction Program; 1st Ind, CofT for CG ASF, 18 May 43; both in OCT 561.4 Army Air Forces.

a hurried effort was made to procure sufficient landing craft for such an operation. The Chief of Transportation depended chiefly on the Navy to procure the craft that would be needed by the Engineer Amphibian Command, but since the Navy's program was in arrears he placed some orders directly. During this period there were sharp differences of opinion between the Army and the Navy on priorities and also on the design of craft for Army use.[40]

The decision taken in July to invade North Africa in November 1942 and to delay the cross-Channel attack removed some of the pressure from the landing craft program, but it remained critical. In September the Navy proposed that thereafter it procure all amphibious craft in order to avoid competition, confusion, and multifarious designs.[41] The Chief of Transportation agreed and the Army approved this proposal. Thereafter all orders for such vessels were placed by the Chief of Transportation through the Navy, but the Chief of Transportation maintained a close liaison with Navy procurement activities in order to be fully informed regarding production schedules and changes in design.[42]

While not unwilling to rely on the Navy for the landing craft required for tactical purposes, General Gross maintained that his organization should continue to procure the many other types of small vessels that the Army needed for its logistical operations. He emphasized the point because he was aware of sentiment favoring the transfer of this procurement authority to the Navy. He did not want to have to assume the "role of a petitioner" in order to get the vessels required by Army commanders, since he had not found the Navy readily responsive to such requests. The Chief of Transportation believed, moreover, that in the scramble of various agencies to get the vessels they needed there was "no greater compelling force than that of self interest."[43] General Somervell supported this position and entered a vigorous rejoinder when the Navy proposed a centralization of marine procurement in its hands in the spring of 1943. Somervell characterized the proposal as "a wholly unwarranted intrusion into Army affairs," which he felt was not likely to further co-operative efforts in that field. The Navy withdrew its proposal but expressed the view that a fuller exchange of information was desirable to avoid duplication.[44]

The next threat to the Chief of Transportation's marine procurement program came from an unexpected source—the

[40] Memo, Somervell for Adm King, 13 Apr 42; Memo, Gross for Brig Gen Walter Bedell Smith, 5 May 42; both in OCT HB Gross Day File; OCT Adm Memo 42, 6 May 42, sub: Landing Boats; Memo, OPD for Joint Staff Planners Subcommittee on Landing Craft, 9 May 42; Joint Memo, Somervell and Adm Horne for the President, 14 May 42; Memo, Maj Howard W. Quinn for CofT, 14 May 42, sub: Navy Design 50-Foot Tank Lighter; Memo, Quinn for Gross, 9 Jun 42, sub: Truman Committee Hearing; last five and other documents in OCT 370.5 Mvmt BOLERO; Hist Rpt, Marine Br Development and Liaison Div OCT, 21 Jul 42; Memo, Capt Frank M. Warren, Jr., for C of Port and Field Agencies Div OCT, 25 Nov 42; last two in OCT HB Development and Liaison Div; Senate Special Committee Investigating the National Defense Program, *Third Annual Report,* March 4, 1944, pp. 133–40, 167–68.

[41] Memo, Adm Horne for JCS, 9 Sep 42; Memo, Secy JCS for Adm William D. Leahy, Marshall, and King, 10 Sep 42; Memo, ACofS OPD for CG SOS, 14 Sep 42; all in OPD 560, Sec. 2.

[42] Memo, Wylie for Exec OCT, 20 Mar 43, OCT 000–900 Landing Boats.

[43] Memo, Gross for Gen Wood, Reqmts Div ASF, 22 Apr 43; Memo, Gross for Somervell, 22 May 43; both in OCT HB Gross Day Files.

[44] Memo, Somervell for Horne, 22 Apr 43; Memo, Horne for Somervell, 11 May 43; Memo, Somervell for Horne, 13 May 43; all in ASF Hq Navy 1942–44.

Director of War Mobilization, Mr. Byrnes. In the fall of 1943, in collaboration with the Joint Production Survey Committee of the Joint Chiefs of Staff, Mr. Byrnes initiated a broad investigation into the shipbuilding programs of the Maritime Commission, the Navy, and the Army. He noted what he thought was an undesirable lag in the execution of the conversion program, which the Chief of Transportation had undertaken in order to provide the Army with troopships, hospital ships, and other specialized types of ocean-going vessels; he also noted a duplication in the small boat programs of the Transportation Corps and the Navy. Mr. Byrnes observed that he was "somewhat persuaded" that the Transportation Corps should be relieved of its responsibility for the procurement of small boats in order that it might direct its efforts more vigorously to its other heavy responsibilities. The Army stoutly defended the progress of its conversion program, and emphasized its conviction that if the needs of the theaters for small boats were to be met promptly the Army Chief of Transportation should be responsible for the design and procurement of such vessels.[45]

While the Joint Production Survey Committee was making a broad inquiry into the shipbuilding situation, Admiral King requested that the Transportation Corps' marine procurement program be reviewed by another committee of the Joint Chiefs of Staff. He took cognizance particularly of the heavy orders being placed for small boats to be sent to General MacArthur; he believed the program to be excessive and wasteful of both vessels and crews. The Army had no objection to such a review. It considered the Joint Military Transportation Committee the proper agency to make the survey but yielded to the Navy's insistence that the Joint Logistics Committee do the job. The report of the Joint Logistics Committee, in March 1944, found the Transportation Corps' marine construction program not excessive in view of the requirements and suggested ways of meeting the crew problem. The report of the Joint Production Survey Committee rendered in May presented the same conclusion.[46]

Both the Army and the Navy recognized that without co-ordination of procurement there was likely to be duplication and waste, but in the absence of evidence that either service had an excessive number of vessels the incentive for positive action was lacking.[47] Consequently, although various joint committees worked on technical matters, no serious attempt was made to harmonize the programs until late in the war. A Joint Small Craft Subcommittee was set up in October 1944, with Brig. Gen. John M. Franklin, Assistant Chief of Transportation, as chairman. This committee, on which the War Shipping Administration was also represented, apparently did not get down to the serious consideration of oversea requirements until after the defeat of Germany and the concentration of the war ef-

[45] Wardlow, *op. cit.*, pp. 253–54, 305–06. As additional documentation, see Memo, James V. Forrestal for the President, 21 Sep 43; Memo, the President for SN, 28 Sep 43; last two in OPD ABC 561 (7 Nov 43); Ltr, Byrnes to SW, 19 Oct 43, OCT HB Ex Relations with OWM; Ltr, Byrnes to SN, 19 Oct 43; Memo, CofT for CG ASF, 29 Oct 43; last two in OCT 561.4 Army Shipbuilding Program.

[46] JCS 644, 24 Dec 43; Memo, Marshall for JCS, 28 Dec 43, OPD ABC 570 (3-1-43), Sec. 2; Memo, CofT for JLC, 5 Jan 44, OCT HB Gross Day File; Memo, CofT for JPSC, 24 Jan 44, OCT 561.4 Army Shipbuilding Program; JCS 644/1, 14 Mar 44; JCS 573/3, 20 May 44.

[47] Memo, Wylie for Gross, 13 Jun 43, OCT HB Wylie Vessels—Small Boats.

fort in the Pacific.[48] In the meantime, under an agreement between the Secretary of the Navy and the Under Secretary of War, a Joint Marine Procurement Board had been established for the announced purpose of co-ordinating the procurement of small boats, marine engines, and accessories. This board, on which Generals Gross, Franklin, and Lewis were the Transportation Corps representatives, was directed to set up subcommittees to assume the work that had already been undertaken somewhat informally with respect to programs and procurement practices, designs and specifications, and repair parts and packaging.[49] Neither of these bodies had progressed far with its mission when the war ended.

Many small vessels that did not enter into the Chief of Transportation's supply program were purchased or chartered locally by the oversea commanders. The theater commanders had authority for such local procurement to meet urgent needs, and they exercised it to the full. Usually the vessels thus acquired were old ones, but some new construction was undertaken by local shipyards. This was notably true in the Southwest Pacific Area, where the need for floating equipment was especially heavy. The marine industry in Australia constructed hulls for about 3,000 boats. Most of them were of the smaller nonpropelled types (lifeboats, surfboats, dinghys, and barges), but upwards of 1,000 were powered boats for which machinery was supplied from the United States.[50] The work in Australia was done under lend-lease and hence did not enter into the Chief of Transportation's budget, but the machinery shipped from this country was charged against Transportation Corps funds.

The Chief of Transportation experienced less difficulty with the program for railway equipment. When he took over that responsibility from the Chief of Engineers in November 1942, the situation was well in hand; a study had been made of the possible requirements in areas where the U.S. forces might operate, and a stockpile of equipment had been started.[51] The areas in which the Military Railway Service might be needed were relatively few, and the extent of the operations was more readily calculated than in the case of marine equipment. Those concerned with programming the procurement of rail equipment were not confronted with requirements so urgent and yet uncertain as those that developed in the Pacific for boats and barges of many descriptions. The expansion of rail requirements for oversea areas was gradual, starting with limited needs in Alaska and then extending to the United Kingdom, North Africa, Iran, India, Italy, continental Europe,

[48] Memo, Vice Adm Ben Moreell for Horne and Somervell, 17 Mar 44, sub: Army and Navy Standardization; Memo, Somervell for VCNO, 24 Mar 44; both in ASF Hq Navy 1942–44; Memo, Col Hicks for Gross, 10 Aug 44; Memo, Franklin for JLC and JMTC, 10 Aug 45; last two in OCT 334 Joint Small Craft Subcommittee.

[49] OCT Off Order 5-36, 20 Mar 45, and revision, 29 May 45; Joint Memo, Vice Adm Edward L. Cochrane and Gross for SN and USW, 1 Jun 45, sub: Joint Marine Procurement Board Progress Report, OCT HB Gross Joint Marine Procurement Board.

[50] Masterson, U.S. Army Transportation in the Southwest Pacific Area, 1941–47, pp. 370–76, App. 32, OCT HB Monographs; Ltr, Australian Military Mission in Washington to CofT, 15 Feb 46, OCT 561.21 SWP, lists vessels by types and indicates that Australia also built for the U.S. Army 14,600 pontons, 4,500 life rafts, and other floating equipment, making a total of 23,697 marine items.

[51] Memo, Maj Frank E. Cheshire for McIntyre, 7 Nov 42, OCT 400.17; Memo, CofT for ACofT for Supply, 21 Nov 42, sub: Advance Plng for Rail Equip; Memo, McIntyre for Gross, 14 Dec 42, sub: Locomotives for Mil Reqmts; last two in OCT 453 Gen.

Luzon, and finally Japan. This gradual expansion permitted the redeployment of some rail equipment from less active to more active areas. A considerable part of the rail equipment procured by the Chief of Transportation was for international aid, and the extent of such procurement was determined by higher authority. The need for locomotives and rolling stock for the utility railroads at Army installations in the zone of interior also developed gradually.

The fact that the Chief of Transportation experienced less difficulty with the railway equipment program did not mean that it held no problems for him. The requirements for the Military Railway Service became large as the military operations expanded, and heavy procurement was undertaken for other nations under the policy of international aid.[52] The program had to be tailored according to the availability of steel and plant facilities for the construction of locomotives and cars. The Chief of Transportation's needs also had to be balanced against the requirements of the domestic carriers, which became progressively urgent as the war advanced. The balance was struck first within the Army—the Chief of Transportation and the ASF Directors of Matériel and Requirements were the principal figures—and it was then subject to revision and final determination by the War Production Board, acting for the President. Generally speaking, the Chief of Transportation's program received good support in the higher echelons as one having a direct bearing on the outcome of the war. The amount of new equipment authorized for the domestic carriers was held to a minimum on the theory that, if the American railroads should find it impossible to handle all military and civilian traffic, the less essential civilian traffic could be curtailed.[53]

The plan of special operational projects inaugurated by the Army Service Forces in June 1943 was helpful to the Chief of Transportation, but it did not solve his problem of ascertaining theater requirements sufficiently far in advance.[54] The plan was designed to assure that the chiefs of technical service would receive carefully calculated forecasts of exceptional matériel requirements in time to include these requirements in their programs and have the matériel ready when needed. Such projects—most of which originated in the theaters, although some were formulated in the War Department—gave the Chief of Transportation earlier information regarding future demands than he had been receiving. But for equipment that had a long lead time, he still had to place contracts on the basis of a general estimate of requirements before the theater projects were received.[55]

The Chief of Transportation made special arrangements for dealing with operational projects with a view to bringing to bear the combined knowledge of his supply, operating, and planning personnel. During the period when projects were

[52] 1st Ind, CofT, for CG ASF, 18 Jun 43; 4th Ind, CofT for Hq ASF, 31 Jul 43; both in OCT 453 Gen; Memo, CofT for Dir Plng Div ASF, 22 Jun 44, sub: Requirements for Locomotives and Cars ETO, OCT 453 RR Equip, Vol. III.

[53] On equipment for domestic carriers, see Wardlow, *op. cit.*, pp. 328–35.

[54] Concerning the plan, see *Logistics in World War II*, pp. 58–59; Memo, Oversea Opns Br, Plng Div OCT, for Hist Unit, 2 Oct 45, sub: TC Special Operational Supplies; Memo, Foreign Trans Facilities Br, Plng Div OCT, for Hist Unit, 11 Oct 45, and atchd documents; last two in OCT HB Plng Div Oversea Opns Br.

[55] Memo, Gross for JLC, 5 Jan 44, par. 4*e*, OCT HB Gross Day File; Interv with Col Bunker, 8 Jul 52, OCT HB Dir of Sup Gen.

being prepared principally in the theaters, the fulfillment of the transportation sections of the projects was supervised by a committee that functioned under the chairmanship of the Director of Supply. In the late months of the war, when projects were being prepared chiefly in the War Department, the committee was headed by a representative of the Planning Division. In the latter instance the committee actually drew up the transportation sections of the projects.[56]

The role of the Planning Division in the preparation of the Transportation Corps supply program merits further definition. It was concerned with long-range planning. Through direct liaison with ASF headquarters and the Operations Division of the War Department General Staff, as well as participation in most of the high-level conferences, the chief of the Planning Division was always informed regarding Allied strategy and the prospective deployment of U.S. troops; in fact, the division contributed heavily to the information regarding transportation requirements and available transportation facilities on which the strategic plans were based. Beginning early in the war the division included a Foreign Transportation Facilities Branch, which studied foreign ports, railways, and highways in order to determine their capacities, and calculated the military personnel and equipment that would be needed to make them adequate for Allied needs. Later in the war the Planning Division also had an Oversea Operations Branch, which was responsible for maintaining liaison with the oversea commands in regard to their needs for transportation personnel and equipment, and for co-ordinating the actions of the several divisions of the Office of the Chief of Transportation in fulfilling those needs. This branch was the outgrowth of a unit that was set up early in the war to deal with the requirements of the forces then being built up in Great Britain. The activity was gradually extended to cover all oversea commands, and eventually to include advance planning as well as the filling of requisitions.[57]

When the supply program proposed by the Chief of Transportation had been approved by ASF headquarters, it was included in the Army Supply Program. ASF headquarters often felt that the Chief of Transportation's estimates of requirements, particularly those for floating equipment, were excessive and requested recalculation. After differences within the Army had been harmonized, the Chief of Transportation still had to convince the War Production Board that the equipment was essential in order to obtain allocations of materials from that agency.

Because of the scarcity of raw materials, ASF endeavored to keep stockpiles of equipment and supplies at the minimum consistent with expediency. After sufficient experience had been accumulated, ASF endeavored to establish a relationship between past consumption, existing inventories, and future requirements. To this end, so-called stock control records were progressively set up for principal items and many secondary items to provide a history of each item as a basis for further procurement and further issues from stock. The records included estimated requirements for the next three years in the case of principal items, and for the next six months in

[56] OCT Off Order 40-3, 2 Feb 44, sub: Procedures for Processing Keyed Projects; Oct Off Order 5-41, 13 June 45, sub: TC Projects.

[57] OCT Adm Memo 51, 19 May 42, and amendment, 21 May 42; Memo, Gross for Somervell, 7 Aug 43; Interv with Maj Virgil H. Williams, Jr., 11 Jun 45; all in OCT HB Plng Div Oversea Opns Br.

the case of secondary items.[58] Beginning in 1944 these records played a progressively large part in the preparation of the Army Supply Program.[59]

Contracting Procedures and Aid to Contractors

Under War Department procurement regulations (WDPR) the Chief of Transportation was authorized to award contracts, make supplemental agreements, and issue change orders without the approval of higher authority when the contract or subsequent change involved an expenditure of less than $5,000,000.[60] He was empowered to delegate this authority and he did so, making the Assistant Chief of Transportation for Supply (later called Director of Supply, and still later Director of Matériel and Supply) responsible for its exercise, with the instruction that actual contracting should be decentralized to field procurement agencies so far as practicable.[61] General Gross made it clear that he expected all contracting officers to regard this delegation "as a mandate to exercise a high degree of courage, insight, ingenuity, and sound judgment" in the performance of their mission. He foresaw that their task would be a difficult one.

While the principle of decentralization was carried out very effectively in other aspects of the Chief of Transportation's work, this was not the case with respect to procurement. The Procurement Division in the Office of the Chief of Transportation, located first in Washington and later in Cincinnati, awarded all contracts for principal items; it delegated authority to award contracts and issue purchase orders for secondary items to supply officers in the transportation zones and at the ports of embarkation to the extent that it considered advantageous.[62] By maintaining full control of contracting for principal items the Procurement Division was able to draw on the manufacturing resources of the entire nation in obtaining favorable prices and satisfactory production schedules. The field supply officers were responsible, however, as agents of the Procurement Division, for the administration of the contracts let in their respective areas, including inspection, expediting, advising contractors regarding controlled materials, aiding them in obtaining components and other materials, giving them assistance in connection with manpower shortages, promoting the settlement of industrial disputes, and working out necessary adjustments in contracts.

When the nine zone supply divisions were consolidated into four area procurement offices in the spring of 1945, it was contemplated that the new offices would be given broader contracting authority. This late move toward a greater decentralization of contracting was reflected in the results for July and August, when the contracts awarded by the field offices exceeded in value the contracts awarded by the Procurement Division. By that time

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[58] These records were published as monthly progress reports; MPR 20 included TC principal items and MPR 19 covered secondary items.

[59] ASF *Annual Report for the Fiscal Year 1944,* p. 106, and *Annual Report for the Fiscal Year 1945,* p. 180.

[60] WDPR, pars. 305.1 and 305.2. Contracts involving $5,000,000 or more required approval of ASF headquarters.

[61] OCT Cir 24, 26 Jun 42; OCT Off Order 5-3, 2 Dec 42; Transportation Corps Procurement Instructions (TCPI), pars. 1-3-7 and 2-4-4*a*. TCPI, like WDPR on which they were based, were a loose-leaf compilation, originally issued on 1 January 1944 and revised as necessary.

[62] TC Pamphlets 18, 1 Feb 45, Purchase Methods, Practices, and Procedures, prepared by Procurement Division for guidance of field installations, is a good general guide on the subject.

contracting for principal items, which had been done exclusively by the Procurement Division, was at a low ebb.[63]

The ports of embarkation made extensive use of Transportation Corps equipment and supplies in storing, outfitting, repairing, and converting ships, filling emergency requisitions from oversea theaters, and carrying on their extensive pier, warehouse, and troop staging operations. In the early months of the war the port commanders, continuing prewar practices, obtained much of this matériel by local purchase. But as the supply organization in the Office of the Chief of Transportation grew in strength and developed its procedures, the Director of Supply's policy of limiting local purchases so far as practicable curtailed the ports' authority. Centralized purchasing, like centralized contracting, enabled the Chief of Transportation to negotiate with purveyors from many localities and also to get the price advantage of large-scale orders. Yet the Director of Supply approved requests for purchasing authority when to have denied them would have imposed a handicap on the work of the ports, and the ports of embarkation, like other Transportation Corps field installations, were authorized to make purchases on their own initiative when necessary to meet emergencies. Emergency purchases were limited to the amount of $10,000 in the case of the ports, and $2,500 in other cases.[64]

Contracts and purchase orders were executed for the Transportation Corps by duly constituted contracting officers. In order to insure that there was a Transportation Corps contracting officer at each Army installation the Chief of Transportation arranged that, unless other provision had been made, the transportation officer at each installation would serve also as the Transportation Corps contracting officer.[65] But the Chief of Transportation had no objection to installation commanders designating other officers to perform this function if local conditions justified the action.

All contracts and purchases were made by negotiation, which was interpreted to mean any method except the formal sealed-bid procedure.[66] Transportation Corps contracting officers were instructed to solicit bids by telegraph, telephone, letter, or other means from a reasonable number of qualified contractors whenever practicable, but they were permitted to use any means of negotiation that in their judgment would result in the expeditious awarding of contracts and at the same time protect the government's interests. In the beginning competitive bidding was seldom resorted to because of the loss of time involved and the fact that the urgent need was to find contractors who could make quick deliveries. Later, when contractors were competing for business and deliveries had begun to catch up with requirements, bids were called for on an increasing scale and negotiations were undertaken on the basis of the bids offered.[67] Standard contract forms as prescribed by the War Department were utilized whenever possible, but use was also made of special forms, devised by the Chief of Transportation's Legal Division and approved by ASF headquarters, to meet special conditions affecting Trans-

[63] Rpt, Procurement Div, Statistical Info, 1 Jan 44–15 Sep 45, p. 2, OCT HB Dir of Sup Rpts.

[64] OCT Cir 160-5, 22 Mar 44; OCT Cir 150-27, revised 21 May 45.

[65] OCT Cir 87, 14 Dec 42; OCT Cir 22, 9 Feb 43.

[66] WDPR, par. 240.1; TCPI, par. 2-4-1.

[67] Remarks by Gross, 16 May 44, in Subcommittee of the Committee on Appropriations, House of Representatives, *Hearings on the Military Establishment Appropriation Bill for 1945*, p. 261.

portation Corps procurement, including both matériel and services.[68]

Unless otherwise provided, contracts and purchase orders executed by contracting officers did not require approval by the Chief of Transportation.[69] Such approval was necessary when the contract did not follow a standard War Department or Transportation Corps form, when it contained a major deviation from an approved contract clause, when it provided for the expansion of plant facilities wholly or in part at government expense, when it contained provisions permitting upward price adjustments, when it was not on a fixed-price basis, or when it called for advance payment of more than $100,000 or in excess of 30 percent of the contract price. Contracts and supplemental agreements requiring approval by headquarters included the following clause: "This contract (supplemental agreement) is subject to the approval of the Chief of Transportation or his duly authorized representative and shall not be binding until so approved."

All contracts were subject to termination or renegotiation under wartime policies established by Congress. These policies recognized the abnormal conditions under which contracts were made and fulfilled, the fluctuation of requirements for military equipment and supplies due to changes in the strategic situation and new technical developments, and the desirability of having the prices actually paid work out fairly for both the contractors and the government.[70]

To facilitate contracting and purchasing, each zone supply officer maintained a record of manufacturers and dealers in his territory with whom business might be done. The record included up-to-date information regarding plant facilities, financial resources, labor supply, past production, and any other data bearing on the concern's ability to fulfill its undertakings. Whenever the Procurement Division considered using a contractor with whom it had had no experience, or whose capability was in doubt, it called on the zone supply officer for information from his records. Further investigation might be necessary, but the object of maintaining these records was to avoid the delay involved in making special inquiries. In the early days, because of pressure to get orders placed promptly, the Procurement Division selected contractors on the basis of general information, but later it insisted on concrete evidence of the concern's ability to perform. Even then, shortages of materials and labor were a constant threat to production schedules.

The Chief of Transportation adopted a policy of "close pricing" and directed that contract pricing be made a matter of constant study.[71] The objectives as defined by the procurement regulations were to offer incentives for efficiency and reduced production costs, to obtain fair and reasonable prices, and to prevent excessive profits. The fixed-price contract was considered the best means to that end. Since the cost-plus-fixed-fee contract was found to encourage excessive costs, that type was permitted only under special circumstances and with the approval of the Fiscal Division, acting for the Chief of Transportation.

The Price Analysis Branch of the Pro-

[68] OCT HB Monograph 28, pp. 47–50, describes the WD and TC contract forms authorized for use; see also TCPI, par. 3-2-1.

[69] TCPI, pars. 3-2-4 and 3-7-2g.

[70] The Transportation Corps experience in these matters is reviewed in OCT HB Monograph 28, pp. 217–47.

[71] TCPI 2, Secs. III and V.

curement Division, set up in July 1943, attacked the problem from many angles.[72] Data were compiled on the cost of basic items, essential parts and assemblies, and government-furnished equipment. Analyses were made showing the effect of major production and engineering changes on costs and prices. Prices paid to different contractors for similar products were compared, with allowances being made for differences in the quantities ordered, differences in local wage scales, differences in plant facilities, and other variable factors. When the analyses revealed that the prices of comparable products were out of line, the procurement officers concerned took steps to ascertain the reasons and the contractors offering the higher prices were required to furnish a breakdown of actual costs based on production experience. Extensive aid was received in these matters from the Fiscal Division, whose Price Adjustment Branch and Financial Analysis Branch made extensive studies of contractors' costs and profits. In May 1944 each zone transportation office and port of embarkation was directed to set up a price analysis unit to assist its contracting officers with their contracting and purchasing activities.[73]

Studies were made by the Price Analysis Branch to establish the trend of prices for commodities procured by the Transportation Corps. The over-all Transportation Corps price index, based on October 1942 as 100, gradually fell to a low point of 93.8 in June 1945. In the latter month the index for rail equipment stood at 91.8, and the index for marine equipment at 95.7.[74] The over-all price curve showed a fairly steady trend, but the prices of particular commodities and groups of commodities fluctuated more frequently and widely.

The price indices for rail and marine equipment reflected the different conditions in those fields. A decline in rail prices began in May 1943, owing to the fact that orders for commercial railway equipment were light and some of the locomotive builders had been affected by cutbacks in tank production.[75] The break in the price index for marine equipment did not occur until a year later. By that time the small-boat programs of the Navy and the Maritime Commission had reached their peaks, and there was keener competition among contractors for orders. The Chief of Transportation then found it possible to place contracts with some of the larger concerns and so get the benefit of mass production prices. Also, the smaller plants with which he had been dealing improved their efficiency as they gained experience in producing vessels for the Army.

Beginning in July 1943 the Transportation Corps eliminated the cost of builders' risk insurance from the contract price of vessels by relieving the builders of responsibility for damage incurred while the vessels were in their possession.[76] The contractors reported to the Transportation Corps when damage had resulted from storm, fire, or other cause, and were instructed whether to repair the damage at government expense or consider the vessel

[72] See Rpt, Dir of Sup, FY 1944, Procurement Div Sec, pp. 10–13.

[73] TC Cir 160-11, 31 May 44.

[74] ASF MPR, 30 Jun 45, Sec. 1-D, Contract Price Changes, pp. 63–64; Rpt, Procurement Div, Statistical Info, 1 Jun 44–15 Sep 45, pp. 11, 12, OCT HB Dir of Sup Rpts. The latter report includes data on prices paid for individual principal items.

[75] See Memos, CofT for Dir of Matériel ASF, 20 May 43 and 31 Jul 43, both in OCT 453.

[76] OCT Cir 89, 16 Jul 43; TCPI, par. 3-8-9*b*. The cost of builders' risk insurance on a small freight vessel was 1¼ to 1½ percent of the contract price.

a total loss. The feasibility of this type of self-insurance had already been tested by the Navy. Although no special study was made to determine the saving actually accomplished by the Transportation Corps, a competent estimate placed the aggregate cost reduction through the elimination of builders' risk insurance at three or four times the expense incurred by the government in assuming the risk.[77] Contractors were still required to carry collision liability insurance and protection and indemnity liability insurance on vessels that were delivered afloat; this was done in order to protect the government against claims by third parties that might arise from damage caused by vessels in the course of launchings or trial trips.[78]

The Chief of Transportation endeavored to support the government program for encouraging full use of small plants as a means of increasing the country's total capacity for production.[79] The effort was beset with difficulties, however, and considerable friction developed between the Transportation Corps and the Smaller War Plants Corporation (SWPC), which zealously sought to have maximum use made of the plants under its cognizance. The Transportation Corps supply organization reserved the right to decide whether the plant facilities and the engineering personnel of a concern were adequate for the satisfactory performance of a contract, and it had frequent disputes with local representatives of the SWPC on this point.[80] When the chairman of the SWPC complained with heat that the Transportation Corps was ignoring his office and the mandate that it held under law, and declared that the country "is not and will not be under the direction of a military junta," General Gross replied that he had supported and would continue to support the objectives of the SWPC, but that "the war program must come first," and consequently plants designated by the SWPC to receive contracts for certain types of work would not be used unless the Transportation Corps was convinced that they could produce satisfactory equipment in accordance with production schedules.[81]

At the root of the difficulty was the fact that so much of the Transportation Corps' procurement involved large rail and marine items that the smaller plants were not prepared to build expertly and expeditiously. In view of this situation, emphasis was placed on increasing the use of small concerns as subcontractors, and contracting officers were instructed to encourage the practice to the maximum. If the use of the smaller plants resulted in higher prices for the end products, this was permissible provided analysis showed that the prices were justifiable under the circumstances.[82] During the fiscal year 1944, contracts awarded by the Transportation Corps to plants under the cognizance of the Smaller War Plants Corporation constituted 91 percent, on a value basis, of the contracts suitable for award to

[77] Interv with Joel P. Shedd, Jr., 24 Jul 52, OCT HB Dir of Sup Contracting Practices.

[78] TCPI, par. 4-4-4.

[79] TCPI, par. 2-2-3; TC Cir 160-5, 21 Aug 44, Supp. 14. A plant having less than 500 employees qualified for classification as a smaller war plant.

[80] Memo, ACofT for Sup for Proc Div, 20 Jul 43, OCT 400.13 Proc Policy; Rpt, Field Sv Gp, FY 1944, Proc Div Sec, p. 4; Rpt, Dir of Sup, FY 1944, Proc Div Sec, pp. 14, 15; last two in OCT HB Dir of Sup Rpts; Interv with Col Bunker, 23 Jul 52, OCT HB Dir of Sup Contracting Practices.

[81] Ltr, Chm SWPC to Gross, 17 Aug 43, and reply, 21 Aug 43, both in OCT HB Gross Day File.

[82] WDPR, par. 225.7 and 225.8; Ltr, Cpl Clifford Starr to Rep Everett M. Dirksen, 26 Jun 45, OCT 453.5.

these plants.[83] During the calendar year 1944, contracts awarded to the smaller war plants constituted 55 percent of the total Transportation Corps contracts on the basis of number, and 24 percent on the basis of value.[84]

Several other circumstances were taken into account in awarding contracts. The proximity of the production facility to the delivery point might affect the choice of a contractor. An effort was made to place contracts for a particular product with at least two contractors who were so located that they would not be subject to the same hazard—flood, for example—which might delay production. The contracting officers were instructed to avoid so far as possible placing contracts in areas designated by the War Manpower Commission as tight labor markets. They were also directed to avoid doing business with concerns that were debarred by the War Department because of law violations or for other reasons.

It was evident early in the war that means would have to be found to prevent unrestricted competition between the Maritime Commission, the Navy's Bureau of Ships, and the Army's Transportation Corps for the services of boat and engine building plants. This was an especially important matter for the Chief of Transportation since the other agencies had heavily committed the industry before the Army's principal program got under way. A comprehensive list of plants available for marine work was made, and each agency was given priority in placing contracts with certain concerns. If an agency desired to do business with a plant that was on another's roster, it did so only after consultation and agreement.[85] The Transportation Corps, generally speaking, had to be content with the smaller and less firmly established concerns. This was a consequence of the fact that, up to the time the distribution of facilities was made, the Army's small-boat program had been relatively limited and had included chiefly vessels under 100 feet in length. Despite the disadvantage that the Chief of Transportation suffered on this account, the situation was more satisfactory than it would have been without such an agreement.

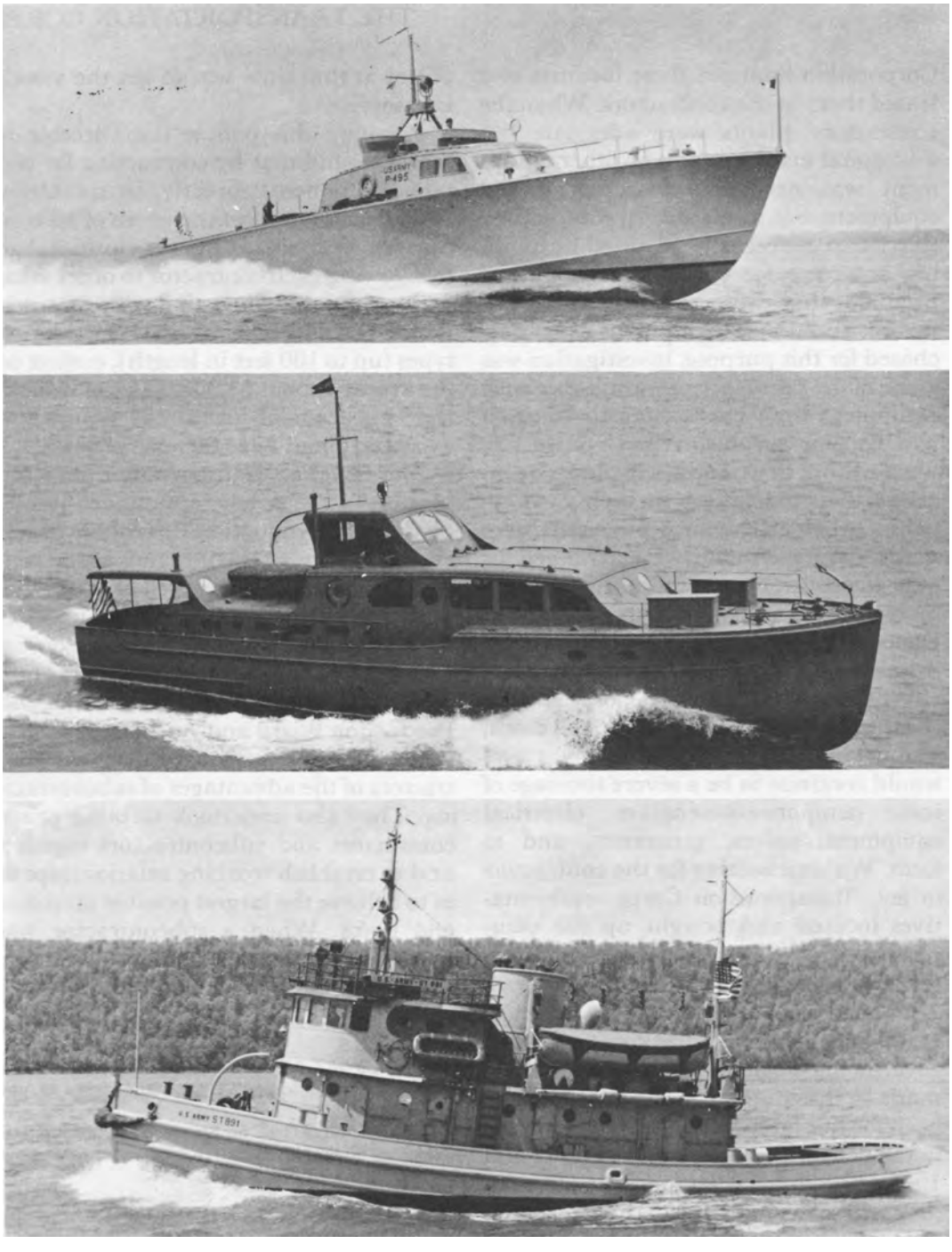
Because so many of the boatbuilding and marine equipment plants at his disposal were of the smaller types, the Chief of Transportation took active steps to encourage the development of new facilities and the improvement of old ones in accordance with War Department procurement regulations.[86] Additional plant facilities were provided for nine concerns, whose prewar production had been in other fields, to enable them to produce equipment and supplies needed by the Transportation Corps. Acting on certificates of war necessity furnished by the Chief of Transportation, the Defense Plant

[83] Rpt, Dir of Sup, FY 1944, Proc Div Sec, pp. 15, 19; statement based on monthly reports submitted to the SWPC.

[84] Rpt, Procurement Div, Statistical Info, 1 Jan 44–15 Sep 45, pp. 5–6, OCT HB Dir of Sup Rpts. The corresponding figures for all ASF contracts for FY 1945 were 60 percent and 25 percent; see ASF *Annual Report for the Fiscal Year 1945*, pp. 215–16.

[85] The exact date of this agreement is not known, but it was in effect in May 1942; see Rpt, Procurement Program, Marine Design, Constr and Procurement Br, Water Div OCT, 29 May 42, OCT 400.13. The representatives of the Army, Navy, and Maritime Commission who dealt with this matter sometimes were referred to as the shipbuilding co-ordination group, but they had no formal name or status. This and some other informal committees appear to have been offshoots of the Strategic Shipping Board, which the President created in December 1941; see Wardlow, *op. cit.*, pp. 44, 253.

[86] TCPI, pars. 10-2-1 and 10-3-1.



BOATS FOR HARBOR AND INSHORE WORK. *85-foot rescue boat procured for the AAF (top); 60-foot Q-boat for local passenger transportation (middle); 85-foot diesel tug (bottom).*

Corporation financed these facilities and leased them to the contractors. When the contractors' plants were adequate but additional machine tools or other equipment was needed, government-owned equipment was furnished. In this manner thirty-two concerns were aided in fulfilling contracts for components and end products that were urgently needed.[87] Before additional equipment was purchased for this purpose, investigation was made of the possibility of transferring such equipment from contractors to whom it had become surplus. When contractors were willing to extend their plants or increase their machinery at their own expense, provided advance payments were made, these payments were arranged for after the contractors' reliability had been investigated and agreements designed to protect the government's interests had been executed.[88]

When the Transportation Corps entered the market with heavy orders for vessels, it quickly realized that there was and would continue to be a severe shortage of some components—engines, electrical equipment, valves, generators, and so forth. Without waiting for the contractors to act, Transportation Corps representatives located and bought up the components wherever they could be found in dealers' stocks. The stockpile thus accumulated was parceled out to contractors as the need arose, allowances for such government-furnished equipment being made in the contract prices.[89] Had it not been for this forehanded move, the delays in the deliveries of boats during 1942 and 1943 would have been more serious than they were. The inclusion of these miscellaneous components in vessels sent overseas created problems in connection with spare parts and maintenance, but the primary object at that time was to get the vessels into service.

Pursuing this policy, the Director of Supply found that by contracting for certain components directly, in quantities large enough to meet the needs of all contractors, he could get better priorities than by allowing each contractor to order what he required. In connection with contracts for the building of 363 vessels of the larger types (up to 180 feet in length), costing on the average about $1,000,000, the value of the government-furnished equipment averaged about $215,000 per vessel.[90]

The Chief of Transportation gave full support to the policy, announced jointly by the War Production Board, the Navy, and the Army, of encouraging prime contractors to farm out as much of their work as practicable to subcontractors in order to utilize the nation's industrial resources to the fullest.[91] Transportation Corps officers joined with representatives of the War Production Board and ASF headquarters in endeavoring to convince prime contractors of the advantages of subcontracting. They also undertook to bring prime contractors and subcontractors together and to establish working relationships so as to achieve the largest possible output of end items. When a subcontractor was found to be so heavily committed that he might become a bottleneck, another sub-

[87] OCT HB Monograph 28, pp. 67, 68, lists the contractors aided.

[88] TC Cir 162, 4 Dec 43, sub: Procedure for Transfer of Production Equip; TC Cir 150-4, 1 Jan 44, and revisions.

[89] See Memo, ACofT for Sup for SPE, file copy undated but obviously written in November or December 1942, in OCT 561.1 Seattle 1942.

[90] Rpt, Procurement Div, Statistical Info, 1 Jan 44–15 Sep 45, pp. 7–8, OCT HB Dir of Sup Rpts; Interv with Col Bunker, 15 Aug 52, sub: Govt-Furnished Equip, OCT HB Dir of Sup Contracting Practices.

[91] WDPR, par. 367.

contractor with smaller commitments was brought to the attention of the prime contractor. These methods increased the total output, but they also increased the difficulty of maintaining a proper distribution of controlled materials and of meeting labor shortages in particular localities.

Labor supply was a constant problem. It was particularly so in the marine field, where the Chief of Transportation relied heavily on small and relatively new concerns whose labor force had been recently recruited and hence was less stable than in the more mature plants. The zone transportation officers kept in touch with Transportation Corps contractors and subcontractors, and when labor shortages occurred or threatened they sought the co-operation of Selective Service boards, War Manpower Commission representatives, and local industrial committees in meeting the situation. They arranged for draft deferments, loans or transfers of experienced workers between plants, and the recruiting of workers from fields that were not so hard pressed. They also assisted contractors in establishing training schools and in working out plans for the more extensive employment of women. Transportation Corps contracting officers sought to avoid the placing of contracts in areas where the labor market was tight, and they encouraged contractors to observe the same rule in placing subcontracts. When it seemed necessary to enter a critical labor area and the contract required the employment of additional workers, contracting officers were required first to get clearance from the Area Production Urgency Committee.[92]

Since the manufacturers of railway equipment were large and well-established concerns, the manpower situation was less acute with them than with the builders of floating equipment. But they were affected, nevertheless, and deliveries of locomotives, especially diesel locomotives, were delayed in some instances because of the scarcity of skilled workmen.

The need for maximum production was so urgent that all possible measures had to be taken to forestall industrial disputes that would delay plant operations. Representatives of the transportation zones maintained contact with contractors' plants, tried to keep abreast of developments in employer-employee relations, and did what they could to avoid work stoppages and to promote the settlement of strikes already started. In this they worked under the supervision of the Labor Branch, Industrial Personnel Division, OCT, which outlined the course of action in most cases but permitted the zone officers to act on their own initiative in emergencies.[93] These officers had no legal authority to take positive action and hence had to work informally. They used their efforts to clear up misunderstandings between management and labor and explained the damage to the war effort that a work stoppage would entail. To back up these informal efforts, they placed their information at the disposal of federal and state labor officials and urged them to take speedy action to the extent of their authority. Although industrial relations were relatively harmonious during the war, strikes were in no sense nonexistent. Between 1 January and 15 August 1945, for example, 160 work stoppages occurred that affected Transportation Corps contracts.[94]

[92] TC Cir 160-5, 28 Apr 44, Supp. 4.

[93] TC Cir 85-1, 1 Jan 44.

[94] OCT HB Monograph 28, p. 78, lists the principal strikes and their effect on the Transportation Corps.

The Chief of Transportation collaborated with the Navy and the Maritime Commission in forestalling labor difficulties at shipbuilding plants. A representative of the Chief of Transportation was one of two War Department members on the Wage Stabilization Committee of the War Production Board. This committee—consisting of representatives of the Army, the Navy, the Maritime Commission, management, and labor, and sitting under the chairmanship of a representative of the War Production Board—did excellent work in establishing uniform practices and wage scales in the shipbuilding and ship repair industries, thus removing the chief causes of disputes. A representative of the Chief of Transportation acted as adviser to the National War Labor Board Shipbuilding Commission, which sought to adjudicate disputes in the shipbuilding industry and thereby avoid strikes.

Extensive use was made of the Army-Navy "E" production award as a means of boosting morale and stimulating both management and labor to maximum effort. Quality and quantity of production in the light of the available facilities were primary considerations in granting these awards.[95] In order that the smaller and less experienced concerns might share in this recognition, consideration was given also to accomplishments in overcoming specific production obstacles, avoiding work stoppages, maintaining fair labor standards, training additional workers, avoiding accidents, making full use of subcontractors, conserving critical materials, and maintaining a low rate of absenteeism. The Transportation Corps sponsored E awards or "Star" awards for sixty-six contractors; in most instances the contractors received both awards, and in some cases the second and third Star awards were given.[96] The Chief of Transportation found that these awards and the ceremonies in connection with them were effective means of increasing and sustaining plant output.

Production Schedules and Controls

The crux of the supply problem was contract performance. There was no advantage in having equipment on order if the contractors did not deliver it according to schedule. Here the Chief of Transportation encountered several obstacles. Although war orders placed by Allied governments and orders for lend-lease had resulted in the expansion of many industries in 1940 and 1941, this was not true of the industries that produced small vessels and rail equipment. The fact that the full scope of the Chief of Transportation's program did not become apparent until more than a year after the United States had entered the war, and the related fact that the development of his supply organization and procedures was correspondingly delayed, had direct bearing on the Chief of Transportation's ability to set up realistic production schedules and enforce them. The controls that the War Production Board exercised over the distribution of strategic materials and components were factors with which the new Transportation Corps organization had to learn to cope.

There is obvious significance in the fact that deliveries of Transportation Corps matériel, which General Somervell had

[95] TC Cir 85-4, 10 Jan 44; revisions, 15 Feb 45 and 2 May 45.

[96] OCT HB Monograph 28, App. XV, lists the contractors sponsored for awards. Star awards were given to plants that maintained outstanding production after receiving the E award. Since rail equipment was built by a relatively small number of large plants, the larger number of awards was to builders of marine equipment.

characterized as "alarming" in the fall of 1942, increased only moderately during the greater part of 1943 and then rose sharply to a peak in the summer of 1944, whereas the production curve for all ASF matériel had reached a high level at the end of 1942, was fairly steady in 1943, and declined somewhat in 1944.[97]

The critical year for Transportation Corps supply was 1943. During that year military campaigns in North Africa and the Mediterranean were undertaken; the Allies assumed the offensive in the Pacific; substantial requisitions for transportation equipment were coming in from the China-Burma-India theater, the Persian Gulf Service Command, and Alaska; and preparations for the invasion of continental Europe were under way. The Chief of Transportation recognized the difficulties confronting his program, but he did not consider them inimical or insurmountable.[98] Conferences were held with officials of ASF headquarters and the War Production Board to enlist their support for the expanded programs, and production schedules were set up to provide equipment by the time it would be needed in the theaters.[99] But production lags were soon apparent and production forecasts were subject to frequent change. ASF headquarters, impatient as always with any evidence of failure, soon began pressing the Chief of Transportation for more accurate forecasts and increased output.[100] The latter recounted his problems and outlined the measures that were being taken to solve them, but he contended that "on an over-all basis" and "with a few exceptions" the production of Transportation Corps equipment was meeting the Army's needs.[101]

The Chief of Transportation's contention was predicated on the program in effect during the early part of 1943, but that program was subject to further expansion as the year progressed. This was particularly true with respect to marine equipment, for the summer of 1943 brought requests for large amounts of this equipment from General MacArthur, who was then making preparations for the long water trek back to the Philippines.[102] After the surrender of the Axis forces in North Africa, ASF headquarters was concerned lest that success might lead to a relaxation of the effort to increase the production of war matériel, and pressure was brought to bear on all technical services to forestall any such tendency.[103] This pres-

[97] Min of SOS Staff Conf, 9 Sep 42, p. 5; ASF *Statistical Review, World War II*, pp. 3, 75, 81. The general ASF production curve again attained a high level during the early part of 1945 when the final drive against Germany was being made.

[98] Memo, ACofT for Supply for ACofS for Matériel SOS, 29 Nov 42, sub: 1943 Production Forecast, OCT 400.17.

[99] Memo, CofT for WPB, OUSW, WDGS, *et al.*, 13 Nov 42; SOS Staff Conf on TC Procurement—Production Activities, 29 Dec 42; Memo, CG SOS for CofT, 22 Feb 43, sub: Prod Conf; all in OCT 400.17; Trans Prod Conf, 24 Feb 43, OCT 337 TC Prod.

[100] ASF headquarters issued monthly reports showing the progress of procurement by all services, and more frequent reports on the procurement of selected critical items (MPR's 1, 1-A, 1-B, 1-C); from these reports the programs of the several services and the status of particular items were evaluated.

[101] Memo, CofT for ACofS for Opns ASF, 12 Apr 43, sub: Operational Stockpile, OCT 400.13; Memo, CofT for CG ASF, undated, sub: Factors to Disrupt TC Production, and reply "written 4-29-43," both in OCT HB Ex Sup; TC Procurement Program, 27 Apr 43, evidently prepared for presentation by General Gross at an ASF staff conference, OCT 337 Staff Conf.

[102] In June 1943 the program included 5,280 marine units; in July this number was increased to 6,480, and in August to 6,751; see TC Supply Program, Production During 1943, Chart 8, OCT HB Dir of Sup Production.

[103] See Memo, Somervell for CofT, 12 Jul 43, sub: 1943 Program; Memos, CofT for ZTO 8th Zone, 17 Jul 43 and 9 Aug 43 (similar memos sent to other zones); all in OCT HB Dir of Sup Production.

sure was transmitted to the Transportation Corps supply officers in Washington and in the field, but the desired results were not immediately apparent. Deliveries of marine equipment did not increase during the summer months, and a slight increase in September was partially offset by a decrease in October—this, despite the forecast of a substantial increase in October.[104]

In his effort to overcome the production lag, the Assistant Chief of Transportation for Supply instituted a survey in July 1943 to ascertain the bottlenecks. During the next two months teams of officers observed the supply operations in the Washington headquarters, in the Field Service Group at Cincinnati, and in the zone offices. These teams reported that a number of organizational and procedural arrangements required improvement. They recommended that the Engineering Division be strengthened so that complete and accurate plans, specifications, and bills of materials could be provided promptly. They proposed that a chief expediter be authorized for the Cincinnati office who would give particular attention to expediting the delivery of components, lack of which was one of the main causes for the delay in the completion of end items. Better understanding and co-operation between the Production Division and the zone supply officers were desirable. The zones needed prompter information from the Procurement Division regarding contracts placed in their respective territories, the execution of which they were expected to supervise. Better liaison was needed between the Procurement Division and the Production Division, so that the experiences of the latter would always be available to the former when it was placing new contracts. The investigators pointed out that production scheduling, in order to be realistic, would have to take into account more fully the availability of essential components.[105]

While this survey by Transportation Corps officers was being made, two engineering firms were also looking into the Transportation Corps supply operations, one of them concentrating on the Field Service Group at Cincinnati and the other on the performance of contractors.[106] The reports of these firms made additional recommendations for improving supply operations. As noted earlier, a change in the head of the Transportation Corps supply organization was made in October 1943 which led to changes in organizational structure and procedures.

Deliveries of Transportation Corps major items started a definite trend upward in November 1943, and reached their highest sustained level in the spring and early summer of 1944. The increase was accounted for chiefly by deliveries of marine equipment, the larger part of which was for use in the invasion of continental Europe, while the remainder was destined for the Pacific and other oversea commands. Deliveries of rail equipment increased somewhat but not in the same proportion.[107] In April 1944 and again during the following month General Som-

[104] Memo, Wylie for Bunker, 25 Oct 43, OCT 400.13 Proc Policy; TC Supply Program, Production During 1943, Chart 6, OCT HB Dir of Sup Production.

[105] Memo Relating to Investigation of Bottlenecks in the TC Program (undertaken pursuant to instructions contained in Ltr, 2 Jul 43, from Col Harry A. Toulmin), OCT HB Dir of Sup Production.

[106] Extracts from a report by J. G. White Engineering Company on procedures, and comments by Field Sv Gp, 27 Sep 43, OCT 310.1 (1943); Rpt 3935, Day and Zimmerman, Inc., 19 Oct 43, OCT HB Ex Sup.

[107] ASF *Statistical Review, World War II,* p. 81; volume is here expressed in terms of value.

ervell expressed satisfaction with the improved production of Transportation Corps equipment and the greater accuracy of the forecasts of deliveries submitted by the Chief of Transportation.[108] More consistent deliveries naturally simplified the task of forecasting. It is impossible, of course, to judge to what extent these improvements were the result of the efforts put forward during 1943 to get the program under way and to overcome the handicaps of a late start, and to what extent they were the result of the change in the person of the Assistant Chief of Transportation for Supply and of the adjustments in organization and methods that followed. Better understanding between the officers concerned with supply in ASF headquarters and the Transportation Corps supply organization was one of the intangible consequences of the change.

Consideration of the various factors influencing the production of Transportation Corps equipment must begin with the control exercised by the War Production Board (WPB) over the nation's entire production system. After unsatisfactory attempts to control the output of military and civilian supplies by simpler methods, the WPB adopted the Controlled Materials Plan (CMP) in November 1942. This plan, which went into operation 1 April 1943 and became fully effective 1 July 1943, was designed to assure that the available supplies of strategic materials—steel, copper, and aluminum—were used only in the manufacture of essential commodities, and that they were made available to manufacturers in such a manner as to enable them to carry out authorized programs and approved production schedules.[109] The controlled materials required to execute the Army's supply program were allocated by the WPB to the Army Service Forces, which distributed them among the technical services in accordance with preference ratings assigned to the various items that they procured. Materials allotted to the Transportation Corps were apportioned among its prime contractors; they, in turn, made allotments to their subcontractors.[110]

The preparation of bills of materials on which claims for allotments of controlled materials were based, the judicious distribution of these materials to prime contractors, the redistribution of materials and components to avoid overages and shortages, and the accounting required for the administration of the complex plan imposed a great amount of additional work on the supply organization. Contractors as well as Transportation Corps personnel had to be trained in the intricacies of administering the CMP. The Transportation Corps' task was complicated by the fact that it dealt with many small and inexperienced contractors who had difficulty in preparing accurate bills of materials, and by the further fact that its program was subject to frequent revisions. The Transportation Corps, nevertheless, accepted the CMP as a useful arrangement and, while often dissatisfied with the allotments of materials that it received, agreed in the end that this plan for controlling the use of strategic commodities, supplemented by a system of priorities or

[108] Min of ASF Staff Confs, 27 Apr 44, p. 1, and 12 May 44, p. 4.

[109] See WPB Pamphlets, Controlled Materials Plan, 2 Nov 42, and Controlled Materials Plan, General Instructions on Bills of Materials, 14 Nov 42, both in OCT HB Dir of Sup Contld Materials.

[110] Manufacturers of certain products required for general use as well as for military programs received allotments of controlled materials directly from the WPB.

preference ratings to indicate the relative importance of the various end items and components, had yielded good results for the war program as a whole and had aided the Transportation Corps in scheduling production and controlling contractors.[111]

The problem of maintaining production schedules was more difficult with marine than with rail equipment. As has been stated, the Transportation Corps was handicapped in the beginning by having to make use of many small and inexperienced prime contractors, because the better-established boatbuilders were tied up by contracts with the Navy and the Maritime Commission when the Transportation Corps entered the procurement field in a large way. This was a temporary handicap, however, that was overcome as the small contractors gradually built up their plants and personnel and gained experience. The difficulty arising from delays in the delivery of components by subcontractors was more persistent. Engines were a major bottleneck, which is understandable, because in addition to the heavy requirements in engines for vessels of many types and sizes, propulsion machinery was in demand for other kinds of war equipment, notably aircraft, motor vehicles, and tanks. Valves, pumps, generators, bearings, electrical equipment of all kinds, and fire-fighting equipment were among the hard-to-get components.[112] Some of these bottlenecks were relieved as the war progressed, but others continued to plague the prime contractors.

The Chief of Transportation's problem of obtaining components for vessels was intensified by the arrangement to supply machinery from the United States for about 1,500 hulls that were to be built in Australia. This arrangement was made when the Transportation Corps' boatbuilding program in the United States was lagging and the heavy requirements in the Southwest Pacific Area were not being met. Investigation showed that Australia could construct the hulls but could not supply propulsion and other machinery. Adaptation of the Australian hull designs to the available American equipment and co-ordination of the production schedules in the two countries posed a considerable problem. To meet it, a Pacific Supply Division was set up in July 1943 in the Field Service Group at Cincinnati.[113] This division had its chief difficulty with engines, for in addition to the over-all scarcity of propulsion units, the Navy's landing-craft program was being pressed and had highest priority at the time the procurement of engines for Australia was under way.[114] Despite the care taken to co-ordinate engineering plans, this undertaking was not very successful. In addition to the engineering difficulties inherent in such a project, some of the Australian concerns were small and not capable of precision building. For these reasons and because of the increased output of floating equipment in

[111] For the development and operation of the CMP and other controls affecting wartime production, see R. Elberton Smith, The Army and Economic Mobilization, a volume now in preparation for this series. The basic TC publications were TC Pamphlet 9, General Priority Instructions, and TC Pamphlet 15, CMP Manual.

[112] Memo, ACofT for Supply for ACofS for Matériel SOS, 29 Nov 42, sub: 1943 Production Forecast, and attached Tabular Report, OCT 400.17; Rpt of Chm WPB, *War Production in 1944* (Washington, 1945), pp. 53–63.

[113] Status Rpt of SWPA Procurement and Production, as of 31 Mar 44, prepared by Pacific Sup Div, OCT 458.1 SWPA, indicates the scope and complexity of the project.

[114] Rpt, Dir of Sup, FY 1944, Production Div Sec, pp. 20–25.

the United States, the Australian program was considerably cut back.[115]

Changes in the design or equipment of vessels, often initiated after the contracts had been let, usually delayed deliveries beyond the scheduled dates. The Chief of Transportation complained that such changes were requested too freely by those who requisitioned the vessels—theater commanders, the Army Air Forces, and the Coast Artillery Corps—but they were the natural result of an effort by the users to improve the serviceability of the craft or to adapt them to new tasks or unforeseen operating conditions. Those who initiated requisitions had in mind only their own peculiar needs and did not hesitate to request as many different types of tugs, launches, barges, and so forth, as seemed desirable.[116] Although constant attention was given to standardization by the Chief of Transportation, it was never possible to adhere strictly to standard designs. Changes, some of them drastic, were requested and could not be denied.

Although the problem of maintaining production schedules in the rail equipment field was less acute, it required constant attention. On the favorable side was the fact that the builders of locomotives and cars were large and well-established concerns with sufficient plant facilities and skilled personnel. But the rail equipment industry, lacking railway orders to keep them fully occupied, had been partially converted for the construction of tanks and other war equipment, and reconversion was accomplished only gradually. In 1942 rail equipment had not been given a high priority and was therefore severely affected by the over-all shortages of steel and other materials. When the Chief of Transportation began placing heavy orders for the Military Railway Service and for lend-lease, many variations in the sizes, types, and equipment of cars and locomotives were necessary to meet the requirements of the foreign railroads on which they would be operated. Although the equipment ordered for western Europe was standard gauge, the Transportation Corps procured 66-inch gauge equipment for India, 60-inch gauge for the Soviet Union, meter gauge for North Africa and India, and eventually 42-inch gauge for Japan. The couplings, bumpers, brakes, and springs used on foreign railroads differed from those used in the United States. These variations from the designs that they were accustomed to manufacturing meant delay at the plants of both subcontractors and prime contractors. Moreover, the War Production Board made direct allotments of controlled materials to the manufacturers of components (so-called "B" products) rather than to the Army, and the Chief of Transportation believed that this was responsible for some of the delays in getting delivery.[117]

An additional problem arose from the fact that the War Production Board kept

[115] Memo, Maj Haran W. Bullard for CG ASF, 27 Aug 44, sub: ASF Observers Rpt, OCT 319.1 SWPA; Interv with Col Bunker, 4 Sep 52, OCT HB Dir of Sup Production. The extent of the cutback is uncertain but Colonel Bunker estimated that it was about one third.

[116] Memo, ACofT for Sup for C of Plng Div OCT, 24 Feb 43, sub: Standardization of Marine Equipment, OCT 561.4 Army Ship Building Program; Memo, CofT for CG ASF, sub: Factors That Disrupt TC Production, undated, but obviously written in April 1943, OCT HB Ex Sup.

[117] Memo, CofT for CG ASF, 17 Apr 43, sub: Production of Ry Equip, OCT HB Ex Sup; Memo, CofOrd for Dir of Matériel ASF, 20 Jun 43, sub: Conversion of Facilities, OCT 453; Subcommittee of the Committee on Appropriations, House of Representatives, *Hearings on the Military Establishment Appropriation Bill for 1946*, p. 508.

an especially close control over the production of locomotives and cars in order to meet civilian as well as military and lend-lease requirements. The results did not always satisfy the Chief of Transportation, who complained in the spring of 1943 that the WPB was continually changing its schedules. This situation led to an agreement, effective 1 January 1944, under which the WPB continued to schedule the production of all railway equipment and components but the Transportation Corps supervised the work in the field, provided expediting service, and supplied the WPB with information on which to set up and enforce its schedules.[118] After trying the procedure for almost a year the WPB came to the conclusion that the Army was not giving sufficient attention to expediting the production of equipment for domestic use and proposed the cancellation of the agreement.[119]

Production scheduling and monthly forecasts of deliveries under the schedules were methods of determining the rate at which equipment and supplies under procurement could be made available to the users. These methods involved careful study of conditions at the plants of prime contractors and subcontractors, the prospective availability of scarce materials, and the possible effect of manpower shortages.[120] The establishment of the production schedule, or "P" line, was a responsibility of the Production Division, but the validity of the schedule and the accuracy of subsequent forecasts of deliveries obviously depended on the care with which contractors were chosen by the Procurement Division and the effectiveness with which the field supply officers carried out their inspection and expediting activities.[121] Understanding and co-operation between the Production Division and the zone supply officers was of the greatest importance in keeping abreast of the progress of production and in preparing delivery forecasts. Improvement of this relationship was one of the needs revealed by the investigations made in the late summer of 1943.[122]

There were numerous factors that made scheduling and forecasting difficult for the Chief of Transportation—the newness of his supply organization, the difficulty of co-ordinating the production of the many subcontractors, the necessity of using small and inexperienced concerns as prime contractors for marine items, the fact that the larger boats were built out of doors where weather might interrupt the work, and the many changes in design that were requested by the users of the equipment. When the question of scheduling and forecasting was being actively debated in the

[118] Memo, CofT for CG ASF, 17 Apr 43, sub: Production of Ry Equip, OCT HB Ex Sup; Memo, Dir of Matériel for Opns Vice Chm WPB, 26 Nov 43, sub: Expediting Locomotive Production, ASF Dir of Matériel Ry Equip and Reqmts; Memo, CofT for ZTOs, 29 Dec 43, sub: Ry Equip Production Scheduling, OCT 453 Rys; Rpt, Dir of Sup, FY 1944, Production Div Sec, pp. 14–16, OCT HB Dir of Sup Rpts.

[119] Memo, George M. Cornell, Dir Trans Equip Div WPB, for Hiland G. Batcheller, Opns Vice Chmn WPB, 29 Nov 44, sub: Army Expediting; DF, Col Maurice R. Scharff for Brig Gen Hugh C. Minton, *et al.*, 30 Nov 44; both in ASF Dir of Matériel Ry Equip and Reqmts.

[120] See remarks of Colonel Toulmin at Transportation Corps production conference, 13 September 1943, OCT 337 TC Production, for fuller discussion of methods of establishing and revising schedules.

[121] Special Order 66, issued by Col Toulmin, 31 Aug 43, sub: Procedure in Connection with Establishment of Marine "P" Line, OCT HB Dir of Sup Production.

[122] For illustrations of lack of understanding, see Memo, Col Toulmin for ZTO 6th Zone, 4 Jun 43; 2d Ind by 6th Zone Sup Br, 10 Jun 43; 3d Ind by ZTO 6th Zone, 12 Jun 43; all in OCT 6th Trans Zone.

spring of 1943, the Chief of Transportation pointed out that only certain items in his program were in arrears, while other items were completed on or ahead of schedule. He therefore argued that a proper measure of Transportation Corps performance would be a comparison of *total* actual deliveries during the month against *total* forecast deliveries. ASF headquarters took the position that this "statistical averaging out of noncomparable items" would be meaningless, and that from the standpoint of meeting specific oversea requirements the proper measure of performance must be a comparison on the basis of individual items. The merit of the ASF position from a practical standpoint is obvious.[123]

As already indicated, the Transportation Corps made progress in scheduling and forecasting deliveries and controlling production beginning late in 1943.[124] The inherent difficulties were still evident, however, during the last full year of wartime production, 1 July 1944 to 30 June 1945. For all Transportation Corps material procured during that period the monthly deliveries exceeded the beginning-of-the-month forecasts (on a dollar value basis) by an average of 1.9 percent. The deliveries of self-propelled marine equipment exceeded the forecasts by 3.7 percent, but the deliveries of nonpropelled equipment fell short of the forecasts by 7.5 percent. The deliveries of locomotives and locomotive cranes exceeded the forecasts by 4 percent, but the deliveries of railway cars fell short by 6.1 percent. Deliveries of materials-handling equipment fell short of the forecasts by 4.7 percent.[125] Although the types of equipment procured by the Transportation Corps gave rise to distinctive difficulties in maintaining delivery schedules, the problem was shared by all the technical services.[126]

The difficulties experienced in adhering to production schedules necessitated the maintenance of a well-organized expediting system. Expediters were sent to the plants of subcontractors and prime contractors with instructions to ascertain and report on the progress under each contract. When an expediter found that production was falling behind schedule, his job was not merely to put pressure on the contractor but to give him all possible aid in overcoming his difficulties. To do this the expediter had to be thoroughly familiar with the technical aspects of the job and with the Transportation Corps' organization and procedures. When expediters attached to the zone or district transportation offices were unable to cope with a difficulty, they called upon the Production Division at Cincinnati—later designated the Production Branch of the Procurement Division—for assistance. If the problem could not be solved on that level, an appeal was made to the Director of Supply in Washington, who had a small staff of special expediters attached to his office. When this effort failed, a request for a higher preference rating was initiated for approval by ASF headquarters and eventually by the War Production Board.

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[123] Memo, ACofT for Sup for CofT, 17 Apr 43, sub: Forecast Statistics, OCT 400.17; Memo, CofT for CG ASF (undated but evidently written soon after above memo), sub: Factors That Disrupt TC Production; reply by CG ASF (also undated), sub: Difficulties in Forecasting TC Production; last two in OCT HB Ex Sup; Memo, Finlay, OCT, for Robinson, ASF Hq, 15 May 43, OCT 400.13; Memo, CofT for CG ASF, 18 Jun 43, sub: Production Schedules and Forecasts, OCT 400.314.

[124] For methods of controlling production, see Rpt, Dir of Sup, FY 1944, Production Div, pp. 6–11, OCT HB Dir of Sup Rpts.

[125] Rpt, Procurement Div, FY ending 30 Jun 45, pp. 4, 79, OCT HB Dir of Sup Rpts.

[126] ASF, *Annual Report for the Fiscal Year 1944*, pp. 148–49.

During the war the Production Division dealt with approximately 2,400 requests to aid contractors in maintaining their production schedules. In about 1,800 of these cases the needs were met by assigning special personnel to the task. In approximately 400 cases requests for higher preference ratings were obtained. In about 200 cases it was necessary for the War Production Board to issue special instructions to break the bottlenecks.[127]

A thoroughgoing system of inspection was set up by the Chief of Transportation to insure that equipment and supplies were manufactured in accordance with contractual terms, including engineering plans, specifications, and instructions regarding packing, processing, and marking. Inspection also covered the security arrangements that contractors established to protect technical data, their plants, and the equipment or supplies they were producing. On the operating level the inspection responsibility was delegated to the zone transportation officers, and each zone had a chief inspector. An inspector-in-charge was assigned to each plant having substantial contracts. Special inspectors were assigned to follow through on items of unusual importance. Staff supervision was given by the Inspection Service Branch of the Production Division. The Director of Supply had a small staff of inspection specialists, who were sent into the field when conditions required them. The inspection work, which was initially covered only by general instructions, was eventually governed by very detailed regulations.[128]

The final inspection and acceptance of end items was a responsibility of the inspectors-in-charge. These formalities usually took place at the manufacturer's plant, but in cases where that plan was impracticable the inspection was made at the depot, holding and reconsignment point, or port of embarkation to which the manufacturer had shipped the matériel. In cases of extreme emergency final inspection could be waived, but the Chief of Transportation emphasized that such waivers should be few and should be fully justified by the circumstances. Acceptances of rail equipment usually involved no difficulties, since only a small number of well-established plants manufactured this equipment and it was constructed according to the builders' specifications with only minor changes to meet the Army's requirements. Acceptance of self-propelled marine equipment required more thorough tests because of the special and frequently changing designs, the fact that many of the prime contractors were inexperienced in such work, and the further fact that each vessel embraced numerous components, manufactured by different subcontractors, that had to be deftly fitted into the end product. These vessels were accepted only after they had been put through a trial run and the performance had been approved by all members of the trial board.[129]

Marine equipment that was accepted afloat required delivery arrangements different from those applicable to rail equipment, knockdown barges, and other items that were shipped from the manufacturers'

[127] OCT HB Monograph 28, pp. 102–06.

[128] General Instructions and Routine Reporting Procedures for Marine Personnel, 1 Jan 43; TC Pamphlet 6, 9 Feb 44, and revisions, sub: Standard Inspection Practices; TC Pamphlet 10, 1 May 44, sub: Inspection Manual, revised 15 Apr 45; all in OCT HB Dir of Sup Insp.

[129] TC Pamphlets cited n. 128; OCT HB Monograph 28, pp. 121–23.

plants by rail or highway carriers. The ports of embarkation, which took charge of most floating equipment immediately after acceptance, sent representatives of their water divisions to the places of delivery to take over the vessels from transportation zone representatives who had accepted them from the contractors. The designated master of the vessel and the chief engineer accompanied the port representative in each case, in order that they might observe the trial run and become familiar with the vessel on its way to the port. The master and chief engineer joined the inspector-in-charge in making a complete inventory of equipment and reporting any omissions or defects. The port also sent a crew, which might be the regular crew or a special delivery crew, to the delivery point. After a vessel had been taken over from the zone representative, the chief of the port water division was responsible for it until it was shipped overseas or transferred to another branch of the Army in the zone of interior. During this interval he had such repairs or adjustments undertaken as he considered necessary to make the vessel ready for service.[130]

Maintenance and Spare Parts

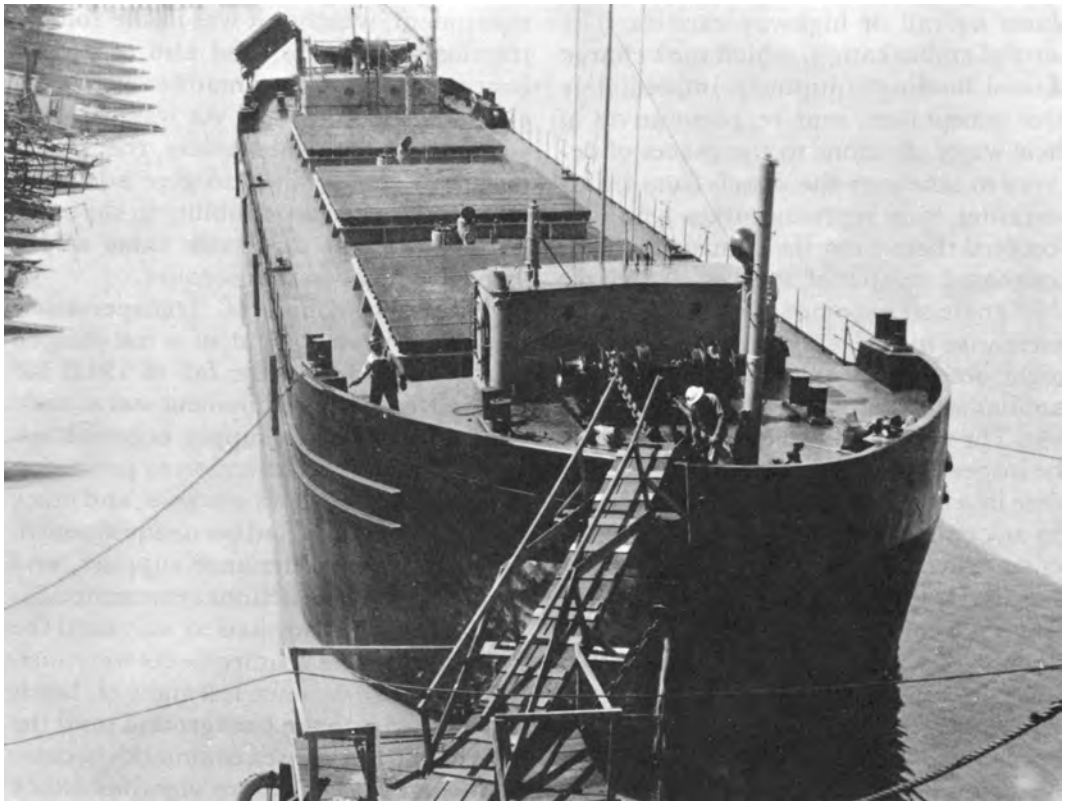
The Chief of Transportation and the agencies that had the responsibility before him procured more than 100,000 major items of equipment during World War II. *(Table 40)* These were not expendable supplies but durable equipment, most of which would continue in service over a period of years with proper maintenance and repair.[131] The Chief of Transportation had the wartime responsibility of providing the maintenance supplies and spare parts necessary for the upkeep of this equipment, whether it was in the zone of interior or overseas, and also of issuing instructions regarding maintenance policies and procedures.[132] As was the case with other technical services, the Transportation Corps failed to give adequate attention to this responsibility in the early part of the war and later came under severe criticism on that account.

When the Chief of Transportation began the development of a full-fledged supply operation in the fall of 1942, the demand for marine equipment was already heavy and his new supply organization had to give its first attention to procuring the tugs, barges, floating cranes, and other types of vessels that had been requisitioned. Spare parts, maintenance supplies, and maintenance instructions represented future needs, and they had to wait until the more immediate requirements were met. Maintenance was not lost sight of, but it was pushed into the background until the situation in the oversea commands became acute and forced a more vigorous attack on the problem. In the spring of 1943 the shortage of spare parts was being keenly felt by the U.S. forces engaged in the North African campaign, not only in regard to marine equipment but also in regard to railway equipment for which the

[130] OCT HB Monograph 28, pp. 123–26. Concerning sources, assignment, manning, and repair of small boats, see Wardlow, *op cit.*, pp. 249–61.

[131] See remarks by Gen Lewis in Min of Program Supply Conf, New York, 12–13 May 44, p. 5, OCT HB Dir of Sup Gen.

[132] AR 55-510, 9 Oct 42, par. 2; AR 55-650, 27 Feb 43, par. 4; WD Memo W 55-44-43, 12 Oct 43. General Army instructions on maintenance were given in ASF Cir 31, 15 May 43; WD Memo W 700-32-43, 6 Jul 43; WD Memo W 700-41-43, 3 Sep 43; ASF Cir 19, 17 Jan 44; WD Cir 227, 7 Jun 44; WD TM 37-250, Nov 44, Basic Maintenance Manual.



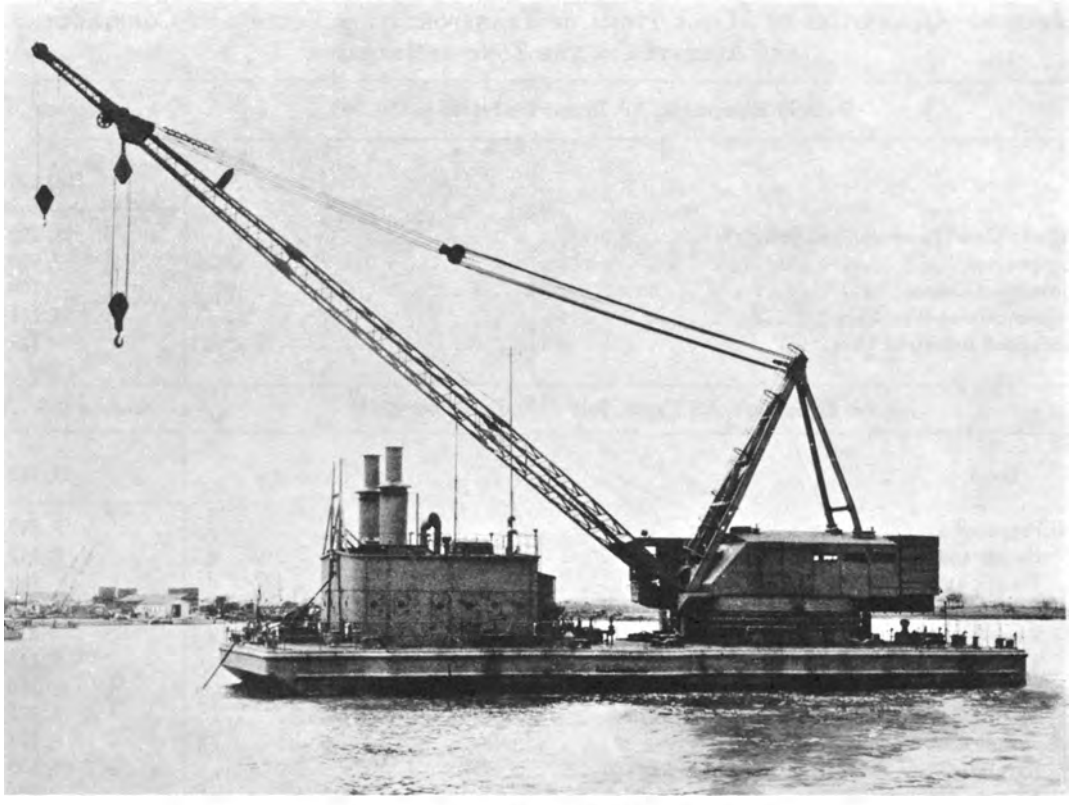
SEAGOING STEEL BARGE UNDER CONSTRUCTION *for Transportation Corps*

Chief of Transportation had become responsible in November 1942. Other theater commanders also were finding it necessary to either deadline some of their equipment or resort to makeshift methods of repair, since spare parts for American-made equipment were rarely procurable overseas. The Chief of Transportation then took steps to definitely program the production of spare parts and initiated other measures to meet the situation.[133] These measures included the establishment of a spare parts committee, which included representatives of the supply organization, the Rail Division, and the Water Division, to consider all aspects of the problem.[134]

The overcoming of the deficit was a slow process. Raw materials were scarce and closely rationed by the War Production Board. Many manufacturers were heavily committed by contracts for end items, so that the production of spare parts could

[133] Memo, Toulmin for Gross, 6 Jan 43, par. 4*b*, OCT 561.4 Army Shipbuilding Program; Memo, Brig Gen Carl R. Gray, Jr., for CofT, 24 May 43, sub: Spare Parts; Memo, ACofT for Sup for CofT, 24 Jul 43, sub: Immediate Shipment of TC Stores; handwritten Memo, Gross for Toulmin, 27 Jul 43; last three in OCT 453.31–461 Africa.

[134] Memo, Exec for Sup for Exec OCT, 11 Jun 43 OCT 344 Spare Parts Com.



REVOLVING FLOATING CRANE *with 60-ton capacity.*

not be pressed. The problem was complicated by the many types of engines and other mechanisms that the Transportation Corps had been forced to put into its floating equipment and by the general lack of standardization. Another aspect of the problem was the difficulty of estimating the requirements for replacement parts and maintenance supplies because of lack of experience data and the unpredictable effect of inexpert or careless operation of the equipment by inadequately trained personnel. As late as January 1944, the Chief of Transportation was obliged to report, "the present status of the spare parts problem is acute."[135] When the invasion of the Continent got under way in June 1944, General Ross, Chief of Transportation, ETOUSA, was still concerned about the adequacy of spare parts to keep his transportation equipment in service, although General Gross felt that his supply organization had "done fairly well" by that theater because of its high priority.[136] While the situation gradually became easier, the supply of spare parts

[135] Memo, Gross for Somervell, 20 Jan 44, Problems 11 and 14, OCT 319.1 Current and Anticipated ASF Problems.

[136] Ltr, Ross to Gross, 6 Jun 44, and reply, 19 Jun 44, both in OCT HB Gross Day File.

TABLE 40—QUANTITIES OF MAJOR ITEMS OF TRANSPORTATION EQUIPMENT CONSTRUCTED AND ACCEPTED IN THE ZONE OF INTERIOR

Railway Equipment, All Types: 1942–1945 [a]	*Number of Units*
Total	106,698
Railway Cars (Passenger and Freight)	95,290
Locomotives	7,570
Locomotive Cranes	260
Maintenance-of-Way Cars	3,251
Specialized Industrial Cars	327
Marine Equipment, All Types: July 1940–December 1945 [b]	***Number of Units***
Total	13,962
Self-Propelled	7,849
Barges and Lighters	442
Freight and Passenger Vessels	468
Launches	1,358
Rescue and Salvage Vessels	813
Tugs and Towboats	2,123
Miscellaneous Boats	258
Marine Tractors and Other Propulsion Units	2,387
Nonpropelled	6,113
Barges	5,839
Floating Cranes	274
Materials-Handling Equipment, All Types: 1942–1945 [c]	***Number of Units***
Total	1,908
Gantry Portal Cranes	501
Stiff-Leg Derricks	685
Miscellaneous	722

[a] Data for acceptances of railway equipment not available for 1940 and 1941. Acceptances in 1942 include those effected by Chief of Engineers up to 16 November, when railway procurement was transferred to the Chief of Transportation.

[b] Marine equipment figures include acceptances by other Army agencies—chiefly the Quartermaster Corps, and the Transportation Service up to 31 July 1942, when the Transportation Corps was established.

[c] Data for acceptances of materials-handling equipment not available for 1940 and 1941.

Source: Statistics, Procurement, pp. 69–73, compiled for a statistical volume of this series, now in preparation, with further details as to types and sizes of equipment.

did not catch up with the need until the production of end items had passed its peak.[137]

The difficulties of procurement and distribution were compounded by lack of

[137] See Memo, Dir Plns and Opns ASF for CofT, 28 Oct 44, and 1st Ind by CofT, 11 Nov 44, both in OCT 400.212.

centralized responsibility for maintenance in the Office of the Chief of Transportation. This was evident in a survey made by representatives of ASF headquarters late in 1943.[138] The recommendations of the survey team were given careful consideration by General Gross, in consultation with Brig. Gen. (later Maj. Gen.) Frank A. Heileman, Director of Supply, ASF, with the result that two new divisions were established in the OCT supply organization. A Stock Control Division was set up to regulate the accumulation and distribution of spare parts and maintenance supplies, as well as stocks of end items. A Maintenance Division was installed that was made responsible for the preparation of spare parts lists and catalogues and the determination of requirements for depot stocks. These functions had been performed up to that time by the operating divisions—that is, the Water Division, the Rail Division, and the Transit Storage Division. The survey team had recommended that the Maintenance Division be made responsible also for the development of policies, procedures, and practices for the maintenance of equipment, but the Chief of Transportation did not agree; he decided that these functions should remain with the operating divisions because of the experience that they already had in this field and their close contact with the users of the equipment.[139]

The Maintenance Division was late in getting started and it never attained a position of influence, although it was given some additional duties. Its purpose was brought to the attention of the field, and the theater commanders were requested to aid its work with reports regarding their maintenance problems, the supply of spare parts already on hand, and the prospective requirements.[140] It was given supervision over packing, packaging, and processing activities at Transportation Corps depots and was charged with the development of improved methods and the preparation of manuals on the subject.[141] It was made responsible for the co-ordination of all communications with higher headquarters regarding maintenance policies and problems.[142] But the Maintenance Division was always handicapped because the determination and enforcement of policies and procedures remained with the several operating divisions. Its most tangible results were in publications. Late in 1944 the division was abolished and such functions as it had been performing were assigned to the new Technical Publications Branch of the Distribution Division. In May 1945 the Maintenance Division was reinstated, but its responsibilities were in the nature of liaison and co-ordination rather than direct supervision of maintenance activities.[143]

Secondary only to the procurement and distribution of maintenance matériel was the issuance of technical publications to inform the users how particular items of equipment were to be maintained, and of lists or catalogues showing the spare parts that were available. The preparation of technical publications was shared by the manufacturers of the respective items and the Chief of Transportation.[144] These pub-

[138] Rpt 146, Spare Parts for Marine Equipment, Dec 43, OCT 020 Org of TC Sup Activities.

[139] Memo, Dir of Sup ASF for CofT, 20 Jan 44; Memo of Conf, 26 Jan 44; Memo, CofT for Dir of Sup ASF, 31 Jan 44; all in OCT 020 Org of TC Sup Activities.

[140] OCT Misc Ltr 41, 26 Jul 44, sub: Maintenance Problems.

[141] TC Cir 90-8, 23 Jun 44.

[142] OCT Off Order 5-4, 27 Oct 44.

[143] OCT Info Bull 55, 23 May 45, Sec. III.

[144] Concerning the work of the Technical Publications Branch, see Rpt, Procurement Div, 30 Jun 45, OCT HB Dir of Sup Rpts.

lications were obtained from the manufacturers so far as possible, and in March 1945 the Procurement Division was instructed to make this requirement a part of each contract.[145] The aim was to have the publications accompany the equipment, but the theaters complained of not receiving them. Responsibility for the preparation of lists and catalogues rested entirely with the Chief of Transportation. The compilation of complete catalogues, together with the establishment of standard nomenclatures, was a heavy task. In the fall of 1944 two sections of a comprehensive Transportation Corps catalogue were issued, dealing respectively with "organizational spare parts" for light maintenance and "higher echelon spare parts" such as were required for heavier maintenance.[146]

The difficulties encountered by the theaters with the maintenance of Transportation Corps equipment were not entirely attributable to delays in shipping spare parts and in providing instructions. An initial consignment of first echelon maintenance supplies was shipped with all major items, but they were sometimes removed from the equipment before it actually went into service.[147] Regulations were issued forbidding such removal, but the temptation to obtain spare parts wherever they could be found was always strong with officers having equipment in urgent need of repair, and tools were attractive to native pilferers as well as military technicians. As a further measure to deal with the problem, the Chief of Transportation ordered that these supplies be strongly barricaded in the equipment so that they would not be readily accessible. Separate shipments of maintenance matériel, as in the case of other supplies, sometimes were lost in theaters where adequate depot systems had not yet been set up or where supply operations had been disrupted by strategic developments.

The establishment and enforcement of proper packing, packaging, and processing standards and practices were considered part of the maintenance responsibility, since the success with which these functions were performed had a direct bearing on the condition of equipment and supplies when they reached the oversea commands. Different problems were encountered with the types of locomotives, cars, and boats that were shipped set up and uncrated; locomotives, marine engines and other bulky equipment that were boxed or crated; railway cars, barges, and landing craft that were shipped in knocked-down condition; and the many other items of equipment and supplies that were shipped in containers. The basic need was for complete instructions and specifications, and these were developed gradually in the Chief of Transportation's supply organization. Manufacturers were required to carry out these instructions and specifications so far as possible, but considerable packing and processing had to be done at the depots, the holding and reconsignment points, and the ports, where it was often found that the work had not been properly done before shipment or that containers had been broken in the course of transportation.

As with other phases of the supply re-

[145] OCT Off Order 30-23, 10 Mar 45, sub: Tech Publications to Accompany Each Shipment.

[146] ASF Catalogue TC-1, 27 Oct 44, describes the purpose of the TC catalogue, the echelons of maintenance, and the procedures for requisitioning spare parts.

[147] See Memo, ACofT for Supply for Field Sv Gp, 25 Oct 43, and atchd Rpt on Locomotive Spare Parts in UK, OCT 453.31 England.

sponsibility, the Chief of Transportation got off to a late start in the development of packing, packaging, and processing instructions, and then subordinated this project to tasks that seemed more pressing, with the result that progress was slow.[148] In September 1944 The Inspector General reported that many manufacturers were still failing to provide proper protection for equipment before shipment, and that the Transportation Corps depots were therefore overburdened with the task of correcting deficiencies. The depots, on the other hand, complained that they had not been given adequate written directions but had received most of their instruction orally from visiting officers.[149] Even during the late months of the war satisfactory performance in this field was a goal rather than an achievement.[150]

Although his problems with the various phases of maintenance were acute, the Chief of Transportation was unwilling to surrender any part of that responsibility. Late in 1943 a proposal was placed before ASF headquarters that the heavier types of maintenance (third, fourth, and fifth echelons) for all vessels except Army transports be made a responsibility of the Corps of Engineers, which already was maintaining certain specialized types of vessels used in its construction work and for tactical purposes. In opposing this proposal, the Chief of Transportation pointed out that in order to provide for the maintenance of transports and small boats the Transportation Corps had established marine repair shops at the ports, and that if the Corps of Engineers were to take over the maintenance of the smaller vessels a duplication of facilities and personnel would result.[151] He contended that supervision of the lighter types of maintenance (first and second echelon maintenance, which were performed by the operating crews) and the heavier maintenance could not be placed under separate agencies without danger of loss of co-ordination and detriment to the operation of the vessels. He further emphasized that maintenance requirements had to be considered in relation to the design of vessels, the procurement and storage of spare parts and maintenance supplies, and the training of crews to operate the vessels, all of which were Transportation Corps responsibilities. The technical soundness of the Chief of Transportation's position was apparent, and the proposal was not adopted.[152]

Spare parts for internal combustion engines presented one of the more difficult aspects of maintenance. The number of these engines included in the wartime programs for both marine and land equipment was great, and the manufacturers were beset with heavy backlogs. The problem was felt especially keenly in the Southwest Pacific Area, to which the Chief of Transportation had shipped a large number of vessels in the early part of the war. Since many small naval craft were

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[148] Memo, C of Packing and Crating Br for C of Maintenance Div OCT, 21 Feb 44; Memo, CG ASF for CofT, 27 May 44; both in OCT 400.162; TC Cir 90-8, 23 Jun 44, sub: Packaging, Packing, and Processing.

[149] Memo, TIG for ACofS G-4, 15 Sep 44, sub: Packaging of Supplies, OCT 400.162; TC Cir 80-57, 2 Nov 44, sub: Rpt of Insp on Packing.

[150] Memos, CG ASF for CofT, 19 Dec 44, 23 Jun 45, 16 Jul 45, all in OCT 400.162; TC Off Order 5-37, 3 Apr 45; OCT Misc Ltr 243, 17 Jul 45; WD SB 55-14, Oct 45, sub: Processing, Packaging, and Packing TC Equip and Parts.

[151] The Chief of Transportation also converted, manned, and operated six marine repair ships that were sent to oversea ports where shore facilities for repairing floating equipment were inadequate or nonexistent; Wardlow, *op. cit.*, p. 301.

[152] Memo, CofT for Dir of Sup ASF, 14 Dec 43, sub: Maintenance Responsibility, OCT 563 TC.



PROCESSING AND CRATING SHOP *at the Lathrop, California, Holding and Reconsignment Point.*

equipped with similar engines, the Army in emergencies was able to obtain some spare parts from naval depots, although the extent of such help naturally was limited so long as the Navy had not taken Army requirements into account in building up theater stocks.[153]

In the summer of 1944 the War Department and the Navy Department entered into a formal agreement under which the Navy would supply parts having high usage factors for the types of internal combustion engines used by both the Army and the Navy. The naval spare parts distribution centers in all theaters were directed to honor Army requisitions, but within limits set by the number of Army engines in the theater, the Navy's usage factors, and the supply of spare parts on hand.[154] Although Army requirements in the theaters were not always met in this way, the arrangement greatly simplified the problem of requisitioning and avoided the maintenance of duplicate stocks.

The progress that the Chief of Transportation had made during the latter part of the war in building up stocks of spare parts in the zone of interior did not forestall a renewed crisis in this field after V-J Day. In accordance with blanket instructions issued to the technical services, all contracts for equipment and spare parts,

[153] Memo, Col Thomas G. Plant, CTO USASOS SWPA, for CofT, 30 Nov 43, sub: Engine Spare Parts, OCT 561.4 SWPA.

[154] Memos, AG 412.5 (27 Jul 44) 28 Jul 44; AG 412.5 (21 Aug 44), 22 Aug 44; AG 412.5 (14 Dec 44), 14 Dec 44, sub: Spare Parts for Marine Engines.



MARINE ROPE IN STORAGE *at the Montgomery, Alabama, Holding and Reconsignment Point.*

except those covering railway equipment for the Foreign Economic Administration, were summarily canceled. Although the end of the war meant the end of heavy requisitions for new equipment, much of the marine and rail equipment already in the theaters was kept in service and still required maintenance. As a result, the Transportation Corps supply organization during the early postwar period was placed in the position of having to operate on a "hand-to-mouth basis," and for a period of about nine months spare parts and maintenance supplies were procured wherever they could be found as requisitions were received. The policy was not modified until April 1946, when planned procurement on a limited basis was again authorized.[155]

Progress in Technical Matters

Transportation Corps equipment, generally speaking, consisted of commercial types modified to meet Army requirements. In a measure this circumstance lightened the responsibility of the Chief of Transportation for technical development, as compared with the services that procured equipment of a strictly military nature without prototypes in the commer-

[155] Memo, ACofT for Sup for C of Procurement Div OCT, 4 Sep 45, sub: Readj and Demob; Memo, CofT for CO Marietta Depot, 10 Apr 46; Interv with Col Herbert D. May, 17 Jul 46; all in OCT HB Dir of Sup Gen. During the war Colonel May was chief of the Field Service Group, and later executive to the Director of Supply; at the time of this conversation he was chief of the Supply Division, which was a consolidation of all supply agencies of the OCT.

cial field. Yet his responsibility was considerable for a number of reasons. The modifications in commercial designs to adapt them to Army requirements were often extensive. The equipment had to meet the needs of a variety of users—the Air Forces, the Corps of Engineers, the Coast Artillery Corps, the tactical commanders, the port commanders, and the beneficiaries of the lend-lease program. The conditions of employment varied widely in different parts of the world because of differing military, climatic, and other factors. The using services were constantly developing new ideas to make the marine equipment that the Chief of Transportation procured for them more exactly meet their needs. The differences between U.S. and foreign railway equipment and operations had to be taken into account in manufacturing locomotives and cars for use overseas. Relatively little had been done before the war to prepare for meeting the requirements of a world-wide transportation operation.

The latter point adds to the evidence already presented in this volume that a technical service that has to organize and start operations after war has begun is at a great disadvantage. This is true not only because the service has missed the opportunity for advance research and planning, but also because it encounters extraordinary difficulties during wartime in assembling technicians, orienting them to their task, and establishing procedures to assist them in functioning effectively. Work on the adaptation of marine equipment had been carried on in the Quartermaster Corps and work on the adaptation of rail equipment in the Corps of Engineers before the Chief of Transportation took over these functions. But the development accomplished up to that time was limited, partly because of small budgets and partly because the scope and variety of the oversea requirements were largely unforeseen. The Chief of Transportation therefore assumed the major part of the task of technical development, as well as of procurement.[156]

The technical organization was built up gradually.[157] In the beginning the Engineering Division was responsible for all aspects of the work—engineering plans, designs, specifications, standardization, research, and development. When the Field Service Group was established in early summer of 1943, part of the technical personnel was moved to Cincinnati, where it continued to function as the Engineering Division, charged only with those functions that pertained to production engineering; the rest of the personnel remained in Washington and was designated the Technical Staff. Because of the difficulty of engaging a sufficient number of technicians to enable the Engineering Division to cope with the expanding program, the Director of Supply made an arrangement with an engineering firm to assign personnel to supplement that of the division.

The Technical Staff in Washington assumed a general supervision of technical developments. It was aided by a Technical Committee representing the Director of Supply, the operating divisions in the Office of the Chief of Transportation, and the other technical services that were invited by the Chief of Transportation to participate. In addition to this general advisory committee, subcommittees were estab-

[156] The Army's general instructions relating to technical research and development are in AR 850-25, 30 Jun 43, and changes.

[157] OCT HB Monograph 28, pp. 145–51.

lished late in the war to deal with the design of specific types of equipment; they were known as the Marine Design Committee, the Rail Design Committee, and the Highway and Materials-Handling Design Committee.[158]

This organization continued until 1945. In January of that year the Transportation Corps Board was established to aid the Chief of Transportation in improving all phases of his service, including matériel, training, and procedures.[159] In June 1945 the Technical Staff was redesignated the Research and Development Division.[160] There was obvious overlapping in the fields assigned to the Transportation Corps Board and the Research and Development Division. The arrangement eventually worked out was that the division would serve in a staff capacity to assist the Director of Matériel and Supply in fulfilling his technical responsibilities, while the board would work on specific projects assigned to it by the Chief of Transportation.[161]

The technical objective was to develop plans, designs, and specifications that would assure equipment that was sound from an engineering standpoint and at the same time satisfactory to the users. This objective was especially difficult to attain with marine equipment because of the many uses to which tugs, boats, barges, and floating cranes were put during the war and the divergent and changing operating conditions. With railway equipment the technical requirements were less changeable, but here again there were many problems because of the differing gauges, clearances, and railroading methods encountered in the oversea commands. Materials-handling equipment for docks and warehouses required no noteworthy departures from commercial types. The same was true of motor equipment for over-the-road service in the theaters.[162]

In working out satisfactory designs for such equipment there was close collaboration between the Director of Supply's technical personnel and the operating divisions concerned with the respective types—that is, Water Division, Rail Division, Transit Storage Division, and Highway Division. These divisions were represented on the technical subcommittees that dealt with the respective types of equipment. Changes in design were made only with the concurrence of the chief of the interested operating division.

The effort to meet the desires of those that used the equipment was paralleled by an effort to avoid an excessive number of designs. Reference has been made to the fact that when the Transportation Corps began procuring large amounts of floating equipment for the theaters in the fall of 1942, it had to contract for designs that the builders could most readily produce and to utilize the kinds of engines, electrical systems, and other mechanisms that were promptly available. The result was that a great variety of vessels was put into service. This was recognized to be an unsound situation, since the multiplicity of types complicated the task of providing spare parts and issuing maintenance instructions, and also militated against the

[158] For a discussion of the work of the Technical Staff, see Rpt, Dir of Sup, FY 1944, Tab labeled Tech Staff; Rpt, Tech Staff and Research and Development Div, year ending 30 June 45; both in OCT HB Dir of Sup Rpts.

[159] ASF Cir 412, 16 Dec 44; TC Cir 5-7, 17 Jan 45.

[160] OCT Info Bull 61, 11 Jun 45.

[161] TC Cir 5-30, 18 Jan 46, revised 29 May 46.

[162] The Chief of Transportation did not contract for motor equipment, but during the last half of the war he collaborated with the Chief of Ordnance in obtaining types of trucks, tractors, and trailers that would be most serviceable in the mass movement of freight in the theaters; see Wardlow, *op. cit.*, p. 91.

development of mass production methods by the builders. Although such a program was unavoidable in the beginning, an effort to standardize was begun at once.[163]

Standardization involved not only refusing to reorder the nondescript types that had been procured earlier, but also holding down the number of changes made in standard types to meet requests from the users. During the first year—that is up to the fall of 1943—about 60 percent of the basic designs were eliminated and the remaining 40 percent were simplified so far as possible. On 1 September 1943 there were 156 active designs of floating equipment, including 25 tugs, 22 freight and passenger boats, 30 cargo barges, 14 miscellaneous barges, 6 crane and derrick barges, 19 rescue and salvage boats, 10 harbor defense boats, and 30 miscellaneous types of small boats. Procurement in the calendar year 1944 included only seventy-one designs; only two new types were built during that year.[164] It was hoped that the number of marine designs could be brought below forty, but that had not been achieved when the war ended.

In attempting to reduce the number of types of rail equipment, the Director of Supply was confronted with problems of a different nature—the relatively inflexible requirements for operation on foreign railroads and in conjunction with foreign equipment.[165] Cars and locomotives were built to forty different combinations of gauges, brakes, and couplers. The size of rail equipment sent overseas had to take into account also the roadbeds and the clearances on the lines over which it would move. The decision to use diesel-driven locomotives in Italy and Iran added to the number of designs on the active list. On 1 September 1943, there were 69 active designs for locomotives, 35 for locomotive cranes, 43 for freight cars, 31 for tank cars, and 64 for miscellaneous types of rolling stock—a total of 242 on the comprehensive railway equipment list.[166] In June 1944, there were seventy-three rail end items under procurement; that was a "spot picture," however, and the figure does not indicate how many designs were on the active list at that time.[167]

Although considerable progress was made toward standardization as the war went on, there were limits beyond which the Chief of Transportation could not go. He had to meet the constantly developing or changing needs of the users of the equipment, and a complete "freeze" of designs was therefore impracticable.[168] But the goal of standardization was never

[163] Memo, CG SOS for CofT, 22 Feb 43, sub: Production Conf, par. 2; Memo, CofT for ACofS for Matériel SOS, 27 Feb 43; both in OCT 400.17.

[164] OCT HB Monograph 28, pp. 152–53; List, Marine and Rail Items Procured by TC as of 1 Sep 43, OCT HB Dir of Sup Program; Rpt, Reqmts and Distribution Div, 30 Jun 45, Reqmts and Stock Contl Br, p. 10, OCT HB Dir of Sup Rpts. Numerous statements were made during the war regarding the number of designs in use, but the bases of computation differed; the figures used here apply to designs for marine end items and appear to give a correct indication of the extent to which standardization was accomplished during the period of heavy procurement.

[165] Some of the refinements that the Russians and the British requested were refused; Memo, CofT for Gen Clay, 6 Jul 44, sub: Diesel Locomotives for USSR, ASF Hq Dir of Matériel Ry Equip & Reqmts; Memo, BAS Washington for Dir of Sup, 16 Aug 44, OCT 453 England, and reply, 26 Aug 44, OCT 453.3 England.

[166] List, Marine and Rail Items Procured by TC as of 1 Sep 43, OCT HB Dir of Sup Program.

[167] Rpt, Reqmts and Distribution Div, 30 Jun 45, Reqmts and Stock Contl Br, p. 9, OCT HB Dir of Sup Rpts.

[168] Memo, ACofT for Sup for Plng Div, 24 Feb 43, sub: Standardization of Marine Equip; Interv with Col Bunker, 4 Sep 52, sub: TC Supply Problems, OCT HB Dir of Sup Production.

lost from sight. To that end and also with a view to reducing the production delays and the additional costs involved in unnecessary modification, a close control was established over change orders, including those originating with the builders as well as those initiated by the users of the equipment.[169]

A plan of classification, prescribed by the War Department, supported the idea of standardization and aided in determining the quantities of end items and spare parts that should be procured.[170] The designations for the classes were changed in August 1944; thereafter all items of equipment for which there was recurring demand were placed in one of four classes: "standard" items were those that would be procured in preference to others; "substitute standard" items were those that were not as satisfactory as standard items but could be procured when the latter were not available; "limited standard" items could not be reordered, but existing equipment could be repaired and returned to service; and "obsolete" items were to be dropped from use entirely. Classification was made by the Technical Committee, on which not only the Director of Supply but the operating divisions and other interested technical services were represented.[171] Classifications were based on conditions affecting the procurement of the items as well as on reports from the theaters regarding performance and operating conditions.

Standardization and classification called for a system of item identification that would enable officers overseas to know exactly what equipment and supplies were available and to prepare their requisitions in terms that could be readily understood at depots in the zone of interior. The Transportation Corps plan of identification included the design number and a short description of each item; it did not include code numbers. Like some other aspects of Transportation Corps supply, development of a standard nomenclature was still under way when the war ended.[172]

Although the major technical task was to adapt commercial equipment to military needs and modify existing Army designs to meet new conditions, some projects were undertaken that involved research and experimentation. Among the newly developed equipment placed in service during the war was a refrigerator barge for use in the Pacific, consisting of a standard 112-foot knockdown steel barge with nine refrigerating units mounted on the deck and machinery for the generation of electrical power installed in the hull. A light four-man lifeboat that could be employed for a variety of purposes was developed for use in connection with the 85-foot aircraft rescue boat. A yoke-type life preserver, which would support a soldier carrying a full pack and small arms more satisfactorily than the vest type or belt type, was designed. In addition to work done in collaboration with The Surgeon General on the design of a "self-contained" unit hospital car for use in the zone of interior, a light ten-car hospital train was developed for service on European railroads. In collaboration with the Coast Artillery Corps, plans and specifications

[169] TC Cir 110-3, 13 May 44, sub: Engineering Changes or Modifications.

[170] AR 850-25, 30 Jun 45, pars. 14, 15.

[171] TC Cir 160-15, 28 Aug 44, and Supps. 1–7, sub: Classification of Equipment as to Types and Specifications; TC Cir 160-19, 19 Jan 45. Results of Technical Committee studies are given in reports in OCT 344 TC Tech Com.

[172] See TC Standard Nomenclature for Major Articles of Equipment, 7 Mar 46, in OCT HB Monograph 28, App. XIX.

were worked out for a new mine planter, which could handle the larger and heavier types of submarine mines that were being developed. Several types of life floats were constructed to meet special conditions encountered in the oversea commands.[173]

When the war ended a number of other projects were under way. A railway flatcar to transport heavy tanks was being developed with a view to distributing the load so as to make it operable over recently repaired roadbeds and bridges. A 50-ton diesel-electric locomotive was being designed, especially for use in forward areas, which could be employed either singly as a switcher or in multiple when heavy tractive power for line hauls was needed. A 30-ton gasoline mechanical locomotive was being worked on that would have high tractive power but an axle load no greater than the cars that it would draw. Study was being given to various types of propellers and propulsion methods, including jet propulsion, with a view to increasing the speed and maneuverability of small craft and to improving performance in shallow or weed-infested waters. Data regarding German transportation equipment were being gathered and analyzed. The Transportation Corps Board had undertaken tests of numerous materials and devices to determine their suitability for use by the Army.[174]

The Transportation Corps contributed to the development of a number of other items of equipment that were not its direct responsibility. The most important of these was the amphibious 2½-ton truck, or DUKW. The idea of a cargo vehicle that could operate on either land or water had appealed to both the Army and the Navy, and both had done some work on it. When satisfactory results seemed to be in doubt because of indifference or preoccupation, Brig. Gen. Theodore H. Dillon, Deputy Chief of Transportation, got behind the project and kept it active until a serviceable vehicle had been developed and tested under the auspices of the Office of Scientific Research and Development.[175] The Brodie System for landing and launching aircraft by use of a portable rig attached to the side of a vessel or set up on shore was conceived by a Transportation Corps officer at the New Orleans Port of Embarkation and developed with Transportation Corps funds.[176] The Chief of Transportation sponsored tests to develop a method of laying pipeline under water, particularly with a view to piping petroleum from England to France during the invasion of the Continent; this project was carried forward by the Corps of Engineers and later by the British.[177] The Transportation Corps collaborated with the Asso-

[173] Barge, refrigerator, knockdown, design 435 (standard); Lifepreserver, yoke type, combat type, kapoc; Memo, Tech Staff for Contl Br Off of Dir of Matériel and Sup, 12 Jun 45, sub: Status Report; all in OCT HB Dir of Sup Research and Devel; Rpts, Rail Div, FY 1944, p. 25, and FY 1945, p. 21, OCT HB Rail Div Rpts. Only one hospital train was built for oversea use because of the decision to convert passenger cars in the theaters and thereby save shipping.

[174] OCT HB Monograph 28, pp. 164–67.

[175] Memo, Lt Col Russell F. Oakes, Tech Info Off OCT, for Wardlow, 20 Sep 46, and attached review of development of DUKW, and other documents in OCT HB Topic Amphibious Vehicles; James Phinney Baxter, 3rd, *Scientists Against Time* (Boston: Little, Brown and Company, 1946), pp. 76–81, 243–51; Vannevar Bush, *Modern Arms and Free Men* (New York: Simon and Schuster, 1949), pp. 35–36; Eisenhower, *Crusade in Europe*, p. 163.

[176] Memo, CofT for COMINCH US Fleet, 31 Dec 43, sub: Brodie System; Note by author, 5 Dec 46, recording statements by Gen Wylie; and other documents in OCT HB Topic Brodie System.

[177] Memo, Col John H. Leavell, OCT, for Ross, 8 Mar 43, sub: Underwater Pipeline, OCT HB Wylie Petroleum; Memo, Leavell for Gross, 4 Mar 44, par. (5), OCT HB Gross Petroleum; WD press release, 2 Sep 45, sub: TC Planned Oil Pipelines in Channel in 1942.

ciation of American Railroads in developing the Mareng Cell, a rubberized container that made possible the transportation of petroleum in open-top rail cars.[178]

In these technical matters, as in other aspects of the supply operation, ASF headquarters kept a close supervision over technical service activities. The basic regulations were formulated in that headquarters and its representatives sat informally with the Transportation Corps Technical Committee. ASF headquarters, moreover, expected the technical services to keep it informed on all significant technical developments and to obtain its approval for the opening or closing of research projects. When the Chief of Transportation's Director of Supply failed to comply with the latter requirement, he was sharply reminded of the omission.[179] While ASF headquarters kept such matters under close scrutiny, it apparently did so for the purpose of observing progress or lack of progress rather than of supervising the technical aspects of the work.

In view of the fact that so many items of Transportation Corps equipment were adaptations of commercial designs, the aid of private industry in making the adaptations was of great value. During the war this aid was sought informally as it was required, but the need for a standing arrangement with industry was recognized and steps were taken in that direction.[180] Not long after the end of the war the Chief of Transportation announced the establishment of the Technical Advisory Board consisting of fifty-two outstanding experts representing all branches of transportation.[181] These men were requested not only to stand ready to give assistance on matters referred to them by the Chief of Transportation, but to bring to his attention any developments or possibilities of development that might be of interest to the Army. This arrangement reflected the importance of the role that the Army's marine and railway equipment had played in the conflict just finished; it also reflected a recognition of the desirability of constant technical improvement to enable the Transportation Corps to keep its equipment abreast of developments made through private research and adequate for the needs of another war.

Summary of Successes and Failures

The Chief of Transportation's success in meeting the matériel requirements of the theaters varied with the different oversea commands and the different types of equipment. The needs of the Pacific commands for small vessels and materials-handling equipment developed rapidly, and, because of his late start in the procurement field and his difficulties in attaining adequate production, the Chief of Transportation was not able to meet those needs fully and promptly. Shortages of such equipment were severely felt in the Pacific during 1942 and 1943, although they could not be termed critical in the sense that they adversely affected the outcome of important military undertakings. By 1944 the shortages were being steadily overcome. In the Mediterranean and European theaters the requirements for

[178] Memo, Buford, Vice Pres AAR, for Metzman, C of Rail Div OCT, 14 Jul 42; Memo, Maj Cheshire for CofT ETOUSA, 4 Nov 42; both in OCT 457 Mareng Cell.

[179] Memo, CG ASF for CofT, 9 Sep 44, sub: TC Development Projects, OCT HB Dir of Sup Research and Devel.

[180] Ltr, Lewis to Buford, Vice Pres AAR, 9 May 45, OCT 334 Tech Adv Bd.

[181] TC Cir 5-29, 17 Jan 46, revised 7 Feb 46; WD press release, 3 Mar 46.

marine and materials-handling equipment developed more slowly, and since these commands held top priority their needs were adequately met, although deliveries sometimes were slower than the theaters desired. The calls for railway equipment were relatively light until 1943 and did not reach their peak until 1944, so that the Chief of Transportation was able to build up a stockpile that enabled him to meet most demands as they arose.[182]

The equipment that the Chief of Transportation procured was technically adequate, except for some items hastily obtained during the early part of the war. The great variety of uses to which boats and other floating equipment were put in the oversea theaters, and the hard and unusual treatment that they often received, could not be fully foreseen. The vessels hastily constructed during the early part of the war to meet the theaters' urgent needs were in some cases makeshifts and consequently unsatisfactory from the standpoint of both operation and maintenance. But considerable progress was made toward eliminating engineering faults, and as the theaters reported their experiences with particular types of equipment the designs were improved to meet the operating requirements.[183] The technical problems were not so great with rail equipment. Some time was required to establish the sizes, gauges, and other physical characteristics of locomotives and rolling stock for service in the several theaters, but when these requirements had been ascertained there was no difficulty in fulfilling them, since the contractors for such equipment were well-established and technically competent concerns.

The research work carried on by the Chief of Transportation during the war, with a view to developing new and more effective types of equipment, was limited. No doubt much could have been accomplished in that direction had the Chief of Transportation entered the war with an adequate research staff and with objectives and procedures already established. Since these conditions did not obtain, he proceeded on the basis that the most immediate and satisfactory results could be obtained by adapting equipment already in use by the Army or the commercial transportation industry. Basic needs were met in this way.

Failure to make adequate provision for spare parts for Transportation Corps equipment was probably the most serious shortcoming chargeable to the Chief of Transportation's supply organization. The effects of this shortcoming were felt most severely in the marine field; the military railway services overseas also were affected but not to the same degree. It does not excuse the fault in the Transportation Corp's program to point out that shortage of spare parts was a common experience in the theaters, involving all technical services. But it seems fair in extenuation to reiterate the fact, which has been so often cited in this chapter, that the Chief of Transportation inherited the procurement program after the demands for equipment

[182] Except as otherwise indicated, this summary is based on facts presented earlier in this chapter and conversations with Transportation Corps officers. See also Memo, ACofT for Sup for CofT, 1 Oct 45, sub: Rpt on Accomplishments and Handicaps, and attached reports of divisions, in OCT HB Dir of Sup Rpts.

[183] Probably the most unsatisfactory item was the knockdown barge, which was contrived to save shipping space. During a visit to the Pacific theater in the fall of 1943 General Gross reported that this barge would have to be improved, since after assembly overseas it too often did not float; Ltr, Gross to Wylie, 26 Sep 43, par. 5, OCT HB Wylie Gross Letters Sep–Nov 43.

were already large, and that for a time his resources were severely taxed to supply the most urgently needed end items.

The Chief of Transportation was slow in fulfilling his supply responsibilities in other respects; these included the provision of information regarding the operation and maintenance of the equipment that he had shipped overseas, of catalogues to indicate the types of equipment that were available for shipment, and of spare parts lists to assist the theaters in ordering replacement parts against future needs. It would have helped the theaters if they had been furnished specifications and blueprints for some of the larger equipment that involved difficult operating and maintenance problems. The earlier adoption of standard nomenclature and descriptions would have encouraged the theaters to requisition items that were in production, and would have discouraged the practice of "inventing" new types of equipment to meet their peculiar needs.[184] These aspects of the supply responsibility, like the procurement of spare parts, were forced into a position of low priority by the urgency of the basic need for the equipment itself.

The failure of the Chief of Transportation to concentrate in one division the responsibility for establishing and enforcing maintenance policies and procedures was the source of some of the weakness in that field. The explanation of this failure lies chiefly in the fact that other divisions, particularly the Water and Rail Divisions, already had technical personnel qualified to deal with these matters, and the procurement of similar personnel exclusively for the Maintenance Division not only would have been difficult in view of the existing manpower shortage, but also would have been wasteful. In addition, having assigned certain maintenance responsibilities to the operating divisions in the early part of the war, the Chief of Transportation found it difficult to transfer those responsibilities later. Yet it seems likely that the assignment of full maintenance responsibility to a unit set up expressly for that purpose would have produced better results.[185]

There was some co-operation between the Army and the Navy in the procurement of marine equipment and in related technical matters, but it fell short of the possibilities. Procedures for such co-operation had not been established in peacetime, and the pressures of war as well as habits of independence militated against their rapid development after Pearl Harbor. The Army and the Navy joined with the Maritime Commission in an arrangement to assign boatbuilders to work primarily for one agency so that each could know fairly accurately the production capacity on which it could rely. The agreement under which the Navy became responsible for the procurement of all amphibious landing craft and that under which the Navy provided spare parts for internal combustion engines in Army equipment were logical and beneficial. Otherwise, the two departments followed parallel but independent courses. The need for standardization, particularly of marine engines, was recognized, but a concerted move in that direction was not made until fairly late in the war, and although there was some discussion in

[184] Consolidated Operational Report on TC Activities in ETO, May 42 through V-E Day, Annex 3, Rpt of Supply Division, gives a general review of problems in that theater; in OCT HB ETO.

[185] See comment by C of Maintenance Div, 19 Sep 45, attached to Memo, ACofT for Sup for CofT, 1 Oct 45, sub: Report on Accomplishments and Handicaps, OCT HB Dir of Sup Rpts.

joint committee there were no appreciable results.

Certain phases of the Transportation Corps supply operation have been deliberately omitted from this discussion, since they did not present problems that were essentially different from those encountered by other technical services. Two of them—depot operations, and stock control—were substantially affected by the lateness with which the Transportation Corps came into being.

During the first two years of the war the Chief of Transportation had no facilities that could properly be called depots. Transportation Corps matériel was placed in service almost as soon as it was manufactured, and when temporary storage was required it was provided at the holding and reconsignment points. Supply officers were placed at those installations to assume accountability for Transportation Corps items and fill requisitions as they were received. As stockpiles gradually grew, more formal depot operations became necessary, and on 1 January 1944 space was assigned for this purpose at the four holding and reconsignment points located at Voorheesville, New York; Marietta, Pennsylvania; Montgomery, Alabama; and Lathrop, California. Later three subdepots were established at the holding and reconsignment points at Yermo, California; Auburn, Washington; and Elmira, New York. Each depot stocked particular types of equipment rather than the entire range. The officers in charge were provided with certain services by the commanders of the holding and reconsignment points, but they were responsible to the Director of Supply for their depot activities.[186]

Late compliance with the ASF plan of stock control was a corollary of the late establishment of the Transportation Corps depots. This plan, set up in the spring of 1943, was designed to enforce the maintenance of proper stock levels at depots and other installations in the zone of interior, to keep the depot stocks in line with the probable requirements of the oversea commands, and to provide an over-all co-ordination to prevent uneven distribution with shortages in some places and overages in others.[187] In July 1944 The Inspector General, following a survey, reported that stock control was still in its initial stages at Transportation Corps headquarters and in different stages of development at Transportation Corps depots and ports of embarkation. In response to a request from General Somervell for comments on this report, the Chief of Transportation stated that stock status reports had been initiated by his Director of Supply, excesses and shortages at depots and other field installations were being studied, and depot stock records were being brought into balance with physical inventories. While there was still much to be accomplished, he felt that considerable progress had been made.[188]

[186] For space occupied by the depots, see Table 20, above. OCT HB Monograph 28, pp. 169–94, briefly discusses depot functions and operations.

[187] *Logistics in World War II*, pp. 79–80; monograph prepared in the Industrial College of the Armed Forces, History of Stock Control, Army Service Forces, U.S. Army, January 1948.

[188] Memo, CG ASF for CofT, 6 Jul 44, sub: Stock Levels; 1st Ind by CofT, 12 Jul 44; both in OCT 400.212.

CHAPTER VIII

Observations and Conclusions

The record of the Chief of Transportation in meeting his responsibilities for the movement of Army personnel and matériel, the training of troops, and the procurement of supplies and equipment in World War II was a good one, and this fact was recognized throughout the Army. The staff that General Gross gradually assembled was technically proficient, and under his leadership it devoted itself to the tasks of the Transportation Corps without reservation. But there were some other factors that weighed heavily in the results. The new Chief of Transportation had to establish the place of his office in the Army organization and plan of operation before it could properly perform its mission. In building up personnel and facilities adequate for the job the Chief of Transportation had to contend with personnel ceilings and materials priorities at every step. Wartime transportation was a co-operative business in which several civilian and military agencies were concerned, and it presented problems growing out of divergent interests and differing opinions. And as an overriding factor there was the extraordinary scope of the military operations, which gave to the Army the greatest transportation task ever undertaken by a single agency.

The desire of the Chief of Transportation to have all Army transportation functions performed under his supervision was based on the firm belief that this arrangement would facilitate co-ordination and promote economy in operations. While the desire was not completely realized, the exceptions did not constitute serious handicaps. The Chief of Transportation did not control passenger and freight movements by air, and he unwillingly delegated authority to the Army Air Forces to route their own domestic freight moving by surface carriers. These exceptions interfered with the Chief of Transportation's plan of over-all co-ordination of movements, but the volume of traffic thus placed outside his jurisdiction was relatively small. The bulk of the traffic was under his control and the procedures that were developed for handling it proved very successful. These procedures were successful not only because military traffic was moved promptly and safely, but also because congestion was avoided and the means of transportation were used intensively so that the maximum amount of commercial as well as military traffic could be moved.

The importance that the Chief of Transportation attached to having unbroken control of troops and supplies throughout their movement from the zone of interior to the oversea commands seems to have been well justified; it appears to have warranted the vigorous protests that he made whenever the integrity of his control was threatened. Careful co-ordination of the movements to the ports with the loading and dispatch of ships was necessary to

avoid a waste of transportation and delays in the arrival of shipments overseas. The Chief of Transportation worked on the simple theory that such co-ordination would be relatively easy if he controlled the shipments at all stages, and that it would become more difficult if he had to depend on the co-operation of other elements of the Army in order to achieve it. This did not mean that he wanted these movements to be outside the control of the War Department General Staff, which was responsible for carrying out strategic plans; it meant only that the Chief of Transportation did not want his ability to execute authorized movements to become dependent on the readiness or unreadiness of other operating agencies of the Army to adjust their activities to the plans of the Transportation Corps.

The first and only serious threat to the continuity of the control the Chief of Transportation exercised over troop movements was the proposal, in the summer of 1942, to remove the staging areas from the jurisdiction of the port commanders and to place them under the service commands. The reasoning behind this proposal was logical enough. The command, training, and equipping of troops while they were at the ports awaiting transshipment overseas were not basically transportation functions; they were, in fact, functions that the service commands were qualified to perform. But the Chief of Transportation had practical reasons for wanting the staging operations to remain under the direction of his port commanders. Those commanders were responsible for dispatching the various types of troop units and replacements overseas in accordance with movement orders and theater priorities, and they were responsible for having enough troops ready for embarkation to fill the ships that were placed on berth. The Chief of Transportation believed that there was less chance of failure in fulfilling these responsibilities if the staging process was under the direct control of the port commanders than if they had to rely on the service commands to get the troops ready for delivery to the shipping terminals. Considering the complexity of the staging process, the urgency with which wartime movements had to be executed, and the frequent changes made in the priorities, the force of the Chief of Transportation's logic is difficult to deny. At any rate, the plan that he favored worked remarkably well during World War II, and, although the staging operation was placed under the control of the army commanders after the war, provision was made that in the event of a major mobilization the staging areas would revert to the control of the Chief of Transportation.[1]

The possibility that the Chief of Transportation might lose control of the movement of a large part of the freight destined for oversea areas arose in the spring of 1943. At that time proposals were considered to make the oversea supply divisions at the ports of embarkation responsible to ASF headquarters rather than to the port commanders and the Chief of Transportation, or to transfer their functions to new agencies that would be responsible directly to ASF headquarters. The oversea supply divisions' main responsibilities were to process requisitions received from the oversea commands, and to schedule the movement of shipments from depots to ports in accordance with the priorities and the availability of ships to lift them. The handling of theater requisitions and the enforcement of priori-

[1] See DA SR 55-720-5, 28 Jun 51, pars. 2*c–d*.

ties were not essentially transportation functions, but the Chief of Transportation felt that they were inseparable from the task of co-ordinating the arrival of shipments at the ports with the readiness of the ships, a task that was definitely a transportation function. The basic reason for the proposal to remove the oversea supply divisions of the ports from the supervision of the Chief of Transportation was that, in carrying out the latter's policies regarding the use of ships and ship space, the ports had not been sufficiently responsive to the policies and plans fostered by ASF headquarters relating to the distribution of supplies.

Since General Goodman set up and directed the very successful Oversea Supply Division at the New York Port of Embarkation, his views on this subject are of special interest. From his experience he became convinced that the OSD, while it should be located at or adjacent to the port, should be responsible directly to ASF headquarters (or the branch of the Army having corresponding responsibilities), rather than to the port commander or the Chief of Transportation. He had observed that under the Chief of Transportation's policy that ships must be loaded as nearly to capacity as possible, low-priority items sometimes were shipped because they contributed to balanced cargoes, whereas some higher-priority items were held back because they would have contributed to unbalance; he considered the subordination of supply to transportation considerations a logistical mistake. Although he had received good support from the port commander at New York, General Goodman saw a potential hazard in a system under which a port commander could require that all communications regarding oversea supply be passed through his office, for the delays involved in such a procedure would be incompatible with good service to the oversea theaters. He concluded, moreover, that since the oversea supply division had to bring pressure to bear on the various technical services to insure that supplies were shipped in accordance with schedules it had prepared, it could do this more effectively as an agent of the commander of all of the service forces than as a representative of one of them.[2] These views were substantially in accord with those held by General Lutes, ASF Director of Operations, as presented earlier.[3]

The fundamental issue was whether supply considerations or transportation considerations should govern the loading of ships. It is understandable that the view of the Chief of Transportation, who was under constant pressure to get more ships for the Army and to use those available to utmost capacity, should have differed from that of General Lutes, who was responsible for the proper distribution of all ASF supplies, and that of General Goodman, whose job was to insure that the European and Mediterranean theaters received the items they had requisitioned in accordance with the priorities they had established. It is obvious, also, that under the pressure of wartime operations these points of view could not always be reconciled. The trend of Army thinking on the subject is indicated by the fact that, after the issue came into prominence in the spring of 1943, the influence of the ASF Director of Operations over the operation of the OSD's was greatly increased, and that after the war the OSD's, although they remained physically located in the port establishments, were placed directly under the control of

[2] Ltr, Goodman to author, 14 Apr 52, OCT HB PE Gen Oversea Sup.

[3] See above pp. 337–38.

the Logistics Division (G-4) of the General Staff, which had taken over the supply functions previously performed by ASF headquarters.[4]

The disagreements between the ASF Director of Operations and the Chief of Transportation, because of the staff function that the latter performed, were inevitable in view of the overlapping of the responsibilities of the two offices as the incumbents interpreted them. Both Lutes and Gross took broad views of their duties, and neither was inclined to give up any authority he considered necessary to their fulfillment. Gross believed that the transportation and logistical studies that his transportation experts and planning staff prepared were essential to the strategic and logistical decisions the commander of the Army Service Forces and the General Staff were required to make. Lutes objected to this as an intrusion into his sphere as the staff officer for planning and coordinating ASF operations. But Lutes also considered his staff responsibility justification for intervening in matters that Gross considered purely operational.

The problem of drawing a dividing line between staff and operating functions is a familiar one in military circles. The establishment of SOS (ASF) headquarters as an additional echelon between the Secretary of War and the Chief of Staff, on the one hand, and the technical or operating services, on the other, rendered the problem more, rather than less, difficult. When plans were being laid in early 1942 for the establishment of the Services of Supply, General Lutes, as prospective Director of Operations in the headquarters organization, expressed the view that transportation should be under his control if he were to effectively regulate the distribution of supplies.[5] It is not surprising, therefore, that he subsequently should have had differences with General Gross, who, having been made chief of an independent transportation service, jealously guarded the prerogatives that he believed necessary to the proper conduct of his office.

A great deal has been said in this volume about the handicaps under which the Chief of Transportation operated because of the fact that his office was not established until after the nation had gone to war. Anyone who has studied the records must concede that these handicaps were very real. Naturally some activities were more deeply affected than others.

The handicap was less severely felt in the execution of troop and supply movements than in some other fields. Movements of increasing size had been handled during 1941, and a good working relationship with the railroads had been developed. But methods that were adequate before Pearl Harbor were inadequate for the exceptionally heavy movements that became necessary thereafter. A comprehensive system for controlling port-bound shipments of freight did not become fully effective until the summer of 1942, and consequently there was disturbing congestion at the major ports during the early months of the war. The standard operating procedures that were necessary to insure that all agencies of the Army concerned with movements understood their functions and performed them properly were evolved slowly and did not reach maturity until 1943. As a result, port commanders had a heavy task preparing troops and equipment for shipment to the theaters because home stations, depots, and tech-

[4] See DA SR 730-5-1, 15 Jul 49, par. 11.

[5] Leighton and Coakley, *Global Logistics and Strategy, 1940-1943*, Ch. IX, p. 228.

nical service headquarters sometimes failed in fulfilling their responsibilities. How much a permanent Chief of Transportation would have been able to accomplish in forestalling these difficulties is of course problematical, but at least he could have visualized the situation and laid plans for dealing with it.

The controversy over supervision of the oversea supply divisions at the ports was in part attributable to the fact that this activity was not assigned to the ports until January 1942, after the United States had entered the war. The organizations and procedures necessary to perform this complex and vital function had to be developed from the ground up, and virtually nothing had been done in that direction when the ports were placed under the control of the new Chief of Transportation in March 1942. The relationships of the oversea supply divisions, which were subsequently organized, with the other operating divisions at the ports had to be worked out, as well as the relationships with the Office of the Chief of Transportation and SOS headquarters. The shortcomings of the oversea supply divisions during the period of development accentuated the conflict between supply and transportation interests, which kept the Office of the Chief of Transportation and the headquarters of the Services of Supply in a state of agitation for many months. This was one of many instances that demonstrated the shortsightedness of maintaining in peacetime organizations and procedures that must be completely revamped to cope with the greatly expanded requirements of war.

In the matter of training troops the handicap was more severe. Until the summer of 1942 the Chief of Transportation had virtually no training staff at his headquarters; training doctrine and tables of organization and equipment for port units were prepared by The Quartermaster General, and the actual training was accomplished at the ports of embarkation. It is not surprising, therefore, that when the Transportation Corps was established in July 1942 and given full responsibility for troop units to operate ports and small boats, little had been done to visualize the requirements of global warfare and to prepare for meeting them. The training of railway troops, amphibian truck companies, and some other types of units was added to the Chief of Transportation's responsibilities still later. The assembling of an adequate headquarters staff, the acquisition of appropriate training facilities, and the formulation of training doctrine and programs were accomplished step by step. Under the circumstances it was inevitable that the demand for port and marine units, which began to build up rapidly in the summer of 1942, should have soon outstripped the ability of the Chief of Transportation to meet it promptly, and that some units should have been sent overseas without sufficient training. The Chief of Transportation eventually did a creditable training job, which he might have done earlier if he had had the opportunity to prepare for the task sufficiently far in advance. The preparation of rail units was not as greatly affected by this situation, since a Military Railway Service headquarters had been functioning for some time when the Chief of Transportation took over this activity from the Chief of Engineers and most of the men for these units were drawn from the commercial railways and already had technical skill.

The most serious disadvantage that the Chief of Transportation suffered because of his delayed start was in connection with

the procurement of equipment. Here again his responsibilities were acquired gradually, the build-up of his headquarters staff was not started in earnest until the late summer of 1942, and his field establishment to deal with contractors and supervise production did not begin to take shape until some months later. This incipient organization naturally experienced difficulties in determining the amount of equipment to be procured, finding reliable contractors, mastering the intricacies of the controlled materials plan, setting up production schedules, forecasting deliveries, standardizing designs, and meeting the technical requirements of those who used the equipment. Although definite progress was made during 1943 in catching up with the demand for marine equipment—the main source of difficulty—it was not until 1944 that satisfactory results began to emerge. Because of the necessity of concentrating attention on overcoming the backlog of unfilled requisitions for end items, the matter of maintenance and spare parts received only belated attention, and the Chief of Transportation was still struggling with this problem as he entered the last year of the war.

Scientific research to develop more effective types of marine, rail, and highway equipment for military use in the various oversea areas began late and remained on a modest scale. The needs of the Army were met chiefly by modifying commercial types, and, while the accomplishments in that field were considerable, they were of an engineering rather than a scientific nature. The conception and development of basically new equipment requires time. Results are best achieved in an atmosphere of unhurried study and experimentation, and this is difficult to achieve in an organization beset with wartime operating problems. The outstanding new transportation item introduced during World War II was the amphibious truck, and while the Chief of Transportation foresaw the need and encouraged the development of this vehicle, the technical work was accomplished by a civilian agency that was able to draw upon the talents of numerous scientists and to conduct research and make tests free from the pressure of operating responsibilities.

The relations of the Chief of Transportation with the civilian agencies of the government concerned with transportation must be viewed in the light of the fact that they were all wartime creations and had to organize their operations and learn to work with each other while meeting their heavy day-to-day responsibilities. It may seem futile to reiterate the theme that peacetime organizations and procedures should provide at least a foundation upon which wartime operations can be built. As has been demonstrated, even after belligerency has become virtually inevitable the hope still lingers that somehow it can be averted and that the complete changeover that becomes necessary with the advent of war can be avoided. For this reason some of the vital transportation lessons taught by World War I were disregarded in 1940 and 1941. It is to be hoped that the lessons of World War II will not be wasted.

Beyond the question of mutually acceptable standards and procedures, the relationship between military and civilian transportation agencies may be a difficult one because of the difference between the military and commercial points of view. This difference was encountered during

World War II in both the ocean shipping and domestic transportation fields, but the situation became particularly acute in connection with the latter.

Ships capable of transoceanic service were devoted almost entirely to the war effort, civilian traffic being held to that which was absolutely essential. The Allied leaders considered the transportation of lend-lease goods and civilian aid supplies as much a war necessity as the transportation of matériel to the fighting forces, and, although the Chief of Transportation sometimes protested when these programs were assigned vessels that he urgently needed to move Army cargoes, it was inevitable that the broader point of view should prevail. The controversy over the attempt of the War Shipping Administrator to have the loading of military cargoes placed under his control brought the divergence of the military and commercial attitudes into prominence for a time, but when the issue was once settled in favor of the military agencies, it remained settled. Thereafter the differences that arose between the Army's transportation officers and the representatives of the War Shipping Administration were concerned more with details than with basic concepts.

With domestic transportation the situation was essentially different; civilian traffic increased during the war and, in addition, a heavy military traffic had to be handled. Against the greatly enlarged volume of traffic only a limited amount of new transportation equipment could be provided because of the heavy inroads that the demands for military equipment and for ships to move the military forces made on the supplies of raw materials. The military authorities were willing to concede only limited amounts of these materials to the transportation industry at the expense of the military programs, because they believed that civilian traffic should be reduced to whatever extent might be necessary to enable the carriers to meet the demands made upon them. The carriers, on the other hand, did not want to cut down civilian traffic more than was absolutely necessary, and in this they were supported by the Director of Defense Transportation. As a result, although the carriers did a remarkable job in handling the inflated volume of traffic, the requests of the armed services for railway equipment were not always met to their satisfaction. Equipment for handling military freight was not seriously affected, but passenger equipment for troop movements was tight throughout the war. During redeployment after V-E Day and the repatriation period after the Japanese surrender, there was widespread criticism, both official and public, because some troops were not moved promptly from the ports of debarkation and many soldiers were required to travel in unsuitable equipment.

The obvious lesson from this experience is that since the same domestic transportation facilities must serve both civilian and military needs in time of war, there should be an understanding or a policy declaration regarding the curtailment of civilian privileges when the requirements of war demand it. Any such pronouncement would have to issue from the President, and considerations of political expediency might argue against it. But the salutary effect in assuring proper transportation for military purposes and in harmonizing the relationships of the military and civilian transportation agencies in carrying out the war programs would un-

questionably be helpful. In the countries of Europe that were fighting for their existence the military requirements made heavy inroads into the civilian's right to use transportation for nonessential purposes. The American military authorities believed that the people of the United States would readily yield their privileges to the extent that the military effort might require. In fact, they did this during the late stages of World War II, and the complaint of the military authorities was only that the substantial curtailment of civilian traffic was not decreed soon enough to obviate the necessity of transporting thousands of returning soldiers on long trips in day coaches, and to forestall the widespread resentment that this treatment engendered. The curtailment of civilian privileges should be the timely result of deliberate decision rather than the belated consequence of public criticism.

Another question that should be settled in advance, rather than after it has become a critical issue, is who shall provide such additional transportation equipment as becomes necessary to meet military needs. The Army Chief of Transportation and other military officers were of the opinion that the railroads, because of their greatly increased revenues, should provide such additional locomotives, freight cars, and passenger cars as were required for the wartime traffic. This applied, of course, only to cars of standard designs and not to hospital cars and other specialized equipment that would be of no value to the carriers after the war. The railroads, although they acquired considerable new equipment, were not inclined to go beyond what they could reasonably expect to use after the military crisis was over; they believed that the additional wartime requirements should be met at government expense. This difference of opinion became apparent as early as the summer of 1940. The impasse was not broken until May 1943, when the government belatedly placed an order for special troop sleepers and troop kitchen cars. Two years later a duplicate order was placed with a view to meeting the unusually heavy requirements of redeployment and demobilization. In both instances the action was precipitate rather than deliberate, and in the latter case it was taken so late that most of the cars were not delivered in time to be of service during the period of heaviest troop travel in the summer and fall of 1945.

This summary would be incomplete without specific reference to the system devised for controlling freight traffic, which was one of the outstanding accomplishments of the war in the domestic transportation field. The need for such control was one lesson that had remained vivid in the memory of both military and railway men since World War I, when lack of it seriously threatened the effectiveness of the American forces in France. Although the subject was often discussed during 1941, no system of over-all control had been developed when the United States entered World War II. For a time it seemed that the effort to work out an adequate plan might become stalled over the question of whether it should be administered by a civilian or a military agency. But the need was too great to permit a long delay; basic agreement on a co-operative plan was reached in March 1942, and a comprehensive system had been placed in operation by early summer. The central element of the plan was a committee representing the armed forces and the civilian transportation agencies. Its over-all control measures, supplemented by controls applicable to individual shipments, proved

highly effective. The only reason for complaint was that the system was not set up soon enough to deal with the traffic congestion that became threatening during the early months of the war.

The necessity of capitalizing on the lessons taught by World War II, as a form of insurance on national security in the event of another world conflict, has been widely recognized and frequently voiced. The special committee of the Senate that devoted several years to investigating the failures and successes of the national defense program expressed the view that it would be "a tragic mistake to allow the knowledge thus gained to become stale and to fail to set it down as a definitive guide for the future." [6] In 1946 Secretary of War Patterson, pointing to the need for continuous planning and research in the field of military transportation, predicted that in another great war the competition between the belligerents for the most efficient means of transport will be exceedingly keen and that "changes in favor of speed and flexibility will make what we now have seem primitive." [7]

These statements point up the conclusion, with which few at present will take issue, that the effort to constantly improve the procedures and equipment of military transportation must be no less persistent and imaginative than those in the field of military aeronautics, communications, and ordnance. With World War II and the conflict in Korea fresh in memory, this conviction is now clear and strong. The establishment of the Department of Defense, with its implication of greater unity among the armed services, is a favorable factor. But the question that remains to be answered is whether the present state of alertness would be able to survive an interval of peace such as existed between World War I and World War II.

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[6] Senate Special Committee Investigating the National Defense Program, *Fifth Annual Report*, September 3, 1946, p. 12.

[7] Address at meeting of the Army Transportation Association, Chicago, 13 Nov 46.

Bibliographical Note

In preparing this volume use was made of material from many sources, but the chief source of information was the records of the Office of the Chief of Transportation (OCT). This was natural because so much of the account is concerned with the procedures and practices of the Transportation Corps, all of which came under the observation and supervision of the Chief of Transportation. The OCT records include those maintained by The Quartermaster General while he was responsible for Army transportation; these OQMG records were turned over to the Chief of Transportation when the transportation function was transferred to him in March 1942. In addition to subject files, the OCT records include sets of serially numbered directives of the Chief of Transportation such as circulars, office orders, and miscellaneous letters. All of these records are at present in the custody of the Departmental Records Branch, The Adjutant General's Office, except as stated below.

During and after the war the Historical Branch in the Office of the Chief of Transportation (OCT HB)* built up a special file of documents of historical significance as an aid to research. This file includes periodical reports submitted by the OCT divisions, by the Transportation Corps field installations in the zone of interior, and by the transportation officers with the forces overseas; copies of especially significant documents located by Transportation Corps historians in the course of their research; personal files of the Chief of Transportation, and of certain of his principal assistants, that were turned over to the Historical Branch after the war; and monographs prepared by Transportation Corps historians covering specific aspects or phases of the Corps' activities. These records are presently in the custody of the Historical Research Office in the Office of the Chief of Transportation, but it is anticipated that eventually they will be placed with the other OCT records in the custody of the Departmental Records Branch, The Adjutant General's Office.

The special historical file was of great value in preparing this volume as well as the other volumes of the Transportation Corps' history. While copies of most of the documents may also be found in other records, the file contains some material that is unique. The personal files of officers who performed important functions were of exceptional value. They include both subject files and chronological files, the latter also called day files, reading files, or staybacks. The subject files often contain information not found elsewhere, and the chronological files sometimes opened up avenues of research that might otherwise have been overlooked. Unfortunately, many personal files were not turned over to the Historical Branch but were destroyed or dissipated when the war was over.

The transportation activities of the Army were under the supervision of the Supply Division (G-4) of the General Staff up to March 1942, and thereafter they

*During the war period the Historical Branch was also called Historical Section and Historical Unit.

were under the supervision of the Commanding General, Services of Supply, later known as the Army Service Forces. These agencies dealt with a wide range of activities, including all aspects of supply. It was not practicable, therefore, to search their records with the same thoroughness that was applied to the OCT records, and the research was limited to files that dealt with basic transportation subjects. The records of these agencies are now in the custody of the Departmental Records Branch, TAGO. In addition to subject files, the SOS-ASF records include sets of all serially numbered directives issued by the Commanding General, and complete sets of the monthly progress reports (MPR's), which cover many activities, including transportation.

The same plan of selective research was followed in examining the records of other agencies of the War Department. These agencies included the Office of the Secretary of War (OSW), the office of the Under Secretary of War (USW), the Office of the Chief of Staff (WDCSA), the War Plans Division (WPD) of the General Staff, the Operations Division (OPD), which succeeded WPD, and the Plans and Operations Division (P&O), which succeeded OPD. On some occasions research also led to the files of other divisions of the General Staff—G-1, G-2, and G-3. The records of The Adjutant General were used extensively, and they were especially valuable in establishing the background of the many War Department directives bearing on transportation and in tracing the evolution of Army regulations and War Department circulars.

While many of the minutes and papers of the Joint Chiefs of Staff, the Combined Chiefs of Staff, and their various committees were found in the records of the several agencies of the War Department, it was frequently necessary to consult the records of the Joint Chiefs of Staff to insure complete coverage. These records include, in addition to JCS and CCS documents, the minutes and papers of the Joint Board, which was the principal Army-Navy co-ordinating agency before the establishment of the JCS. They also include studies of the Combined Shipping Adjustment Board, a high-level civilian agency that worked closely with the Combined Chiefs of Staff on problems pertaining to the efficient use of Allied shipping resources.

Unquestionably much interesting information regarding the execution of the policies and procedures of the Transportation Corps could have been found in the files of the field agencies that functioned under the supervision of the Chief of Transportation. But to have undertaken direct research in the records of the many ports of embarkation, zone and district transportation offices, port agencies, holding and reconsignment points, et cetera, would have meant giving less attention to other records that seemed more essential to the purpose of this volume. Study of the activities of the field agencies, therefore, was based upon the voluminous correspondence between those agencies and the Office of the Chief of Transportation, periodical historical reports submitted to the Chief of Transportation by the field agencies, reports of conferences between headquarters personnel and officers from the ports and zones, and special reports on specific subjects made at the request of the OCT Historical Branch.

Since this volume deals primarily with policies, procedures, and activities peculiar to the Transportation Corps, chief reliance was perforce placed on the primary

sources mentioned above, yet considerable use was made of secondary sources. Several of the volumes in the series UNITED STATES ARMY IN WORLD WAR II deal extensively with logistics and therefore with transportation. Official publications of the U.S. Navy and the U.S. Air Force have provided information pertaining to those branches of the defense establishment. Some of the published accounts of specific military campaigns have shown the interrelationship of transportation and military operations. A report of the Chief of Transportation issued soon after the end of the war, and a report on the war period published by ASF headquarters somewhat later, contain useful information and interesting opinions. The same is true of reports covering the activities of the U.S. Maritime Commission, the Office of Defense Transportation, and the War Production Board—civilian agencies that exercised a broad influence over wartime transportation.

Guide to Footnotes

Documents of many types are cited in the footnotes of this volume, and they are to be found in the records of many offices and agencies. The principal records have been identified in the bibliographical note. The abbreviations that have been used as a means of saving space are defined in the list of abbreviations. The purpose of this guide is to make clear to the reader how the footnotes have been formulated, so that he may better understand the nature of the source material and more readily locate any documents that he desires to examine.

The type of document most frequently cited is the memorandum (Memo), the form used chiefly for correspondence within the War Department. The indorsement (Ind) was used extensively within the War Department as a substitute for separate memoranda, especially when it was anticipated that a number of offices would make comments on the original document. The disposition form (DF) was often used for transmitting documents within the War Department, but on occasion it also included comments and instructions. The report (Rpt) gave the results of an investigation, inspection, or study; while it sometimes showed an addressee, it often did not. The letter (Ltr) was the form generally used for communication between agencies of the government, but the less formal memorandum was sometimes employed in this way. The principal forms of electrical transmission were the radiogram (Rad), the telegram (Telg), and the teletype message (TWX). When the copy consulted did not indicate the means by which the message had been sent, it is cited as a message (Msg).

In citing communications the descriptive information is given in the following order: the form of the communication, the sender, the addressee, the date, and the subject. To save space, nonessential parts of long subjects are omitted, and the subjects are omitted altogether when in the author's opinion they are not essential to the identification of the documents.

The last part of each citation identifies the office or agency in whose records the document is located, and also the file. Sometimes files are identified only by a decimal number, but often both a decimal number and a subject are used. When a number of documents are to be found in the same location, the identification of the agency and the designation of the file are given only once—after the last cited document.

In citing serially numbered documents the location is usually omitted, because these documents are to be found in complete sets in the records of the agencies that originated them. Such War Department documents are the Army Regulations (AR), Circulars (WD Cir), General Orders (GO), Technical Manuals (TM), and Field Manuals (FM). Serially numbered circulars, orders, and manuals were issued by the Commanding General of the Services of Supply, later the Army Service Forces, and similar publications were put out by the Chief of Transportation. Locations are not given for documents orig-

inated by the Joint Chiefs of Staff and the Combined Chiefs of Staff organizations; the JCS records include the minutes of these agencies filed chronologically, and other papers filed serially.

Two other devices were used to shorten the footnotes. In many instances the citations for a number of statements on the same general subject are combined in one footnote, rather than having a separate footnote for each statement. Usually such a footnote applies only to statements preceding it, but sometimes it applies also to statements immediately following. When a file contains many documents pertaining to the subject under discussion, only the documents considered more significant are cited.

Glossary of Technical Terms*

Accessorial services	Services rendered by a carrier in addition to transportation, such as sorting, packing, and storing.
Balanced cargo	A mixture of heavy and light cargo, which approximately fills the cargo space and weighs the ship down to its legal maximum draft.
Ballast	Heavy material, other than cargo, carried in the hold of a vessel to provide stability.
Balloon cargo	Items that occupy an exceptionally large amount of space in relation to their weight.
Bareboat charter	A form under which the charterer hires the vessel only, and provides the crew, supplies, fuel, and other operating requisites.
Bottom cargo	Dense and heavy cargo, particularly that stowed in the bottom of a ship's hold to improve stability.
Broken stowage	Ship space lost, or left unfilled, because of the size or shape of packages or other items of cargo.
Class I installation	One wholly under the command of the service commander. (See service command.)
Class II installation	One under the command of the service commander with certain activities exempted. In general, this class included the posts, camps, and stations utilized by the Army Ground Forces.
Class III installation	One under the command of the Army Air Forces, at which the service command performed limited services.
Class IV installation	One under the command of the chief of a technical service or staff division of the Army Service Forces, at which the service command performed certain functions.
Combat loader	A vessel specially equipped for combat loading. The Navy provided two types—APA (transport, attack), and AKA (cargo ship, attack).

*Like most industries, transportation employs technical terms that are not familiar to the lay reader. Certain Army terms also are not understood outside military circles. These brief nontechnical definitions will save the reader the inconvenience of seeking explanations elsewhere.

Combat loading	Loading a ship with an assortment of equipment and supplies required by troops entering combat, and stowing the various items in such a manner that they can be unloaded quickly and in the order needed.
Combat zone	Forward area of a theater of operations, where combat troops are actively engaged.
Communications zone	The part of a theater of operations behind the combat zone, where supply, transportation, and other facilities are located and services performed.
Corps area	One of nine commands in the zone of interior before July 1942, with functions similar to those of the service commands. (See service command.)
Deadheading equipment	Moving transportation equipment from place to place without a pay load, that is, without revenue passengers or freight.
Dead-weight tonnage	The number of long tons (2,240 pounds) that a ship can transport, including cargo, fuel, water, stores, crew, and passengers.
Dry cargo ship	Any ship, except a tank ship carrying liquids in bulk. As used in World War II the term applied to passenger ships as well as freighters.
Echelons of maintenance	Categories ranging from the first echelon, which included the simpler forms of upkeep, to the fifth, which included the heavier types of repairs. (See ASF Manual M 807, Glossary, 25 Oct 44.)
Filler cargo	Packaged and bagged supplies which can be stowed in small and irregularly shaped spaces in the hold of a ship.
Full and down	Term indicating that a vessel has all cargo space filled and that the cargo is sufficiently heavy to take the ship down to the legal maximum draft.
General cargo	Broadly used, the term includes all except bulk cargoes, but in Army usage it may exclude explosives.
Gross tonnage	The internal cubic capacity of a ship's holds, 'tween decks, and permanently enclosed spaces on or above the upper deck (except certain exempted spaces) measured in tons of 100 cubic feet.

Impedimenta	Military and personal equipment and supplies accompanying a troop movement.
Landing craft	A vessel designed to carry troops and combat equipment ashore for a landing attack.
Line haul	Haul over a railroad line, as distinguished from switching.
Long ton	Weight ton of 2,240 pounds; customarily used in connection with ocean freight, whereas the railroads customarily use the short ton of 2,000 pounds.
Measurement ton	Forty cubic feet; sometimes called ship ton, since it is used chiefly in connection with ocean transportation.
Organizational equipment	(Also called organic or unit equipment.) Articles issued to troop organizations as such, rather than to individual soldiers.
Reefer ship	A vessel with refrigerator space for perishable cargo. The term reefer is also applied to railway cars and trucks with cooling equipment.
Service command	One of nine commands in the zone of interior after July 1942 (replacing the corps area); a field agency of the Services of Supply, and later of the Army Service Forces. It furnished certain services to other elements of the Army within its area, including administrative, legal, financial, medical, construction, and fixed communications. (See Class I, II, III, and IV installations.)
Short ton	Weight ton of 2,000 pounds, customarily used by the domestic carriers.
Tanker	A tank ship for transporting petroleum products and other liquids in bulk.
Theater of operations	An Army command including the area of actual fighting (combat zone) and the adjacent area utilized for supporting administrative and supply activities (communications zone).
Zone of interior	The area that furnishes manpower and matériel to the forces in theaters of operations. The United States and Canada constituted the zone of interior for the U.S. Army in World War II.

List of Abbreviations

AAF	Army Air Forces
AAR	Association of American Railroads
ACofS	Assistant Chief of Staff
Actg	Acting
Adm	Administrative
AFHQ	Allied Forces Headquarters
AGF	Army Ground Forces
AGO	Adjutant General's Office
AKA	Cargo ship, attack
Am	Ammunition
ANPB	Army-Navy Petroleum Board
ANSIA	Army-Navy Shipping Information Agency
APA	Transport, attack
APH	Evacuation ship
APO	Army Post Office
AR	Army Regulations
ARB	Army reservation bureau
ASC	Air Service Command
ASF	Army Service Forces
Asgmt	Assignment
Assn	Association
Asst	Assistant
ATAA	Air Transport Association of America
ATC	Air Transport Command
Atchd	Attached
Atty Gen	Attorney General
BAS	British Army Staff
BMWT	British Ministry of War Transport
BPE	Boston Port of Embarkation
Br	Branch
Bull	Bulletin
BuPers	Bureau of Personnel (Navy)
BUPERS	Chief, Bureau of Personnel (Navy)
Bur	Bureau
BUSHIPS	Chief, Bureau of Ships (Navy)
C	Chief
CCS	Combined Chiefs of Staff
CG	Commanding General

Chm	Chairman
CINCAFPAC	Commander in Chief, U.S. Army Forces, Pacific
Cir	Circular
CKD	Completely knocked down
CM-IN	Classified message, incoming
CM-OUT	Classified message, outgoing
CMP	Controlled Materials Plan
CMTC	Combined Military Transportation Committee
CNO	Chief of Naval Operations
CO	Commanding officer
CofCA	Chief of Coast Artillery
CofEngrs	Chief of Engineers
CofOrd	Chief of Ordnance
CofT	Chief of Transportation
Com	Committee or commission
Comd	Command
Comdr	Commander
COMINCH	Commander in Chief, U.S. Fleet
COMNAVEU	Commander, U.S. Naval Forces, Europe
Compt	Comptroller
COMZONE	Communications zone
Conf	Conference
Cong	Congress
Consol	Consolidating
Const	Construction
Contl	Control
Conv	Conversation
CPA	Central Pacific Area
CPE	Charleston (S. C.) Port of Embarkation
CSAB	Combined Shipping Adjustment Board
CTB	Commercial Traffic Bulletin
DA	Department of the Army
DCofS USA	Deputy Chief of Staff, U.S. Army
Def	Defense
Demob	Demobilization
Dept	Department
DF	Disposition form
Dir	Director or directive
Disp	Disposition
Div	Division
DUKW	2½-ton amphibious truck
Emb	Embarkation
EO	Executive Order
Equip	Equipment

ESF	Eastern Sea Frontier (Navy)
Estab	Establishment
ETO	European Theater of Operations
ETOUSA	European Theater of Operations, U.S. Army
Evac	Evacuation
Exam	Examination
Exec	Executive
FAS	Forwarding authorization serial number
FM	Field Manual
FY	Fiscal year
G-1	Personnel Division, War Department General Staff
G-2	Military Intelligence Division, War Department General Staff
G-3	Organization and Training Division, War Department General Staff
G-4	Supply Division, War Department General Staff
GAO	General Accounting Office
Gen	General
GHQ	General Headquarters
GO	General Order
Govt	Government
Gp	Group
GRB	Government reservation bureau
H&RP	Holding and reconsignment point
Hist	History or historical
Hosp	Hospital
Hq	Headquarters
HRPE	Hampton Roads Port of Embarkation
Hwy	Highway
ICC	Interstate Commerce Commission
IG	Inspector General
IMC	Interterritorial Military Committee of AAR
Imped	Impedimenta
Incl	Inclosure
Ind	Indorsement
Indiv	Individual(s)
Info	Information
INS	International News Service
Insp	Inspection
Int	Intelligence
Interv	Interview
JAGO	Judge Advocate General's Office
JANASB	Joint Army-Navy Ammunition Storage Board
JCS	Joint Chiefs of Staff
JLC	Joint Logistics Committee

JMPA	Joint Military Passenger Agreement
JMPEA	Joint Military Passenger Equalization Agreement
JMTC	Joint Military Transportation Committee
JPSC	Joint Production Survey Committee
LAPE	Los Angeles Port of Embarkation
LCL	Less-than-carload
LST	Landing ship, tank
Mar Com	Maritime Commission
MATS	Military Air Transport Service
MCC	Movement Coordinating Center
MDW	Military District of Washington
Med	Medical
MI	Military impedimenta
Mil	Military
Min	Minutes
Misc	Miscellaneous
MKD	Medium (partially) knocked down
Mob	Mobilization
MOS	Military occupational specialty
MP	Military Police
MPR	Monthly progress report
MRS	Military Railway Service
Mtg	Meeting
MTO	Mediterranean Theater of Operations
MTOUSA	Mediterranean Theater of Operations, U.S. Army
MTS	Military Transportation Section, AAR
MTV	Motor transport vessel
MTX	Expedited military shipment
Mvmt	Movement
NATOUSA	North African Theater of Operations, U.S. Army
NOPE	New Orleans Port of Embarkation
NTS	Naval Transportation Service
NYPA	New York Port Agency
NYPE	New York Port of Embarkation
OCNO	Office of the Chief of Naval Operations
OCS	Officer candidate school
OCT	Office of the Chief of Transportation
ODT	Office of Defense Transportation
Off	Officer
OPD	Operations Division, War Department General Staff
Opn	Operation
OQMG	Office of The Quartermaster General
Ord	Ordnance
Org	Organization

OSD	Oversea Supply Division
OSW	Office of the Secretary of War
OUSW	Office of the Under Secretary of War
OWM	Office of War Mobilization
OWMR	Office of War Mobilization and Reconversion
Pass	Passenger
PE	Port of embarkation
Pers	Personnel
PL	Public Law
Plng	Planning
PMG	Provost Marshal General
POW	Prisoner of war
Pres	President
Proc	Procurement
Prod	Production
QMC	Quartermaster Corps
Rad	Radiogram
RAMP	Recovered Allied Military Personnel
Readj	Readjustment
Recap	Recapitulation
Redepl	Redeployment
Reg	Regulation or regulating
Reorg	Reorganization
Rep	Representative
Repl	Replacement
Reqmt	Requirement
RFC	Reconstruction Finance Corporation
RO	Rotational group
Rpt	Report
RR	Railroad, or readjustment regulations
RTC	Replacement training center
Ry	Railway
SB	Supply Bulletin
Sch	School
SD	Shipping document
Secy	Secretary
Sen	Senator
SF	San Francisco
SFGD	San Francisco General Depot
SFPE	San Francisco Port of Embarkation
SG	Surgeon General
SGO	Surgeon General's Office
SHAEF	Supreme Headquarters, Allied Expeditionary Force
Shipt	Shipment

SKD	Semi-knocked down
SN	Secretary of the Navy
SOP	Standard operating procedure
SOPAC	South Pacific Area
SOS	Services of Supply
Sp	Special
SPA	South Pacific Area
SPE	Seattle Port of Embarkation
St	Staging
Sta	Station(s)
Stg	Storage
SUP	Single-unit pack
Sup	Supply
Sv	Service
SvC	Service command
SW	Secretary of War
SWPA	Southwest Pacific Area
SWPC	Smaller War Plants Corporation
Tab	Table or tabulation
TAG	The Adjutant General
TAT	To accompany troops
TC	Transportation Corps
TCC	Transportation Control Committee
TCPI	Transportation Corps Procurement Instructions
TD	Temporary duty
Tech	Technical
Telg	Telegram
TIG	The Inspector General
TM	Technical Manual
Tng	Training
T/O	Table of Organization
T/O&E	Table of Organization and Equipment
TQMG	The Quartermaster General
Traf	Traffic
Trans	Transportation
TUP	Twin-unit pack
TWX	Teletype message
UK	United Kingdom
UNRRA	United Nations Relief and Rehabilitation Administration
USA	U.S. Army
USAT	U.S. Army transport
USCG	U.S. Coast Guard
USN	U.S. Navy
USW	Under Secretary of War

UTC	Unit training center
VCNO	Vice Chief of Naval Operations
VSD	Vendor's shipping document
WAC	Women's Army Corps
WD	War Department
WDGS	War Department General Staff
WDPR	War Department Procurement Regulations
WDSS	War Department Special Staff
WPB	War Production Board
WSA	War Shipping Administration
ZEC	Converted Liberty ship
ZI	Zone of interior
ZTO	Zone transportation officer

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