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CHAPTER IV

T R A N S P O R T A T I O N B Y R A I L

2nd Military Railway Service

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CHAPTER IV
SECOND MILITARY RAILWAY SERVICE
SECTION I
GENERAL

The French Railways in Prewar Days

The railway system in France provides a closely-knit network of primary and secondary lines throughout the country and is similar in most respects to the other railway systems on the Continent of Europe, both from the standpoint of operation and technical characteristics. Within this network, there are various concentrations of railroad lines which lead from the major ports to the center of France and to important industrial and farming areas, forming a series of well-defined main lines of railway communication. The greatest of these concentrations are found on the west and northern coasts of France from Bordeaux, from the Brittany and Cherbourg Peninsulas, and from Le Havre converging towards Paris, which is the heart of the railway system of France. (See Railway Map of France at the beginning of this chapter.)

Totalling some 26,417 miles of lines of single and double track, the French railroads were formerly owned and operated by seven great railway systems, two of which were state-owned. On 1 January 1938 they were merged into one French National Railway System, the Societe Nationale des Chemins de Fer Francais (SNCF). It was with the French authorities representing this organization that members of the Transportation Corps in the ETO worked closely throughout the various phases of railway rehabilitation and operation which began shortly after initial Allied landings in France.

During prewar days, through-cars operated from France to England, Belgium, Holland, Germany, Poland, Austria, Hungary, Roumania, Yugoslavia, Bulgaria, Greece, Italy, Spain, and Portugal. The French schedules for operating passenger train were very good, and rapid movement of these trains were standard practice before the Germans invaded France in May and June of 1940. Scheduled passenger trains ran from Cherbourg to Paris in less than six hours. A few streamlined passenger trains were operating in France before 1940 but they were comparatively rare. Before the war, a regular program of ferry-train passenger and freight service was in effect between France and England. Railhead-port terminals at Cherbourg and Portsmouth had facilities for berthing these train ferries. By means of this operation it was possible to take a train at London for Paris, spend a few hours on a well outfitted ship, or remain on board the train, and continue on to Paris without changing trains.

Freight traffic, however, had no schedule of movement and consequently freight service was comparatively as slow as the passenger service was fast. Freight trains ran into the secondary network of lines and were often side-tracked with a resulting loss of time. Another factor that affected the slow movement of freight traffic was the practice of assigning the locomotive to the engine crew; this is in direct contrast to operations in the United States where the same engine pulls a train within the limits of a division. Thus, in France when the engineer arrived at the end of his freight haul, the train was side-tracked, the engine disconnected, and the train remained there until another engine arrived. This system of assigning an engine to a train crew was also followed for passenger service, when the run came within a

work-day; however, on long runs, within the limits of SNCF jurisdiction, the engine was assigned to the train. While delays in the delivery of freight resulted, there was the outstanding advantage that each crew had a personal interest in the appearance and performance of the engine assigned, and in this way, the need for shop maintenance was kept to a minimum.

Prior to the heavy Allied bombings inflicted on rail yards, the railway operating and repair facilities were efficient and adequate to meet civilian needs. In addition to the conventional type of engine switching, gasoline tractors with rubber tires were used in some regions. These ran alongside the tracks and pushed the cars by means of a wooden buffer beam or pulled them with a cable which was carried on the tractor. They were capable of moving a single load weighing 99 tons or 220 to 440 tons if the cars were loosely coupled. Traversers were also used for switching at many of the large stations. Telephone and telegraph communications in connection with French railway operations were also good and extended throughout all regions. Teleprinters were being installed in increasing numbers. The signals were mostly of the manual block type, with automatic block in use at few locations.

Approximately one fourth of the railroad lines in France are for double track operation. Stations are very close together; this is also true of side tracks and spurs. Because of an even closer network of highways and secondary roads, there are many level crossings, and over and under passes. Each level crossing has a small house for the gate keeper, generally a man, his wife, and children who rush out and wave as the train passes.

Facilities for the loading and unloading of railway cars in France were constructed for lightweight and for operations on a small scale, emphasis being placed on hand labor as the chief means of handling freight to and from trains and platforms. Most of the refueling operations were done by hand, with the aid of hand-operated winches, and other simple chute and hopper devices. These facilities and methods of operation were sufficient to meet the civilian needs during normal times, but for military operations involving the movement of supplies and reinforcements for several armies, they were too light, too slow, and vastly inadequate for the heavy demands placed upon them.

In the operation of their railroads, the French used a higher percentage of personnel than is normally used in the United States for this purpose. However, during Allied military operations on the Continent, this practice was found to have resulted advantageously in the favor of the U. S. Forces, because of the fact that much of this skilled personnel was used by the 2nd Military Railway Service (2nd MRS) in supplementing the work of its own personnel before the railroads were returned to the French for complete operation.

Essential Differences in Design and Construction

While the French railway system is similar to that of the British in the United Kingdom, in that both systems are a very close network of rail-

roads and the lines are designed for frequent but lightweight traffic, there are a few differences in the design and construction of the railway equipment used by each. However, these were easily overcome in adopting British rolling stock to French railways. On the otherhand, the American railway system and equipment being, to a greater extent, different from those in either country, the matter of supplying locomotives and rolling stock from the U.S. for use on the Continent constituted a major task for U.S. railway engineers and railway equipment manufacturers. In view of the nature and size of the undertaking as a whole, the designing and building of adaptable railway equipment in America was necessary in order to deliver locomotives and rolling stock in time and in sufficient quantities to support the move of Allied military forces across Western Europe.

The greatest and most important differences in the design of French and American railways and equipment are in the scale of constructions. Thus the hauling capacity of French freight cars is up to 20 tons as against an approximate tonnage capacity of 50 tons in American cars, while the average British is 20 tons. Most French cars are of the single truck type while those in use in the United States are equipped with double trucks. The trucks of the French and British cars, due to their short length, are fixed to the car frame, without springs, and consequently have no flexibility or "give" on curves; this results in a great deal of side sway. Care is therefore required when the train is traveling at high speeds, on curves or on uneven road beds, because of the tendency of cars to jump the track.

The track width gauge in the United Kingdom and France, on the main lines, is Standard, as in the United States, so that no difficulty was experienced in adapting U.S. power and rolling stock. However, the steel rail used in France is lighter than that employed in the United States; the main lines in France use 110-pound steel which is classed as "medium", in America. Road beds are well ballasted and well drained. Ties are of the same size as in the United States except that some steel ties are used. These ties were installed after the last war and are not well thought of by French railway officials. Tie plates between rail and ties are not used to any great extent, the light traffic making them unnecessary. British bull-head rail, set in chairs with wedge locking device, is used to some extent in the west, but all new rail is flat bottom rail of design similar to the rail used in the U.S. Lag screws are universally used instead of track spikes for fastening rail to ties. Switches are of similar design to U.S. standard, excepting that switch stands are operated with weighted handle and are not positively locked. The engines used in France are similar to those operating in the United States and many of them are of American make.

The British and French direction of movement, is opposite to that of the Americans, in that in the United Kingdom and France trains run on the left hand side on two-way operations. This difference affects only the position of the engine throttle, insofar as technical details of the equipment are concerned. The French and British coupling system are the same, but totally different from those used in railway operations in the United States. When rolling stock was designed in the U.S. for operation on the Continent, changes had to be made in the braking system which involved mainly a new valve design for the air line and some changes in the length chain and in the brake rods.

Preliminary Steps Taken to Meet Essential Differences

Before the Invasion of Western Europe, beginning in 1942, the Military Railways Division of the Office Of the Chief of Transportation in London made extensive surveys to determine the type of equipment that would be most suitable for operations on the Continent of Europe. Through the use of Army Intelligence Reports and the assistance of Continental rail experts, the general conditions of the railways as they were at that time, and as they were expected to be after the invasion, were evaluated and plans were made on the basis of the findings. The proposed tonnages to be handled were studied and requisitions for power and rolling stock were made. (See appendix No. 7, this Chapter, for summary of planned rolling stock requirements and amounts actually received by month during 1944.)

Freight cars, gondolas, flat cars, tank cars, and cabooses were especially designed in relation the data accumulated. This rolling stock was then built in the United States and shipped to the United Kingdom knocked-down; it was then assembled there, and subsequently ferried to France, after the beachheads had been established. Locomotives, types 2-8-0 and 0-6-0, and Diesels were requisitioned. Work trains, hospital trains, and machine shops on wheels were assembled in the United Kingdom and ferried across the English Channel as soon as the tactical situation on the Continent had sufficiently developed to receive and handle them. All of this equipment, while designed and constructed for Continental use, with allowances for the differences pointed out above, appeared little different from the equipment that might be seen on American railways except for size and weight and the type of couplings, that is, the chain and hook type as contrasted to the automatic type as used in the United States. The rolling stock was painted uniformly olive drab and both power and rolling stock were marked with the caption "Transportation Corps, U.S. Army" accompanied by the Transportation Corps insignia.

French Railways in German-Occupied France

During their four year occupation of France, the German military forces requisitioned many of the French railway lines, especially those in the Channel section or northern part of the country, directly across the Channel from England. It was from this area that it was anticipated they would invade England. While some of the rail lines had been very well maintained before the Allied invasion, others had been greatly overworked by the Germans, and maintenance work was neglected on some of these. While this neglect of maintenance was also true in regard to most of the French equipment captured from the Germans, as the Allied forces moved across France, it was found that a portion of it had been brought into France from other countries, including Germany, and some had been recently constructed of excellent materials.

Owing to their strategic value to the Germans, the French railroads, particularly rail centers, yards, junctions, and choke points were the targets for many Allied bombings for nearly two years prior to the invasion. The Germans would repair the bomb damage and in a short time the attacks would be repeated. In many cases, when the lines became so badly damaged that it was not practical to make use of them any longer, they would shift the traffic to an alternate line. Because of the pattern of German rail operations and the subsequent destruction by aerial bombings, the

rail lines in a great circle around Paris, particularly to the west and at certain critical points, were badly damaged.

French Cooperation During Initial Allied Operations on the Continent

French cooperation with the Military Railway Division began before the landing of U.S. Military forces on the Continent, in the form of sabotage to the German railway operations by civilian workmen. Such incidents as the hiding of tools, car brasses, and critical parts of repair and maintenance equipment, hampered enemy operations; many of these tools were returned intact, after the American took over operations. A portion of the U.S. railway operating supply problem was thus aided. Aid from the French was even more extensive and useful to the Advanced Party of the Military Railway Division during the first two weeks Allied occupation of the Cherbourg Peninsula. When the 2nd Military Railway Service arrived in Cherbourg, officials of the SNCF at that Port made available to them their knowledge, experience, and equipment insofar as was practical. Later, several of these men were commissioned directly as officers in the French Army and worked closely with the 2nd Military Railway Service providing a large amount of technical assistance.

French railway personnel were, in practically all cases, willing and anxious to return to work. They were given their original jobs at their standard rates of pay, and in spite of the differences in languages they were very helpful in aiding to re-establish the railway service.

Railway Transportation Responsibilities within the Sections and Base Sections

The 2nd MRS units located within the various Sections and Base Sections of the Communications Zone were responsible to the Commanding General of their respective Section or Base Section for administration and discipline only and to the 2nd MRS for technical operations and supervision. Their activities were co-ordinated through the Section or Base Section Transportation Office. Under the latter, the Rail or Road Traffic Officer (RTO) was responsible for the clearance of loaded and empty trains at railheads, dumps, and loading points. The various Railway Grand Divisions had their boundaries so located that they conformed as closely as possible to the areas of the Sections and Base Sections, in order to facilitate supervision and technical control. (See Chart No. 6, this Chapter, for locations and operating limits of Railway Grand Divisions and assigned units as of 1 January 1945.)

The Railway Traffic Officer

The initials "RTO" were used for the Transportation Corps Railway Traffic Officers (or Road Traffic Officers) who were stationed at strategically located Railway Stations, railheads, Traffic Control Points, airstrips, and depots throughout the Communications Zone. The RTO was the "field agent" of the Transportation Corps and in most instances his assigned post covered an area embracing several railheads, hospitals, depots, dumps, camps and airfields.

The missions of the RTO were: to provide prompt and dependable transportation for troop and supply movements within his area, utilizing all available transportation in the most efficient manner possible; to see that such facilities were used wisely and that transportation arrangements were executed smoothly; to prevent traffic congestion by foreseeing and warning higher headquarters of threatened congestion; to expedite information relating to traffic movements; to maintain records of all traffic movements; and to keep higher headquarters fully informed of the traffic situation in the area. The RTO had no authority, however, over the operation and maintenance of the carrying agencies. For the accomplishment of his various missions, the RTO was responsible to the Base Section Commander through his Section Transportation Officer. His technical direction was received from the Chief of Transportation through channels. (See also Appendix No. 11, this Chapter).

Some of the specific problems encountered by Railway Traffic Officers in the Communications Zone, during the last quarter of the year 1944, are covered in Chapter VI under the Section or Base Section to which various RTO's were assigned.

Brief Review of Railroad Rehabilitation and Progress of Operations during

July, August, and September 1944

(See Volume IV, History of the Transportation Corps in the Battle of France, for further details)

Actual work in the rehabilitation of the railway system in France started at Cherbourg on 28 June 1944, when Lt. Colonel W. T. ELMES of the 2nd MRS began reconstruction of the waterfront rail installations, using French Civilian labor. From 11 to 27 June, the 2nd MRS Advance Party, of which Lt. Colonel ELMES was Commanding Officer, made a reconnaissance over the rail line from Lison to Cherbourg. The Advance Party of the 2nd MRS landed on 11 and 18 June in two increments. Two days after the capture of Cherbourg on 26 June, the Advance Party was in that city. By 11 July, the 729th Railway Operating Battalion (ROB) was operating the railway line to Carentan, and to Lison by 20 July, when the 720th Railway Operation Battalion arrived at that point to take over operations. Up to that date, no freight of any consequence had been moved by rail on the Continent by the 2nd MRS. Work train had operated on the line and a regular schedule of passenger trains had been placed in service running from Lison and Carentan to Cherbourg. These trains accommodated military personnel and, by special arrangement, civilian evacuees who were returning to the Cherbourg Peninsula in large numbers. In July, an ambulance train service was begun by using improvised hospital ward cars made from standard French boxcars fitted with stretchers and equipped with hospital train conveniences. In the transportation of supplies, due to the comparatively short distances involved, very little use was made of train service, during the first two months, all of this short distance hauling being done by truck. However, after the break-through at St. Lo on 26 July, the rapid movement of the Armies made the prompt rehabilitation and immediate availability of the railways for service, a matter of major importance.

Because of their strategic importance to the Germans, the French rail lines which constituted their principal lines of communications to the interior of France and towards Germany, had received repeated and heavy

aerial bombardments, over a long period prior to the invasion, so that consequently rail centers, yards, junctions and choke points were extensively damaged. In withdrawing, the Germans destroyed the railway facilities but these demolitions were found to be infrequent and not very methodical. After the extensive damage done by the enemy in the destruction of the railway lines in Italy, it was assumed that they would do the same in France as they retreated. Thus, in anticipation of the Germans using their "Track-Ripper" which destroys ties and tracks, it had been planned that the laying of long stretches of rail would be necessary. Fortunately, except for a few sections near the German border, there was no major or extensive damage to lengths of running track, so that the rehabilitation of the lines was a simpler task than had been expected. However, bridges and tunnels, fuel and water facilities, and the communications system were destroyed by the Germans themselves or had been damaged by the concentrated Allied aerial bombing preceding the invasion. The adequate rehabilitation and availability of communications facilities in connection with railway operations lagged behind train operations entirely across France.

The repair of railroads during the first two months of Allied military operation on the Continent was done largely as stop-gap reconstruction, so that trains could be moved over a line. A single line was usually laid through a destroyed yard and train operations were possible although difficult due to a lack of switching facilities, the greatest problem being the repair of destroyed railway bridges. The repair and reconstruction of these bridges was the responsibility of the Engineers assigned to the area; however, the tremendous volume of work that was necessary required a considerable amount of time, and consequently slowed down the advance of railway operations until the essential reconstruction work had been accomplished.

The first major haul of supplies by 2nd MRS was on 15 August, when 31 trains loaded with high priority supplies were forwarded for use of the Third Army, which was approaching Paris from the southwest. Loaded on the Cherbourg Peninsula, these trains were scheduled to proceed to the Le Mans railhead and transfer their loads to trucks by which the supplies would be delivered forward to the Army. However, the main lines from the base of the Cherbourg Peninsula and the east were not operative, and the northern line from Granville to Surdon was still in the hands of the Germans at Argentan. The famous Argentan gap was being closed during this period. The southern line running from Rennes to Le Mans was inoperative due to bridge and yard destruction. In the face of these difficulties, an alternate route was selected from the maze of single track lines in the area between the two main lines. Personnel, fuel, and supplies were moved to junction points and the trains were started on their way. The four-day train run from Cherbourg to Le Mans contained practically all the problems found subsequently in all train operations in France. A great congestion of empties occurred almost immediately at the railhead in Le Mans. Unfortunately, the yards at this point were extremely damaged and the congestion in the yards became so bad that it eventually appeared impossible to move another train into the area; at the same time a shortage of empties occurred at the railheads and loading points on the Cherbourg Peninsula. This situation was not relieved until the two main lines were finally opened.

The percentage of captured German equipment which was not extensively damaged by bombings or German demolitions, and found to be in usable condition, was very high, considerably higher than the 20 percent that had been

taken into account during the military railway planning stage prior to the invasion. (See Appendixes Nos. 5 and 6 for amounts and types of rolling stock and power which was captured). Some of this equipment, however, was very old. Engines and cars appeared that had been used during the last war, but with repairs, much of it was made usable. Power shortages occurred, however, in the early stages of railway operation. A few American locomotives had been landed by the end of September, but many of the French engines were in a very bad state of repair and it was therefore dangerous and inefficient to make too much use of them. A few Diesels had been landed and these were used to a great extent.

Some of the roundhouses and railway shops had been destroyed but they were not so badly damaged that they could not be placed in service again. In some shops, the Germans wrecked vital parts of a machine and then left them in the area. It was only a matter of welding or recasting in order to restore the machine to running order. In other instances, it was found that tools and missing parts from repair and maintenance machinery had been hidden by French workmen so as to interfere with German operations, and that soon they were bringing such items back with them from their homes and other places used for hiding.

Another problem that caused serious difficulties in operations during this period was in the make-up of trains. Originally, in operations on the Continent, the train make-up orders came from the Movements Division of OCOT. It was found, however, that the trains were often greatly overloaded and consequently there were frequent delays due to steep grades (over 2 percent) on some of the lines used. This situation was not corrected until the train make-up function was shifted to the 2nd MRS and the Freight Movements Branch, OCOT, merely indicated the amount and priority of the material to be hauled.

The progress of 2nd MRS operations on the Continent was more rapid after D plus 60. By 6 July the farthest railheads inland were at Carentan and La Haye du Puits; thirty days later they had moved forward only a few miles and were still at the base of the Cherbourg Peninsula with the advance railheads at Lison and Folligny. By D plus 90, the railheads were established in the Paris area, on two lines of communications; (See Chart No. 1, this Chapter) one on the north from Granville to Vire and Paris and the other to the South of it from Rennes to Le Mans and to Paris. By D plus 116 the 2nd MRS had 4,787.88 miles of single and miles of double track under their jurisdiction.

Up through D plus 90, the 2nd MRS had made considerably more progress than had been called for in the original plans for the invasion, it being estimated that by that time the railways would be operating as far east as Le Mans on a very limited network of lines. Actually, on that date railways were in operation to Paris and were on the verge of pushing east to the German border and northeast into Belgium. This retarded, and then suddenly rapid, advance contributed materially to the personnel, equipment and supply shortages in the operation of the 2nd MRS which occurred during that time. By the end of September 1944, three railway lines of communications extended east from Paris. On the north, a line ran from Battignoles Yards, Paris to Compiègne, Valenciennes, and to Liege in Belgium. In the center of the Communications Zone, another line ran from Paris to Soissons and connected



ONVILLE



SAAREGUEMINES



BELFORT



EPINAL

GERMAN RAILWAY BRIDGE DEMOLITIONS IN FRANCE



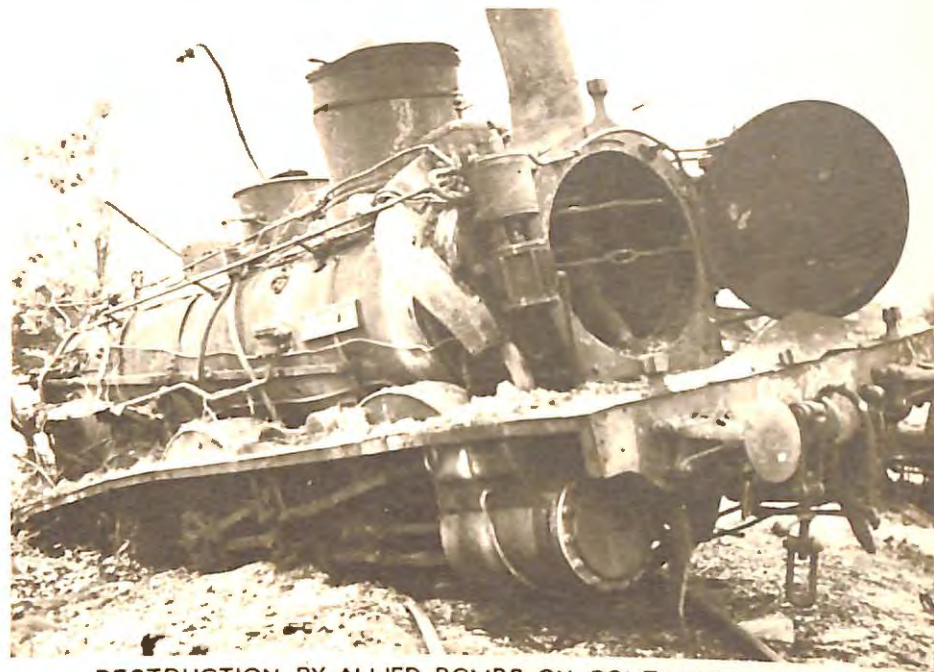
SABOTAGE BY F.F.I.



GERMAN PLANE ATTACK . BELGIUM



HOSPITAL TRAIN CARS GARE ST. LAZARE, PARIS



DESTRUCTION BY ALLIED BOMBS ON CONTINENTAL EQUIPMENT

DESTRUCTION OF POWER AND ROLLING STOCK

to the northern line at Charleroi. The southernmost railway line of communication from Paris ran east to Sezanne and to Nancy. Two lines running roughly north and south connected these three main lines. One on the west ran from Laon to Reims and to Verdun, and served these points; another ran parallel to the German-Luxembourg border from Liege on the north to Longuyon and to Nancy on the South. The British, at the end of September, had a railway line connecting with the end of the U.S. operated line at Lison that ran from that point to Bayeux and Lisieux and Caen, and the French operated a line that connected with the U.S. operated system west from Rennes and almost to Brest, which port was still occupied by the Germans.

By the end of September, the 2nd MRS was moving approximately 10,500 tons daily, to the east of Paris. During September, 539,739 tons of supplies were moved over all of these lines for a sum total of 435,775 tons since the beginning of the 2nd MRS operations on the Continent and a total of 80,725,967 ton miles (See Appendix No. 1, this Chapter).

* * * * *

The succeeding sections in this Chapter on the activities of the 2nd MRS during October, November, and December 1944 cover details relating to the continuation of railroad rehabilitation, construction, and operations which began on 8 July when the 738th Railway Operating Battalion landed in France. Volume IV of the History of the Transportation Corps in the Battle of France covers the activities of the 2nd MRS on the Continent during the months of July, August and September 1944.

SECTION II

DEVELOPMENTS IN RAILWAY OPERATION

DURING LAST QUARTER OF YEAR 1944

General Condition of Railroads in U.S.-Occupied French Territory:

At the beginning of October 1944, the 2nd MRS had under its jurisdiction in France, Belgium and Luxembourg 2,011.98 miles of single track and 2,776.09 miles of double track rail lines, extending from the coast on the English Channel, inland to Paris and northeast to Liege and Aachen, and south, parallel to the German border to the vicinity of Nancy. By the end of December, these figures had increased to 3,542.08 miles of single track and 5,005.26 miles of double track, or practically one-third of all the railroads in France. Nearly all of this increase during the last three months of the year represented developments within the network in which 2nd MRS operations were already in progress, there being little extension forward beyond their location as of 1 October (See Chart No. 1, this Chapter, for graphic representation of 2nd MRS moves on the Continent by 30 day periods, from D plus 100 to D plus 180).

This total rail line mileage varied in regard to its state of repair, depending upon the importance of the line, the extent of the damage incurred, and the length of time since the area had been evacuated by the Germans. The rail lines in use in the Cherbourg Peninsula and in the northern portion of the Brittany Peninsula were in a comparatively good condition by the end of the year. In these areas, the railroads and auxiliary railway operating facilities had been repaired. Rail yards in the Cherbourg Peninsula at

Folligny and Le Mans had been sufficiently cleared to run tracks through the areas and in some cases partial yard reconstruction had been completed. Telegraph and telephone communications were practically normal again, but the two communications lines from Cherbourg to Paris were often crowded. On the otherhand, in the area northwest of Paris and to the coast, the railway system was far from being comparable with its prewar conditions. The Allied bombings and German demolitions to which this area had been subjected were extensive. An example of German demolition in this area is shown in Chart No. 2, this Chapter, which indicates the systematic series of bridge demolitions used by the Germans at Rouen as found after its capture the middle of October. The bridges on the main lines were repaired as quickly as possible but those on secondary lines remained in a wrecked condition since they were not an immediate interference to rail movement over the main lines.

In the Paris area all bridges were destroyed by German demolition and the only means of passage through the city was via passenger stations on the so called "inner circle" route. Immediately action was taken by the Engineers to reconstruct bridges so that direct passage of trains could be effected, both east and north of Paris. All lines leading from Paris had small bridges destroyed at various distances from the city. These were rapidly repaired so that railroad traffic followed the Armies closely during this period. Communication facilities, however, lagged behind railroad construction due to the intense destruction, but in most cases some relay of message could be accomplished through French railway wires. This helped in getting trains moved over the line, but considerable difficulty was experienced in running the railway as a whole due to lack of information on train movements.

The greatest amount of damage due to German demolitions was in Liege, Metz, and Nancy areas where the Germans had made a strong stand. In most of these areas extending parallel to the German border, demolitions were extensive and complete. In the Metz area alone 16 bridges were damaged and other railroad facilities were damaged considerably. (Chart No. 3, this Chapter, shows the extent of bridge demolition encountered at Metz, as of 25 November 1944).

Close to the German border in the area east of Metz the "Track Ripper" had been used. This was the first time its devastating effects on railroads had been encountered since the Italian front. By means of this device, some of the railroad lines in this area were completely destroyed. Explosive charges had been placed regularly on other lines and 90 percent of them had been detonated. At the forward areas, the situation was such that initially only one line could be pushed through to a railhead. This required reconstruction of a single line and replacing critical bridges by the Engineers, and using this line until more extensive facilities could be developed. Since the movement forward was comparatively slow during the last three months of the year, advantage was taken of this opportunity to repair and rehabilitate the railroads and auxiliary facilities to such a point that more nearly normal operation could be performed.

The Phase System of Military Railway Operations in France

The designation of military railway operations as Phase I, II, or III was devised for convenience in indicating the various stages of

development necessary to rehabilitate the railroads, to operate them over the necessary period of time, and then to return them to the French for operation. Plans for phasing military railway operations on the Continent were made before the invasion, and subsequently placed in operation largely because it was foreseen that the U.S. Army would be required to operate, repair, and maintain all of the French railways that would become part of the various and continually lengthening Lines of Communications, during movement across France and into Germany. The system proved valuable and sound when applied. For example, by relieving U.S. Army railway units in certain areas, the railway operating units, originally employed on the western end of the main Lines of Communication, were moved forward into more critical areas while others were being prepared for further operations in Germany. Application of this system of phasing operations had no relation to the phase designation applied to progressive steps in other military advances on the Continent. Following is a brief description of the phasing system as used by 2nd MRS in operating the railroads in France (See also Appendix No. 8, and Charts Nos. 4 and 5, this Chapter):

Phase I: This period covered the first steps necessary to operate the railroads using military personnel, after sufficient rehabilitation had been completed to make it possible to place them in service. These lines extended as far forward behind the Armies as practical. The principal reasons for operation of railways by military instead of civilian personnel during Phase I operations was the danger from enemy action and for Security precautions.

Phase II: After railway operation was restored to normal, within a certain area or over a given line, it went into Phase II operation. This meant that the U.S. Army retained full control of the line, having jurisdiction over all activities in connection with its operations. However, the trains were operated by French civilian personnel, with 2nd MRS personnel remaining on duty until assured that the civilian authorities could handle them without military supervision.

Phase III: During the third or last phase of operations, the lines within an area or between certain points were returned completely to the French for operation and control. The U.S. Army then made requisitions to the civilian agency (SNCF) concerned, for U.S. Army tonnage to be transported over the line or series of lines under its control. During this period, the railways handled civilian freight and passenger service, with priority to U.S. Army needs.

In addition to weighing the technical factors involved in turning over the operation of the railroads to the French, the determining of a suitable time for the transition into Phase III operations was based on other important considerations, the most important of which was the strategic value of the line within the Communications Zone, that is, whether or not it was a main Line of Communication from a major port, or if it was to be used for movement of priority supplies forward, or for evacuation of hospital patients. Thus, when the lines on the Cherbourg Peninsula and the line from Rennes to Le Mans went into Phase III operations, they were already carrying a reduced amount of freight. On the other hand, the main line from Cherbourg to Paris via Caen, Surdon, and Dreux was still in Phase I operations at the end of December 1944 because of its value as a line for

the movement of hospital trains to Cherbourg. Other important considerations were in connection with the condition of the roadbeds, tracks and auxiliary railway operating facilities, the importance of the line to the French in meeting civilian needs, and the availability of skilled personnel for Phase III operations. The locality also had a definite bearing on the situation. For example, east and west of Paris the operating conditions of the railroads were considerably different; furthermore, the supply needs of the civilians varied. There was a lack of skilled personnel east of Paris, and enemy activity varied in certain localities. (Chart No. 4, this Chapter) shows the situation regarding phase operations by 2nd MRS on the Continent as of 1 October 1944 and Chart No. 5 indicates the extent of 2nd MRS control as of 31 December 1944.

Line of Communications Shift in Emphasis

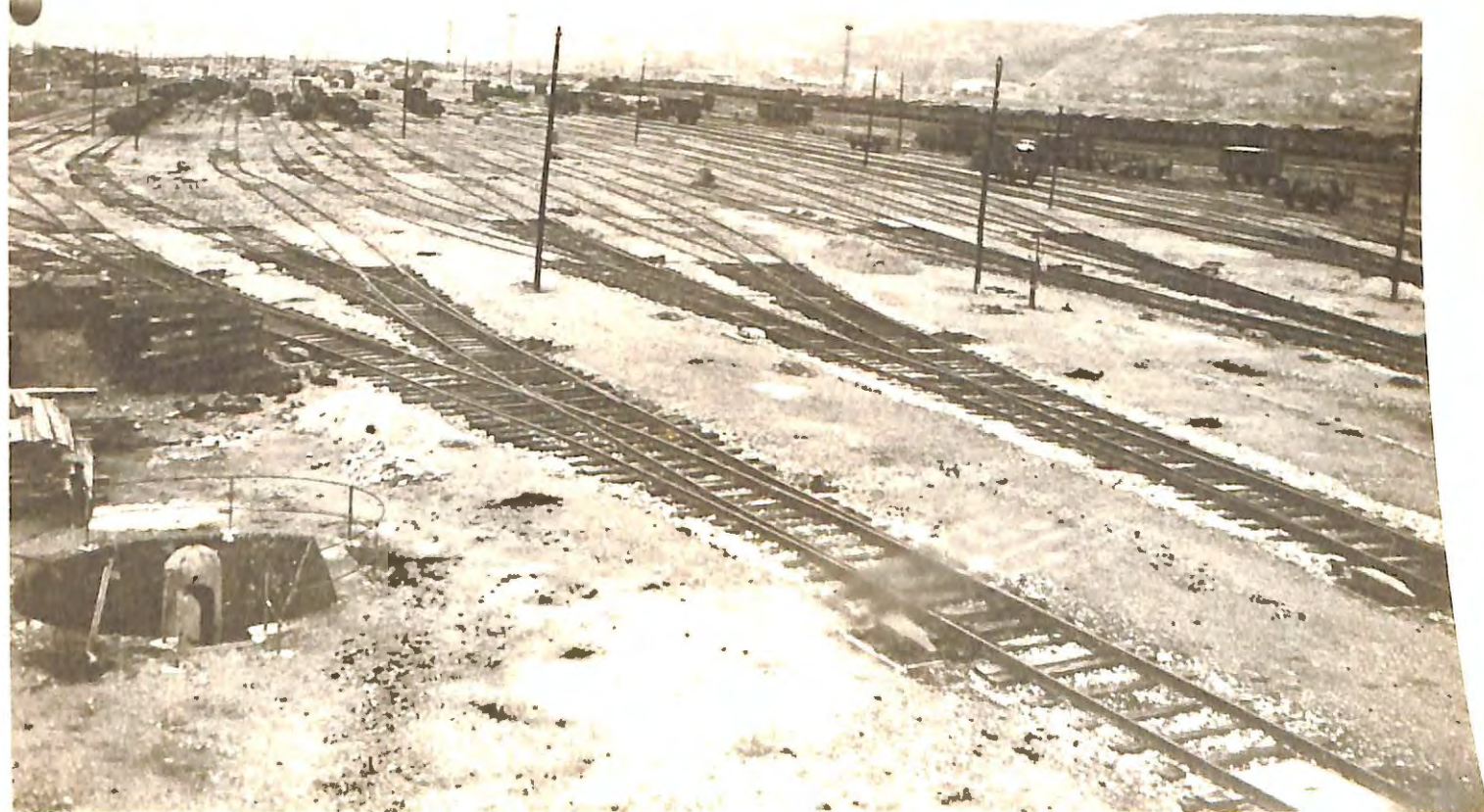
The fourth quarter of the year 1944 represented for the 2nd MRS in France a period of development in rail areas of operation, which resulted in returning many lines to the French for Phase III operations. There was also an important shift in emphasis on certain Lines of Communication (See Chart No. 3, Chapter 1 for the main Lines of Communication and mileages).

While very little advance was made in mileage by the 2nd MRS during this period, full advantage of the time was taken to consolidate and develop those lines under its jurisdiction, to build and repair facilities for train operation, and to improve service to the fullest extent possible. The progress made in developing railroad operations to the extent that they could be turned over to the French for operation in the Phase III stage is indicated by the Situation Maps shown in Chart Nos. 4 and 5, this Chapter, showing information effective as of 1 October and 31 December 1944. With the placing of these lines in Phase III operations, the 2nd MRS was relieved of supplying military personnel for their operation and much of the necessity for transporting food and fuel to the large cities in the interior of France. With the development of inland waterway facilities (See Chapter II) the task of moving coal by rail was also relieved somewhat from among the duties of the 2nd MRS. A shortage of US military operating personnel contributed substantially to the necessity for Phase III operations as soon as practical.

The shift in emphasis during this period, relating to main Lines of Communication, was due primarily to the opening of the three major ports to the east of Cherbourg and closing of the beaches. Thus, the latter closed on 15 November and in the meantime, Le Havre had opened 30 September, Rouen on 15 October, and later Antwerp opened on 28 November. The discharging of cargo from the newly opened major ports relieved some of the pressure on the long Line of Communication haul from Cherbourg. At the same time, the continuance of long motor truck hauls became more impractical; the Red Ball Route from Cherbourg was terminated 13 November. All of these changes directly affected operations of the 2nd MRS and the distribution of units under its control throughout the Communications Zone, ETO. Chart No. 7, this Chapter, shows graphically the various moves made by the Grand Divisions and Railway Operating Battalions in the ETO from date of arrival on the Continent to 1 January 1945.



STATION YARD AT BELFORT
MARSHALLING YARD LIEGE BELGIUM





Q M DEPOT

VERDUN - FRANCE



QM DEPOT

HERBESTHAL - BELGIUM



REEFERS & THE FROZEN FLEET. HOMECOURT - FRANCE



FORWARDING OF RATIONS TO TRUCKHEADS - FRANCE

RAILHEADS DEPOTS AND TRUCKHEADS

For statistical comparisons of tonnages moved monthly on the Continent, from the ports and east of the Seine River—by rail, motor, and inland water, see Appendixes Nos. 1, 2, 3, and 4, this Chapter. In Appendix No. 1, (par. 13) it will be noted that a total of 3,811,368 net tons of supplies were handled by rail east and west of Paris during October, November, and December 1944, as compared to a total of 435,775 net tons for the months of July, August, and September 1944.

Statement of Essential Problems
Loading and Unloading Supplies

As a facility for transporting all types of supplies, equipment, and troop reinforcements, the 2nd MRS was concerned primarily with movement after loading and unloading by the service concerned. However, since these operations are so closely related and dependent upon each other, the task of loading supplies at the port or transfer loading points and unloading them at the railhead at destination, had an important effect upon the efficiency of train operations during the last quarter of the year. Since the responsibility was clearly defined, a solution of the problem resolved itself into concentrated efforts by G-4, ETOUSA through the various Services charged with the responsibility of keeping rolling stock loaded and unloaded so as not to interfere with train schedules. At the Ports, Transportation Corps Port Battalions were responsible for the unloading of ships and other sea-going craft. The units actually performing the operation of loading freight cars varied to some extent, depending upon whether the supplies were handled from ship or quay directly into freight cars or if facilities were such that they had to be loaded first into trucks and then transported by motor to the railroads. In the case of loading supplies discharged at the beaches, the latter applies 100 percent. Methods of loading at the various ports varied, depending upon the existing or rehabilitated facilities for moving railway cars to the docks where they could be loaded directly into cars, by hand or crane. The extent to which this was different varied at the individual ports. Operations at each of the ports discussed in Chapter III under the Major Port concerned; a list of the various railheads will be found in Appendix No. 2, Chapter II, as well as in Appendix No. 1 this Chapter.

In general, where tracks were available at the dock, the job of loading supplies was greatly simplified and speeded up by the use of cranes of the crawler type. When it was possible to bring ships into the quayside, the organic loading and unloading equipment of the vessel was used. In Cherbourg, for example, after the necessary reconstruction and mine clearance, it was possible to bring Liberty ships to the quayside and discharge the cargo directly into train cars. On the otherhand, when it became necessary to use trucks for intermediate hauling, most of the work was done manually. The truck backed up to the freight car and the supplies were transferred by hand. In some cases it was possible to use crawler cranes, where certain supplies, particularly rations, were unloaded from ships in slings. The sling was left around the load which was again lifted by a crane at the rail loading point and deposited in a car, where the supplies were stacked by hand. The same was done with pallet and skid loads when the haul was short and the supplies were of such a type that it was practical to handle them in this manner.

Regardless of the mechanical equipment used, by far the greatest amount of the handling of supplies in loading and unloading was done manually in at

least one operation; the biggest problem was to keep to a minimum the number of times this had to be done. Thus, the most efficient of these operations was at the port of discharge when facilities were available for direct loading into railway cars from the ship or quayside; and at the other extreme the greatest inefficiency occurred when supplies were landed on the beach, moved to dumps, and then again moved to rail loading points.

It was found that, in addition to the delays indicated above, when supplies arrived by rail at the forward railheads, various disorganized conditions at these forward destinations often interfered with the prompt unloading of railway cars. These included the lack of yard unloading trucks and unloading equipment. All of these difficulties, however, were materially remedied by the end of the year by means of cycling the dispatching of trains. (Discussed in the next sub-section of this Chapter under "Movement Control"). Lack of personnel at these railheads was a continuous problem. While the Red Ball Route was in operation, truck-rail transfer points came into usage because the rail lines east of Paris were capable of greater capacity than those to the west. These transfer points were usually in well developed yard areas where the trucks of a convoy could pull up alongside an empty train and transfer their loads directly. Here also personnel shortages occurred. Enemy V-1, V-2 and robot raids also had hampering effects at some of the railheads and transfer points.

Examples of specific delays in unloading are given below as abstracts from 2nd IRS unit reports:

(1) From a Semi-Monthly Report on the activities of the 2nd IRS for the period 15 to 30 November: "The German robots are doing considerable damage to rail facilities in Belgium, particularly in the Antwerp and Liege areas, which is being further aggravated by the fact that Belgian workers are refusing to work in these areas. A considerable number of trains have been held up waiting for repair of track in order to get through in the Liege area. The Military Railway Service is coping with this situation as expeditiously as possible; however, the additional help of Belgian labor is urgently needed to speed up the flow of traffic".

(2) From an Historical Report of the 710 Railway Grand Division, dated 17 December, 1944: "A heavy congestion of traffic in the northern section, particularly in the region of the 709th Railway Grand Division (the Brussels area) made it necessary to withhold shipments in heavy volume in the Paris area. In order to relieve congestion in the vicinity of Tergnier, Laon and Reims, authority was requested from 2nd MRS to reroute some traffic from Antwerp to Eastern regions via Aulnoys, Persons, Megieres and Verdun. Also, an embargo on all freight to the north was placed in effect by 2nd MRS necessitating the storing of freight destined for Belgium at Dreux and other points west of Dreux, the only exceptions being hospital trains, troop trains, Ordnance supplies and perishables".

(3) From an Historical Report of the 722nd Railway Operating Battalion, dated 26 December: "About 10 November, there began an accumulation of east-bound traffic commencing near railheads in Belgium and progressing extending westward. By 20 November, the accumulation had increased until there was an eastbound train occupying each block from Erquelines (Belgium border) to Namur almost continuously and which materially retarded movement of trains. By 24

November, the eastward traffic offered from France had accumulated to such an extent that the Belgian Railway System was unable to absorb it currently and it then became necessary to set selected trains clear of the main track at stations near the Franco-Belgian frontier and release the crew and engine. Energetic measures were taken by Railway Operating Battalion, Railway Grand Division, and 2nd MRS personnel to clear up the situation but the effect of these measures had not been felt at the close of the month of November. At that time there were approximately 30 trains from which crews and engines had been released at stations in France near the frontier awaiting acceptance on Belgian Railways.

The general labor and political unrest in Belgium plus the reluctance of the Belgium train crews were a hindrance to efficient operations in that area. In a few cases where priority trains arrived at the Belgian border and there were no Belgium crews available, the French crews handling the trains hauled on through into Belgian territory beyond their territorial and prescribed working time limits.

Movement Control

Of equal and sometimes greater importance over and above the problems brought on by variations in loading and unloading facilities and limited personnel, was the tremendous task of Movement Control throughout the entire Communications Zone of the ETO. Among the variable factors involved, in addition to loading and unloading facilities, were developments in the tactical situation and enemy interference at critical loading and unloading points, the type of supply being moved on a priority basis, and the physical condition of the railways, equipment and operating personnel available. Essentially, the problem was that of allocating rolling stock to meet the frequently changing and urging demands and keeping empties available for loading.

At the Office of the Chief of Transportation, supply movement requirements were received monthly from the Commanding General, Communications Zone, through G-4. In conference with the various divisions at OCOT, the Chief of Control and Planning determined how the supply requirements stipulated by G-4 could best be handled, that is, by truck, rail, inland waterways, or combinations of these means. Decision was also made regarding the ports or other sources from which movements would be made. On the basis of the proposed allocations resulting from these conferences, the overall transportation plan evolved was submitted to G-4 for approval before placing the program in effect. (Details regarding Control and Planning during the last quarter of the year 1944 are given in Chapter II). The OCOT, through the Movements Division, OCOT, then turned over to 2nd MRS the requirements for rail transportation for development of detailed operational plans and execution through the Railway Grand Divisions and Railway Operating Battalions in co-operation with the Base Sections involved. Handling the technical railway transportation problems involved was strictly a function of the 2nd MRS.

where Phase III railway operations were in effect, the Freight Branch of Movements Division, OCOT, made their requisitions directly to the French authorities (SNCF) through the Liaison organization of the Seine Section Transportation Section which handled such arrangements as a subordinate to the French Liaison authorities of the OCOT. Prior to 1 September, 1944, Movements

Division, OCOT, made suggestions as to the make-up of trains but due to the extremely technical quality of train operations, this duty was then fully delegated to the 2nd MRS. When sudden changes occurred in the tactical situation and there were shifts in the urgent need for supplies, the trains and directions of movement had to be quickly changed; this was accomplished through close liaison between OCOT and the 2nd MRS or OCOT and the French SNCF authorities.

Commodity priority changes in relation to certain developments in the tactical situation had a direct bearing upon the railway transportation facilities. In general, however, ammunition, POL, rations, and Medical supplies were consistently rated for highest priority. Since the Transportation Corps and the 2nd MRS were Service organizations they had no voice in establishing priorities. Their function was to transport these supplies forward in their designated priority sequence and within specified time limits. Priorities and current changes were handed down from Com Z, G-4, to Control and Planning, OCOT, and from there they went to the 2nd MRS. In addition to the various mechanics involved in actually transporting supplies by rail, the 2nd MRS was responsible for the necessary control of train movements in order to avoid exposing, at one time, all of a certain class of supply to the chances for enemy interference. Thus, groups of trains made up for certain railheads often moved forward in cycles. This had the additional advantage of allowing time for unloading the trains in sequence at destinations and for clearing the yard or siding of empty cars. For example, a group of priority trains would be dispatched to a forward railhead in a sequence, such as: ammunition, Medical supplies; gasoline, rations, and then ammunition again followed by Medical supplies, gasoline and rations. At the receiving end, certain types of unloading equipment had to be available and storage facilities were necessary for each type of supply; also, some form of lifting equipment was necessary when the loads could not be handled entirely by hand. Thus, if a number of trains of any one type of supply arrived at once at the railhead, it would invariably overtax certain handling facilities and result in the tie-up of a loaded train, due to personnel and equipment limitations.

On return trips from forward railhead deliveries, salvage material was transported as well as large quantities of captured enemy equipment. In general these items were Quartermaster or Ordnance. The 2nd MRS also returned loads of railroad equipment that could be used for railway reconstruction. In Oise Section, train loads of captured German equipment contributed to congestion in the Reims area until special action was taken through the Commanding General of Oise Section, in order to clear the yards. (See Chapter VI, under Oise Section).

The return of empty freight cars presented difficult problems due to inadequate yard facilities at forward railheads, and the lack of sufficient telephone and telegraph communications. During the last three months of the year, this situation was improved. To help remedy the difficulties arising, Railway Operating Battalions, Base Section Transportation Officers, and RTO's forwarded to 2nd MRS headquarters a daily situation report on an overbalance of empty freight cars in an area and these were moved back and made available at predetermined loading points.

Operating Personnel and Equipment Shortages

The phase system of operating the railways in France contributed substantially to meeting the railway operating personnel problem, but in certain instances situations arose which resulted in delays and required special handling.

During early operations on the Cherbourg Peninsula, the 707th Railway Grand Division was faced with a shortage of operating personnel in the area assigned to the 720th Railway Operating Battalion and their Railway Shop Battalions were heavily pressed for repair work to be done. In the Paris area the 710th Railway Grand Division was short of train operating and yard personnel in Soissons. In addition to the phasing of railway operations, many of the personnel shortages that occurred during the last three months of 1944 were overcome by a system of lending men from one battalion to another. By the end of the year 1944, it was anticipated that after 1 January 1945, when all of the rail lines west of Paris were planned for Phase III operation, certain railway operating units would be made available for forward areas where there were railway personnel shortages due to the heavy increase in railway traffic.

Maintenance and Repairs

During the last quarter of 1944, the problem of maintenance and repair increased, as compared to the previous three months. Initially, the lines which were rehabilitated and taken over for military purposes, went through a period of hasty reconstruction and repair. This work was done by Engineer General Service Regiments and the Signal Corps. Much of the reconstruction work done by these units was of a temporary and semi-permanent nature. Consequently, under heavy traffic, some of the repaired roadbeds and tracks laid over filled shell holes began to sag or go out of line and the problem of continuous and extensive work by Railway Operating Battalions became necessary. The repair and maintenance of railway equipment was done by Railway Shop Battalions. Their work in clearing destroyed yards, repairing captured equipment, and maintaining power and rolling stock also increased as the tactical situation developed. Working under great difficulties because of a limited supply of tools, and faced with an overwhelming amount of destruction, they worked long hours, improvised tools, and repaired machinery. They were also faced with the problem of rehabilitating captured equipment that in most cases was so old and worn that it was constantly in need of repairs in order to keep it in operation. After moving to a new area to perform their normally assigned duties, these RSB's found that it was often necessary to make extensive repairs to the railway shop facilities. For example, when the 712th Railway Operating Battalion was assigned to Le Mans on 22 August 1944, it was faced with the problem of first preparing an area suitable for operations, which involved setting in order the railroad repair facilities at that station; similar instances occurred during the last quarter of the year 1944. The roundhouses and shops were wrecked. Thus, it became necessary to clear the yards of destroyed equipment and rebuild shops and machinery before they could make current repairs to locomotives and rolling stock. (Details of the work done by the various Railway Shop Battalions in the MTO during the last three months of the year are covered in Section III, under Unit Histories.)

Reconnaissance, Reconstruction, and Maintenance.

The urgent demand for use of the railroads to supply the U.S. Armies in France required as rapid expansion of the railway service as possible. For this reason reconnaissance was conducted immediately after landing. Elements of the 2nd MRS and Corps of Engineers worked very closely in order to determine the conditions of the railroad tracks, roadbeds, yards, and other auxiliary facilities and to estimate the amount of materials required for the rehabilitation of track, bridges, signal communications, and water and fuel points. Decision in regard to the policy to be followed in connection with railway reconstruction was made in advance by the 2nd MRS and the Engineers in order to avoid delay in the work involved. In the Normandy Campaign, the initial reconnaissance work was done by the Advance Party of the 2nd MRS and later by detachments from the 2nd MRS headquarters but as the lines extended further inland other units aided in this work. Engineers, Railway Grand Divisions, and special parties operating with the SNCF, all cooperated in gathering the needed information about the condition of the railroads and the necessary repairs for restoring them to service as quickly as possible. Reconnaissance of railroads, as in any other type of Engineer work during military operations, was continuous, even after reconstruction began, so that by this means it was possible to maintain complete a daily situation map showing the progress of work and availability of lines as they were rendered serviceable.

Actually, reconnaissance of the railway situation in France began many months before the assault landings were made; this was accomplished through the study of aerial photographs showing the damage that was being done by aerial bombings. These studies were currently kept up-to-date and supplemented by an evaluation of reports prepared by Army research specialists concerning the railway lines in France during peacetime. Tourist pamphlets, prewar advertisements, and information from underground sources in France were the chief sources. The map of France at the beginning of this Chapter shows the network of Standard Gauge Railroads in France known to Military Railroad Service; OCOT, ETOUSA, prior to the invasion. After the assault landings, the railroad reconnaissance parties on the Continent obtained information from the French on the conditions of the railway lines in advance areas, and the location of railway supplies and equipment. This aid was of particular advantage in planning before certain areas were surveyed.

The construction of the railroads in the U.S.-occupied areas on the Continent was the responsibility of the Corps of Engineers and was under the technical supervision of the Chief Engineer, Communications Zone. Signal Communications were handled similarly under the Signal Corps. The maintenance of way and equipment was under the technical supervision of the Chief of Transportation, Communications Zone, operating through the General Manager, 2nd MRS; operation of the railroads was under the technical supervision of the Chief of Transportation, Communications Zone, operating through the same headquarters. (See Appendix No. 10; this Chapter, for copy of Standing Operating Procedure No. 32, Headquarters, ETO, "Continental Railways", July 1944). By the end of 1944, U.S. Engineers had rehabilitated in France 4,780 miles of double track and 3,050 miles of single track lines.

Bridge repairs and reconstruction constituted the major problem of railroad rehabilitation work. Weakening or failure of reconstructed substructure



GERMAN DEMOLITION SARREGUEMINES - FRANCE



ENGINEER BRIDGE RECONSTRUCTION MALMEDY. BELGIUM



ENGINEER BRIDGE RECONSTRUCTION. MALMEDY - BELGIUM



SHORT SPAN RECONSTRUCTION BY ENGINEERS. MALMEDY. BELGIUM

BRIDGE DESTRUCTION AND RECONSTRUCTION



FILLING BOMB CRATER WEST OF PARIS



ENGINEER CORPS BRIDGE RECONSTRUCTION - BELGIUM

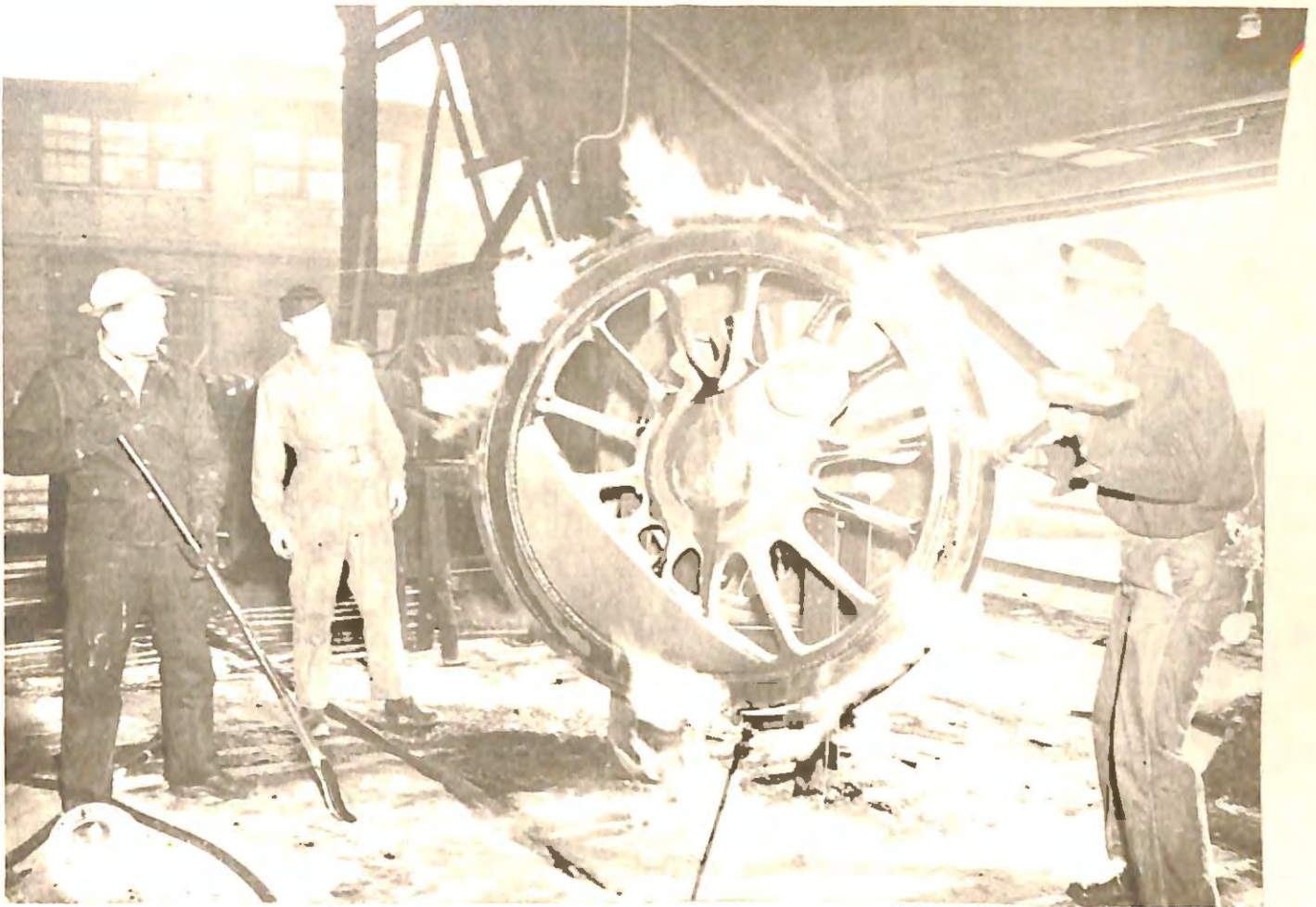


REPAIRING DAMAGE IN RAILYARDS - BELGIUM



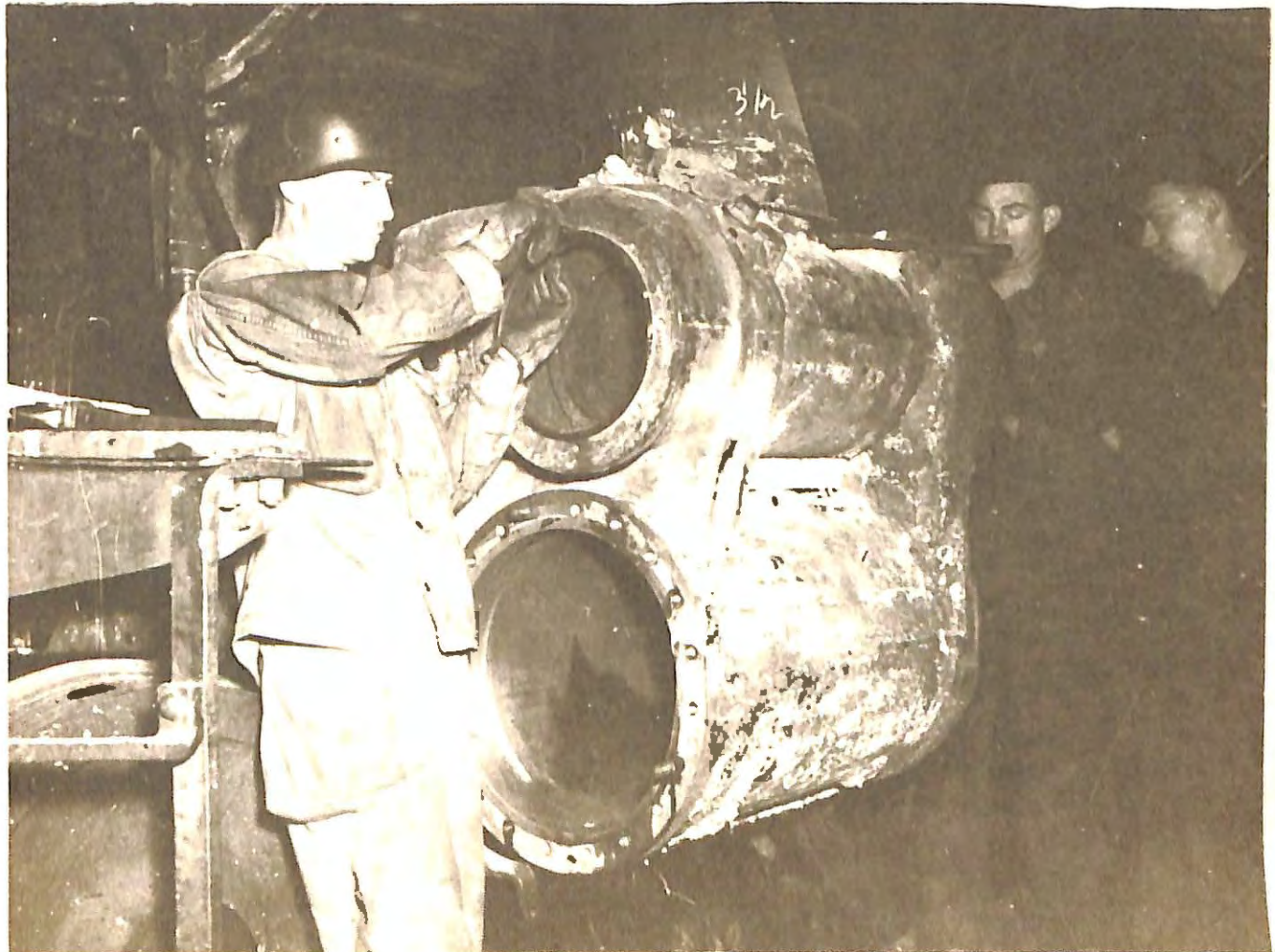
RAIL LINE RECONSTRUCTION ENGINEERS AND FRENCH CIVILIANS

RECONSTRUCTION OF RAILWAY FACILITIES



SWEATING ON A TIRE

RAILWAY SHOP MAINTENANCE
REPAIRING A BURST CYLINDER - NAMUR BELGIUM



necessarily had to be guarded against. An Engineer survey of the bridges on the various Lines of Communication in Com Z, ETO, as of 15 November 1944, listed approximately 180 damaged railway bridges as having been repaired and 125 rebuilt by U.S. Army personnel in order to restore railway lines to service. The French repaired others, with the aid of American Engineers. Repair and reconstruction of tracks were also of importance in the necessary railway rehabilitation. The Germans frequently removed rails and ties at places where no replacements were available. Destruction at choke points in rail yards was frequent; control towers and automatic and manual switching facilities were damaged. In the Metz area complete new tracks and ties had to be laid in order to restore lines which had been completely destroyed by the "Track Ripper" and explosive charges.

An example of the amount of railway and bridge work required in some areas at Metz (see Chart No. 3, this Chapter) demolition charges had been placed at the center of every length of track and it was estimated that 90 per cent of these placed charges were detonated by the Germans when they retreated. Frogs and switches were also damaged extensively. For a distance of 11 kilometers the following material was required for track reconstruction: 2,500 60-ft. rails, 75,000 ties, 45,000 coach screws, 2,500 angle bars. All the rail lines loading into and from Metz were cut and sixteen highway bridges were destroyed; in addition, five railway bridges had been demolished and one over-pass bridge was down across the railroad line.

Following is an abstract from a report made by the Engineer Headquarters, Advance Section, located at Dolhain, Belgium, after reconnoitering the line from Mentzen to Aachen:

- "84.9 KM Concrete culvert, in good condition, no demolition, Junction.
- "74.4 KM Tunnel - Roof of tunnel destroyed by demolition, large amount of sand covering rails. Two holes cut in tunnel walls at far end for demolition purposes.
- "73.4 KM Barbed wire across rails, 1 rail blown by shell, ties in good condition.
- "73-2 KM Steel cable across tracks.
- "73.1 KM Shell hole, one rail destroyed.
- "73.0 KM 3 Shell holes, 3 rails and one tie destroyed.
- "72.9 KM Shell hole, 1 rail, 1 tie destroyed. Large amount of ties and plates (stock pile).
- "72.6 KM Shell hole, 2 rails, 2 ties destroyed.
- "72.6 KM Stone Masonry Arch over pass destroyed: One abutment completely demolished, the other cracked. Railway over highway, width of gap 45 ft., height 30 ft.
- "72.5 KM 4 Shell holes; 5 ties and 3 rails destroyed.
- "72.4 KM 3 Shell holes, 3 ties and 4 rails destroyed.
- "72.3 KM Masonry of Stone Arch destroyed under one track, other track lifted, but otherwise in good condition. Railroad over road. Gap - 18 ft. 3 shell holes, 3 rails and 3 ties destroyed.
- "72.2 KM 2 Shell holes; 2 rails destroyed.
- "72.1 KM 2 Shell holes, 3 rails and 2 ties destroyed.
- "71.9 KM Shell hole - 1 rail destroyed by shrapnel, but usable. Old rail laying across tracks. Barbed wire entanglement and trip-wire across tracks. German grenade under rail.

"71.6 KM Shell hole, 1 rail damaged by shrapnel, usable. Old rail laying across tracks.

"71.5 KM Stone Masonry Arch over-pass, in good condition. Railroad over dirt road, shell hole, one rail destroyed.

"70.9 KM Steel girder bridge destroyed. Railroad over highway. Cap 49 ft., Height 15 ft. abutments in good condition.

"70.8 KM 2 Shell holes, 2 rails destroyed.

"70.7 KM 2 Rails destroyed by demolitions. Charge in frog."

The report was accompanied by a series of drawings showing the various conditions observed on the line and was followed by a series of other similar reports covering the entire area.

A report from the 706th Railway Grand Division, dated 22 September 1944, Subject. Survey of Railroad Facilities in the Nancy Area, indicated that a survey was made by 2nd MRS personnel to study the railway operating facilities in that area. The party making the survey was conducted by Major G.W. Covert. It was made for the Commanding Officer of the 706th Railway Grand Division and forwarded by him to the Engineering Section of the 2nd IRS. Following is an abstract from the report:

"I. History:

"The Germans began their retreat from the Nancy area on 31 August 1944..... The American 3rd Army first went through and liberated that town on 15 September 1944, thus giving the Germans a 15-day period in which to remove practically all of the freight and passenger rolling stock of any military value and all the motive power that the French did not sabotage or have dispersed. This leaves the terminal and areas devoid of much usable equipment..... Relatively little damage was done to the plant, the main items being the demolition of the interlocking control tower so that the switches in the entire area have to be operated by hand.....

"II. Description of Layout:

(A sketch was attached showing station and yard layout including a description of the yard, platforms; sheds and warehouses, switching facilities, stub end yard, classification yard, and the totals of cars that could be accommodated).

"III. Operations:

"Because of the fact that there are seven bridges destroyed on the main line between Fail and Nancy via Champogneulles (northern Route) the Engineers are repairing the southern route from Fail via St. Vincent into Nancy from the east end of the layout.

"There is capacity to spot a total of 130 cars along driveway location where trucks may drive directly alongside the freight cars..... (Descriptions of driveways and their condition, freight houses and their capacities, and a summary of capacities for storage were included.) "It is to be noted that with the damaged interlocking plant there will be slow operation by reason of hand throwing the various main track switches.

"IV. Cars on Hand. (A list by type was given, showing location, yard, shop, contents and totals).

"V. Locomotive and Repair Shop:

"1. The facilities as a whole were practically untouched by bombings or demolitions. The facilities have been handling 110 engines..... The French have dispersed the power and at present have 50 locomotives at this point; 13 can be put into service immediately, the remainder as soon as minor repairs are made and the locomotives fired.

"a. Turntable; The Germans have removed the drive motor, but the French will be able to procure another motor for replacement immediately. It is of adequate size and will handle American locomotives.

"b. Backshop. This shop will house 10 locomotives for heavy repairs and from all indications is adequately equipped for such work.

"c. Running Repair Shop. This shop will house 40 locomotives and is serviced by two transfer tables and one drop pit.

"d. Round House. This is a 15-stall installation.....out of date. The French have asked permission for removal.....now used for storage pipe and welding shop.

"e. Diesel Car Repair Shop. This is a comparatively new shop.. will house 20 or 25 steam locomotives.....would be well adapted for light repairs.....French Diesel cars were dispersed by the French to avoid bombings... no reason for their not being re-assembled at this time.

"2. Electric Power. We are informed that the French are manufacturing their own power for engine house facilities and except for some minor trouble which is being corrected, adequate power is available.

"3. Car Shop. This is a seven-track enclosed building, serviced by two traverse tables and is in excellent condition. This installation, together with three rip tracks, will be ample for C Company of Shop Battalion to operate in conjunction with the present French force.

"4. Machine Shop. This is the only installation that was severely damaged by the retreating Germans. It was demolished upon their retreat and the machines methodically broken up to the extent that a mobile workshop is needed until such time as additional or new machines can be procured.

"5. The layout of this plant is excellent for the quick turning of locomotives.....It is situated close to the station.....It could well house a Shop Battalion.....A dormitory building consisting of showers, locker rooms, small kitchen, and 44 bedrooms.....Could house approximately 150 men.....ideal location for the company operating the round house.

"VI. Coal, Water, and Sand.

"1. Coal Facilities. The French have a two track system of coal from a center stock pile and is serviced by a rather antiquated Brown hoist... We are informed that they have a three-days supply of coal on hand. We assume this to mean enough coal for 50 engines at this point.

"2. Water Facilities. The former water storage tank was demolished by the Germans upon their retreat, but the French have cut into the city water supply and water is available for full operation.....

"3. Sanding Facilities. The original set-up was not damaged and we can go into immediate production of drying sand for locomotives.....

"VII. French Organization:

"Nancy is located in the 3rd Arrondissement of the Region East of the SNCF, and is the headquarters for this Arrondissement. (A list of Officers of SNCF and their telephone numbers was attached).

"A discussion of the bridge demolitions in the 3rd Arrondissement was held with M. Touche (Principle Engineer of Trains and Buildings, SNCF) and the location of the bridges demolished to date to the best knowledge of

the French is shown in a separate report....A discussion was held with M. Boye (Principal Inspection for Transportation, SNCF) as to the probable military railway operations and possible future military traffic in his territory. He was informed that future discussions with him would be held within the next few days concerning details of method and means of military railway coordination and operation with the French Railway Employees. The discussion was general and no commitments on the part of the Military Railway Service were made."

(Report signed by JACK W. BUFORD, Major, T.C., Engineer T & S, and GEORGE W. COVERT, Major, T.C., Supt. Equipment).

The railroad construction work done at the various ports during the last quarter of the year 1944 is covered in Chapter III under the Major Ports concerned. Information on the rehabilitation work required initially, after landing and taking over the German-occupied French territory, is covered in Volume IV, History of the Transportation Corps in the Battle of France, for July, August and September, 1944. As Phase III operations become effective the SNCF assumed the duties of reconstruction and repair within their areas of responsibility.

One of the greatest difficulties in railway maintenance was that caused by sagging tracks. Since the lines in most cases received heavy and repeated shellfire and aerial bombardment, much of the track bed particularly at critical junctions and marshalling yards, was pitted by craters, some of which were approximately 30 feet in diameter at the surface of the ground. In repairing these road beds and rail lines, the Engineers filled the craters with material at hand and reconstructed the line over the fill. Under heavy traffic however, many of these repaired sections settled and caused the track to sag. This was so frequent and occurrence that the Railway Operating Battalion maintenance of way personnel had to be constantly on the alert to keep these craters filled up to ground level in order to avoid the sinking or disalignment of the track passing over them. Another cause for extensive maintenance work on the roadbeds was the heavy use made of certain sections by the Germans without the proper repair and maintenance. A constant watch over signal and communications facilities was also essential as these were subject to frequent breakdowns due to their poor state of repair, lack of capacity, or their vulnerability to enemy action.

The Railway Shop Battalions (RSB) were responsible for the repair of captured railway equipment of all types. Because of the extensive damage done to the railway repair facilities, their job was extensive and very difficult. Also, much of the captured equipment was old and required frequent repairs so that the volume of work steadily mounted.

On 31 December, 1944, there were four Railway Shop Battalions on the Continent: the 757th RSB at Cherbourg, under the 710th Railway Grand Division, the 765th RSB at Paris under the 710 RGD, and 763rd RSB at Louvain under the 709th RGD, and the 755th RSB at Namur under the 708th RGD. Following are extracts from unit history reports of 2nd MRS Railway Shop Battalions and Railway Operating Battalions on maintenance and repair of railways and equipment during the last quarter of the year 1944.

From the 720th Railway Operating Battalion, dated 15 December, 1944:

"Company A progressed with the clearing and rehabilitation of yard tracks at Mezidan and Caen. Bomb craters on main lines between Lison and Lisieux were reinforced with slag. Between Caen and Mezidan, bridge crews installed bridge ties on steel spans, replacing track ties of uneven thickness. Signal crews maintained telephone lines, signals and interlocking plants, and worked with French signal gangs in replacing track and signal installations for proposed use of electric block signals....Company B expended its efforts on the repair of locomotives, rolling stock, and the operation of the wrecker." (Company B men had formerly been attached to the 757th RSB at Cherbourg).

From the 732nd Railway Operating Battalion, dated 15 December, 1944:

"The Couville and Sottevast Yards required considerable maintenance work in the way of draining, resurfacing, ballasting and reconstruction of switches, crossovers and leads. The work was done by Company A (track maintenance). Principal problems consisted of excessive rain, improper drainage and scarcity of materials, i.e. ballast, switches, rail, etc....The signal platoon took over maintenance of signals on the main line from Cherbourg to Sottevast with the incidental duties of supplying the lighting and communications between various offices and installations in the two yards....The locomotive platoon assisting the 757th RSB worked in harmony to keep the much used equipment in good condition. Car platoons inspected and turned engines, working in shops and also assisting the 757th RSB and the 728th ROB in perfect coordination."

From the 757th Railway Shop Battalion, dated 15 December, 1944:

"Work was begun 11 November on processing new British austerity type locomotives in conjunction with American engines arriving on the Continent.... on 25 November, the motors were started on the Coal Conveyor System....It was originally working for the Germans....It was left requiring a new tower to be built, new motors to be installed, new chain for the buckets, clearing of dirt and water from the pits, and complete re-wiring by the electricians."

From the 723rd Railway Operating Battalion, report for the month of December:

"Improvements on the line continued to be made by the battalion with the Corps of Engineers and French civilians. Bridges are constantly being repaired and strengthened and during the month some 92 cars with 1074 long tons of ballast were used to improve the roadbed all along the line."

From the 728th Railway Operating Battalion report for the month of December:

"The 128th and 130th Mobile Shop units have been attached to the organization for duty and are now located at Lison in connection with the locomotive maintenance at that point....Our facilities have been increased to the extent that we have taken over more track for maintenance, railroad stations, locomotive turning points, signal maintenance, telephone maintenance, and additional switching operations....We have the 139th and 140th Hospital train Maintenance Platoons at Cherbourg in connection with the maintenance and operation of the hospital trains to and out of the Gare Maritime....These men ride the hospital trains on their runs in connection with the maintenance."

From the 716th Railway Operating Battalion report for the month of October:

"Company B, the company responsible for the upkeep and light repairs to locomotives and cars, is now mobile, having their shops set up in railroad cars. In many instances, when operations started in France, personnel of one company were utilized in another company due to the urgency of the work to be done, such as, operation of trains and maintenance of track.....Company B, with its limited personnel, was operating a backshop and roundhouse in which they made heavy repairs in addition to light repairs on engines at the Battignoles yards, Paris."

From the 764th Railway Shop Battalion report for the month of October:

"On October 2, 1944, officers and men arrived at Battignoles yards, Paris, to assist the 716th ROB, Co B, in releasing accumulated power at the Battignoles shop. 106 locomotives were found in the yards, most of them dead..... necessary repairs were made.....we handled 510 locomotives through the engine house for an average of 21.3 per day with running repair maintenance work. 132 locomotives were turned out of the shop during this period with the following heavy repairs: 52 rod work, 12 cut journals, 31 stag bolts, 5 arch tube work, 3 leaky flues, 5 engine trucks, 7 pilot sills, 4 broken cylinders, 3 tank wheels, 10 miscellaneous repairs.

"The average locomotive repair has been $5\frac{1}{4}$ per day turned out of the shop.....the shops were full of French locomotives and were not adapted to engine house operation and our work was accomplished outside, mostly in inclement weather.....At Le Mans, the necessity for repairing and servicing Diesels arose... We did not have a Diesel platoon but had a few men with such experience in the plant maintenance sectiona man with Diesel experience was put on each shift and men with aptitude placed with them. In this manner we started servicing and repairing Diesels.....A platoon of 16 enlisted men worked at Dreux and Chartres while they averaged 18 and 15 engines per day respectively. At both points it was necessary to start from scratch which meant rigging up watering and fueling facilities.

"Company C was assigned the maintenance of hospital trains terminating at this station....the equipment being foreign to all personnel, a study of the cars to be worked was required so that repairs could be made expeditiously.....the heating of the cars was highly important.....this work was handled by the men in a remarkable manner despite the strange and intricate fittings used on foreign passenger equipment.

"The freight car work was performed at one of the auxiliary shops. Machinery and tools have been installed to make repairs to the many U.S. Army cars now in use and extensive repairs have been made to some of this equipment. One of the most important jobs of the freight car sections is the repair refrigerator cars and to install ice bunkers and means of air circulation so that perishable foods will receive proper refrigeration while in transit."

From the 764th Railway Shop Battalion report for the month of November:

"Work continued at Battignoles yards, Paris, and the engine house force

handled 737 running repair locomotives during the month or on an average of 24.6 per day. The shop made 121 classified repairs as follows: 7 general repairs, class 5; 47 rod jobs; 7 general boiler work; 10 stag bolt jobs; 3 renew flues; 2 renew arch tubes; 2 wrench damage; 1 piston rods; 1 air pump and cab work; 1 injector and cab work; 3 broken cylinders; 1 pipe and brake rigging.

"The maintenance of hospital trains at Gare St. Lazare and Gare de L'Est is continuing during the time trains are in terminal.....air-brake, steam heat, electrical, interior water systems, coach cabinet carpenter, draft gear and truck work is the daily routine on these trains. New hospital trains are being built. Company C was called upon for the planning, inspection, and output of these trains. Cars are being converted from French passenger equipment at various shops throughout the Paris areas, making it necessary to have an experienced technical man at each point to inspect, supervise and expedite the work performed.

"Seventy-five (75) freight cars were repaired at the Clichy shops, many requiring extensive repairs.....machinery is being installed at this shop to facilitate the making of heavy repairs on all cars running into this point..... machinery will be used to make replacement material for hospital trains..... freight yard inspection is being carried out, the crews making light repairs to prevent switching of cars to the shop whenever possible."

From the 764th Railway Shop Battalion report for the month of December:

"A total of 94 locomotives were handled at the Battignoles shop during the month of December for heavier than roundhouse running repairs.....total 826 locomotives were handled by the enginehouse force for an average of 26 locomotives per day. Boiler work handled by B Company included 132 boilers drained and repaired by renewing stagbolts, arch tubes, etc.....seven water cisterns repaired and placed in service and a total of 21 engines were taken out of service for application of boiler patches. Six new hospital trains were placed in service.....these trains are being maintained and serviced by this battalion.....recent cold weather and steam trouble have increased our work.

"On the night of 26 December, 1944, Gare St. Lazare was bombed by enemy aircraft. Machinery, tools and supplies were lost.....work shops, tool room, and supply room were completely demolished....eight hospital train cars were wrecked, four being repaired at Gare St. Lazare and the remainder being sent to the Livallois shop. Special U.S. Army trains were also damaged requiring two to be sent to the Wagon-Lit shop for repairs, three being repaired at the station. 108 cars were repaired at Clichy shops during the month of December."

Signal, and Telegraph and Telephone Communications Equipment

On all French railway lines, the manual block system was used. Many of the signal devices were wrecked, along with other railway operating facilities; these were restored to operation by the Signal Platoon of the various Railway Operating Battalions assigned to the area. On important lines, where manual systems were to be changed for U.S. Army use, the Signal Platoon of the Signal Section of SNCF went to work changing over to automatic operations.

Prior to the invasion, the telegraph and telephone communications equipment used in connection with the French railway system was adequate for peacetime needs, although most of the equipment was old and out-dated, as compared to that used in the United States. However, when the Americans landed and moved across France they found not only the expected damage from Allied aerial bombings, but also the effects of German demolitions during their retreat. Wires were cut, in many areas at every pole, telephone switchboards were ripped out; chopped with axes, or detonated with explosives. Repeater stations also suffered the same fate.

The destroyed wire along all the main rail lines showed signs of a German-developed technique in which a rope was dropped over the wires between poles and a pulley was tied to the track. The rope was passed through the pulley and attached to an engine which when moved forward ripped the wires down; this effectively destroyed all point-to-point contact between stations as well as through-wires.

The original network plan called for a dispatcher's circuit, a message circuit; a through-movement control talking circuit between headquarters, 2nd MRS, and the various Railway Grand Divisions under its control, and a local movement control circuit between the Railway Grand Divisions and Railway Operating Battalions; also teletype service was to be provided between principal points.

As indicated previously, the Signal Corps was charged with the duties of replacing communications lines for the operations of the railroads in France but with the requirements of combat troops and rear echelon headquarters, this was a sizeable addition to an already tremendously large task assignment. Consequently, only the dispatchers' and message circuits were rehabilitated at first. Railroad long-line communications were postponed. Courier service using jeeps and motorcycles were established to reach points which had been by-passed in the existing French communications system. In anticipation of the situation which developed, Major General ROSS arranged with the Signal Corps for the release of high-powered mobile radio units to the OCOT. Operating personnel was trained at 2nd MRS headquarters and the units were dispatched to keypoints between Cherbourg, Nancy, and Belgium. They were used for long distance control messages, both by the Grand Divisions and 2nd MRS headquarters.

By the end of 1944, the 2nd MRS had complete communications coverage throughout the areas occupied in France and Belgium and teleprint service had been established between Cherbourg, Paris and Nancy.

Supply of Railway Equipment

For use in American-occupied territory on the Continent, the railroad rolling stock ferried to France after the beachhead had been established was built in the United States on the basis of studies and plans made by the Planning Division and Military Railway Division of the Office of Chief of Transportation, ETO, established at that time in the United Kingdom. Specialists had returned to America from England for conferences with American railway equipment manufacturers and for assistance in supervising the design and construction of the equipment required for the operation. By the end of

1943, some of the rolling stock manufactured for use on the Continent began arriving in the United Kingdom in a knocked-down stage and the engines arrived stripped of excess weight. Depots were established at Hainault and Sudbury in England and at Newport in Wales. Assembly of the railway equipment received was undertaken at Hainault and Sudbury by Railway Shop Battalions and Engineer units of the British Army, and a record of 30 cars per day was reached at Hainault. By D-Day, approximately 20,000 freight cars had been assembled for shipment to France. These included box cars, gondolas, flat cars, tank cars, refrigerator cars, and cabooses. At Newport, detachments of Railway Shop Battalion personnel were busy servicing engines that had arrived in the U.K.

From sources in the United Kingdom, other types of railway equipment were being built during the later part of 1943 and early 1944, prior to the invasion; these included mobile shop units, wrecking trains, and hospital trains. Landing craft and ships were also requisitioned and made ready to ferry this equipment to France. Wrecking vans were designed and built, and the other auxiliary railway equipment needed for operation on the Continent was accumulated and held available in British-American Joint Stock Piles.

On 10 July, the first rolling stock was landed in France, consisting of one 150 h.p. Diesel engine and ten flat cars. This was a work train and it was ferried across the English Channel on an LST. The rolling stock in this train was mounted on heavy trailers. On 29 July, the first train ferry arrived at Cherbourg and this was followed closely by the first sea-train. These ships began the ferrying program that was to deliver 19,383 freight cars and 1,521 pieces of motive power to France by the end of 1944. See appendices Nos. 5 and 6, this Chapter, for detailed summaries of statistics relating the railway equipment in France, from the U.K. and captured, as of 1 October 1944 and as of 3 January 1945. Appendix No. 7 gives a composite summary of the number of locomotives and freight cars in the United Kingdom and on the Continent at the close of each month of the year 1944 beginning with July; a summary of the planned requirements for locomotives and freight cars is also shown in Appendix No. 7 for comparison.

A large percentage of the railway equipment captured by the Americans was damaged from Allied bombings or by German demolitions. The figures given in Appendices Nos. 5 and 6 show the comparative number of various items in repair shops and in use or available. The captured rolling stock was divided, depending upon its state of repair: (1) completely wrecked, (2) damaged but reparable, best adapted for cannibalism (in which undamaged parts were removed from equipment and used to repair other damaged cars and engines), and (3) rolling stock and power which was in good condition. As captured equipment was repaired and made available for use, it was held jointly by the 2nd MRS and the French for use as needed.

At the end of December practically all of the American rolling stock and power in the U.K. had been ferried to France (See Appendix No. 7) and plans were under consideration whereby additional equipment would be received directly from the United States and assembled in France.

Hospital Trains

Specially equipped hospital trains composed of cars adapted from British equipment, were operated in France for the evacuation of U.S. wounded from the

front, beginning on 20 August 1944. Prior to their movement to the Continent, these hospital trains had been used in the U.K. to transport patients landed from France for movement inland to hospitals or evacuation to the United States. Until these regular hospital trains were received on the Continent, 20 French box cars or "40 and 8's" were used, equipped with the necessary hospital appliances; this train was built by the 755th Railway Shop Battalion in Cherbourg during July and used to transport the wounded from the American area. It was later replaced with the arrival of the specially equipped hospital trains from the U.K.

The first hospital train for Continental use was completed on 24 March 1942 in British shops by British labor, made from American plans. On D-Day, 31 of these trains were ready for operation in France. By 1 October, there were 14 in service in France for the handling of U.S. casualties. By the end of December their status was as follows:

<u>Composition of Trains</u>	<u>Total No. on Continent</u>	<u>No. Turned over to British</u>	<u>No. Available for U.S. Use</u>
14 - Car	23	--	23
15 - Car	13 (10 British)	6	7
10 - Car	1	--	1
Totals:	37	6	31

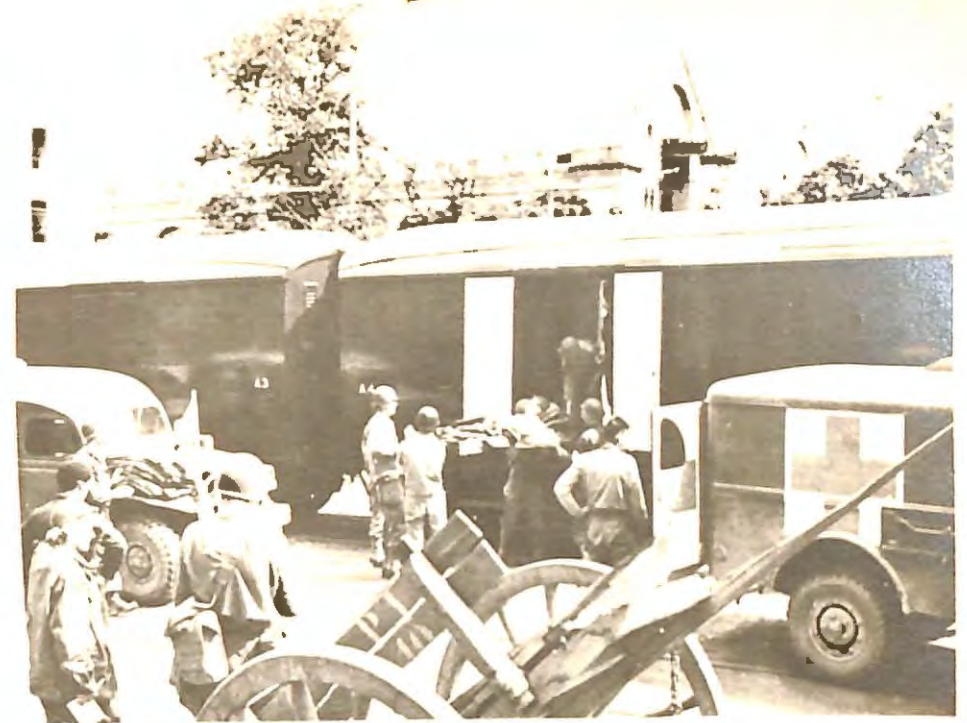
At the close of the year, TC records indicated that 194,842 patients had been transported by rail and that a total of 633 hospital trains had moved from forward areas.

Movement schedules for hospital trains in France and Belgium were established on the basis of requisitions from the Surgeon General, Major General PAUL R. HAWLEY, MC. These requisitions were received by the Passenger Branch, OCOT, which in turn advised the Transportation Officer of Seine Section. Specific requests were then forwarded to the Section or Base Section Transportation Officer (STO) in whose area the movement would originate. Where hospital trains were to be operated by the French the SNCF was notified by the STO, with a request for crews and locomotive power. The operation of hospital trains did not conform entirely to the phase operation system, in view of the fact that special through-handling was given such trains, in order to avoid delays. The hospital train running time between Paris and the forward railheads was 18 to 19 hours and from Paris to Cherbourg, approximately 12½ hours on the short route through Lisieux and Caen. Hospital trains were dispatched over the same lines handling other traffic but their speed and priority were so handled that they did not interfere with the movement of supplies and reinforcements to the front.

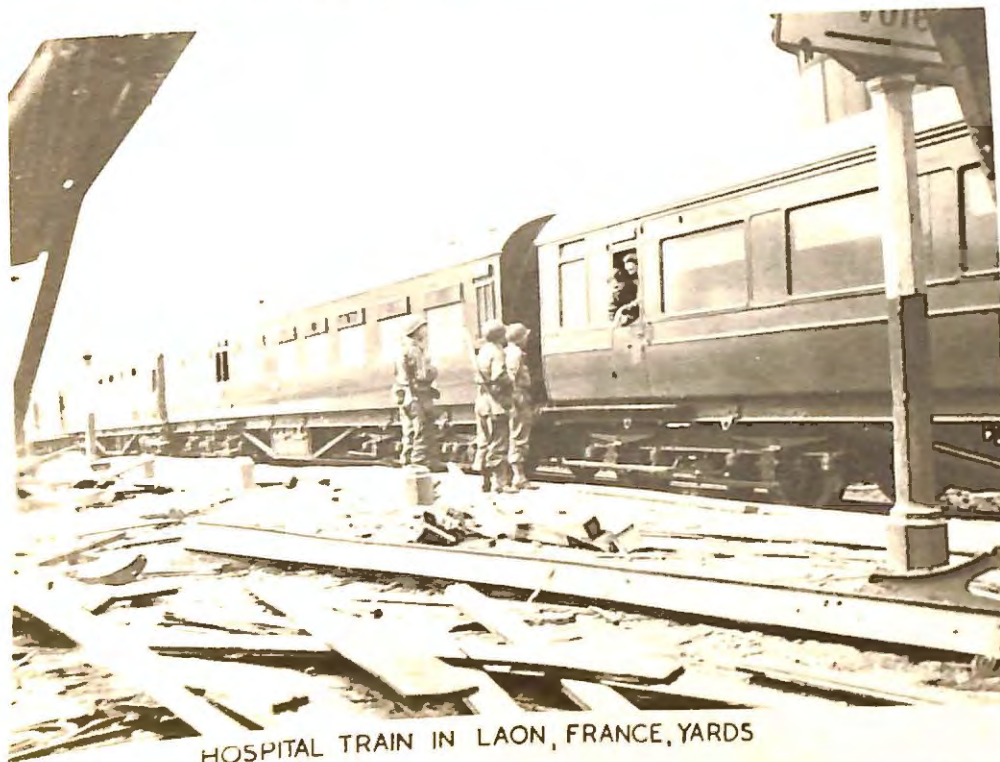
Hospital trains were run from railheads in the vicinity of field hospitals near the front to Paris and from these to the coast, to be transported by water to the United Kingdom. Movement of patients from field hospitals to the railheads was accomplished by means of ambulance trucks. At Paris, the trains were pulled to tracks on the Rue Amsterdam side of the Gare St. Lazare or at the Gare de l'Est where they were met by ambulances. Patients scheduled for hospitalization at Paris were removed and the train then proceeded to destination. Representatives of the Red Cross met each train and provided



HOSPITAL TRAIN OF WARD CARS LISON, FRANCE



LOADING HOSPITAL TRAIN - FRANCE.



HOSPITAL TRAIN IN LAON, FRANCE, YARDS



HOSPITAL TRAIN LIEGE BELGIUM

HOSPITAL TRAINS

refreshments and light reading matter. German wounded and soldiers of other nationalities pressed into service by the Nazis were also handled on these hospital trains, in separate cars, under suitable guard.

Hospital trains were made up in units of 14 or 15 cars, with through-passage ways, equipped as complete units for the medical and nutritional care of the wounded, and for the quartering and feeding of the Medical staff. The train consisted of an office car, eight ward cars, one car for sitting patients, two staff cars, and service cars consisting of a kitchen car, a pharmacy car, and a boiler car. All were steam heated, electrically equipped, and provided with hot water. Three types of cars were provided for patients: one for stretcher cases (converted milk-carrying coaches), one with bunks (regular sleeping cars), one for sitting patients (regular coach cars with seats). All of these cars were adapted from English rolling stock.

At two of the largest railway stations in Paris, the Gare St. Lazare and the Gare de l'Est, 90 railroaders of the 764th Railway Shop Battalion worked in shifts 24 hours a day, seven days a week, maintaining the U.S. Army hospital trains in France. They also worked to convert other cars for hospital use. Their tools were obtained from the French and from Joint American-British Stock Piles in the U.K. The contrast between the construction of British and American built cars was found to influence the progress of repair and maintenance work. British cars were wood-framed; steam hose connections and air brakes were different: links and couplers were longer; and electrical power was provided through the medium of glass jar batteries. Initially, ground lines were not available for testing air brakes. U.S. Army portable air compressors were installed for testing brakes on hospital trains. Steam leaks were one of the major problems. Steam heat connections on the British, French, and Belgian cars were not interchangeable. To solve this problem all connectors were changed and the fittings were standardized.

Cooperation of the French

In general, the 2nd MRS, throughout the year 1944, obtained the full cooperation of the French in connection with the rehabilitation and operation of the railroads in France during the three phases of operations through which the railroads passed in the Communications Zone, ETO. Relations as they existed during this time led Brigadier General CLARENCE L. BURPEE, General Manager of the 2nd Military Railway Service, to comment for press release as follows:

"The French have been very cooperative in every respect. We have never called upon them that they did not cooperate to the fullest extent. Long hours do not matter. They have stayed on the job from 30 to 40 hours without relief, some of them barefoot, some with barely enough clothes on their backs to keep them warm, but not one whimper has been heard. I have not had a half dozen complaints from the French workers since I have been on the Continent. They have always been free with advice and generous with their experience."

During the occupation of France, the Germans used the network of French railroads to their own advantage and to do so, freely moved French operating crews into unfamiliar territory. This placed an extra hardship on the workers because their ration tickets could only be used in their hometown or city. As a result, the train crews lived almost entirely on plain bread and cider which they carried with them when they left their home stations. Their

efficiency was soon reduced because of malnutrition. Sabotage resulted and some of the effects were in the form of sand in lubricating oils and greases, in the pistons and valve of locomotives and journals, and in the brakes and axles of engines and cars. While the damage initially was detrimental to the German effort, this action later deprived the Allies of much rolling stock and locomotive power. On the other hand, in order to cut off the movement of German troop trains, French saboteurs would blast the tracks ahead and to the rear of the trains and thus isolate the troops and equipment. This technique saved much valuable rail equipment for future Allied use.

After American occupation, French railway groups emerged from hiding and enthusiastically cooperated with U.S. Army Engineers and Railway Shop and Operating Battalions in clearing wreckage from railyards and right-of-ways. Many of these workers were weak from hunger and malnutrition and some collapsed under the terrific pace which necessarily had to be set to meet current conditions. The many others who remained, or came later to help in the rehabilitation and operation of the railroads were willing and cooperative and aided greatly with the required work. Operations on the Brittany Peninsula were handled by the French under the U.S. Army Phase III plan: the same situation came about quickly at Le Havre.

In most instances, the French were on the job waiting to be told what to do. Frequently entire shop crews were found under shelters adjoining a bombed-out roundhouse or a towerman would wait at a completely wrecked control tower, wanting to help but not knowing exactly how. As a matter of policy, all former employees of the railway system in France were utilized in their normal railroad occupations.

Interpreters were obtained by the Railway Grand Divisions and Railway Operating Battalions. These men also maintained liaison between the SNCF and 2nd MRS. Where not available, the sign language and diagrams together with a common knowledge of railroading served sufficiently. While most of them were cooperative and often enthusiastic, others were lethargic; it was discovered that this was due primarily to four years of practice in being "obstructionist" to the Germans. These did not seem to readjust their habits quickly.

Indicative of French cooperation in railway matters, however, was the steady progress made in returning railway operations to the French. Misunderstandings or unnecessary delays were always promptly handled through the cooperation of French Liaison Officers. By the end of the year 1944, track mileages turned over to the French for Phase III operations, as compared to Phases I and II, were as follows:

	Single	Double
Phase I	29.63	396.87
Phase II	45.07	938.30
Phase III	225.63	1,822.48

French and American shopmen worked together, using equipment made available by the local shop and some brought in by the Railway Operating Battalions. By the close of the year they had returned to service approximately 800 locomotives of all types, French, German, and Italian. A total

of 560 French locomotives were made available to the Americans and of this number 163 were undergoing repairs in French operated shops. The La Floria shops in Paris were the largest and best equipped in France and were manned entirely by French mechanics, with the exception of one six-man American crew. This shop serviced American and French Diesel engines as well as large locomotives; motor rewinding was also done there. Electric locomotives were also reconditioned in this shop, some of which had been placed in operation by the end of the year with French crews.

Use of French Railroads for Passenger Service

No civilian passengers were transported on American-operated railways, excepting in unusual cases. It was generally necessary for civilian passengers to await Phase III operation of a line when normally scheduled train operation by the French was resumed. As an exception to this policy, while 2nd MRS operations were confined to the Cherbourg Peninsula, some refugee personnel was moved, mostly back to Cherbourg.

Soldiers on leave in groups used the railroads. The officer in charge of the group requested warrants for these soldiers from the Section Transportation Officer and the railway facilities were made available in accordance with the T.C. S.O.P. on Personnel Movements.

Special troop trains were in operation since the beginning of train operations on the Cherbourg Peninsula, 11 July 1944. At the beginning of the period when the lines was operated from Cherbourg to Carentan and Lison, a regular schedule of passenger trains was in operation; originally this was a four-train daily service. They were run for the use of military personnel and some French who had Civil Affairs clearance. As the line was extended, troop trains were made up and a slowly growing troop train operation began. By 31 December 1944, the total number of passengers hauled on troop trains was 669,475 and 362 special troop trains had been operated. On 1 October, the Passenger Branch, OCOT, inaugurated the Main number system to be used in the movement of troop trains. The first Main number train (1001 M) passed through Oise Section and was serviced at Sezanne. Passenger coaches were used where possible for the movement of Allied troops. However, many freight cars had to be used for passenger train moves; they were referred to as the "40 and 8's."

On train movements from forward areas, POW's and certain expatriates who were forced into military service by the Germans were transported.

Effect of German Counter-Offensive on 2nd MRS Operations

Before the end of December 1944, the Germans had made their mid-December counter-offensive against First United States Army positions and had driven into Belgium and Luxembourg a distance of approximately 50 miles. However, by the end of December, the Allied Armies had gained the initiative and were forcing back the German salient.

Approximately 250 miles of railway track were recaptured during the offensive activities of Field Marshal von Rundstedt's troops; primarily these lines were lateral within the area occupied, and none of the major lines of communications were affected. However, enemy air activity was heavy and the

2nd MRS railway units in the forward areas were strafed and bombed many times. German activities were greatest at the Soissons railhead. The following is quoted from reports made by 708th Railway Grand Division and attached units:

"On 20 November in the early afternoon, the sky suddenly cleared and exposed the sun for a few minutes. Operation at Ans, Renory, Kinkempois Yard, and Guillemins was routine. At 1525 hours the sound of an approaching V-1 was scarcely noticed except by a few who chanced a casual skyward glance endeavoring to spot the flaming robot in its trajectory over the city. Heretofore, an occasional V-1 had pathed the sky, always carrying it's guttural "6x6-like roar" out of the sound of hearing. But the sound of the V-1 grew louder and louder and finally it stopped altogether. In an instant, its explosion rocked Guillemins valley. Some said it was an accident. But five minutes later there was a repetition; two more had fallen in Liege. The first robomb siege of Liege was on. The activity intensified by the hour and by the next day V-1's fell with severe regularity. A tabulation from 22 November to 30 November indicated 331 robombs fell and detonated in the almost immediate vicinity of the Liege (Guillemins) railroad station. Several hits caused damage (none of which was irreparable) to railroad installations, including track damage, damage to the switch control tower at Guillemins, and damage to the bridge leading to the roundhouse at Guillemins. There was considerable damage to headquarters building such as partial weakening of building structure and loss of windows through breakage. During the course of this siege there was a daily loss of glass in front windows of headquarters to the extent that at the end of the period no glass was left. All personnel slept in shelters during the period. A warning system was initiated day and night through the medium of outside guards who listened for the regular approach of V-1's. All enlisted men from Master Sergeant to privates participated in this roster. In addition, V-2's were dropped occasionally within the city. The first siege ended at 1630 hours on 30 November. There was no V-1 activity again until 15 December when, obviously timed to coincide with the great Nazi counterattack south of the city, the second siege began. Personnel were again forced to shelter due to the close proximity of hits. By Christmas, V-1's had marked the city of Liege with was damage resembling a prolonged artillery attack. Coupled with the V-1 siege and coinciding with the counterattack the Luftwaffe became active over the city, strafing and bombing sometimes in considerable strength. Shortly before midnight on 22 December, a Nazi plane, braving heavy flak, swooped low at Guillemins station and dropped bombs. One of the bombs, probably a 100-pounder, struck the building next to headquarters causing severe damage and a crater at the northeast corner of the building, plus the loss of remaining windows and a further weakening of the building structure. A V-1 struck freight cars in the Guillemins station, approximately 150 yards from headquarters at about 0610 hours on 21 December, setting fire to several cars carrying mail, burning six and demolishing or damaging fourteen. Personnel of this organization assisted in the unloading of mail in order to avoid loss by burning and on every occasion possible assisted clearing debris at all nearby incidents

"On 24 December, disaster struck the 741st Railway Operating Battalion when an enemy plane day-bombed the joint billet of the 740th and 741st Railway Operating Battalions, located about six blocks from Guillemins. Nine soldiers of the 741st were either killed (or later died) or were burned to death and many soldiers of the 740th and 741st were injured, some severely.



EFFECT OF THE GERMAN COUNTER-OFFENSIVE ON RAILWAY
INSTALLATIONS ABOVE GARE ST.LAZARE
BELOW SOISSONS YARD



On 27 December disaster again overtook the 740th when a V-1 struck the boarding cars of Company B at Renory Siding, Kinkempois Yard (Liege) killing eight soldiers of that company and injuring about twenty others. Consistent enemy strafing and bombing of the Kinkempois area was prevalent during the period. Throughout both of the extremely hazardous periods, the last of which extended into 1945, no personnel of this organization were directly injured from enemy activity.

"The problem of telephone communications for operation of trains greatly minimized during the period, principally due to failure of the Armies to drive forward with the speed demonstrated in France and Belgium and the use made of existing Belgium communications, coupled with the extremely good work of battalion Signal crews supervised by this organization's Signal Engineer. Night operations continued difficult and particularly during the periods of enemy V-1 strafing and bombing activity. The language handicap was generally under control through the use of interpreters and the ability of personnel to speak and understand French more readily through experience in daily contact for the past five months. In addition, the back-haul and relocation of Army supplies to safer areas during the enemy counterattack required close figuring in the control of forward movements, supplying of empties, and balancing of power."

A number of bombing and strafing attacks were made during the period at various points along the line of railway communications. The following report from the 710th Railway Grand Division indicates the location of these attacks and the damage done.

"The first enemy action along the lines supervised by the 710th RGD since arrival in France started at approximately 2200 hours 26 December 1944. A chronological report of messages and reports received at the headquarters during the period 26-27 December follows:

"FROM MAJOR SHEA, 724TH ROB, 2330 HOURS 26 DECEMBER 1944

Tergnier	No Damage
Creil	Possible Strafing Light Engines
Matelots	No Damage
Vill. St. George	No Damage
Versailles	No Damage
St. Lazare Station	Direct Hit on Red Cross Coffee Shop
Paris	2 Hospital Trains in Station at time.

"2ND REPORT, MAJOR SHEA, 0015 HOURS, 27 DECEMBER 1944

Tergnier Yard	Strafed, No Damage
Creil	3 light engines strafed but not hit
Argentan	No Damage
Epluches	No Damage

"3RD REPORT, MAJOR SHEA, 0030 HOURS

"Bomb hit track 23 and 24 St. Lazare Station, Paris, and demolished 2 cars of Hospital Train No. 23, damaged 2 others. Train had just been unloaded and all personnel accounted for, as far as known."

"REPORT FROM SGT. S. NDERS, 724TH ROB, 0045 HOURS

"Report Soissons has been bombed and two ammunition trains blown up.

Trying to contact Soissons. Holding ammunition trains at Le Bourget until get definite information."

"REPORT FROM CHIEF DISPATCHER, 712TH ROB, 0045 HOURS

"Advise 12 Kilo. west of Chateau Thierry, Post 78, Westbound Train strafed. French engineer and Fireman wounded. Have sent engines out for train.

"REPORT FROM SGT. SAUNDERS, 724TH ROB, 0225 HOURS

"Report strafing at Cambrai, Alnoye, Wassigny, Ornoy. French engineer wounded at Ornoy. Major Shea reports Soissons on fire but did not know extent of damage. 724th was sending 5 crews by truck from Tergnier, 4 722nd crews with power, 3 716th crews with power; and 3 crews from Batignolles, as soon as possible. Major Shea was leaving immediately for Soissons. Lt. Benson, 724th, Capt. Albaugh and Lt. Miller of 724th also were on way to Soissons.

0115 HOURS

"Lieutenant Herrick, Night Duty Officer, 710th, called Capt. Adair at Cherbourg, who said as far as he could determine all operations east of Paris were normal. Chief Dispatcher at Dreux confirms this.

"REPORT FROM CAPT. DEVUY, 2ND MRS, 0400 HOURS

"Called and said would need Co. "A" men at Soissons equipped as full as possible and as soon as possible. Lt. Emmerick, 724th, was informed and advised would get men under way at once.

"REPORT FROM LT. EMMERICH, 724TH ROB, 0410 HOURS

"Capt. Spiedel, 724th Co. "A" has 25 men on way in trucks. Also has bulldozers and shovels and material all loaded at Compaigne to move with rest of company as soon as work is received by courier from Lt. Miller at the scene.

Additional information on the damage at Gare St. Lazare is quoted from a report of the 764th Railway Shop Battalion at Paris:

"On the night of 26 December, 1944, Gare St. Lazare was bombed by enemy aircraft. One officer and 20 EM received injuries necessitating medical attention. Machinery, tools and special supplies were lost as a result of the bombing and out work shops, tool room and supply room were completely demolished, making it necessary to improvise with what was left. Eight (8) hospital train cars were wrecked, four (4) being repaired at Gare St. Lazare, the remainder being sent to Livallois Shop. Special U.S. Army trains were also damaged requiring two (2) to be sent to the Wagon-Lit Shops for repairs, three (3) being repaired at the station.

"S/Sgt Harold L. Richards, ranking non-commissioned officer on the second shift was caught beneath the wreckage at Gare St. Lazare. He worked himself out of the wreckage and knowing that a Hospital Train was

coming into the station and without regard to his injuries or his personal safety, ran out and had the train stopped before it would have run into a shellhole and the wreckage caused by the bomb."

SECTION III

UNIT HISTORICAL REPORTS

At the beginning of October 1944, under 2nd MRS control on the Continent, there were five Railway Grand Divisions, sixteen Railway Operating Battalions, and four Railway Shop Battalions. The personnel strength of these various units amounted to 530 officers and 11,591 enlisted men. Appendix No. 5, this Chapter, gives the names of these units and the personnel strength of each as of 1 October, 1944. By the end of the year, the number of Railway Operating Battalions under 2nd MRS had increased to eighteen, plus two Railway Operating Battalion detachments; the number of Railway Shop Battalions had remained at four; in addition, there were five Railway Work Shop (Mobile) units and ten Hospital Train Maintenance Platoons. The total personnel strength amounted to 763 officers and 16,763 enlisted men. The names of these units and the personnel strength of each, as of 1 January 1945, are given in Appendix No. 6. Chart No. 5 shows graphically the various moves made by the Railway Grand Divisions and Railway Operating Battalions under 2nd MRS control from 21 August through 31 December 1944, and Chart No. 6 indicates the location of these units at the end of the year and their operating limits. Statistics on the tonnages moved by rail in the European Theater of Operations during six months of operation on the Continent, July through December 1944, will be found in Appendix No. 1. Appendix No. 9 is a true copy of Assignment Order No. 1, Headquarters, 2nd Military Railway Service, dated 1 January 1945, and gives details of the operating limits assigned to the various 2nd MRS units in France, as of that date.

Extracts from reports received from Headquarters, 2nd MRS for the months of October, November and December, 1944 follow:

From their report of 9 December:

"The two months of October and November 1944 represented for this organization, progress in extension of Lines of Communication, consolidation of railway lines and facilities already in operation, and the arrival of additional units for participation in rail transportation. During this period, the headquarters remained in Paris, which was the center of operations on the Lines of Communication from the Cherbourg and Brittany Peninsulas to Belgium and the eastern borders of France

"On 6 October, at a meeting with the British at Caen, an agreement was made whereby the line from Le Molay to Mezidon to Lisieux would be turned over to the 2nd Military Railway Service, which was accomplished on 23 October, thereby shortening the supply lines from west to east. Included in the agreement was the necessity for handling certain tonnage for the British over this line, which has been done in a satisfactory manner.

"About the middle of November, in preparation for the shift of the supply

routes from the Cherbourg Peninsula to the Port of Antwerp (it being anticipated that as soon as the Antwerp Port was placed in operation the unloadings at Cherbourg, and Omaha and Utah Beaches would be considerably curtailed), the Commanding General, 2nd MRS, reached an agreement with the Normandy Base Section for revision of railway operations from the Cherbourg Peninsula, whereby the Cherbourg Terminal would be under the supervision of the Port Commander. Loaded trains were to be delivered to the 2nd MRS at Couville, and two Railway Operating Battalions were attached to the 4th Port for duty, to handle the port terminal operations.

"In line with this trend, all assignments of railway units under the supervision of this headquarters were revised, substantially as follows:

- "(1) The limits of the 707th Railway Grand Division were extended from the Cherbourg Peninsula to and including Dreux; together with supervision of the lines in the Western Region, north of and including the line from Granville to Argentan to Dreux, which was in Phase III operation, and five operating battalions and one shop battalion were assigned to the 707th in support of this program.
- "(2) The 710th Railway Grand Division was assigned the territory from Dreux to Paris and lines northeast to Tergnier, in the Northern Region, and supervision of lines in their territory in Phase III. Two operating battalions and one shop battalion were assigned in support of this program.
- "(3) The 709th Railway Grand Division was moved to Malines, Belgium, to operate the military railways from Ternier into Belgium and lines in Belgium west of the Meuse river, extending into Luxembourg, and supervision of lines in that territory in Phase III. Three operating battalions and one shop battalion were assigned to the 709th.
- "(4) The 708th Railway Grand Division, already located in Belgium, assumed the responsibility for maintaining and operating the railways in Belgium, Holland, and Germany east of the Meuse River, and the extension of lines in support of the 1st and 9th Armies, as well as supervision of any lines that might be placed in Phase III in territory assigned, and for the present only one railway operating battalion was assigned for this operation.
- "(5) The 706th Railway Grand Division assumed responsibility for operation of all lines from Bar-le-Duc, inclusive; and Verdun, inclusive, to railheads in support of the 3rd Army, and supervision of lines from Paris to Bar-le-Duc and Verdun which were placed in Phase III. Three operating battalions were assigned to the 706th.

"In order to accomplish the revision in territories of the Railway Grand Divisions as outlined above, the line from Le Havre to Creil via Beauvais was placed in Phase III, as well as the lines from Paris to Bar-le-Duc via Sezanne and Sommesous, and to Verdun via Epernay and Reims.

"During October, the Administrative Department was moved from offices at 52, Avenue des Champs Elysees to St. Lazare Station, at which the offices of the Commanding General, and Equipment and Transportation Departments were already located and during the last few days of November, the Stores and Engineering Departments were also moved to St. Lazare Station, where for the first time since activation of this organization all departments were housed in the same building.

"Brigadier General Carl R. Gray, Commanding General of the 1st Military Railway Service, and Director General of Military Railways in the Southern Line of Communications, with headquarters located at Lyon arrived in Paris early in October to confer with Generals Ross and Burpee relative to operations of the 1st Military Railway Service and the line of demarcation between the territories served by the 1st and 2nd MRS. General Burpee was formerly associated with General Gray in operations in North Africa and Italy, prior to being returned to the United States in December 1943 to activate the 2nd MRS.

"Effective 7 November 1944, Advance Echelon, 2nd Military Railway Service, was established at Antwerp, Belgium, with the mission of supervising planning and development of the Port of Antwerp for rail operations, coordination with CG, Advance Section, Army Staffs, and the 21 Army Group, affecting common interests of the U.S. and Great Britain, representing the Commanding General in connection with operations in Belgium, and supervision of planning for extension of lines of communication into Germany. The Advance Echelon was placed under the command of Colonel George W. Beeler, who was appointed Assistant to the Commanding General (Assistant General Manager)."

The following is quoted from a report from Headquarters, 2nd MRS, dated 3 January 1945:

"The month of December represented for the 2nd MRS a period of continued change, reaching a peak in tonnage handled, followed by a sharp downward trend brought about by the tactical situation, bombing and strafing of installations and trains on the move, losses in equipment and personnel due to the offensive of the enemy in Belgium, and increased activities in attacks by V-1 and V-2 flying bombs.

"A peak in tonnage was reached on 15 December, when 50,784 tons were handled on that day, and correspondingly, a low for the month was reached on 20 December, when loadings were reduced pending improvement of the position of the Armies, and only approximately 30,000 tons were handled.

"Considerable damage was done to installations and equipment during the month when enemy activity increased with the offensive. At Liege a V-2 demolished three cars of one of the hospital trains, made it necessary to shop five others, and shattered the glass windows in all cars of another train. At Soissons, enemy bombs set fire to an ammunition dump where considerable railway equipment was under load, part of which was pulled out by railway personnel and some cars were pulled from the tracks to nearby fields by combat units in the area. The main line was out of operation for a considerable distance due to bombs and exploding ammunition plowing up the tracks. German planes dropped two bombs on Gare St. Lazare, Paris, on 26 December, at approximately 2245

hours. All tracks were back in operation on 28 December.

"It had been anticipated that all lines west of Paris would be placed in Phase III as early as 1 December; however, due to delay in opening the Port of Antwerp, this was postponed and plans were formulated to bring this about by 1 January 1945, which has been still further delayed due to recent offensive launched by the enemy in Belgium. The transfer of the lines west of Paris to Phase III will now be accomplished as soon as the tactical situation will permit. In preparation for the shift of supply lines, the following units have been moved from areas west of Paris to the forward areas during December:

707th Railway Grand Division	Cherbourg to Antwerp
716th Railway Operating Battalion	Versailles to Aulnoye
729th Railway Operating Battalion	Cherbourg to Antwerp
732nd Railway Operating Battalion	Cherbourg to Conflans
735th Railway Operating Battalion	Coutances to Landen
744th Railway Operating Battalion	Argentan to Charleroi

"It is planned to utilize the experience gained by the 707th Railway Grand Division, which has supervised the Cherbourg Terminal since the beginning of operations on the Continent, by placing the operation of Antwerp Terminal under its jurisdiction.

"Major General Charles P. Gross, Chief of Transportation, War Department, Washington D.C., arrived in the Theater during the month and in company with General Burpee made an inspection trip of the territory under the supervision of the Second Military Railway Service, traveling by train from Paris to Cherbourg, thence to Brussels, by motor to Liege and Antwerp, by rail to Le Havre, thence to Paris by motor.

"The 2nd MRS celebrated the first anniversary of its activation on 28 December, which was incorporated into the Christmas Party sponsored by the unit on Christmas Day, when thirty French orphans were invited for Christmas dinner, and were presented with gifts from the Christmas tree, comprised of candies contributed by the officers and enlisted men from their rations, together with toys purchased with voluntary contributions from the members of this command.

"Advance Echelon, Second Military Railway Service, was moved from Antwerp to Brussels on 4 December."

Space limitation make it impractical to give an account of the activities of each of the various units under 2nd MRS control, of which there were a total of thirty six, including the headquarters of each of the Railway Grand Divisions, as indicated above. In the following paragraphs, however, are a few brief facts about each of the Railway Grand Divisions. Full reports from each of the 2nd MRS units in the MTO covering this period are available in the files of the Historical & Technical Information Branch, OCOT.

706th Railway Grand Division

Location as of 31 December 1944: Nancy, France.

Assigned Units: 712th, 718th, 732nd, and 733rd Railway Operations Battalions.

Commanding Officer: Lt. Colonel LOUIS G. JAMISON

The 706th Railway Grand Division, previously assigned to the Le Mans territory, with the 712th, 722nd, and 723rd Railway Operating Battalions under its jurisdiction, moved to Toul on 22 September and to Nancy on 15 November 1944. The personnel strength of the 706th Railway Grand Division Headquarters was 25 officers and 59 enlisted men; Appendixes Nos. 5 and 6 show the personnel strength of each of the units assigned to the 706th R G D as of 1 October 1944 and as of 1 January 1945.

The supervision of railway operations and expediting the movement of supplies to various railheads, the determination of the most suitable location for railheads from an operational viewpoint, the establishing of needed communications to maintain efficient operations, these were outstanding among the duties of the 706th Railway Grand Division. Stationmasters were assigned to the riding of trains for the purpose of noting and recommending means of improving the service. Work on communications was accomplished by coordinating with other units in the region. Problems encountered were in connection with supplying water and coal as well as with the limited availability of power. The shops at Nancy were used in part to repair tank cars. Rehabilitation of yards and facilities was conducted by the Railway Operating Battalions. In some instances, operations were carried out under enemy fire but without appreciable loss in time and loss of life. French power was used to make all moves in the district and close cooperation with SNCF in all locations was required.

"Lt. Colonel LOUIS G. JAMISON, and Major JACK W. BUFORD participated in the presentation of a Diesel Car to Lt. General PATTON on 24 October 1944. The conversion to a headquarters car was done by enlisted men of Company B of the 733rd Railway Operating Battalion."

707th Railway Grand Division

Location as of 31 December 1944: Cherbourg, France.
Assigned Units: 720th, 728th, 729th, 735th Railway Operating Battalions
and the 757th Railway Shop Battalion.

Commanding Officer: Lt. Colonel GARRETT C. WHITE.

The 707th Railway Grand Division was the first of the RGD's to arrive on the Continent, 25 July 1944. It was assigned railway operations on the Cherbourg Peninsula and the operation of the Cherbourg terminal rail facilities. One shop and four operating battalions were assigned and under their jurisdiction on 1 October 1944. They were the 720th, 728th, 729th, and the 735th Railway Operating Battalions, and the 757th Railway Shop Battalion. The personnel strength of the Headquarters, 707th Railway Grand Division was 33 officers and 59 enlisted men. Appendixes Nos. 5 and 6 show the personnel strength of each of the units assigned to the 707th RGD as of 1 October 1944 and as of 1 January 1945.

708th Railway Grand Division

Location as of 31 December 1944: Liege, Belgium.
Assigned Units: 734th, 740th Railway Operating and 755th Railway Shop
Battalions.

Commanding Officer: Colonel WILLIAM S. CARR.

The 708th Railway Grand Division, originally at Pontabault with no battalions assigned, moved to Rennes on 31 August and to Laon on 11 September

where it remained a month and where the 740th Railway Operating Battalion was assigned. The 708th RGD and the 740th ROB moved to Liege on 11 October 1944. On 31 December 1944 the 708th RGD had the 722nd, 740th, and the 741st Railway Operating Battalions assigned. The personnel strength of the 708th Railway Grand Division Hq. was 25 officers and 56 enlisted men. Appendixes Nos. 5 and 6 show the personnel strength of each of the units under 708th RGD as of 1 October 1944 and as of 1 January 1945.

709th Railway Grand Division

Location as of December 31, 1944: Malines, Belgium.

Assigned Units: 716th, 722nd, 735th Railway Operating and 763rd Railway Shop Battalions.

Commanding Officer: Lt. Colonel MERLE M. SHAPPELL

The 709th Railway Grand Division arrived at Compiègne 11 October 1944 from England and had the 724th Railway Operating Battalion under its jurisdiction. On 15 November it moved, minus this unit, to Malines in Belgium and on 7 December to Brussels where it was charged with operating the lines in that area, and southwest towards Paris. The personnel strength of the 709th Railway Grand Division Headquarters was 28 officers and 58 enlisted men. Appendixes Nos. 5 and 6 show the personnel strength of each of the units assigned to the 709th RGD as of October 1944 and as of 1 January 1945.

710th Railway Grand Division

Location as of 31 December 1944: Paris, France.

Assigned Units: 720th, 723rd, 724th, 728th Railway Operating and the 764th and 757th Railway Shop Battalions.

Commanding Officer: Lt. Colonel OTTO D. GRILL

The 710th Railway Grand Division, previously assigned the Chartres, Paris, Le Mans territory, moved to Paris on 19 September 1944. The personnel strength of the 710th RGD Headquarters was 30 officers and 58 enlisted men. Appendixes Nos 5 and 6 show the personnel strength of each of the units assigned to the 710th RGD as of 1 October 1944 and as of 1 January 1945.

A C K N O W L E D G E M E N T S

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Major GEORGE D. SAUNDERS	Data on Fuel and Stores
Major EDWIN J. SCHAEFER	Data on Signals and Communications
Captain NEIL T. DeLONG	Historical Material
Captain EDMUND J. PHILLIPS	Historical Material
1st Lt. RAYMOND GREEN	Statistics
2nd Lt. FREEMAN P. DREW	Maps and Charts
S/Sgt Chester L. Minter, Jr.	Consolidation of Hq. Historical Reports
T/3 Roscoe G. Burt, Jr.	Data on Reconnaissance
T/4 Robert R. Craft	Photographs

SECOND MILITARY RAILWAY SERVICE STATISTICAL REPORT

July - December 1944 Incl.

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1. ARRIVING PARIS FROM:

A. NORMANDY:
(1) FREIGHT

	NO TRAINS	LOADS	NET TONS	NET TON MILES	FRT TRN MILES	AVG TONS PER TRAIN	AVG TONS PER LOAD	AVG TONS PER DAY	AVG FRT TRN MILES	AVG NET TON MILES PER DAY	AVG TRNS PER DAY
SEP	585	17,427	216,115			369.4	12.4	7,203			
OCT	613	22,493	305,524			498.4	13.5	9,855			
NOV	564	26,887	383,561			681.1	14.2	12,785			
DEC	412	21,607	285,782			693.6	13.2	9,219			
TOTAL -	2,174	88,414	1,190,982								

(2) HOSPITAL

SEP	19	313	7,600								
OCT	22	361	5,885								
NOV	16	238	8,091								
DEC	32	528	10,620								
TOTAL -	89	1,440	32,196								

(3) TROOP/POW

SEP	30	1,124	12,020								
OCT	27	1,087	11,430								
NOV	10	575	5,556								
DEC	27	1,189	11,150								
TOTAL -	94	3,975	40,156								

B. BRITTANY:
(1) FREIGHT

SEP	3	141	1,807			602.3	12.8	602			
OCT	185	6,005	80,433			434.7	13.4	2,594			
NOV	165	4,890	68,513			415.2	14.0	2,283			
DEC	161	3,943	48,844			303.3	12.4	1,575			
TOTAL -	514	14,979	199,597								

(2) HOSPITAL

SEP	-	-	-								
OCT	-	-	-								
NOV	4	70	1,380								
DEC	1	17	400								
TOTAL -	5	87	1,780								

(3) TROOP/POW

	NO TRAINS	LOADS	NET TONS
SEP	4	160	1,600
OCT	32 (1 POW)	975	10,984
NOV	30	1,254	13,195
DEC	20 (6 POW)	860	8,300
TOTAL -	86	3,249	34,079

2. CHERBOURG:

A. FORWARD:

(1) FREIGHT

	NO TRAINS	LOADS	NET TONS	NET TON MILES	FRT TRN MILES	AVG TONS PER TRAIN	AVG TONS PER LOAD	AVG TONS PER DAY	AVG FRT TRN MILES	AVG NET TON MILES PER DAY	AVG TRNS PER DAY
JUL	138	1,299	15,780	297,930	5,080	114.5	25.4	75.1	241	14,187	6.6 (21 DYS)
AUG	459	9,000	80,256	3,049,101	20,698	174.8	11.5	2,588	667	98,358	14.8 (31 DYS)
SEP	610	14,460	176,954	50,254,936	271,344	290.0	12.2	5,898	9,044	1,675,165	20.3 (30 DYS)
				(7,065,277)							
OCT	1,600	51,753	611,106	173,419,032	454,600	382.0	11.8	19,454	14,664	5,594,162	51.6
				(29,798,478)							
NOV	1,651	69,497	865,826	245,894,584	466,884	523.4	10.8	28,860	15,562	8,196,486	52.0
				(34,507,297)							
DEC	1,334	55,132	662,206	188,066,504	378,856	496.4	12.0	21,361	12,221	6,066,661	43.0 (31 DYS)
				(29,176,264)							
TOTAL -	5,792	201,141	2,412,128	660,982,087	1,597,462						
				(100,544,316)*							

(2) HOSPITAL

JUL	-	-	-
AUG	12	-	4,800
SEP	38	-	15,200
OCT	95	-	38,000
NOV	131	-	52,400
DEC	93	-	37,200
TOTAL -	369	-	147,600

(3) TROOP

JUL	50	-	20,000
AUG	83	-	33,200
SEP	97	-	38,800
OCT	132	-	52,800
NOV	105	-	42,000
DEC	85	-	34,000
TOTAL -	552	-	220,800

* FIGURES IN PARENTHESIS AS REPORTED BY 707TH RGD. FOR SEPT, OCT, NOV & DEC BASED ON 284 MILES TO CHERBOURG FROM PARIS.

STATISTICS - JULY TO DECEMBER 1944 INCL

(4) PRIORITY (FRT)

	<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRAIN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
SEP	323	8,565	115,486	32,798,024	-	357.5	13.4	7,699	-	2,186,535	21.5 (15.0)
OCT	852	22,602	315,388	89,582,292	241,968	370.1	13.9	10,173	7,805	2,889,451	27.4
NOV	983	27,927	381,852	109,297,963	279,172	391.5	13.9	12,161	9,305	3,643,265	32.7
DEC	<u>716</u>	<u>21,204</u>	<u>279,834</u>	<u>79,472,856</u>	<u>203,344</u>	<u>390.8</u>	<u>13.1</u>	<u>9,026</u>	<u>6,559</u>	<u>2,552,640</u>	<u>23.0</u>
TOTAL -	2,874	80,298	1,095,560	311,151,135	724,484						

B. EVACUATED:
(1) FREIGHT

JUL	123	1,556	17,147	448,966	-	139.4	-	816	-	21,379	5.9
AUG	300	9,115	23,468	549,452	-	78.0	-	757	-	17,724	9.7 (31.0)
SEP	371	14,869	21,107	5,994,388 (616,424)	-						
OCT	1,502	74,663	53,900	15,336,940 (1,652,687)							
NOV	1,637	55,430	74,133	21,053,772 (2,363,302)							
DEC	1,375	96,506	19,524	5,544,816 (795,785)							
TOTAL -	5,308	252,139	209,279	48,928,334 (5,428,198)*							

3. BRITTANY:
A. FORWARD
(1) FREIGHT

SEP	(NO AVAILABLE REPORTS)										
OCT	185	6,005	80,433	804,330	1,840	437.1	13.3	2,594	59	25,946	5.9
NOV	165	4,890	68,513	685,130	1,650	415.2	14.0	2,283	56	22,837	5.5
DEC	<u>86</u>	<u>2,375</u>	<u>34,423</u>	<u>8,089,405</u>	<u>20,210</u>	<u>400.2</u>	<u>14.4</u>	<u>1,721</u>	<u>1,010</u>	<u>404,470</u>	<u>4.3 (20.0)</u>
TOTAL -	436	13,270	183,369	9,578,865	23,700						

* FIGURES IN PARENTHESIS REPRESENT FIGURES AS REPORTED BY 707TH RGD. TOTALS FOR JULY & AUGUST BASED ON 707TH'S FIGURES ONLY. SEPT, OCT, NOV, & DEC FIGURED ON THE BASIS OF 284 MILES FROM CHERBOURG TO PARIS.

	<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>NET TRN MILES</u>	<u>AVG TONS PER TRAIN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG NET TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
4. DEPARTING PARIS TO											
A. NORTH											
SEP	158	4,951	63,951	10,687,684	26,729	404.7	12.9	2,132	391	356,256	5.2 (30 D)
OCT	555	18,035	245,174	51,990,153	127,332	44.7	13.5	7,908	4,107	1,773,875	18.5
NOV	589	20,340	289,622	69,307,981	140,283	491.7	14.2	9,654	4,342	2,310,266	19.9
DEC	429	15,351	209,903	44,704,347	94,394	489.0	13.6	6,771	3,045	1,442,075	13.8 (31 D)
TOTAL -	1,731	58,677	817,650	179,690,168	388,738						
B. EAST											
SEP	192	6,011	77,043	10,247,672	24,148	401.2	12.8	2,568	804	341,555	6.4 (30 D)
OCT	477	14,923	201,142	32,073,818	69,557	453.0	13.4	6,488	2,243	1,031,639	14.8
NOV	495	16,354	234,479	42,065,613	87,017	473.7	14.3	7,815	2,900	1,402,188	16.6
DEC	380	11,621	160,209	28,114,084	66,728	421.6	13.7	5,168	2,152	906,906	12.3 (31 D)
TOTAL -	1,511	48,909	672,873	112,501,217	247,450						
C. N & E - TOTAL											
SEP	350	10,962	140,994	20,935,356	50,877	402.9	12.8	4,699	1,695	697,811	11.6 (30 D)
OCT	999	32,958	446,316	87,063,971	194,222	446.7	13.6	14,395	6,265	2,793,853	33.3
NOV	1,084	36,694	524,091	111,373,647	227,300	483.4	14.3	17,469	7,576	3,703,121	36.1
DEC	809	26,972	370,112	72,818,431	161,122	457.4	13.7	11,939	5,197	2,348,982	26.0 (31 D)
TOTAL -	3,242	107,586	1,481,513	292,191,405	633,521						
5. DEPARTING PARIS TO											
A. NORTH											
(1) HOSPITAL											
SEP	8	134	3,200								
OCT	53	845	12,000								
NOV	82	1,288	30,620								
DEC	99	1,550	36,680								
TOTAL -	242	3,817	82,500								
(2) TROOP											
SEP	13	462	5,200								
OCT	44	1,432	16,724								
NOV	29	1,273	12,895								
DEC	20	772	7,970								
TOTAL -	106	3,939	42,789								

B. EAST:
(1) HOSPITAL

	<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRAIN</u>	<u>AVG TONS PER LOAD</u>	<u>NET TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
SEP	16	244	6,400								
OCT	9	159	1,920								
NOV	7	113	2,800								
DEC	26	402	17,360								
TOTAL	68	918	28,480								

(2) TROOP

SEP	21	712	8,400								
OCT	16	603	7,240								
NOV	19	788	7,780								
DEC	20	907	8,572								
TOTAL	76	3,010	31,962								

C. NORMANDY:
(1) HOSPITAL

SEP	2	32	800								
OCT	30	490	12,000								
NOV	62	1,014	24,800								
DEC	69	1,111	27,600								
TOTAL	163	2,647	65,200								

(2) TROOP

SEP	2	69	860								
OCT	1	54	540								
NOV	4	168	1,600								
DEC	4	74	1,600								
TOTAL	11	365	4,600								

(3) POW

SEP	-	-	-								
OCT	4	194	1,600								
NOV	3	140	1,200								
DEC	4	158	1,600								
TOTAL	11	492	4,400								

	<u>NO TRAINS</u>	<u>LOA DS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LG D</u>	<u>AVG TONS PER DAY</u>	<u>A G FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
(4) FRT (EMPTIES)											
SEP	381	13,992	42,828								
OCT	476	24,354									
NOV	423	21,249									
DEC	<u>272</u>	<u>14,575</u>									
TOTAL -	1,552	74,170	42,828*								
D. BRITTANY:											
(1) FRT (EMPTIES)											
OCT	62	2,884									
NOV	57	2,472									
DEC	<u>75</u>	<u>3,271</u>									
TOTAL -	194	8,627									
(2) HOSPITAL											
NOV	6	94	2,400								
DEC	<u>3</u>	<u>48</u>	<u>1,600</u>								
TOTAL -	9	142	4,000								
(3) TROOP											
NOV	3	130	1,200								
DEC	<u>4</u>	<u>168</u>	<u>1,600</u>								
TOTAL -	7	298	2,800								
(4) POW											
DEC	<u>1</u>	<u>57</u>	<u>400</u>								
TOTAL -	1	57	400								
6. DISTRIBUTION TO:											
A. 1ST ARMY											
SEP		4,879	61,485				12.6	2,049			
OCT		15,340	212,572				13.8	6,857			
NOV		15,780	229,680				14.5	7,856			
DEC		<u>9,852</u>	<u>145,245</u>				<u>14.7</u>	<u>4,040</u>			
TOTAL -		45,851	648,982								

* NET TONS REPORTED FOR SEPTEMBER ONLY

	<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
B. 3RD ARMY											
SEP		3,998	49,772				12.4	1,659			
OCT		10,702	149,322				13.9	4,816			
NOV		13,550	199,626				14.7	6,654			
DEC		<u>7,544</u>	<u>114,075</u>				<u>15.1</u>	<u>3,679</u>			
TOTAL -		35,794	512,795								
C. 1ST & 3RD - TOTAL											
SEP		8,877	111,257				12.5	3,708			
OCT		26,042	361,894				13.8	11,674			
NOV		29,230	429,306				14.6	14,310			
DEC		<u>17,396</u>	<u>259,320</u>				<u>14.9</u>	<u>8,365</u>			
TOTAL -		81,545	1,161,777								
7. LOADED AT PARIS:											
A. PIPE - 1ST ARMY											
OCT		183	2,074				11.3	691			
NOV		548	9,011				16.4	901			
DEC		<u>1,540</u>	<u>24,300</u>				<u>15.7</u>	<u>1,215</u>			
TOTAL -		2,271	35,385								
B. PIPE - 3RD ARMY											
OCT		3,800	52,241				13.7	1,685			
NOV		2,122	32,332				15.2	1,197			
DEC		<u>2,000</u>	<u>35,690</u>				<u>17.8</u>	<u>1,215</u>			
TOTAL -		7,922	120,263								
C. TRUCK - 1ST ARMY											
OCT		4,234	55,389				13.0	1,787			
NOV		1,425	16,892				11.9	849			
DEC		<u>5</u>	<u>42</u>				<u>8.4</u>	<u>42</u>			
TOTAL -		5,664	72,323								
D. TRUCK - 3RD ARMY											
OCT		704	8,567				11.2	659			
NOV		782	9,459				12.0	497			
DEC		<u>16</u>	<u>86</u>				<u>5.3</u>	<u>86</u>			
TOTAL -		1,502	18,112								

	<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>	
E. TRUCK & PIPE -- 1ST ARMY												
		4,417	57,463				13.0	1,714				
	OCT											
	NOV	1,973	25,993				13.1	1,083				
	DEC	<u>1,545</u>	<u>24,342</u>				<u>15.6</u>	<u>1,159</u>				
	TOTAL --	7,935	107,798									
F. TRUCK & PIPE -- 3RD ARMY												
	OCT	4,504	60,808				13.4	1,964				
	NOV	2,904	41,691				14.3	1,389				
	DEC	<u>2,016</u>	<u>35,776</u>				<u>17.7</u>	<u>1,154</u>				
	TOTAL --	9,424	138,275									
G. TRUCK & PIPE -- 1ST & 3RD												
	OCT	8,921	118,271				13.0	3,675				
	NOV	4,886	67,684				13.8	2,256				
	DEC	<u>3,561</u>	<u>60,118</u>				<u>16.9</u>	<u>1,939</u>				
	TOTAL --	17,368	246,073									
8. MOVED TO PARIS AREA:												
A. FREIGHT												
	OCT	218	5,055	74,008		339.3	14.6	2,387				
9. SWITCH MOVES -- PARIS												
A. FREIGHT												
	OCT	147	3,387	50,528		343.7	14.9	1,629				
	NOV	78	1,622	20,206		259.0	12.4	721				
	DEC	<u>178</u>	<u>4,467</u>	<u>50,949</u>		<u>286.2</u>	<u>11.3</u>	<u>1,698</u>				
	TOTAL --	403	9,476	121,683								
10. 7:0TH RY GRAND DIV:												
A. FORWARD												
(1) FREIGHT												
	OCT	876	25,947	343,274	34,844,081	193,753	396.0	13.2	11,073	6,250	1,124,003	28.2
	NOV	1,300	42,914	596,085	51,661,989	180,000	458.5	13.9	19,869	4,333	1,722,066	43.4
	DEC	<u>1,061</u>	<u>43,921</u>	<u>580,688</u>	<u>46,630,789</u>	<u>106,100</u>	<u>547.3</u>	<u>13.2</u>	<u>18,732</u>	<u>3,422</u>	<u>1,504,219</u>	<u>34.2</u>
	TOTAL --	3,237	112,782	1,520,047	133,146,859	479,853						

		<u>NO TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
(2) HOSPITAL												
	OCT	75		30,000								
	NOV	124		49,600								
	DEC	<u>175</u>		<u>70,000</u>								
	TOTAL -	374		149,600								
(3) TROOP												
	OCT	50		20,000								
	NOV	106		42,400								
	DEC	<u>138</u>		<u>55,200</u>								
	TOTAL -	294		117,600								
(4) OTHERS												
	OCT	199		-								
B. EVACUATED												
(1) FREIGHT												
	OCT	636		16,156	1,171,027							
	NOV	701	25,529	22,696	3,077,831							
	DEC	<u>727</u>	<u>28,725</u>	<u>76,363</u>	<u>3,471,817</u>							
	TOTAL -	2,064	54,254	115,215	7,720,675							
(2) HOSPITAL												
	OCT	44		17,600								
	NOV	146		58,400								
	DEC	<u>188</u>		<u>75,200</u>								
	TOTAL -	378		151,200								
(3) TROOP												
	OCT	6		2,400								
	NOV	50		20,000								
	DEC	<u>62</u>		<u>24,800</u>								
	TOTAL -	118		47,200								
II. FORWARDED EAST FR LOADING TERMINALS:												
A. ANTWERP												
	DEC	<u>268</u>	<u>11,874</u>	<u>150,824</u>	<u>15,082,400</u>	<u>26,800</u>	<u>562.7</u>	<u>12.7</u>	<u>5,586</u>	<u>992</u>	<u>558,607</u>	<u>9.9</u> (27 DV
	TOTAL -	268	11,874	150,824	15,082,400	26,800	562.7	12.7	5,586	992	558,607	9.9

NOTE: STATISTICS OMITTED FOR LINK TERMINALS

ATHUS, AUDUN, AUDUN LE ROYER, BAILEYCOURT, BANNINCOURT, BARISY, BARISEY LA COTE, BAR LE DUC, BARRABECOURT, BATTENBURG, BELLEVILLE, BENOISTROFF, BLESME, BOISSY, BOULEVARD, BOULEVARD LE BAU, BRILY, CHALLIGNY, CHALLIGNY NEUVES MAISONS, CHAMBREY, CHAUMIGNEUILLES, CHARNY, CHATEAU SAULNOIS, CHATELAINCOURT, COMMERCY, COFFIEN, COMPIEGNE, COMPIEGNE JARNY, COUBLERT, CROUY, FARNETAL, DIFFERDANGE, DOINGERMAIN, DUGNY, SIX MAUCOURT, EPIHEY, ELAIN, EPIHEY, ESSLY, FLORENCE, FROULART, FORTOY, GRANT, HEBONDANGE, HAIPONT, HARLES, HERSBETHAL, HERVE, INSING, JARVILLE, JEANDELISE, KERKRADE, LANDRES, LANNING, LONGRY, LUTTERADE, LUTTEL, MARSTICHT, MANCIELLES, MARGIVAL, RICHEROUX, RONCOINILLES, MONCEL, MONTEY, MOURMANGE, MANCY, MANCY ST GEORGES, NEUFCHATEL, PAGNY MOSELLE, PAGNY SUR MEUSE, PEPINSTAR, POMPIY, RABECOURT, REARDON, REMILLEY, REVIGNY, SITTARD, ST DIEZEL, ST JEANNE, SEZANNE, SORCY, SPACHOLTZERHIDE, THIONVILLE, VALKENBURG, VERVIERS, VISE, VOUCALIERES.

NOTE: MAJOR TERMINALS WITH STATISTICS

	<u>NO. TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
BRUNOUILLES											
OCT	5	166	1,316	324,204	1,220	263.2	7.9	329	305	81,050	1.2 (4 dys)
NOV	56	2,285	23,057	6,913,237	13,798	501.0	12.3	1,079	530	265,893	2.0 (27 dys)
DEC	38	1,320	12,490	3,072,540	9,348	328.6	9.4	624	467	153,627	1.9 (20 ")
TOTAL	99	3,771	41,863	10,309,981	24,366						
BRESSAUX											
DEC	50	1,833	23,075	876,850	1,900	461.5	12.5	961	79	36,952	2.0 (24 dys)
TOTAL	50	1,833	23,075	876,850	1,900						
COMPIEGNE											
NOV	39	1,029	15,502	390,050	1,000	397.4	15.0	1,102	76	80,004	3.0 (13 dys)
DEC	54	1,568	23,115	577,875	1,350	428.0	14.7	1,156	67	28,893	2.7 (20 dys)
TOTAL	93	2,597	38,617	967,925	2,350						
CONSERVOYE											
DEC	25	790	10,120	455,400	1,125	404.8	12.9	562	62	23,300	1.4 (18 dys)
TOTAL	25	790	10,120	455,400	1,125						
LE HAVRE											
OCT	42	1,578	22,773	3,165,238	6,594	542.2	14.4	1,751	507	243,479	3.8 (11 dys)
NOV	167	1,288	95,219	14,958,903	26,335	570.1	15.2	3,173	877	498,630	5.5 (30 dys)
DEC	222	7,905	112,978	17,737,546	34,854	508.9	14.2	3,644	1,124	572,179	7.2 (31 dys)
TOTAL	431	10,771	230,870	35,861,687	67,783						
MEROUVILLE											
NOV	231	7,177	103,376	4,445,268	9,503	447.4	14.4	3,691	339	158,759	8.2 (28 dys)
TOTAL	231	7,177	103,376	4,445,268	9,503						

	NO. TRAINS	LOADS	NET TONS	NET TON MILES	FRT TRN MILES	AVG TONS PER TRN	AVG TONS PER LOAD	AVG TONS PER DAY	AVG FRT TRN MILES	AVG NET TON MILES PER DAY	AVG TRNS PER DAY
OSTEND											
OCT	19	381	9,443	1,638,721	3,524	497.0	24.7	944	352	168,872	1.9 (10 dy)
NOV	57	1,184	27,445	5,078,651	10,554	481.4	23.1	1,306	502	241,840	2.7 (21 dy)
DEC	2	35	901	166,685	370	450.5	25.7	901	370	166,685	2.0 (1 dy)
TOTAL	78	1,600	37,789	6,884,087	14,448						
HEMVED											
OCT	81	2,506	42,087	9,866,945	19,045	525.7	16.8	7,014	3,174	1,644,490	13.5 (6 dy)
NOV	131	3,687	50,201	12,030,235	30,785	383.1	13.6	1,859	1,140	445,564	4.8 (27 dy)
TOTAL	212	6,193	92,288	21,897,180	49,830						
KOUEN											
NOV	16	431	4,951	595,022	1,952	309.4	11.4	707	278	85,003	2.2 (7 dy)
DEC	111	2,996	30,615	3,735,030	13,542	275.8	10.2	1,020	451	124,501	3.7 (30 dy)
TOTAL	127	3,397	35,565	4,330,052	15,494						
SOUSSONS											
OCT	20	564	7,462	1,080,269	2,889	373.1	13.2	746	288	108,026	2.0 (10 dy)
NOV	89	2,646	37,618	5,453,510	12,905	422.5	14.2	1,253	430	181,784	2.9 (30 dy)
DEC	113	3,262	45,361	6,577,345	16,385	401.4	13.9	1,680	606	245,605	4.2 (27 dy)
TOTAL	222	6,472	88,991	13,111,124	32,179						
SOMMESOUS											
OCT	49	1,716	25,418	3,294,373	6,483	518.7	14.8	2,310	589	299,488	4.4 (11 dy)
NOV	14	456	6,475	862,505	1,872	462.5	14.2	809	232	107,813	1.7 (8 dy)
DEC	2	83	1,146	152,418	266	573.0	13.8	1,146	266	152,418	2.0 (1 dy)
TOTAL	65	2,255	33,039	4,309,296	8,621						
TOUT											
OCT	14	262	2,926	166,225	593	280.4	14.9	981	148	41,556	3.4 (4 dy)
NOV	78	2,090	29,347	1,265,834	3,354	376.2	14.0	1,048	119	45,208	2.7 (28 dy)
DEC	13	318	4,253	182,879	559	327.1	13.3	354	46	15,239	1.0 (12 dy)
TOTAL	105	2,670	37,526	1,614,938	4,506						
VERJUN											
OCT	30	893	11,149	332,560	889	371.6	12.4	1,398	111	42,820	3.7 (8 dy)
NOV	79	2,581	35,812	1,063,197	2,350	453.3	13.7	1,557	102	46,225	3.4 (23 dy)
DEC	174	4,529	60,372	1,811,160	5,220	306.9	13.3	1,947	168	58,650	5.6 (31 dy)
TOTAL	283	8,003	107,333	3,206,917	8,459						

	<u>NO. TRAINS</u>	<u>LOADS</u>	<u>NET TONS</u>	<u>NET TON MILES</u>	<u>FRT TRN MILES</u>	<u>AVG TONS PER TRN</u>	<u>AVG TONS PER LOAD</u>	<u>AVG TONS PER DAY</u>	<u>AVG FRT TRN MILES</u>	<u>AVG NET TON MILES PER DAY</u>	<u>AVG TRNS PER DAY</u>
12.											
TOTALS. FORWARD --											
FROM ALL											
TERMINALS --											
OCT	324	10,417	145,028	21,776,253	46,053						
NOV	1,210	36,665	528,949	60,841,500	126,577						
DEC	1,451	46,524	610,147	59,507,437	136,863						
TOTAL	2,985	93,606	1,284,124	142,125,190	309,493						

13. GRAND TOTALS --

* JUL	138	1,299	15,780	297,930	5,080	114.5	25.4	751	241	14,187	6.6 (21 dy)
** AUG	459	9,000	80,256	3,049,101	20,698	174.8	11.5	2,588	667	98,358	14.8 (31 dy)
*** SEP	988	26,712	339,739	77,378,936	23,501	344.5	12.7	11,325	7,716	2,579,298	32.8 (30 dy)
**** OCT	2,338	71,193	977,683	198,237,121	488,373	418.0	13.7	31,538	15,721	6,394,745	75.1 (31 dy)
***** NOV	3,442	104,944	1,524,748	281,359,240	634,699	445.0	14.5	50,824	21,156	9,378,641	114.7 (30 dy)
***** DEC	3,138	98,643	1,308,937	212,621,269	502,949	418.0	13.2	42,223	16,224	6,858,750	101.2 (31 dy)
TOTALS -	10,501	311,721	4,247,143	772,943,597	1,883,300						

* FIGURES BASED ON REPORT OF 707TH RAILWAY GRAND DIVISION OF DAILY TRAINS HANDLED.

** FIGURES BASED ON REPORT OF 707TH RAILWAY GRAND DIVISION OF DAILY TRAINS HANDLED.

*** INCLUDES 707TH'S FIGURES FOR SEPT 1 - 15, INCL; PLUS CHERBOURG PRIORITY FOR SEPT 16 - 30, INCL; PLUS FORWARDED N & E FROM PARIS. TON

**** INCLUDES CHERBOURG PRIORITY, ARRIVING PARIS FROM BRITTANY, FORWARD N & E FROM PARIS, AND LOADING TERMINALS (MILES FIGURED ON 284 MILES

***** INCLUDES CHERBOURG PRIORITY, ARRIVING PARIS FROM BRITTANY, FORWARD N & E FROM PARIS, AND LOADING TERMINALS (FR CHERBOURG TO PARIS)

14. FREIGHT OPERATIONS TO DESTINATIONS NORTH OF PARIS:
 (NOTE) STATISTICS OMITTED FOR MINOR TERMINALS

ANTWERP, BEAUVAIS, BRUSSELS, CHANTILLY, CHARLEROI, CHAUNCY, COMPIEGNE, COURCELLES, CREPY COUVRON, LUPEN, EPINAL, HERSTAL, HEERLEN, JOIDOIGNE, LONDIN, LAON, LIERS, LIBRAMONT, LONGUEVILLE, LUXEMBURG, MONS, MERU, MARGIVAL, MAASTRICHT, MARSCH, MONTDIDIER, NEMUR, NOUVION, RENICOURT, ROUEN, ST QUENTIN, SPA, STEINFORT, TONGRES, VAN CLEURS, VERVIERS, VISE, WASSIGNY WELIKENRAEDT.

(NOTE) MAJOR TERMINALS WITH STATISTICS

<u>DESTINATION</u>		<u>TRAINS</u>	<u>LOADS</u>	<u>TONS</u>
HUY	SEP	47	1,443	18,469
	OCT	122	4,031	54,023
	NOV	7	208	2,749
	DEC	3	136	1,786
	TOTAL	179	5,818	77,027
LIEGE	SEP	31	1,015	7,450
	OCT	203	5,736	87,341
	NOV	268	9,479	46,444
	DEC	198	3,688	49,479
	TOTAL	700	19,918	190,714
SOISSONS	SEP	53	1,677	22,117
	OCT	125	4,100	57,576
	NOV	156	5,380	76,890
	DEC	102	3,967	56,438
	TOTAL	436	15,124	213,021
TOTAL TO NORTH	SEP	183	5,580	63,443
	OCT	544	16,693	239,786
	NOV	610	20,438	201,417
	DEC	526	15,173	212,572
	GRAND TOTAL	1,863	57,884	717,218

15. FREIGHT OPERATIONS TO DESTINATIONS EAST FROM PARIS:
 (NOTE) STATISTICS OMITTED FOR MINOR TERMINALS.

ATTICHY, ARPAJON, BANNONCOURT, BARRANCOURT, BARISEY LA COTE, BAR LE DUC, BLESME, ESANCON, CHALONS, CONFLANS, COMBERCY, COUCY LE CHAPPEL, COULOMMIERS, DEMAIN, IEULOURD, DIJON, ETAMPES, EPERNAY, EPPY LE MAZZEROIS, ETAIN, GERDREVILLE, AYONGE, HOMECOURT, JOINVILLE, LONGRES, MALSHERBIES, MOREMILON, RANBUCOURT, MAREBURG ST DIZIER, ST MIHIEL, SEZANNE, SORCY, SUIPPES, TORY, TOUL, VALQUES, URMESS, VITRY LE FRANCOIS, VAN CLEURS, HIRSON.

(NOTE) MAJOR TERMINALS WITH STATISTICS.

<u>DESTINATION</u>		<u>TRAINS</u>	<u>LOADS</u>	<u>TONS</u>
ROUVILLE	SEP	57	1,956	25,182
	OCT	19	620	7,958
	NOV	116	3,697	55,468
	DEC	79	2,559	32,340
	TOTAL	271	8,832	122,948
NOUVION	SEP	4	150	308
	OCT	33	1,056	16,530
	NOV	-	-	-
	DEC	-	-	-
	TOTAL	37	1,206	16,838
CHAUNCY	NOV	9	183	3,646
	DEC	21	429	8,072
	TOTAL	30	612	11,718

15. (CONT'D)

DESTINATION		TRAINS	LOADS	TONS
REIMS	SEP	20	683	8,595
	OCT	51	1,731	18,743
	NOV	29	992	11,616
	DEC	52	1,618	20,072
	TOTAL	152	5,024	59,026
REVIIGNY	SEP	2	79	767
	OCT	194	7,770	93,890
	NOV	21	801	11,337
	DEC	-	-	-
	TOTAL	217	8,650	105,994
SOMMESOUS	SEP	58	1,632	19,022
	OCT	32	993	6,895
	NOV	5	162	1,843
	DEC	2	68	933
	TOTAL	97	2,855	28,693
VERDUN	SEP	20	572	1,279
	OCT	62	5,089	30,356
	NOV	270	9,243	132,464
	DEC	168	5,425	73,362
	TOTAL	520	20,279	237,461
TOTAL TO EAST	SEP	228	6,966	75,567
	OCT	438	18,612	193,276
	NOV	485	16,097	232,656
	DEC	378	11,890	160,664
	TOTAL	1,529	53,565	662,163
GRAND TOTAL SHIPPED NORTH AND EAST --		3,392	111,449	1,379,381

16. TRAINS MOVED TO PARIS AREA/SWITCH MOVES:
(NOTE) STATISTICS OMITTED FROM MINOR TERMINALS.

ARGENTIL, AUBERVILLIERS, AUSTERLITZ, BRETIGNY, COUBERT, EVANGIL, GENNEVILLIERS, ISSY LE MANTINEUS, IVRY, LA CHAPPELLE, LA PLAINE, LE BOURGET, LE PECQ, LEVILLETTI MAGASIN-GENEROUX, MELUN, MONTROUGES, PANTIN, REVILLEY, RUCIL, SEVRES ST CLOUD, VILLA-COUBLAY, RAMBOUILLET, REUILLY, LIMAS, BERCY, GRENVILLE, LE GARENNE, FONTENAY LE RAPEE, VERSAILLES, FONTAINBLEAU, PARIS EST, ORLY, MITELOT, ST NICHOLAS, ETAMPES Q177, VITRE, NANTERE.

(NOTE) MAJOR TERMINALS WITH STATISTICS.

DESTINATION		TRAINS	LOADS	TONS
ST DENIS	SEP	17	398	5,290
	OCT	53	1,031	19,885
	NOV	12	319	4,328
	DEC	24	772	9,575
	TOTAL	106	2,520	39,078
ST QUEN	SEP	13	300	4,160
	OCT	24	1,240	18,323
	NOV	30	1,557	23,128
	TOTAL	75	3,197	45,611
VURIGARD	SEP	2	33	468
	OCT	19	561	7,887
	NOV	13	289	4,594
	DEC	16	330	3,930
	TOTAL	50	1,213	16,879

16. (CONT'D)

<u>DESTINATION</u>		<u>TRAINS</u>	<u>LOADS</u>	<u>TONS</u>
VINCENNES				
	OCT	5	167	1,319
	NOV	2	42	707
	DEC	<u>24</u>	<u>786</u>	<u>9,401</u>
	TOTAL	31	995	11,427
TOTALS MOVED TO PARIS AREA				
	SEP	59	1,246	16,715
	OCT	168	4,529	65,773
	NOV	125	3,394	45,317
	DEC	<u>180</u>	<u>4,622</u>	<u>52,453</u>
GRAND TOTAL MOVED TO AREA ---		532	13,791	180,258

18. COMMODITIES FORWARDED FROM PARIS TO 1ST & 3RD ARMIES

COMMODITY		LOADS	TO 1ST ARMY		COMMODITY		LOADS	TO 3RD ARMY	
				TONS					TONS
AMMO	SEP	1,906		27,015	AMMO	SEP	1,434		21,420
	OCT	7,273		103,339		OCT	4,037		59,455
	NOV	8,015		115,197		NOV	4,197		61,463
	DEC	<u>5,971</u>		<u>86,761</u>		DEC	<u>2,807</u>		<u>39,819</u>
	TOTAL -	23,165		332,312		TOTAL -	12,475		182,157
POL	SEP	1,410		18,357	POL	SEP	992		13,220
	OCT	4,113		59,205		OCT	3,488		51,402
	NOV	2,586		40,422		NOV	4,123		64,086
	DEC	<u>2,758</u>		<u>43,667</u>		DEC	<u>3,117</u>		<u>52,261</u>
	TOTAL -	10,867		161,651		TOTAL -	11,720		180,969
RATIONS	SEP	1,563		16,114	RATIONS	SEP	1,522		15,032
	OCT	3,954		50,028		OCT	3,227		38,565
	NOV	5,179		74,061		NOV	5,230		74,077
	DEC	<u>1,123</u>		<u>14,927</u>		DEC	<u>1,730</u>		<u>22,025</u>
	TOTAL -	11,819		155,130		TOTAL -	11,709		149,699
TOTALS	SEP	4,879		61,486	TOTALS	SEP	3,948		49,672
	OCT	15,340		212,572		OCT	10,752		149,422
	NOV	15,780		227,680		NOV	13,550		114,105
	DEC	<u>9,852</u>		<u>145,355</u>		DEC	<u>7,654</u>		<u>114,105</u>
	TOTAL -	45,851		649,093		TOTAL -	35,904		512,825
TOTAL COMMODITIES TO 1ST & 3RD ARMIES									
		LOADS		TONS					
	SEP	8,827		111,158					
	OCT	26,092		361,994					
	NOV	29,330		429,306					
	DEC	<u>17,506</u>		<u>259,460</u>					
	TOTAL -	81,755		1,161,918					

19. COMMODITIES FORWARDED NORTH & EAST FROM PARIS & TO PARIS AREA:

	<u>AMMO</u>		<u>POL</u>		<u>RATIONS</u>		<u>ENG EQUIP</u>		<u>MED SUP</u>		<u>DIESEL OIL</u>		<u>LANDING MATS</u>		<u>COAL</u>	
	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>
SEP	3,486	49,780	2,739	36,416	3,191	32,065	1,222	19,466	625	7,169	137	1,902	263	3,958	118	1,601
OCT	11,335	162,714	8,687	132,733	8,694	109,541	1,650	22,435	178	1,458	156	2,789	1,384	20,412	75	1,536
NOV	12,226	156,918	6,896	107,382	11,311	160,427	2,473	30,029	220	2,294	182	2,436	1,015	16,542	15	227
DEC	8,593	145,057	4,363	66,089	322	1,896	2,369	79,650	389	4,723	703	7,771	519	9,243	50	968
TOTAL	35,640	514,469	22,587	342,620	23,528	304,729	7,714	151,580	1,412	15,644	1,178	14,890	3,181	50,155	258	4,334

	<u>MAIL</u>		<u>LUMBER</u>		<u>CLOTHING</u>		<u>CWS EQUIP</u>		<u>AC EQUIP</u>		<u>SIG EQUIP</u>		<u>ORD EQUIP</u>		<u>MISC</u>	
	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>	<u>LOADS</u>	<u>TONS</u>
SEP	87	900	6	60	64	684	25	350	45	574	56	726	28	280	20	248
OCT	233	1,984	37	420	1,453	13,751	144	1,565	355	2,883	462	4,921	86	846	1,418	16,851
NOV	579	3,890	48	912	774	7,498	132	1,373	244	1,974	618	6,741	793	9,661	888	16,489
DEC	1,037	13,850	108	1,248	1,066	4,544	538	6,323	182	1,307	961	12,551	880	10,035	1,108	16,223
TOTAL	1,936	20,624	199	2,640	3,357	26,537	839	9,611	826	6,738	2,097	24,939	1,787	20,822	3,434	49,821

MONTHLY TOTAL ALL COMMODITIES

	<u>LOADS</u>	<u>TONS</u>
SEP	12,112	156,979
OCT	35,068	496,496
NOV	38,319	544,287
DEC	24,474	362,399
GRAND TOTAL	109,973	1,560,161

..... 2nd Military Railway Service
APPENDIX NO. 2
 (Chapter IV)

Army Tonnages Dispatched from Continental Ports by Percentages

<u>Port Area</u>		<u>Rail</u>	<u>Motor</u>	<u>Water</u>
So. France	Nov.	---	---	---
	Dec.	39%	57%	4%
Antwerp	Nov.	---	---	---
	Dec.	44%	41%	15%
Cherbourg	Oct.	54%	46%	---
	Nov.	62%	38%	---
	Dec.	62%	38%	---
Morlaix-Roscoff	Oct.	88%*	12%*	---
	Nov.	95%	5%	---
	Dec.	98%	2%	---
Granville	Oct.	*	*	---
	Nov.	100%	---	---
	Dec.	100%	---	---
Le Havre	Oct.	57%	43%	---
	Nov.	58%	41%	1%
	Dec.	67%	32%	1%
Rouen	Oct.	---	98%	2%
	Nov.	7%	83%	10%
	Dec.	43%	50%	7%
Omaha Beach	Oct.	---	100%	---
	Nov.	---	100%	---
Utah Beach	Oct.	39%	61%	---
	Nov.	---	100%	---
11th Port	Oct.	40%	60%	---
TOTAL	Oct.	47%	53%	---
	Nov.	57%	42%	1%
	Dec.	52%	42%	6%

* Figure applies to Brittany Base Section (Combined--Granville & Morlaix-Roscoff)

2nd Military Railway Service.... APPENDIX NO. 3
 (Chapter IV)

ARMY TONNAGE DISPATCHED FROM CONTINENTAL PORTS BY RAIL, MOTOR, AND WATER

October 1944

<u>BEACH/ PORT AREA</u>	<u>BY RAIL</u>		<u>BY MOTOR</u>		<u>BY WATER</u>		<u>TOTAL</u>
	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>
Cherbourg	192,001	54	162,519	46	—	—	354,520
Omaha	—	—	93,844	100	—	—	93,844
Utah	35,656	39	56,263	61	—	—	92,519
11th Port	32,744	40	48,283	60	—	—	81,027
Brittany	64,806	88	8,549	12	—	—	73,355
Le Havre	22,867	57	17,196	43	—	—	40,063
Rouen	—	—	8,922	98	182	2	9,104
Total	348,074	47	396,176	53	182	—	744,432

November 1944

Cherbourg	242,904	62	150,261	38	—	—	393,165
Le Havre	96,359	58	68,029	41	472	1	164,860
Rouen	7,227	7	86,659	83	9,844	10	103,730
Morlaix/Roscoff	56,568	95	2,730	5	—	—	59,298
Granville	45,591	100	—	—	—	—	45,591
Utah	—	—	11,433	100	—	—	11,433
Omaha	—	—	9,451	100	—	—	9,451
TOTAL	448,649	57	328,563	42	10,316	1	787,528

December 1944

Southern France	161,692	39	233,359	57	16,013	4	411,064
Antwerp	137,316	44	126,803	41	47,829	15	311,948
Cherbourg	155,795	62	97,202	38	—	—	252,997
Le Havre	107,481	67	51,493	32	697	1	159,671
Rouen	54,102	43	63,932	50	9,164	7	127,198
Granville	53,925	100	—	—	—	—	53,925
Morlaix/ Roscoff	32,899	98	595	2	—	—	33,494
TOTAL	703,210	52	573,384	42	73,703	6	1,350,297

(Chapter IV)

2nd MILITARY RAILWAY SERVICE

COMMUNICATION ZONE SITREP AS OF 2359 HOURS - 1 OCTOBER, 1944

1. OPERATIVE TRACK MILEAGE - ETO:

a. <u>Single.</u>	
Total in Operation	2,011.89
b. <u>Double.</u>	
Total in Operation	2,776.09

2. MOTIVE POWER:

a. <u>Received from U.K.</u>	Type	No. Recd.	No. in Servicable condition	No. in Use
1. Steam	0-6-0	53		
	2-8-0	521		
(British)	2-10-0	8		
2. Diesel	650 HP	52		
	500 HP	10		
	350 HP	37		
(British)	153 HP	11		
	150 HP	10		
	TOTALS	702		

b. <u>Captured.</u>	Type	Available	Condition not deter	In Shop	Serv.	In Use
1. Steam	0-6-0	127		28	21	21
	0-8-0	52		18	16	16
	0-10-0	36		2	21	11
	2-4-0	7			1	1
	2-4-2	2		1	1	1
	2-6-0	9		1	1	1
	2-6-2	14		5	1	1
	2-8-0	266		71	72	70
	2-8-2	154		68	38	36
	2-8-4	1				
	2-10-0	15				
	2-10-2	2		1	7	7
	4-4-0	10				
	4-4-2	1		2	4	4
	4-4-4	1		1		
	4-6-0	239		69	85	80
	4-6-2	165		72	47	46
	4-8-2	37		10	10	10
	4-6-4	3				
	6-4-6	9		9		
	All types	414	127	107	180	
	TOTALS	1,564	127	465	506	306

3. <u>ROLLING STOCK:</u>	Captured			Received from U.K.
	Serv.	B.O.		
Box	1,777	380	Gondola 20T	3,166
Gondola	2,495	201	Gondola 40T	1,640
Hopper	6	1	Flat 20T	295
Flat	783	22	Flat 50T	799
Tank	50	25	Box 20T	5,002
Others	14,138	80	Caboosas	30
			Tanks	319
			Reefers	37
TOTALS	19,249	709		11,288

4. SHOP EQUIPMENT:

Mobile Workshops	11 (3 Br)
Industrial Brown Hoist Cranes	8 (2 Br)
Breakdown Train and Crane	8 (2 Br)
Rail Mounted Motor Generator Sets	5 (Br)

5. HOSPITAL TRAINS: 14 (2 Br) 11 - 14 cars ca: 3 - 15 cars

6. <u>RAILWAY UNITS ON CONTINENT:</u>	<u>OFF</u>	<u>E. M.</u>	<u>TOTAL</u>
2d Mil Ry Serv	36	163	199
706th Ry Grand Div	27	59	86
707th Ry Grand Div	26	59	85
708th Ry Grand Div	25	56	81
709th Ry Grand Div			85
710th Ry Grand Div	27	58	838
712th Ry Gpn Bn	25	813	801
716th Ry Opn Bn	26	775	
717th Ry Opn Bn		751	776
718th Ry Opn Bn	25	825	851
720th Ry Opn Bn	26	781	807
722nd Ry Opn Bn	26	786	813
723rd Ry Opn Bn	27	779	806
724th Ry Opn Bn	27	823	834
728th Ry Opn Bn	31	834	859
729th Ry Opn Bn	25		
732nd Ry Opn Bn		797	826
733rd Ry Opn Bn	29		
735th Ry Opn Bn		789	815
740th Ry Opn Bn	26		
743rd Ry Opn Bn		786	813
744th Ry Opn Bn	27		622
755th Ry Opn Bn	24	598	635
757th Ry Shop Bn	25	610	
763rd Ry Shop Bn			469
764th Ry Shop Bn	20	449	469
TOTALS	530	11,591	12,121

APPENDIX NO. 6

(Chapter IV)

2nd MILITARY RAILWAY SERVICE

COMM ZONE SITREP FOR WEEK ENDING 2359 HOURS - 3 JANUARY 1945

1. Operative Track Mileage - ETO:

a. Single.

Total in operation - 3,542.08

b. Double

Total in operation - 5,005.26

2. Track Mileage - Under Jurisdiction of 2d MRS:

	<u>Single</u>	<u>Double</u>
Phase # 1	29.63	396.87
Phase # 2	45.07	938.30
Phase # 3	225.63	1,822.48
Total -	300.33	3,157.65

3. Motive Power:

a. Received from UK.

Type	Total Rec (Stores)	Avail to MRS	Loaned	Serv	In Use	Turned o/to Br	
	<u>USA</u>	<u>BR.</u>					
0-6-0	135	66	130	5 (Br)	125	122	17
2-8-0	755	353	725	15 (Br)	614	610	44
				19 (Fr)			
2-8-0			181 (Aust)	11 (Fr)	175	174	12 (Br)
2-10-0		72					28 (Br)
Sub total-	890	491	1036	50	914	906	101
650 HP	70*		58	9 (8 1st	49	46	2
500 HP	10		10	MRS	7	7	
350 HP	36*	3	35	1 CE)	31	31	2
153 HP		11					11 (Br)
150 HP	10		10		7	7	
Sub Total -	126	14	113	9	94	91	15
Totals -	1016	505	1149	59	1008	997	116

* 1 each destroyed

Tenders 743 743 743 743

b. Captured:

Type	Retd to French	Available	In Shops	Serv	In Use
0-4-0	2				
0-6-0	129	4		4	3
0-8-0	64	16	1	15	15
0-10-0	60	36	6	30	30
2-4-0	7				
2-4-2	2				
2-6-0	12	1	1		
2-6-2	16	4	4		
2-8-0	353	132	28	104	104

COMM ZONE SITREP FOR WEEK ENDING 2359 HOURS - 3 JANUARY 1945.

3. <u>Motive Power</u>		(Cont'd)				
b. <u>Captured</u>		Ret'd to	Available	In Shops	Serv	In Use
Type	French					
2-8-2	193		36	7	29	29
2-8-4	1					
2-10-0	41		70	13	57	57
2-10-2	7		19	5	14	14
4-4-0	10					
4-4-2	3					
4-4-4	3					
4-6-0	251		110	17	93	92
4-6-2	180		17	8	9	9
4-6-4	8		7	4	3	3
4-8-0	1					
4-8-2	55		8		8	8
4-8-4	2					
4-10-0	2					
6-4-6	9					
All Types	411					
Belgium			18	18	30	30
Totals	1822		508	112	396	394

4. <u>Rolling Stock</u>					
a. <u>Received from UK</u>		Total Recd	Turned o/to Br	Destroyed	Avail to MRS
Type					
Gondola 20T		4,513	636	12	3,865
Gondola 40T		2,803	273	4	2,526
Flat 20T		505	2	2	493
Flat 50T		1,473	104		1,369
Box 20T		8,745	1,219	20	7,506
Cabooses		462		5	457
Tanks		690	67		623
Roofers		192			192
Totals		19,383	2,301	43	17,039

b. <u>Captured</u>		Total Captured	BO	Avail to MRS
Type				
Box		10,118	18	10,100
Gondola		12,075	26	12,049
Flat		4,718	--	4,718
Tank		1,023	1	1,022
Roofers		489		489
Cabooses		163		163
Work		196	6	197
Misc (Passgr)		15		15
Coach		508	9	499
Baggage		105		105
Postal		13		13
Hosp Cars		110		110
Totals		29,533	60	29,473

COMMUNICATION ZONE SITREP FOR WEEK ENDING 2359 HOURS -3 JANUARY 1945 (Cont'd)

5. Shop Equipment

	Total	Turned O/to Br	Avail
Mobile Workshops	17 (9 Br)	5	12
20 Ton Brownhoist Cranes	23(11 Br)	2	21
Breakdown Trains	25(11 Br)	2	23
Breakdown Cranes	10(3 Br)	3	7
Rail Mounted Motor Generator Sets	6 (Br)	5	1
Locomotive Cranes (25 ton)	2		2
Inspection Coaches	2 (Br)		2
Special train - 9 cars	1		1
Warwell Flats 80T	20 (Br)		20
Warwell Flats 50T	10 (Br)		10
Total	116	17	99

6. Hospital Trains

	Total	Turned o/to Br	Avail
14 Cars each	23		23
15 Cars Each (10 Br)	13	6	7
10 Cars each	1		1
Total	37	6	31

7. Used & on hand -Grand Divisions. (Coal)

	On Hand (As of 29 Dec)	Used (27 to 29 Dec incl)
706th Ry Grand Division	7,791 tons	4,839 tons
707th Ry Grand Division	No Report	No Report
708th Ry Grand Division	5,422 "	801 "
709th Ry Grand Division	9,726 "	5,429 "
710th Ry Grand Division	8,816 "	5,897 "
Rennes	4,160 "	1,490 "
Le Mans	623 "	899 "
Totals	36,538 "	19,355 "

a. Diesel Oil on hand (as of 29 Dec) - 257,392 gals

8. Railway Units on Continent:

	Off.	WO	EM	Total
2d Mil Ry Ser	30	2	160	192
706th Ry Grand Div	25		59	84
707th Ry Grand Div	33		59	92
708th Ry Grand Div	25		56	81
709th Ry Grand Div	28		58	86
710th Ry Grand Div	30		58	88
712th Ry Opn Bn	25	1	810	836
716th Ry Opn Bn	32	1	807	840
717th Ry Opn Bn				
Co "A", 717th Opn Bn	2		89	91
718th Ry Opn Bn	27	1	793	821
720th Ry Opn Bn	25	1	811	837
722nd Ry Opn Bn	27	1	790	818
723rd Ry Opn Bn	30	1	811	842
724th Ry Opn Bn	31	1	801	833
728th Ry Opn Bn	28	2	842	872

COMMUNICATION ZONE SITREP FOR WEEK ENDING 2359 HOURS - 3 JANUARY 1945
(Cont'd)

8. Railway Units on Continent: (cont'd)

	<u>Off</u>	<u>WO</u>	<u>EM</u>	<u>Total</u>
829th Ry Opn Bn	23	2	839	864
732nd Ry Opn Bn	31	1	888	920
733rd Ry Opn Bn	29	1	789	819
734th Ry Opn Bn				
Co "C", 734th Opn Bn	6		289	295
735th Ry Opn Bn	29	1	891	921
740th Ry Opn Bn	30	1	881	912
741st Ry Opn Bn	28	1	792	821
743rd Ry Opn Bn	35	1	864	900
744th Ry Opn Bn	28	1	795	824
746th Ry Opn Bn				
752nd Ry Opn Bn				
755th Ry Shop Bn	25	2	610	637
757th Ry Shop Bn	25	2	609	636
763rd Ry Shop Bn	12		552	564
764th Ry Shop Bn	23	2	599	624
765th Ry Shop Bn				
126th Ry Workshop (Mobile)	1		28	29
127th Ry Workshop (Mobile)	1		29	30
128th Ry Workshop (Mobile)	1		29	30
129th Ry Workshop (Mobile)	1		29	30
130th Ry Workshop (Mobile)	1		30	31
138th Hosp Trn Maint Platoon	1		26	27
139th Hosp Trn Maint Platoon	1		39	40
140th Hosp Trn Maint Platoon	1		39	40
141st Hosp Trn Maint Platoon	1		27	28
142nd Hosp Trn Maint Platoon	1		25	26
117th Hosp Trn Maint Section	1		12	13
118th Hosp Trn Maint Section	1		12	13
119th Hosp Trn Maint Section	1		12	13
120th Hosp Trn Maint Section	1		12	13
121st Hosp Trn Maint Section	1		12	13
Totals	757	26	16,763	17,526

APPENDIX NO. 7

(Chapter IV)

ROLLING STOCK IN ETO

Rolling Stock Ferried to Continent by Months 1944

<u>IN U.K.</u>			<u>ON CONTINENT</u>	
<u>AS OF</u>	<u>LOCOS</u>	<u>FRT. CARS</u>	<u>LOCOS</u>	<u>FRT. CARS</u>
31 July 1944	1,782	20,027	53	344
31 Aug. 1944	1,650	15,554	249	4,817
30 Sept. 1944	1,323	8,877	685	11,799
31 Oct. 1944	1,081	3,407	929	16,974
30 Nov. 1944	769	1,281	997	19,140
31 Dec. 1944	245	938	1521	19,383

Summary of Planned Requirements

<u>Locomotives & Diesels</u>		<u>Rolling Stock</u>	
2-8-0	2,200	20-ton Box	25,000
0-6-0	504	20-ton Gondola	12,600
650 HP Diesels	64	40-ton Gondola	5,700
350 HP Diesels	50	50-ton Flat	6,000
500 HP Diesels	10	40-ton Tank	3,500
150 HP Diesels	10	20-ton Caboose	3,200
		35-ton Refrigerator	1,200
<hr/>		<hr/>	
TOTALS	2,833		57,200

APPENDIX NO. 8

(Chapter IV)

SUPREME HEADQUARTERS
ALLIED EXPEDITIONARY FORCE

ADMINISTRATIVE MEMORANDUM)
NUMBER 24)

COOPERATION OF FRENCH MILITARY AND CIVIL
TRANSPORTATION AUTHORITIES IN FRANCE

I OBJECT. To outline the manner in which FRENCH railway, port and IWT personnel can best assist the BRITISH/U.S. movement and transportation authorities.

II PRINCIPLES. 1. In principle it is desired to re-establish the normal FRENCH system of control (through Commissions), maintenance and operation of railways, ports and IWT as soon as FRENCH resources are sufficient, with a view to releasing BRITISH/U.S. transportation troops for special task; e.g. in forward areas, subject always to retention of control by BRITISH/U.S. military authorities over movement and the allocation of technical resources to insure that military requirements are met.

2. There are likely to be three stages of development in each area liberated: a. Stage I. BRITISH/U.S. military control, development and operation assisted by FRENCH liaison officers and such civil technicians as may be found immediately available.

b. Stage II. BRITISH/U.S. military control, development and operation assisted by such FRENCH railway, port and IWT agencies as have been re-established as coherent organizations. During this stage there will be a progressive delegation of functions to FRENCH agencies under BRITISH/U.S. direction.

c. Stage III FRENCH assumption of responsibility for maintenance and operation. BRITISH/U.S. requirements being communicated through Commissions.

3. The change-over from one stage to the next necessarily cannot occur simultaneously in all areas or in respect of all functions.

4. In addition, assistance will be needed from such mobile transportation units as the FRENCH authorities are able to raise.

III METHOD. 5. Movement Control. a. In the first stage, FRENCH officers will be attached to Movement Control/Traffic Section T.C. for advice and liaison. These officers will form the advanced element of the Service Militaire.

b. In Stage II, the normal organization of Commissions, with a Service Militaire directing the Service Technique, will assume control as responsibility is progressively delegated to FRENCH agencies. This organization must be set up in its final form before Stage III is implemented, in order that it may function fully and effectively.

c. In Stage III, the normal system of Commissions will be in operation with BRITISH/U.S. representation where necessary to communicate military requirements .

6. Transportation - Railways, Ports and IWT. a. In Stage I, reconstruction, maintenance and operation will be a BRITISH/U.S. responsibility. Recce parties should include at least one technical FRENCH liaison officer whose primary duty would be to contact the civil railway, port and IWT officials in the area concerned in order that they may in turn reorganize their staffs with the available personnel and insure that they report for duty. With every BRITISH or U.S. transportation unit there should be at least two to three technical liaison officers who would be in the case of railways concern themselves respectively with the operating, mechanical, maintenance and construction sections, and in the case of ports with the port operation and construction sections. They should have local knowledge if possible.

b. In Stage II, it is the intention to re-employ all railway personnel as rapidly as possible irrespective of there being actual employment for them in their own trades. Personnel available for duty will be used to supplement military resources, e.g.:

(1) Workshop/shop personnel for maintenance and for the repair of damaged locomotives and rolling stock;

(2) Running sheds/enginehouse personnel - fitters, cleaner, etc., to assist in maintenance and repair of damaged locomotives, rolling stock and machinery; engine crews to supplement BRITISH/U.S. crews, especially on locomotives found intact;

(3) Permanent way/right of way personnel, to assist in the repair and maintenance of track and works;

(4) Technical railway personnel, to assist in the operation, repair and maintenance of telephone, telegraph and railway signal equipment.

c. In the above examples static FRENCH personnel will be under the control of the local BRITISH/U.S. military authority which will work when practicable through the senior FRENCH railway official available. Circumstances may differ in various localities and it would depend on the status of the local FRENCH official as to whether the channel of communication in any one case will be departmental (e.g. mechanical matters handled through the locomotive shed, enginehouse or workshop foreman, and traffic matters through the station master) or alternatively coordinated through an official responsible for all departments. Where the latter procedure is not possible, the primary object will be to reconstitute the necessary district or divisional staff with a view to introducing it quickly.

d. During this stage it should be possible to hand over sections of line for maintenance by FRENCH railway personnel. The speed at which Stage III can be implemented will depend on the speed with which the civil district or divisional organization is reconstituted and whether sufficient FRENCH personnel, particularly train crews, are available. Military operating units will be progressively thinned out until a small supervisory staff only is retained to insure smooth coordination with adjacent areas under full military control.

e. So far as ports and IWT are concerned, it is the intention to re-employ skilled personnel as soon as facilities are available. The Port Commandant/Port Commander will exercise executive control of port working. The normal civil organization will be re-established as early as possible and the local Directeur du Port will give the Port Commander/Port Commander the required assistance as soon as he is in a position to do so as regards:

(1) Stevedoring and lighthouse personnel.

(2) Workshop personnel for repair of cranes, equipment, tugs, etc.

(3) Constructional personnel, who would be required to assist the engineers repairing port facilities.

(4) Skilled personnel for tug and lighterage operations, repair, workshop, heavy repair and construction and maintenance personnel for replacement of lock gates, machinery, etc, on IWT rivers and canals.

f. In Stage III, FRENCH railway authorities will take over executive working of sections of railway as BRITISH/U.S. transportation units are withdrawn. It will probably be necessary to leave some military running shed/enginhouse and workshop personnel to assist in the maintenance and repair of imported locomotives until such time as the FRENCH staffs are thoroughly conversant with these types. Some drivers and firemen may also be necessary for training FRENCH personnel in the handling of these locomotives.

g. Similarly the FRENCH will take over executive working of ports no longer required by the BRITISH/U.S. military authorities in accordance with the phasing given in the pamphlet "Principles for the Operation and Control of Captured or Liberated Ports under BRITISH Control"/"Responsibilities in Captured Ports under Joint Action of the Navy and Army".

h. The same principles apply to IWT where the Ingenieur en Chef des Ponts et Chaussées or the Directeurs Regionaux will exercise a function similar to that of the Directeur du Port.

TRANSPORTATION CORPS
 HEADQUARTERS
 SECOND MILITARY RAILWAY SERVICE
 APO 350, U. S. ARMY

1 January 1945

ASSIGNMENT ORDERS)

NUMBER 1.)

1. Assignment Orders No. 4, this Headquarters, dated 7 December 1944, are rescinded, and the following assignments of Railway Grand Divisions, Railway Operating Battalions, Railway Shop Battalions, Railway Workshops (mobile), and Hospital Train Maintenance Platoons are announced, effective 0001 hours, 1 January, 1945.

2. 706TH RAILWAY GRAND DIVISION: a. The 706th Railway Grand Division, with headquarters at Nancy, France, in the Advance Section, is assigned the mission of operating and maintaining military railways Region D'Est, exclusive of the Paris Terminal, including the rail line in Luxembourg south of and including the line to Saarburg via Athus, Esch, Bettenbourg, Igel and the extension of these lines into Germany in support of the Third Army. It is their further responsibility to supervise all railways placed in Phase III in their territory over which the U.S. military traffic is being hauled.

b. The following units are assigned to the 706th Railway Grand Division, with headquarters and operating limits as outlined below:

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
712th Ry Opn Bn	Verdun	Adsec	Supervision of Phase III Operations, Pantin, excl, to Verdun, excl, via Reims and Chalons, and Chateau-Thierry and Chalons. Operation of Phase II territory Verdun, incl, to Frouard, excl, via Conflans, Onville, Arnaville; Conflans to Longwy, excl, via Baroncourt and Longuyon, including all the railheads on the line northeast and west of Verdun and including Dugny railhead and limestone track railhead between Dugny and Verdun, and railheads along main line assigned.
718th Ry Opn Bn	Longwy	Adsec	Operation Longwy, incl, to Wongerohr, via Saulnes, Esch, Bettenbourg, Luxembourg, and Wasserbillig; Longwy to Athus, La Tour, Virton, Bertrix, incl, and Libramont, incl, Athus to

UNIT	HEADQUARTERS LOCATED IN		OPERATING LIMITS
718th Ry Opn Bn (Cont'd)			Arlong to Libramont and railheads toward Bastogne; Arlon to Luxembourg and north to railheads toward Ettelbruck; all connecting lines, including railheads in territories described above.
732nd Ry Opn Bn	Thionville	Adsec	Operation Conflans to Thionville via Valleroy and Hagondange; Hagondange to Woippy; Valleroy to Longuyon, excl. via Audon la Roman; Barrancourt, excl, to Audon la Roman to Villeruit; Saulnes, excl, to Esch, excl, via Villeruit; Audon la Roamn to Thionville; Fontoy to Esch, excl; Thionville to Bettembourg, excl; Thionville to railheads towards Trier; Thionville to railheads towards Croutzwald; all connecting and branch lines in above-described territory and railheads on these lines.
733rd Ry Opn Bn	Nancy	Adsec	Supervision of Phase III territory Villeneuve St Georges, excl, to Lorouville, excl; operation of Phase II territory Sorcy to railheads on the Gondrecourt line of railheads via either route to Neufchateau in 3rd Army territory; Lerouville, incl, to Verdun, excl, and exclusive of Dugny railhead operation. Lerouville to Conflans, excl (Operation by 733rd ends at Onville, but 733rd, in operating from Lerouville or Commercy to Conflans via Onville will furnish French crews and GI pilots for such trains, and trains originating Conflans destined Lerouville will be manned by 733rd pilots); Lerouville to Chateau-Salins via both routes (Liverdun and Jarville); Jarville to Blainville; Remilly to St Awold, and, until relieved by 1st MRS, operation Chateau-Salins to Sarralbe via Benestroff and Benestroff to Brulange;

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
733rd Ry Opn Bn (Cont'd)			Brulange to Peltre to connect with lines assigned above. Service will be provided 7th Army and 3rd Army railheads in the territory described.

142nd Hosp Tn Mt Pltn Nancy Adsec

3. 707TH RAILWAY GRAND DIVISION: a. The 707th Railway Grand Division, with headquarters at Antwerp, Belgium, in Channel Base Section, is assigned the mission of supervising the United States operations at Antwerp Terminal.

b. The following units are assigned to the 707th Railway Grand Division, with headquarters and operating limits as outlined below:

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
729th Ry Opn Bn	Antwerp	Channel	Post No 7, Schineport to and including North Yard, Antwerp.
743rd Ry Opn Bn	Antwerp	Channel	West Switch,, North Yard to and including dock area, Antwerp.

4. 708TH RAILWAY GRAND DIVISION: a. The 708th Railway Grand Division, with headquarters at Liege, Belgium, in Advance Section, is assigned the mission of operating and maintaining military railways east of the Meuse River, Belgium, Holland, and into Germany from east switch Bressoux, in the Vise-Maastricht line to northern railheads; from Liege Jct switch, Herve line, and from Liege Jct switch on Verviers line to southern railheads; west and north switches Landen to south and Meuse River Bridge, Liege; Liege to Ronet, incl, Landon to Libramont, incl, via Statte and Cincy; Namur to Cincy.

b. The following units are assigned to the 708th Railway Grand Division, with headquarters and operating limits as outlined below:

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
734th Ry Opn Bn	Maastricht	Adsec	From east switch Bressoux to all railheads in Holland and Germany north of and including the Vise-Montzon line.
740th Ry Opn Bn	Liege	Adsec	Junction at Flemalle Haute to east switch Bressoux; Kinkempels to all railheads in Belgium and Germany south of but not including the Vise-Montzen line; Pepinster to Libramont not inclusive via Malmedy, St Vith, Bastogne.
741st Ry Opn Bn	Liege	Adsec	West and north switches Manden to south and Meuse River Bridge, Liege; Liege to Rondt, incl,

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
741st Ry Opn Bn (Cont'd)			Landen to Libramont, incl, via Statte and Cincy; Namur to Cincy.
755th Ry Shop Bn	Namur	Adsec	Namur Shops
138th Hosp Tn Ptn	Verviers	Adsec	

5. 709TH RAILWAY GRAND DIVISION: a. The 709th Railway Grand Division, with headquarters at Brussels, Belgium, in Channel Base Section is assigned the mission of operating and maintaining the military railways constituting USA L/C east switch Tergnier to west switch Namur, and all lines in Belgium west of the Meuse River, except line Landen to Liege via Ans; Namur to Liege via Statte; exclusive of Antwerp and Namur Yards. It is further responsible for the supervision of all rail lines placed in Phase III operation in their territory.

b. The following units are assigned to the 709th Railway Grand Division, with headquarters and operating limits as outlined below:

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
716th Ry Opn Bn	Aulnoye	Oise	North switch Torgnior to west switch Jeumont in Phase II, Supervision of Phase III operation of line Aulnoye, excl, to north switch Verdun via Hirson-Liant-Mezieres Charleville-Sedan.
722nd Ry Opn Bn	Jeumont	Channel	West switch Jeumont to east switch Ronet; Charleroi to west switch Landen; via Gembloux, incl, Marcinelle Yard; Ramillies to north switch Namur; Fleurus to Tamines; south switch Namur to Mariembourg via Givet; Charleroi to Mariembourg; Mariembourg to Anor, Vireux to Mezieres Charleville.
735th Ry Opn Bn	Malines	Channel	Post 7, Schineport Yard, Antwerp, to west switch Landen, via Louvain; Malines to west switch Namur via Brussels, Gembloux, incl Gembloux Yard; Louvain to Ottignies; Louvain to Schaarbeck Yard; Tirlemont to north switch Ramillies; south switch Gembloux to Jemeppe.
744th Ry Opn Bn	Charleroi	Channel	Brussels to Charleroi via Halle-Braine le Comte-Manage-Luttre; Braine le Comte to Maubeuge via Mons; Charleroi to Quivrain via Mons; Ottignies to Manage via

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
744th Ry Opn Bn (Cont'd)			Baulers; Linkbeck to Luttre via Baulers; Ecaussines to Erquelinnes via Haine St Pierre and Binche.
763rd Ry Shop Bn	Louvain	Channel	Louvain and Malines Shops.
126th Ry Workshop	Landen	Adsec	
120th Hosp Tn Mt Sec	Charleroi	Channel	
141st Hosp Tn Mt Ptn	Liege	Aesec	

6. 710TH RAILWAY GRAND DIVISION: a. The 710th Railway Grand Division with headquarters in Paris, France, in Seine Base Section, is assigned the mission of operating and maintaining the military railways in Region d'Ouest, the Paris Terminal, and lines in Region du Nord, exclusive of the line Tergnier through Aulneye towards Charleroi. It is their further responsibility to supervise all railways placed in Phase III in their territory over which U. S. military traffic is being hauled.

b. The following units are assigned to the 710th Railway Grand Division, with headquarters and operating limits as outlined below:

UNIT	HEADQUARTERS	LOCATED IN	OPERATING LIMITS
720th Ry Opn Bn	Caen	Normandy	East switch Lison to east switch Argentan viz Caen.
723rd Ry Opn Bn	Dreux	Normandy	East switch Argentan to and including Versailles-Matelots Yard.
724th Ry Opn Bn	Compiègne	Oise	From east switch Matelots Yard to and including Tergnier viz Creil.
728th Ry Opn Bn	Cherbourg	Normandy	Cherbourg Terminal and line to and including Lison.
757th Ry Shop Bn	Cherbourg	Normandy	Cherbourg Shops.
764th Ry Shop Bn	Paris	Seine	Paris Shops.
127th Ry Workshop	Cherbourg	Normandy	
128th Ry Workshop	Lison	Normandy	
129th Ry Workshop	Cherbourg	Normandy	
130th Ry Workshop	Cherbourg	Normandy	
117th Hosp Tn Mt Sec	Paris	Seine	
118th Hosp Tn Mt Sec	Cherbourg	Normandy	
119th Hosp Tn Mt Sec	Cherbourg	Normandy	
139th Hosp Tn Mt Ptn	Cherbourg	Normandy	
140th Hosp Tn Mt Ptn	Cherbourg	Normandy	

2nd Military Railway Service....

HEADQUARTERS
EUROPEAN THEATER OF OPERATIONS
UNITED STATES ARMY

STANDING OPERATING PROCEDURE

NO 32

CONTINENTAL RAILWAYS

July 1944

APPENDIX NO. 10

(Chapter IV)

July 1944

HEADQUARTERS, EUROPEAN THEATER OF OPERATIONS
STANDING OPERATING PROCEDURE NO. 32
CONTINENTAL RAILWAYS

1. **SCOPE:** This SOP prescribes the procedure for construction, maintenance and operation of all military railroads in U.S. areas on the Continent.

2. **REFERENCES:**

- a. FM 100-10.
- b. TM 5-400

3. **GENERAL:**

a. Construction of Railroads: The construction of railroads will be the responsibility of the Engineer Service and will be under the technical supervision of the Chief Engineer, Communications Zone.

b. Maintenance of Way and Equipment: The maintenance of way and equipment will be under the technical supervision of the Chief of Transportation, Communications Zone, operating through the General Manager, Military Railway Service.

c. Operation of Railroads: The operation of railroads will be under the technical supervision of the Chief of Transportation, Communications Zone, operating through the General Manager, Military Railway Service.

4. **RESPONSIBILITY OF COMMUNICATIONS ZONE SECTION COMMANDERS:**

Communications Zone Section Commanders will exercise disciplinary and administrative control of troops and other railroad personnel.

5. **ORGANIZATION OF RAILROADS:**

The boundaries of Grand Divisions and Divisions of railroads will correspond to those of the sections and sub-sections of the Communications Zone to the fullest extent practicable to facilitate command and administrative and technical control. Superintendents and general superintendents of railroads will not be charged with area command.

6. **OPERATING PROCEDURES:**

Railroads will be operated in accordance with the provisions of Chapter 3, FM 100-10, and in the initial period, at least, will be operated as military railways under the supervision of the Chief of Transportation, Communications Zone. Civilian crews and personnel will be employed where available and such employment proves feasible. Civilian personnel may be employed also for maintenance of way and equipment. The employment of civilian labor on railways will be in accordance with the provisions of ETO-SOP No 29, "Procurement, Utilization and Administration of Civilian Labor in Liberated or Occupied Territories". Changes in the above operating procedure will be accomplished through the publication of instructions by the Commanding General, Communications Zone. The detailed provisions for the operation of the railroads are prescribed in FM 5-400.

APPENDIX NO. II
(CHAPTER IV)

The extent of the responsibilities of a Railway Grand Division (RGD) is illustrated by an assignment order sent to the 709 RGD by the Second MRS dated 9 October 1944. (Abstracted): "Item 10. You will be held responsible for all operations of military railways under your jurisdiction as outlined below:

- a. Transportation Department.
 - (1) Assembling, classifying and prompt handling and release of cars.
 - (2) Dispatchment and expeditious movement of trains.
 - (3) Tracing car movements, return of empty cars and distribution to loading points.
 - (4) Supervision over telegraph and telephone communications.
- b. Engineering Department.
 - (1) Maintenance of track and roadway property, including bridges culverts, building, coaling stations, and structural elements of water stations.
 - (2) Supervision over maintenance of signals. Control tower apparatus, interlocking plants and track circuits.
 - (3) Necessary arrangements for adequate supply of water, including maintenance of all piping and mechanical appliances connected therewith.
 - (4) Reconnaissance of newly captured territory and submission of the proper reports covering condition of property.
- c. Equipment Department.
 - (1) Supervision over all railway repair shops to provide proper maintenance of motive power and cars.
 - (2) Supervision of arrangement, operation and maintenance of shop machinery and mechanical equipment in buildings.
 - (3) Submission of reconnaissance reports on newly captured territory covering motive power and rolling stock.
- d. Stores Department.
 - (1) Coordinate supply requirements and exercise technical supervision over storekeepers.
 - (2) Maintain adequate fuel reserves.

RAIL MOVEMENT WITHIN THE COM. Z.

Quoted from Administrative Procedure for Movement of Supplies on the Continent (except via Air - Part I).

A. MOVEMENT OF GENERAL SUPPLIES:

1. Demands for cars are placed by Depot, Port, or Unit Commander with appropriate RTO.
2. The RTO: a. Confirms the ability of consignee to accept shipment. b. Secures cars in accordance to paragraph 3, 4, 5 and 6 and spots as requested.

3. Demands for 5 or less cars handled R.T.O.
4. Demands involving over 5 cars are referred by R.T.O. to the District Transportation Officer.
5. On shipment involving 25 or more cars and up to 250 tons, Section Transportation Officer issues clearance (but notifies Hq. Com Z of all shipments exceeding 100 tons).
6. On shipments of over 250 tons, Section Transportation Officer obtains clearance from Hq. Com Z.
7. The bulk of traffic will move on regular scheduled service and paragraphs 3 thru 6 above refer to shipments other than those covered by regular scheduled service.
8. Consignor is responsible for:
 - a. Proper loading, stowing, lashing, sheeting, and bracing cars. Loading will conform with gauge limitations shown in Incls - 7 and 8, (not included here with) and must be approved for movement by representative of MRS or RTO.
 - b. Documentation.
 - c. Immediate notification of RTO to move cars, on completion of loading.
9. RTO is responsible for:
 - a. Inspecting all cars for conformance with 8a above.
 - b. Advice to consignee through destination RTO and Hq Com Z by Traffic Dispatch. Advice of shipments, by telephone or teleprinter.
 - c. Maximum loading of cars consistent with safety.
 - d. Prompt unloading of cars.
 - e. Prompt release of cars after unloading.

B. MOVEMENT OF VEHICLES.

10. From Port areas as directed by Port Commander:
 - a. Required rail facilities obtained by RTO on authority of Port Commander for moving either general or special purpose vehicles.
11. From points other than Port areas:

RTO will make required equipment available on request of Hq. or Unit requiring Movement, as provided in paragraph 1 thru 9 above.

C. ORGANIZATIONAL EQUIPMENT NOT CARRIED IN VEHICLES.

12. Will be delivered to railhead from which unit normally draws supplies. (For units already on the Continent)
13. If unit is not already on the Continent, such equipment will be directed by CG, Com Z.

FROM U.K. TO POINTS ON CONTINENT

14. Under direction of Port Commander and in accordance with paragraphs 1 thru 9 above.

FROM U.S. TO POINTS ON CONTINENT.

15. (same as paragraph 14 above).

APPENDIX NO. 12

(Chapter IV)

SHIPMENTS OF IMPORTED COAL
TO VARIOUS DESTINATIONS

	<u>FROM</u>			<u>SNCF</u>	<u>Q M</u>	<u>21 Army</u>	<u>ATIC</u>	<u>Military</u>	<u>Total</u>
	<u>Cherbourg</u>	<u>Granville</u>	<u>Caen</u>						
August	10451							10451	10451
September	30383							30383	30383
October	38612	11804		959				50416	51375
November	11390	33317	16868	4451	2060	468			68554
December	6412	48304	13228	40456	4064	3423	63		115950
Total	97248	93425	30096	45866	6124	3891	63	91250	276713

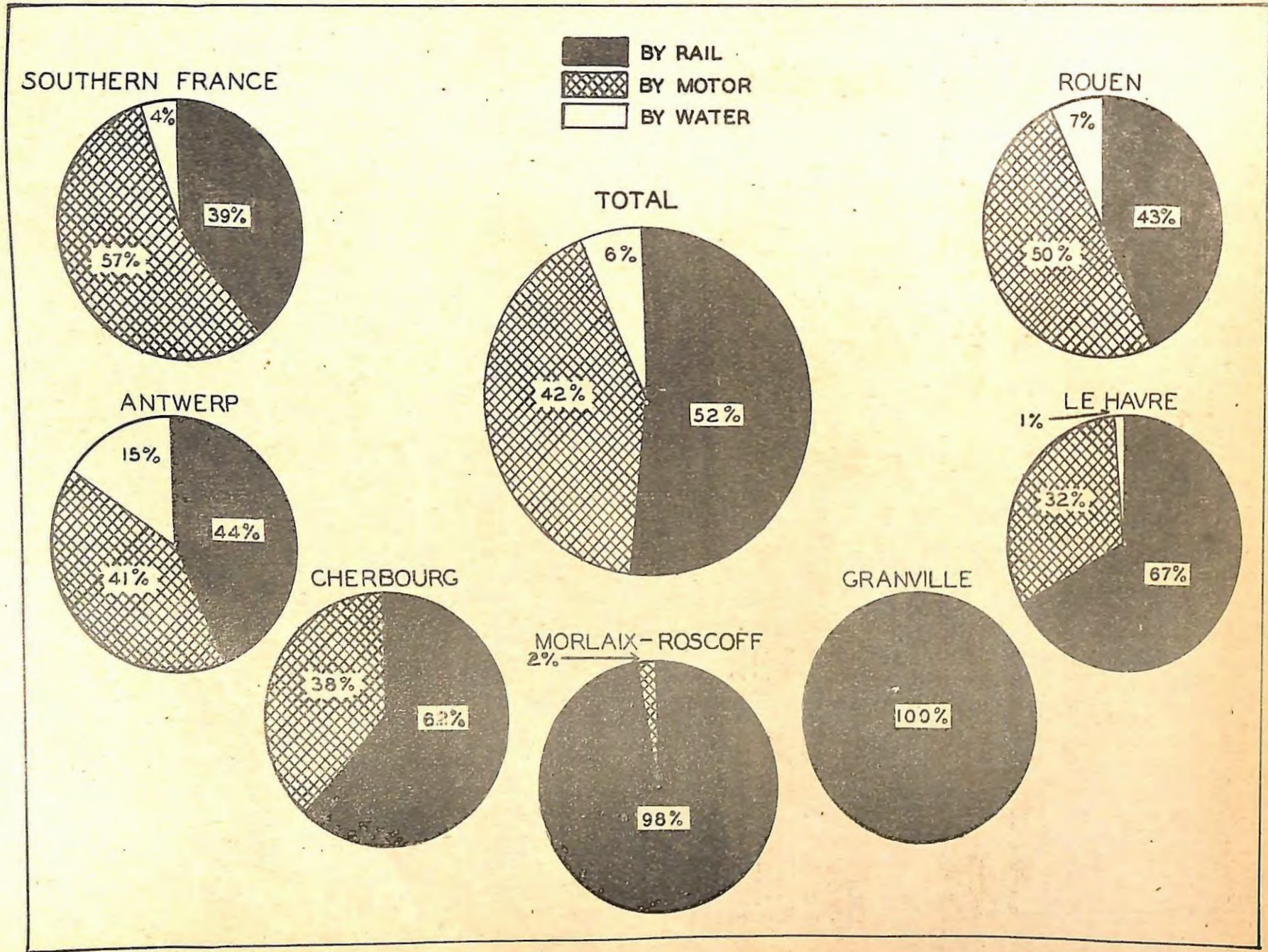
APPENDIX NO. 13(CHAPTER IV)

15 February 1945

COMPARISON OF PLANNED AND ACTUAL TRACK
MILEAGES FOR U.S. MILITARY RAILWAY OPERATIONSPRE D-DAY ESTIMATED MILEAGEACTUAL OPERATED MILEAGE

<u>D+</u>	<u>DOUBLE TRACK</u>	<u>SINGLE TRACK</u>	<u>TOTAL</u>	<u>D+</u>	<u>DOUBLE TRACK</u>	<u>SINGLE TRACK</u>	<u>TOTAL</u>
D+30			46.62	D+30	35	37.00	72
D+60			304.17	D+60	46	87.00	133
D+90	188.0	329.5	517.5	D+90	211	687.00	898
D+120	472.6	158.3	630.9	D+120	2189.71	278.58	2468.29
D+150	535.6	202.2	737.8	D+150	2411.55	281.61	2693.16
D+180	579.5	299.8	879.3	D+180	3157.65	300.33	3457.98
D+210	579.5	546.6	1126.1	D+210	3447.89	553.40	4001.29
D+240	724.2	594.5	1318.7	D+240	3740.68	543.55	4284.23

ARMY TONNAGE CLEARED FROM CONTINENTAL PORTS



~~SECRET~~

1-31 DEC. 1944

STATISTICS BRANCH T. C.

S E C R E T

Table 11

ARMY TONNAGE CLEARED FROM CONTINENTAL PORTS BY RAIL, MOTOR, AND WATER

December 1944

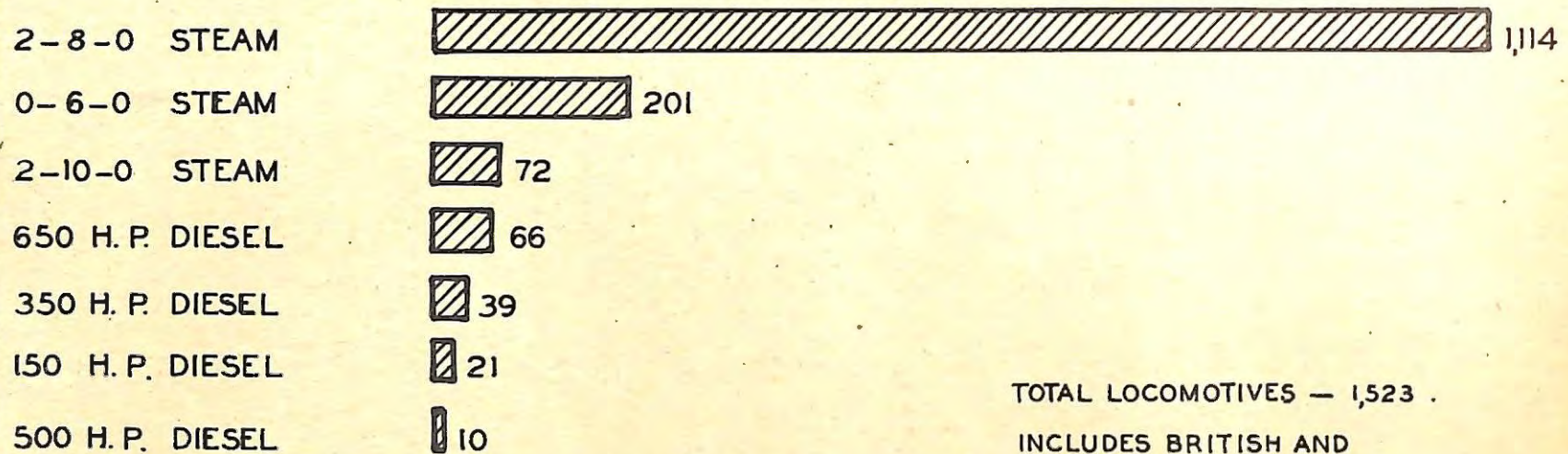
<u>PORT AREA</u>	<u>BY RAIL</u>		<u>BY MOTOR</u>		<u>BY WATER</u>		<u>TOTAL</u>	
	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>	<u>%</u>	<u>Long Tons</u>	<u>%</u>
Southern France	161,692	39	233,359	57	16,013	4	411,064	100
Antwerp	137,316	44	126,803	41	47,829	15	311,948	100
Cherbourg	155,795	62	97,202	38	-	-	252,997	100
Le Havre	107,481	67	51,493	32	697	1	159,671	100
Rouen	54,102	43	63,932	50	9,164	7	127,198	100
Granville	53,925	100	-	-	-	-	53,925	100
Morlaix/ Roscoff	32,899	98	595	2	-	-	33,494	100
TOTAL	703,210	52	573,384	42	73,703	6	1,350,297	100

STATISTICS BRANCH
TRANSPORTATION CORPS, CZ, ETOUSA
31 DECEMBER 1944

S E C R E T

E.T.O. ROLLING STOCK ON CONTINENT

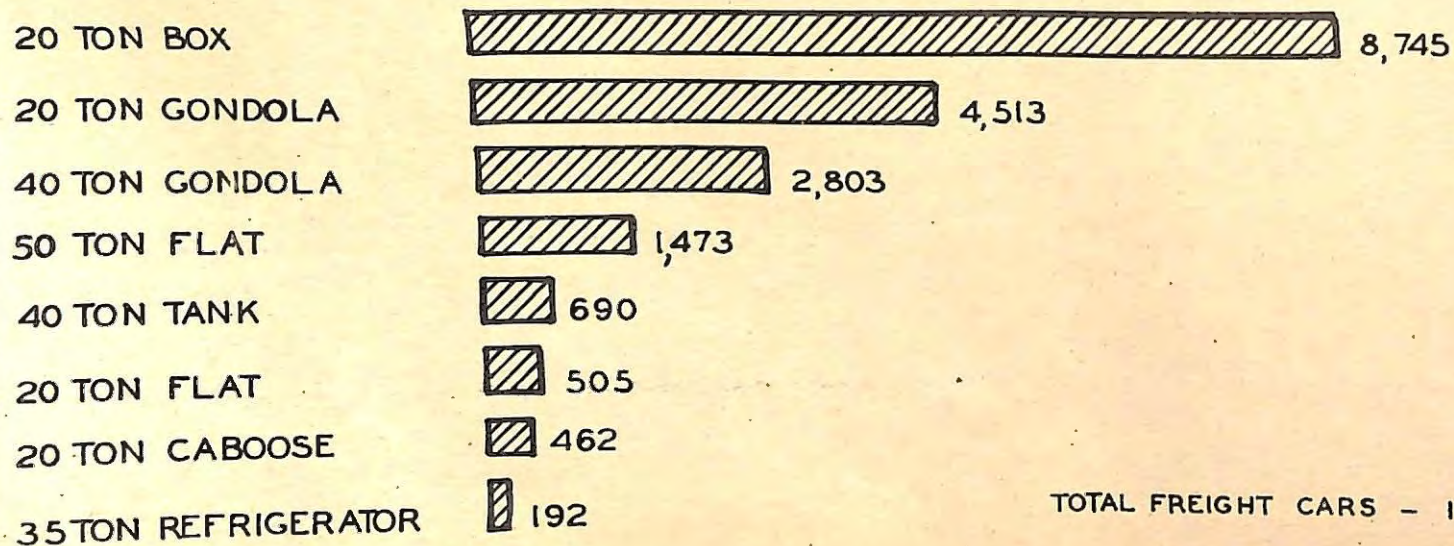
LOCOMOTIVES



TOTAL LOCOMOTIVES - 1,523 .

INCLUDES BRITISH AND AMERICAN MAKE .

FREIGHT CARS



TOTAL FREIGHT CARS - 19,383 .

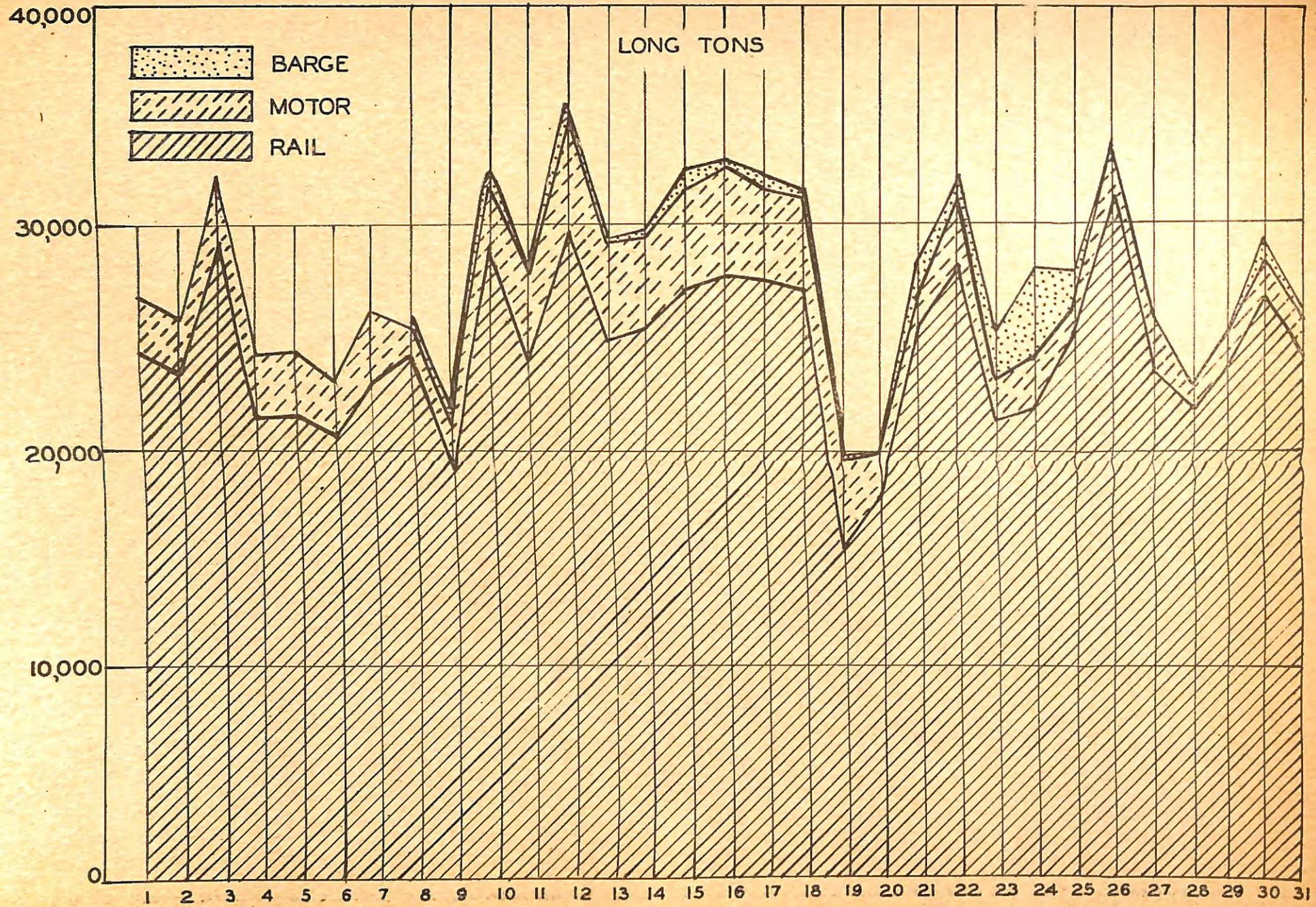
DOES NOT INCLUDE SOUTHERN FRANCE

~~SECRET~~

31 DECEMBER 1944

STATISTICS BRANCH T. C.

RAIL, MOTOR AND BARGE MOVEMENT EAST OF SEINE RIVER



~~SECRET~~

DECEMBER 1944

STATISTICS BRANCH T.C.

SECRET

Table 28

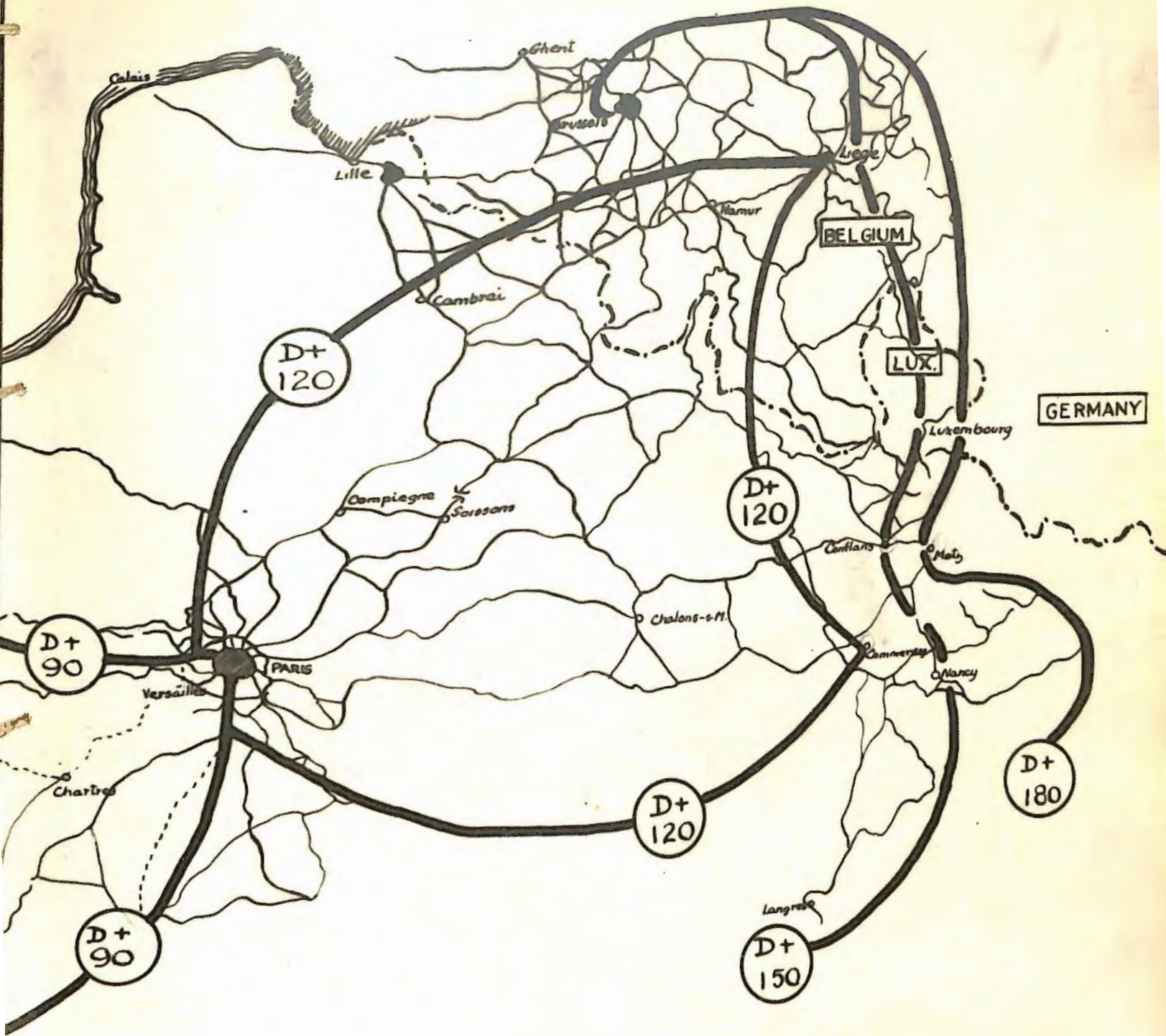
RAIL, MOTOR AND BARGE MOVEMENT EAST OF SEINE RIVER - LONG TONS

DECEMBER 1944

<u>DATE</u>	<u>RAIL</u>	<u>MOTOR</u>	<u>BARGE</u>	<u>TOTAL</u>	<u>DATE</u>	<u>RAIL</u>	<u>MOTOR</u>	<u>BARGE</u>	<u>TOTAL</u>
1 Dec	24,392	2,521	-	26,913	17	27,545	3,941	704	32,190
2	23,239	2,638	-	25,877	18	27,166	3,928	302	31,396
3	29,388	2,984	-	32,372	19	15,415	4,258	190	19,863
4	21,396	2,910	-	24,306	20	17,912	2,005	-	19,917
5	21,454	3,019	-	24,473	21	25,614	1,212	1,404	28,230
6	20,515	2,697	-	23,212	22	28,403	2,972	945	32,320
7	23,027	3,214	-	26,241	23	21,227	1,851	1,236	24,314
8	24,289	1,295	357	25,941	24	21,844	2,398	4,036	28,278
9	19,193	1,829	557	21,579	25	25,127	1,193	1,822	28,142
10	29,133	2,654	477	32,264	26	31,175	2,393	-	33,568
11	23,954	3,834	-	27,788	27	23,575	2,475	-	26,050
12	29,715	5,025	580	35,320	28	21,673	1,254	-	22,927
13	24,705	4,407	149	29,261	29	23,763	1,777	-	25,540
14	25,392	3,838	331	29,561	30	26,951	1,643	567	29,161
15	27,188	4,399	736	32,323	31	24,063	1,673	503	26,239
16	27,652	4,754	314	32,720					

STATISTICS BRANCH
TRANSPORTATION CORPS, CZ, ETOUSA
31 DECEMBER 1944

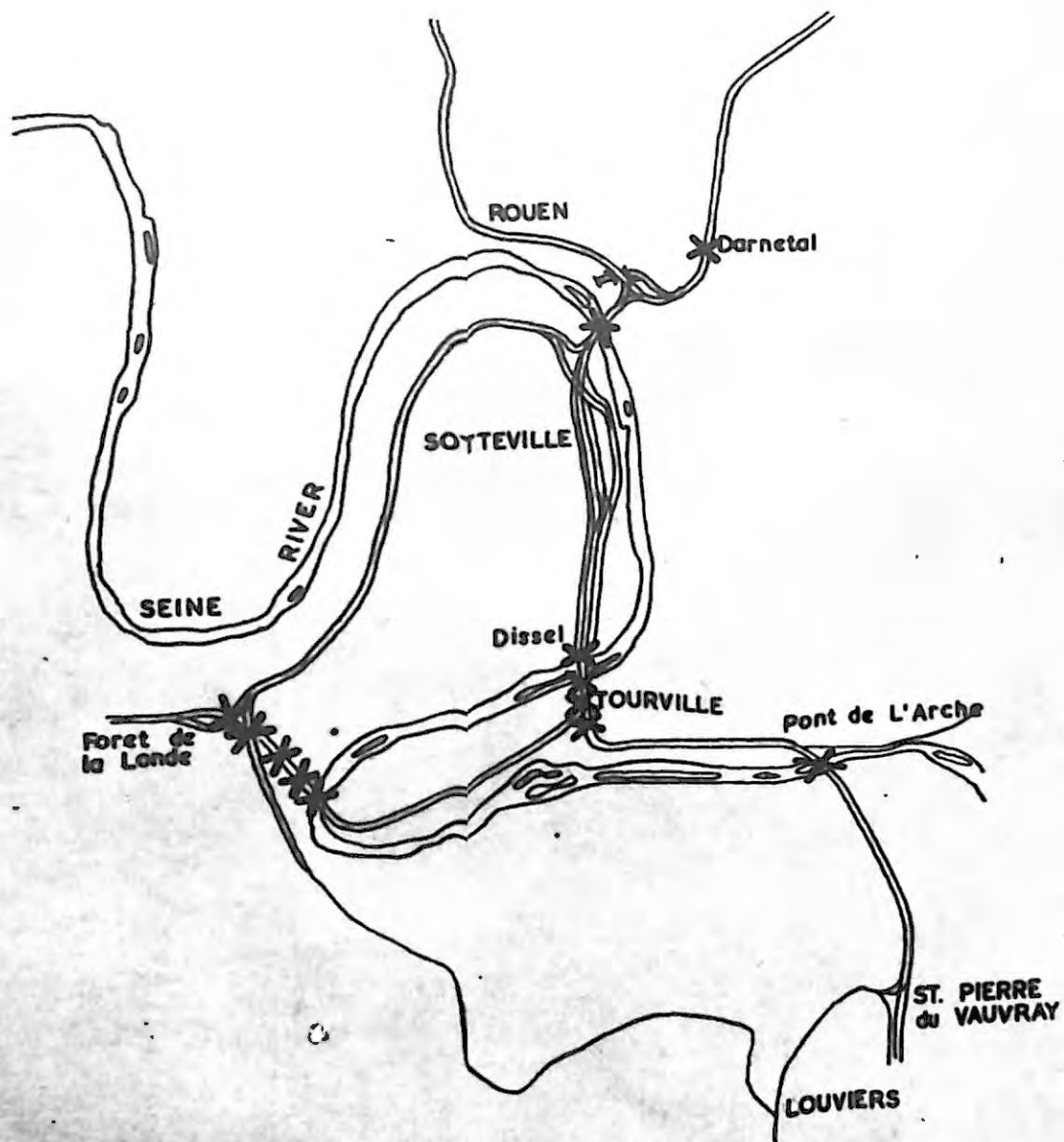
SECRET



PROGRESS OF THE MRS CONTINENTAL RAILWAY LINES
 BY 30 DAY PERIODS, FROM D+100 TO D+180.
 NO IMPORTANT RAIL LINE ADVANCE MADE
 AFTER D+180

NO SCALE

CHART NO. 1
 Chapter IV



X = BRIDGE OUT
 NO SCALE

**DESTRUCTION OF BRIDGES
 ROUEN AREA
 FRANCE - E.T.O.**

SITUATION AS OF 26 OCTOBER 1944
 CHART NO. 2
 Chapter IV

DESTRUCTION OF BRIDGES

METZ AREA

FRANCE-E.T.O.

SITUATION AS OF 25 NOVEMBER 1944

X = DAMAGED OR DEMOLISHED BRIDGES

NO SCALE

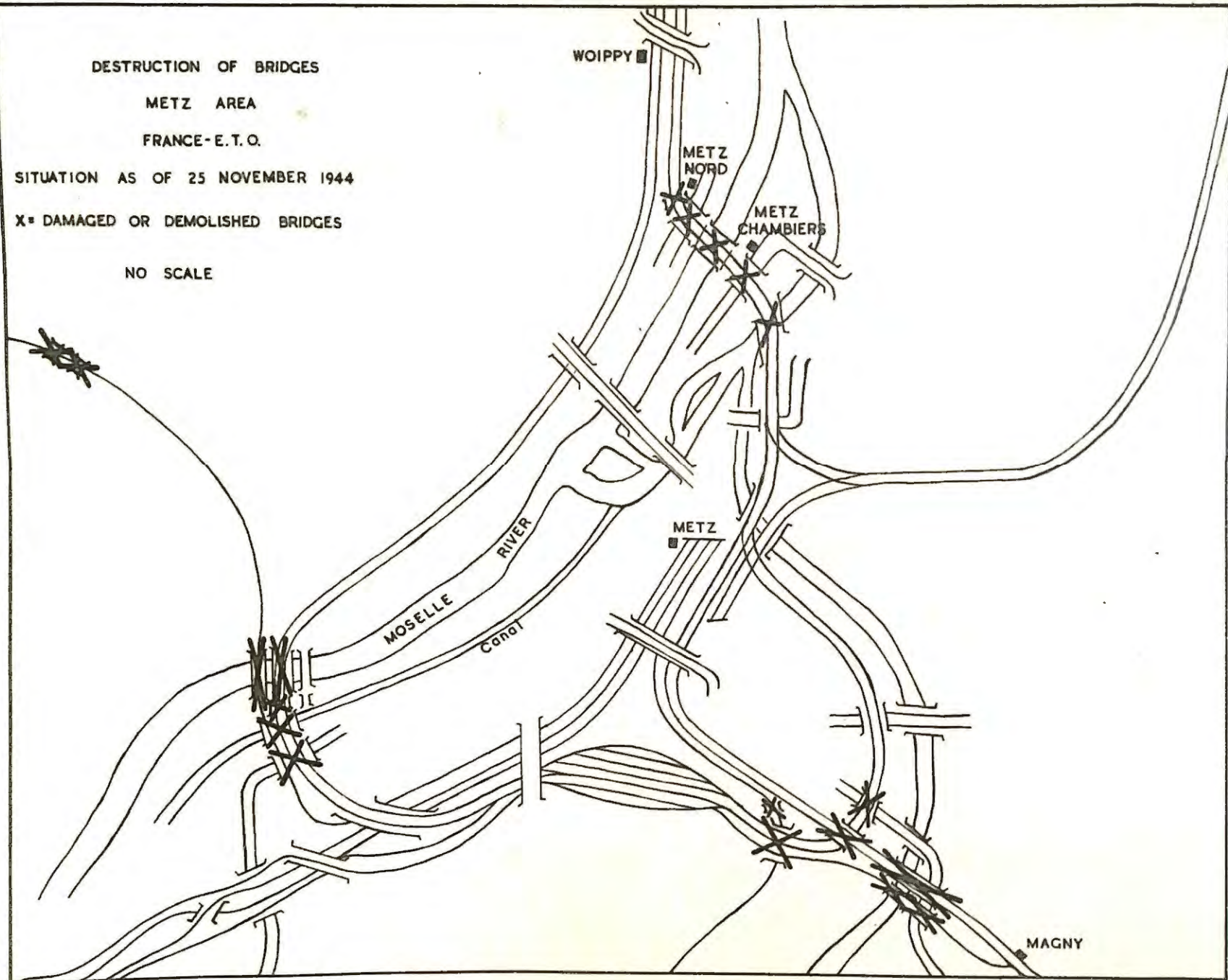
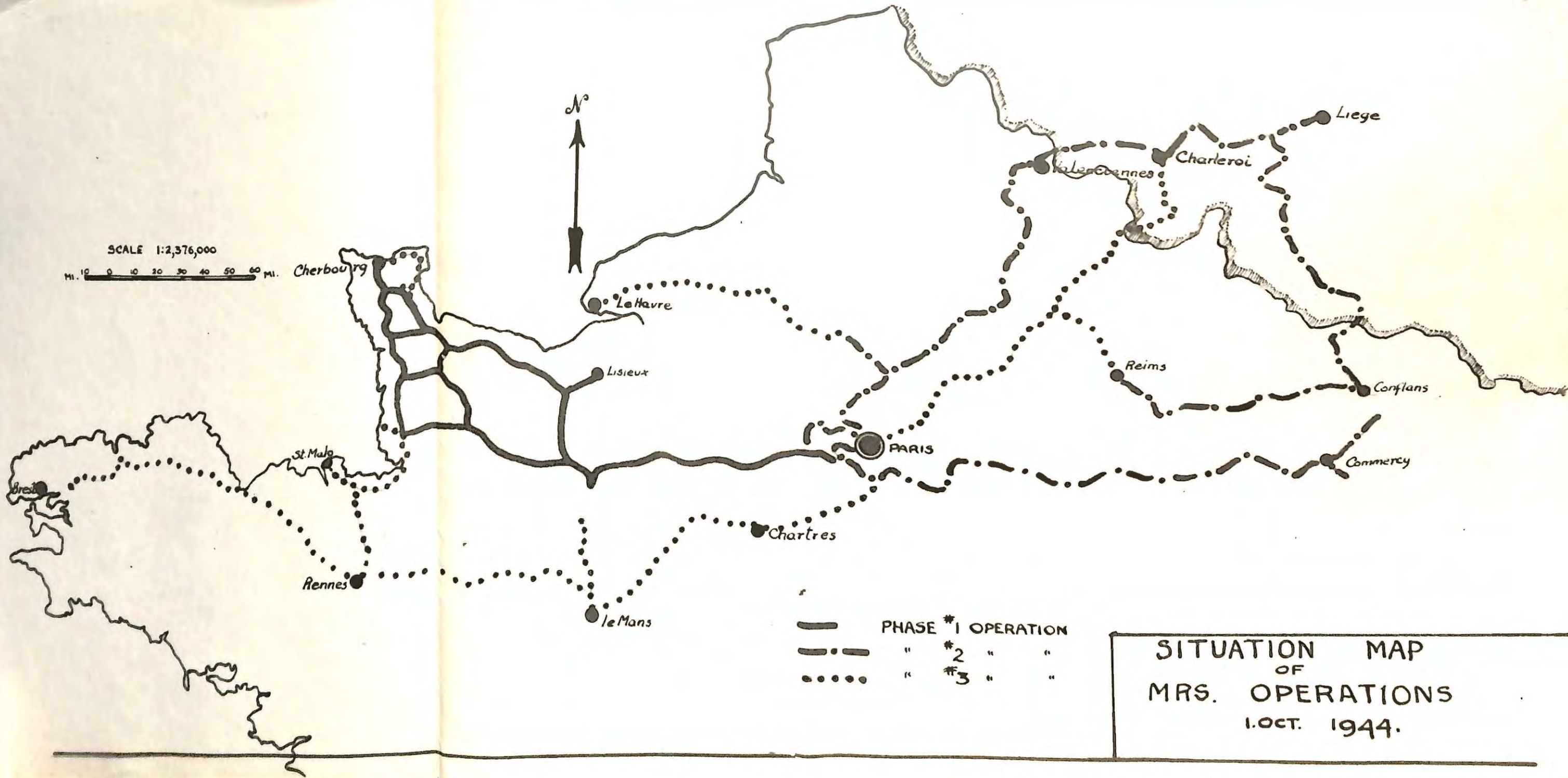


CHART NO. 3
Chapter IV

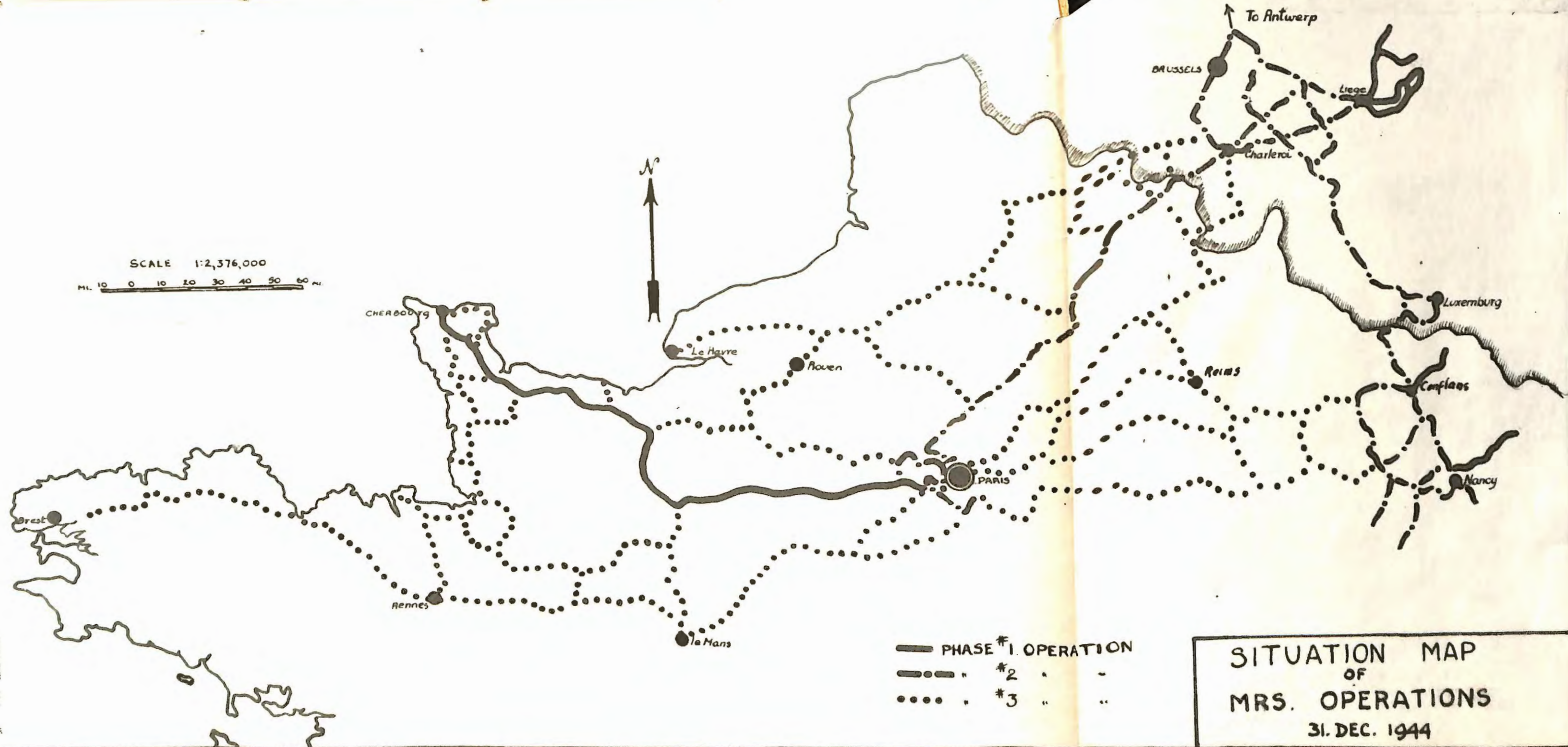
SCALE 1:2,376,000

Mi. 0 10 20 30 40 50 60 mi.



— PHASE #1 OPERATION
- - - " #2 " "
... " #3 " "

SITUATION MAP
OF
MRS. OPERATIONS
1.OCT. 1944.



SITUATION MAP
OF
MRS. OPERATIONS
31. DEC. 1944

~~SECRET~~

SECRET
AUTHORITY
CG 2ND M.R.S.
INITIALS *JFC*
DATE 5/1/45

RY. GRAND DIV.	RY OPER. BN.
706	712 718 732 733
707	729 743
708	734 740 741
709	716 722 735 744
710	720 723 724 728

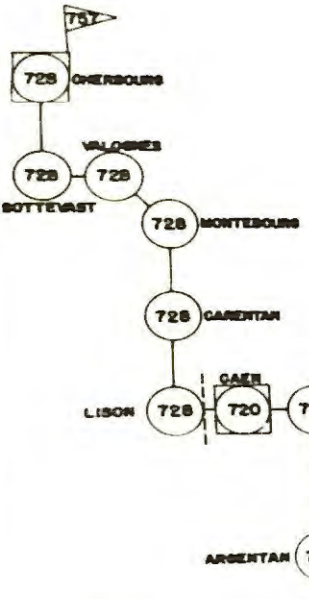
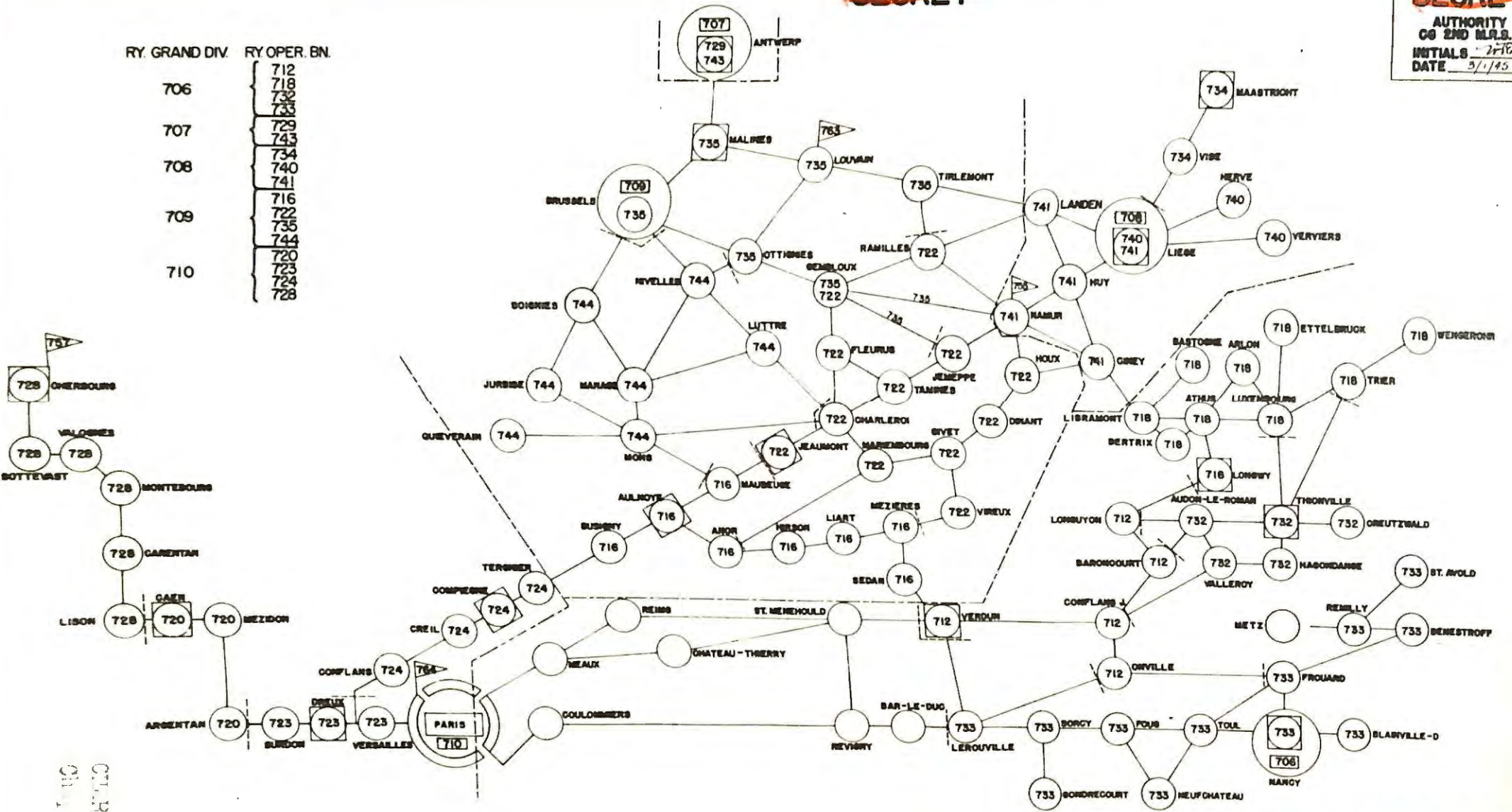


CHART NO. 6
DATE 1945

NOTES

- 735 - OPERATES YARDS AT GEMBLOUX & RONET
- 744 - HQ. AT CHARLEROI

LOCATION OF RY. SHOP BN. (Square symbol)

LOCATION OF RY. OPER. BN. HQ. (Circle symbol)

LOCATION OF RY. GRAND DIV. HQ. (Circle with square symbol)

LIMITS OF RY. OPER. BN. TERRITORY (Dashed line)

LIMITS OF RY. GRAND DIV. (Dotted line)

LOCATION OF UNITS AS OF JANUARY 1, 1945

SECOND MILITARY RAILWAY SERVICE
GENERAL MANAGER'S OFFICE
ENGINEERING DEPARTMENT

OPERATING LIMITS
RY. BATTALIONS & GRAND DIV.

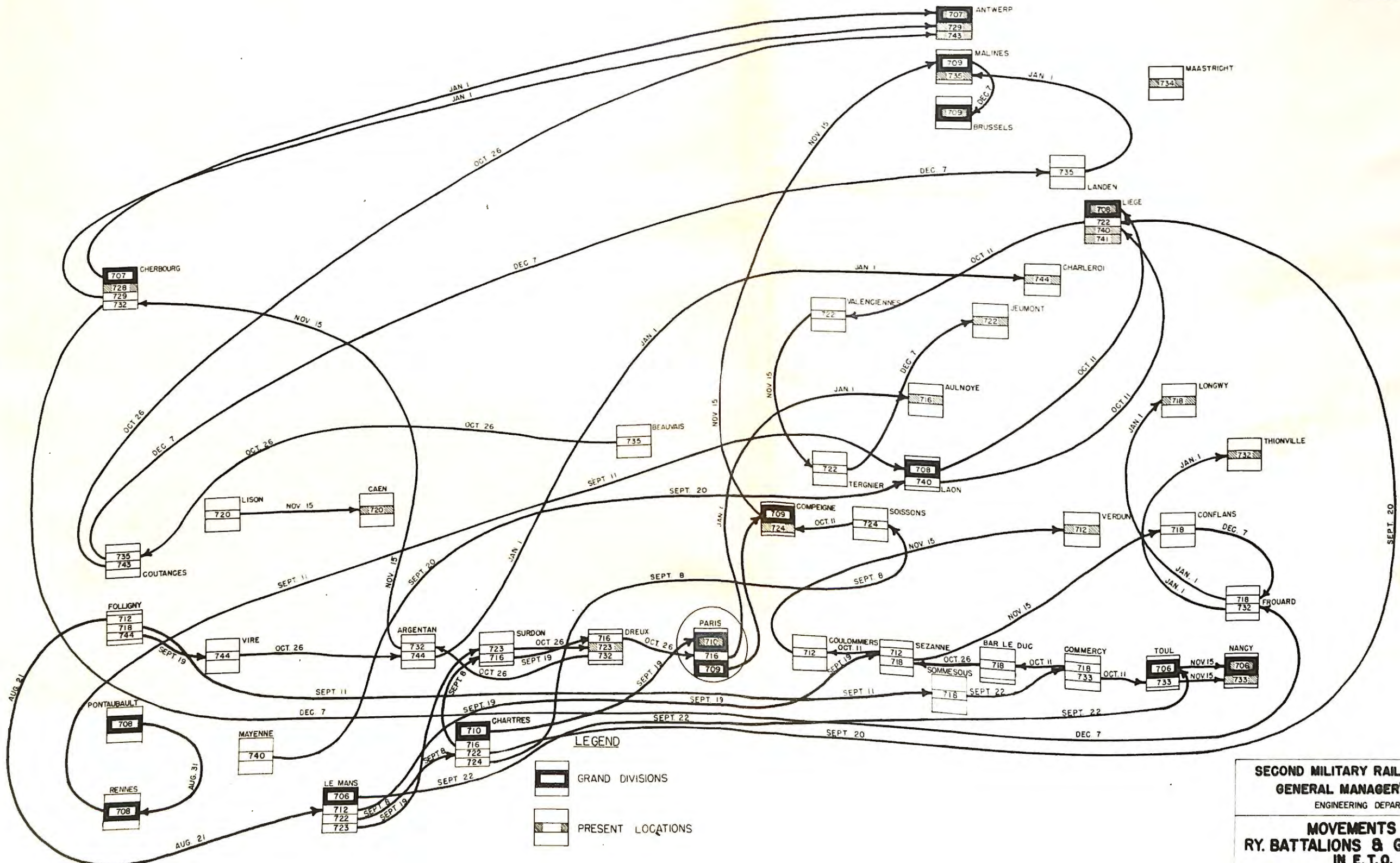
CHECKED BY: *[Signature]*
APPROVED BY: *[Signature]*

DRAWN BY: L G P
CHECKED BY: *[Signature]*
DATE: 3- JAN - 45
PAGE: 1 OF 1
PLAN NO: M 44

~~SECRET~~

SECRET

SECRET
AUTHORITY
CG 2ND M.R.S.
INITIALS *W.S.*
DATE *20/1/45*



SECRET

SECOND MILITARY RAILWAY SERVICE
GENERAL MANAGER'S OFFICE
ENGINEERING DEPARTMENT

MOVEMENTS OF
RY. BATTALIONS & GRAND DIVS.
IN E.T.O.

CORRECT: *W.S.*
M/SGT OFFICE ENGINEER

APPROVED: *W.S.*
COL ASST. GEN. MGR.

APPROVED: *W.S.*
BRIG. GEN. - GEN. MGR.

DRAWN BY E. L. C.	CHECKED BY E. L. C.	DATE 18 JAN 1945	PAGE 1 OF 1	PLAN NO. M 97
REVISION	DATE	BY		

CHAPTER . V

TRANSPORTATION BY MOTOR

Motor Transport Service

O U T L I N E

MOTOR TRANSPORT SERVICE

SECTION I
GENERAL

1.	General Condition of Roads and Road Net	Page 1
2.	General Trends in Use of Motor Transport on the Continent	Page 1
3.	Equipment, Motor Vehicle Supplies, and Maintenance	Page 2
4.	Personnel	Page 6
5.	Summary of MTS Activities	Page 7
6.	Trends in Use of MTS Facilities	Page 8
7.	Effect of German Counter-Offensive on MTS Operations	Page 8

SECTION II
EXPRESS MOTOR TRANSPORT SERVICE ROUTES

1.	Red Ball Route	Page 11
2.	Little Red Ball Route	Page 13
3.	White Ball Route	Page 13
4.	B-B (Bayeaux-Brussels) Red Lion Route	Page 15
5.	ABC (American-British-Canadian) Route	Page 18
6.	Green Diamond Route	Page 22
7.	POL Routes	Page 22

SECTION III

Extracts from Report on Motor Transport Operations in ETO, as prepared by
Colonel LACEY W. MURROW, TC. Page 25



DAMAGED ROADS



SNOW AND ICE



MUD



FLOODS

EFFECT OF WEATHER ON TRUCK OPERATIONS

CHAPTER V
MOTOR TRANSPORT SERVICE
SECTION I
GENERAL

General Condition of Roads and Road Net

The condition of the roads used by Motor Transport Service (MTS) for Line of Communications hauls in the European Theater of Operations was generally good. They were hard-surfaced in practically all areas used, with the exception of short stretches near depots, over detours or at other critical spots where abnormal activity had occurred. The reconstruction and reinforcement of bridges, the filling of bomb craters, and the clearing and repairing of roads damaged by artillery fire and aerial bombings, were among the duties of the Corps of Engineers. Before repaired roads were used for Line of Communications hauls, Transportation Corps scouting parties made the necessary reconnaissances over available roads in order to select the best and shortest routes.

The steady use of main roads resulted in the crushing and grinding of pavements, and over certain stretches the undersurface failed causing deep holes. Often the shoulders of the highways broke due to the weight of vehicles passing over them. Engineers performing road maintenance duties repaired such damage, as well as craters from combat activity, but over the scars of repairs and over sections not yet repaired, the road surface was often extremely rough for driving. In addition to these conditions, mud, ice, and fog were also a great hindrance to motor transport operations.

Although conditions on main Line of Communication routes were generally good, with the exception of those noted above, secondary roads, leading to depots and dumps, and within the areas themselves, were muddy and often covered with snow, and the undersurface was so badly damaged that they were difficult to negotiate, especially with heavy equipment such as tractors and trailers. Sustained activities in these localities aggravated the situation and vehicles often bogged down. Reports were received frequently at MTS headquarters regarding loading and unloading delays that were caused by these conditions. Bulldozers and tractors were used to extricate vehicles in some instances but the time lost became serious. Until hard-standings could be provided, these conditions prevailed in many areas.

General Trends in Use of Motor Transport on the Continent

The most flexible transportation facility available to the U.S. Armies in the European Theater of Operations was motor transport. It was flexible not only from the standpoint of allowing hauls to be made to any location at any time but also from the standpoint of being the most adaptable in meeting the needs for immediate transportation in a changing military situation as that which faced the U.S. Armies after landing in France. Probably the most important consideration in a military operation of this type was the fact that once vehicles were landed on the Continent and bridges and roads were repaired, even though only temporarily, trucks could be placed in service for the immediate movement of supplies and equipment.

Shortly after the assault landings in France and beginning with the arrival of the first Motor Transport Brigade units on the Continent the latter part of

June 1944, the advantages of motor transport facilities were exploited. In support of the break-through at St. Lo the latter part of July, motor transport was used to the fullest extent possible and, initially, was the only practical means of maintaining a flow of supplies to the Armies because of the condition of the railroads in the areas of France taken from the Germans.)

In order to meet the mounting demands of the Armies as they advanced across France, and as new ports and Lines of Communication were opened, express highway routes were established and operated by the Transportation Corps. The first of these operations was the Red Ball Route. However, as U.S. Army forces advanced further from the Cherbourg Peninsula, the length of the haul to Paris and beyond became abnormally great for continuous motor traffic over the Red Ball Route, and it became impossible for MTS to handle the tremendous amount of supplies required. (See Chart 1, Chapter I, for an indication of the Main Supply Lines and mileages from ports to inland points of delivery). Other express routes were, therefore, organized and operated to meet the demands. The principal express routes developed and operated before the end of the year 1944 were:

- (1) The Green Diamond Route, which was in operation from Cherbourg and the beaches in Normandy to Dol on the Brest Peninsula for the purpose of feeding supplies to the rail transfer point at Dol for main Line of Communication hauling by rail to forward areas.
- (2) The B-B (Bayeaux-Brussels) Red Lion Route, which supported the Belgian Campaign.
- (3) The White Ball Route from Le Havre and Rouen to forward supply areas, supporting the Northern French and Belgian Campaigns.
- (4) The ABC (American, British, Canadian) Routes from Antwerp to forward supply areas.
- (5) The Little Red Ball Route, established on 15 December 1944 for a fast delivery service for high priority hauls from Cherbourg to Paris.
- (6) POL Routes, which varied with the needs brought on by the tactical situation.

The need for some of these routes gradually decreased during the latter part of the year, as railway and inland waterway facilities became operative. In general, the trend was to organize new routes as new ports were captured and set in operation, in order to shorten the main supply Lines of Communication as much as possible. The various trucking routes operated in the Communications Zone, ETO, during the last three months of 1944, are discussed in detail later in this Chapter.

Equipment, Motor Vehicle Supplies, and Maintenance

As one of its functional duties, the Equipment Branch of MTS was responsible for equipping MTS units with vehicles and other unit T/E equipment. At the close of the year 1944, the total amount of equipment under MTS operation-



TRUCK WASHING LINE - LUXEMBOURG

TRUCK MAINTENANCE

TRUCK MAINTENANCE CHECK - FRANCE



al or technical supervision was that contained in approximately 198 Quartermaster Truck Companies (TC). This was not a fixed figure; changes were taking place frequently because of the varying demands, particularly during the later part of December when the German counter-offensive brought on additional changes in truck assignments to the Armies and Services. By type of vehicle these truck companies were equipped as follows:

<u>No. of Companies</u>	<u>Type of Vehicle</u>
104	2½-T. Std. 6x6
16	2½-T. COE (Cab over engine)
4	6-T. Semi-Trailer
1	10-T. AC (Animal or Cargo)
49	10-T. Semi-Trailer
6	12½-T. " "
2	45-T. Trailer
5	750-Gal. POL Tanker
9	2000-4000 Gal. POL Tanker
2	Refrigerator

Total 198 QM Truck COs (TC)

Included in the total of 198 truck companies were 84 companies directly under Motor Transport Service for operational control as well as technical supervision. Their number and type were:

<u>No. of COs.</u>	<u>Type of Vehicle</u>
26	2½-T. Std. 6x6
2	2½-T. COE (Cab over Engine)
1	6-T. Semi-Trailer
1	10-T. AC (Animal and Cargo)
37	10-T. Semi-Trailer
2	12-T. " "
1	45-T. Trailer
5	750-Gal. POL Tanker
9	2000-4000 Gal. POL Tanker

Total 84 QM Truck Cos. (TC)

The table of equipment for each truck company called for 48 vehicles. Under ideal operating conditions, 40 of them were to be always operating while 8 were out of service in rotational order for maintenance and repair. This meant a total of approximately 9500 vehicles with approximately 7900 in operation. The estimated lift of this equipment was 52,300 tons.

During November, an additional program for re-equipping 2½-ton Std. 6x6 truck companies with heavier equipment was begun and was still under way at the end of the year. Experience in trucking operations had revealed that heavier equipment, like the 10-ton truck-tractor semi-trailer, was capable of hauling more than 2½-ton 6x6 trucks with 1 ton trailers, whenever suitable roads were available. Thus, by the end of December, 30 Quartermaster Truck Companies (TC) with 2½-ton Std. trucks were re-equipped with 10-ton truck-tractor semi-trailer vehicles and there were indications that more were to be re-equipped. Most of this re-equipping was accomplished by sending trucking companies to the Port of Marseilles, where approximately 1800 trailers and 690 tractors had arrived directly from the United States. The equipment was loaded on five ships. Two ships carried the truck-tractor semi-trailers, and three carried QM Class III and Ordnance Class V supplies. The truck-tractor semi-trailers were assembled by Ordnance teams at Marseilles. Units making the trip to Marseilles to obtain 10-ton equipment were directed to make the return movement with loads of supplies for the advance areas and were then to return to their home station or

to a station newly assigned. By 30 November, 22 truck companies had gone to Marseilles for the purpose of obtaining this 10-ton equipment. Some of the companies doubled up on their assignment and obtained more equipment than was scheduled to be used by their unit; this was done in order to facilitate meeting current transportation commitments, and also, to effect the redeployment of units to forward areas, in order to continue the support of the Armies, and at the same time to obtain the equipment. After completing the move, this overstrength equipment drawn by certain units was properly turned over to its designated unit. Companies were sent two or three at a time in order to maintain a maximum lift on the trip as a Line of Communication operation.

While the personnel of these units were waiting for their vehicles to be assembled, a short course in nomenclature and driving of 10-ton truck-tractor semi-trailers was given to the drivers. For many of them, this was their first experience in handling heavy equipment. After the course, the vehicles were driven to the quayside at Marseilles, loaded with supplies, serviced, driven to Army destinations for unloading, and then forwarded to their proper station for use on regular Transportation Corps hauls. Most of the 10-ton semi-trailers equipment was allocated to the ABC operation for support of the First and Ninth Armies. This project of re-equipping trucking units with 10-ton semi-trailer materially added to the performance capacity of Motor Transport Service, and was the result of long and arduous work in planning by the MTS, as a solution to meeting the coming commitments in the face of an insufficient number of truck companies. From a total of 218 truck companies of all types, operating under Transportation Corps supervision during the first days of December, 10 were loaned to 6th Army Group, 4 to XVIII Corps, leaving 204 truck companies of all types operating on Communications Zone commitments. At the close of the year, a total of 75 additional QM Truck Companies had been authorized Transportation Corps for 1945, 30 of which were shipped to the United Kingdom, prior to being moved to the Continent; 31 were to be transported directly from the United States to the Continent; and 14 were due to arrive from the Persian Gulf. The latter were equipped with 10-ton cargo trucks (Diesel) and were expected to arrive 10 January 1945 at Marseilles. (Note: The 14 companies due to arrive from Persia had operated this type of vehicle there for two years.) At the port of Marseilles there were 185 10-ton cargo trucks (Diesel) which were being assembled; these trucks had recently arrived from the United States as part shipment for the 14 truck companies. Since this was a new type of cargo truck for the ETO, a study was being made at the end of the year to determine the type of operation best suited to its use. It was planned that they be used for static and Line of Communication hauls for heavy density supplies to forward areas.

Of the 30 unequipped truck companies for the TC in the UK, newly arrived from the United States, only one of these units was previously trained in the operation of 3-6 ton, 5-ton, 10-ton, or 12 $\frac{1}{2}$ -ton semi-trailers with 4-5 ton truck-tractors. This company was used as a training unit for the others. Due to the diverting of ships from Continental discharge to the UK, sufficient 10-ton semi-trailers and truck-tractors to equip five truck companies were available in UK ports. It was planned, and the program was started, to equip the training company and four others with these semi-trailers and truck-tractors, and then give the latter intensive schooling in semi-trailer operations before moving them to the Continent for urgent demands.

On the Continent, the vehicles of units being re-equipped with new 10-ton semi-trailers were turned over to a Transfer Pool near Chartres, in order to insure re-issuance of the old equipment to TC truck companies and in order to expedite the exchange. The pool was operated by personnel from MTS, OCOT, assisted by Ordnance Maintenance teams. Vehicles not in operating condition were turned over to a nearby Ordnance 3rd and 4th echelon shop for overhauling.

Appendix No. 2, this Chapter shows in tabulated form the special vehicle requirements of MTS, "On Hand Pending Issue", "On Hand Operating", "En Route", and "Required", as of 31 October, 30 November, and 31 December, 1944; Appendix No. 3 gives a daily breakdown of total vehicles "Assigned", "Available", and "In Use" for the same months of 1944.

The replacement of vehicles was another duty of the Equipment Branch of MTS and was frequently necessary due to casualties suffered by enemy action and due to wrecks and mechanical failures. The approximate total number of vehicles replaced or exchanged for 10-ton equipment during the months of October, November, and December was 6550. Replacements were usually facilitated through the stock acquired on the conversion to 10-ton equipment. Replacement operations were carried out at the Motor Transport Pool located near Chartres and the re-equipment program at Marseilles was handled by the 469th Quartermaster Group. Both operations were under the higher control of MTS.

The shortage of tires and tubes for replacements required by TC vehicles became acute during the last quarter of the year 1944. Preventive measures to ease the strain on tires and to take care of those already in use were urged to the fullest extent. It was estimated that 10 percent of the tires in MTS were worn beyond the point of recapping on 1 December and that many vehicles were being deadlined because it was impossible to obtain the necessary replacements. The wear and tear on tires and tubes made the obtaining of replacements a continual problem. As fast as new ones could be obtained they were put into service; there was never an over-abundant supply.

In a letter dated 1 December 1944, immediate assistance in establishing the necessary priorities for the release of materials needed to alleviate the critical problem was requested. Signed by Major General FRANK S. ROSS, this letter specifically requested:

	430 ea.	tires and tubes	6.00x6	6 ply
12,585	"	"	7.50x20	8 "
249	"	"	8.25x15	14 "
107	"	"	9.00x16	8 "
1,344	"	"	9.00x20	10 "
307	"	"	10.00x15	14 "
816	"	"	11.00x20	12 "
215	"	"	12.00x20	14 "

While the procurement of vehicles and tires were the two main vehicle supply problems, the needs for accessories and auxiliary articles ranging all the way from cotter pins to 750-Gallon Skid Tankers were various and many. Thus, such items as the following were required but available only in very limited quantities or not at all. Solder for use in repairing radiators, pumps to wash vehicles so that repairs could be better made, battery chargers, air pumps for tires, 750-Gal. Skid Tankers to alleviate the lift in POL, paint for lettering vehicles, tents, rope, cots, overshoes, sweaters, and overcoats, side rails, flags to mark American operations in British territory, bicycles to check convoy loads in marching yards, and Prestone and alcohol for antifreeze. Some of these items had an important bearing on certain operations. For example, a sufficient amount of Prestone not being available, alcohol was used instead. The rapid evaporation of alcohol from tractors hauling heavy loads caused over-heating and required constant alertness and maintenance by drivers. Items such as battery chargers and air pressure pumps were likewise important, the latter particularly because of the shortage of tires.

Normally the procedure for procurement of supplies was through regular

Army channels, that is, requisitioning Ordnance for items furnished by Ordnance, Signal for Signal supplies, etc. Truck companies made their requisitions directly to the branch of the Service involved. But where units had difficulty in obtaining supplies, requests were made to the Equipment Branch of MTS for their procurement from local military or civilian sources.

In November, increased emphasis was placed on preventive maintenance, and Line of Communications maintenance systems were organized in bivouac areas, supervised by Ordnance teams. These consisted of Chassis Grease Teams, Mechanic Teams, Body Repair Teams, Gear Box Lubricant Teams, Tire Teams, and Tightening Teams. Third and Fourth Echelon maintenance was performed by Ordnance installations. Under the supervision of, and with the aid of, Medium and Heavy automotive maintenance units, service points were established on the Line of Communications routes for use in performance of First and Second Echelon maintenance. During the last quarter of the year 1944, intensive effort was continued by the Motor Transport Service, OCOT, to lessen the large number of deadlined vehicles which existed in various Sections and Base Sections of Communications Zone. As a result of the work and close coordination with Ordnance, the average vehicle availability per company rose from about 30 on 27 November to 35 on 27 December. The improvement was due mainly to the speeding-up of the replacement of vehicles turned in to Ordnance, better availability of parts, improved maintenance procedures, and the new 10-ton equipment which was obtained. The vehicle replacement factor in Ordnance planning was set at 2 percent per month, which was based on a 10-hour day of operations, over roads in average condition. However, due to the necessity for a 20-hour day of operations, extensive night driving and unfavorable road conditions in many areas, a 2 percent replacement rate proved to be too low to maintain an adequate vehicle availability in TC Truck Companies. It was recommended before the end of the year that the replacement factor be raised to 8 percent per month for 2- $\frac{1}{2}$ ton equipment and 6 percent per month for truck-tractor semi-trailer equipment.

Appendix No. 4, this chapter, gives a copy of Maintenance Bulletin No. 2, published by MTS on 15 November 1944, which outlines the procedure to be followed in "Preventive Maintenance, Company Service Line Operations for Transportation Corps Organizations."

Personnel

The personnel involved in TC Motor Transport operations were primarily those from four types of organizations: the 6955th Hq. & Hq. Co. MTS, QM Groups (TC), QM Battalions, (Mobile) (TC) and QM Truck Companies (TC). In addition, QM Car Companies were on duty at various headquarters.

The 6955th Hq. & Hq. Co., Motor Transport Service, had a total of 55 officers and 128 enlisted personnel as of 31 December 1944. Most of this personnel was supplied by the 1st and 5th Group Regulating Stations and the 10th and 29th Traffic Regulation Groups, the latter being a WAC organization from which 3 officers and 11 enlisted women were included in the MTS. The 6955 Hq. & Hq. Co. was the higher headquarters for 8 Groups, 29 Battalions, and an average of 198 QM Truck Companies (TC). The T/O, (10-22), for a Group Headquarters called for a personnel strength of 10 officers and 21 enlisted men (plus Medical Detachment - not included in these figures). The T/O, (10-56), for a Battalion Headquarters allowed 6 officers and 21 enlisted men. (plus Medical Detachment)

The T/O, (10-57), for truck companies authorized 5 officers and 105 enlisted men.

On the basis of a separate Theater of Operations authorization, 45 additional drivers were to be added to each company in order to accomplish 24-hour operation, and 5 basic privates were to be retained when the companies were reorganized from an old T/O of 110 enlisted men. However, not all units were able to obtain this additional personnel but a total of 154 units did, and thus had a total of 5 officers and 150 enlisted men; the remaining 44 companies continued with their regularly authorized strength. The reason for augmenting the strength of (TC) truck companies was to be able to furnish relief for the drivers when operating 24 hours per day. MTS operated on tasks that were continually growing larger and larger as the length of hauls increased. Moreover, since many of the units were operating on the Continent shortly after D-Day, their personnel were in need of occasional relief. This augmentation was among the extensive plans made by MTS planners in the OCOT, beginning in August 1943.

Replacements for casualties were obtained from the Ground Forces Reinforcement System whenever priorities permitted, but the squeeze on man power was such that truck companies had a difficult time in obtaining replacements. This situation came about due to the fact that priorities for truck drivers were lower than those for other branches of the service. Due to the responsibility and duties involved, the type of personnel best suited for truck operations were those with high morals and a high sense of devotion to duty, and who could be trusted under their own personal supervision. Unless such were obtained, they were a detriment to efficient operations and effective maintenance. A comment by a TC officer presents this particularly important angle on the selection of personnel: "It is obvious that a truck driver must be not only skillful but morally trustworthy in view of the fact that his work leaves him his own master a large part of the time. People who have failed in other situations perhaps less tempting cannot be expected to impose upon themselves a vigorous self-discipline when the chances of being apprehended in various misdemeanors are practically nil. The nature of a convoy and particularly at loading and unloading areas where units tend to split up, leaves the driver much on his own. He must know how to take care of himself and have a sense of responsibility." As the weeks passed, it became evident that the type of man desired for truck operation was not too easy to obtain. There were approximately 1,299 officers and 28,625 enlisted men or a total of 29,924 men employed in Motor Transport Service operations, and approximately 73 percent of the truck companies were made up of Negro enlisted personnel. At the close of the year, it was anticipated that the percentage of Negro QM Truck Cos (TC) would increase in the future.

Summary of MTS Activities

By means of motor transport units under Transportation Corps control, at the close of September 1944, a total of 3,598,192 tons of supplies, and 156,902,372 ton-miles, had been forwarded in support of U.S. military operations in the European Theater of Operations. On 31 December 1944 the total number of tons forwarded on the Continent, since 17 June 1944, amounted to 9,421,458 tons, and 379,353,813 ton-miles. Appendix No. 5, this chapter, itemizes these figures day-by-day from 1 October 1944 through 31 December 1944, and gives monthly cumulative totals; Appendix No. 6 itemizes the ton-miles

forwarded by MTS on the Continent daily for the same three months, and gives monthly cumulative totals. For statistics showing relative amounts of supplies moved by rail, motor, and inland water, by ports, and east of the Seine River, see Appendixes Nos. 3 and 4, Chapter IV.

Return load tonnages were low due to a policy of concentrating on the forward movement of supplies. A Return Load Section was formed, however, in the Movements Division, Office Chief of Transportation (OCOT) and emphasis was placed on increasing such tonnage. From 11 to 25 November evacuation and return loads totaled 18,041 tons and 3,400,801 ton-miles for a daily average of 1,202 tons and 226,720 ton-miles. For the period 26 November to 9 December, evacuation and return loads totaled 25,743 tons and 5,592,222 ton-miles for a daily average of 1,839 tons and 399,444 ton-miles. During the latter part of the quarter, from 10 to 27 December, evacuation and return loads totaled 18,075 tons and 3,904,387 ton-miles, with a daily average of 1,063 tons and 22,966 ton-miles.

Trends in Use of MTS Facilities

The month of November was characterized by a gradual shift in the need for motor transport facilities to the north and east, away from the Cherbourg and Normandy area. Operations on the Normandy beaches declined to a minimum until the discharge of cargo from vessels had ceased at the beaches by 17 November. The Red Ball Route had been discontinued on 16 November. Clearance of supplies through the ports of Le Havre and Rouen increased so that they became the principal sources for the Line of Communication tonnages that were to be handled by Motor Transport Service units. The Green Diamond operation for loading cargo to rail at Dol was discontinued on 1 November.

Plans and reconnaissances were made during November in preparation for movement of alerted units into eastern areas in order to have them ready to support an extensive advance of the Armies. By the end of November, tentative plans were completed and approved by G-4, Headquarters Communications Zone, for the support of the Armies by Motor Transport Service units in the event of a break through into German territory. It was estimated that as many as 80 truck companies, with the equivalent lift of 110 $2\frac{1}{2}$ -ton units, could be made available for the operation. Certain of the units under consideration were already in advance locations; others were alerted or on route, and the balance were available when needed. The plan called for organizing a forward echelon of MTS for the purpose of controlling the motor operations supporting the First, Third and Ninth Armies. The MTS Sub-Headquarters thus formed was to act directly under the operational control of MTS, OCOT, or be placed on Detached Service with Advance Section, Com Z. Personnel was to be taken from that office and be given special training.

Effect of German Counter-Offensive on MTS Operations

During the last two weeks of December, Communications Zone requirements for movement of supplies by motor transport became complicated with the demands of the Armies being affected by the enemy's counter-offensive. Clearance of the ports of Le Havre and Cherbourg remained at former levels, while at Antwerp there was an approximate 30 percent decrease and a 50 to 60 percent de-



AMMUNITION FORWARD

FRANCE



TROOPS TO THE FRONT BY TRUCK

FRANCE



P.O.L. ON RED BALL HIGHWAY

ALENCON FRANCE



PACKAGED GASOLINE

FRANCE

CONVOY MOVEMENTS

crease at Rouen, due mainly to developments in the tactical situation. Motor transport lift diversions from Rouen to Army areas were mainly responsible for this trend and, to a smaller degree, the same was true at Antwerp.

Diversion of motor transport facilities to Army areas, Advance Section, and Oise Section began on the evening of 18 December. The lift taken initially from White Ball motor transport units was 274 $2\frac{1}{2}$ -ton equivalents, and from Seine Section, 258 $2\frac{1}{2}$ -ton equivalents were withdrawn. These units reported to Reims for the purpose of moving personnel of various combat divisions for 12th Army Group. On 19 December, 347 $2\frac{1}{2}$ -ton equivalents were dispatched from the White Ball operation to the Verdun area for the use of Oise Section and Army units. On 20 December, 371 additional $2\frac{1}{2}$ -ton equivalents were dispatched to Reims from the White Ball operation and other Channel Base Section motor transport. Vehicles not required in forward areas were returned. The balance remaining on forward missions on 21 December totaled 1048 $2\frac{1}{2}$ -ton equivalents. A total of 1823 $2\frac{1}{2}$ -ton equivalents were dispatched by Motor Transport Service, OCOT, and as of 31 December it was estimated that, in addition, more than 800 equivalents were sent forward by Communications Zone Sections from TC truck companies.

The motor transport equipment used during the emergency was predominantly composed of $2\frac{1}{2}$ -ton standard trucks and 10-ton semitrailers with 4-5 ton truck tractors. One result of the operation was a demonstration of the usefulness of this equipment as personnel carriers for rapid and large movements. As many as 60 men with equipment were carried by one of these assemblies.

Rapid communication with units under Motor Transport Service control, and centralized control for their dispatch through the Operations Branch, MTS, in coordination with G-4, Com Z, and with Motor Movements, OCOT, made it possible to divert promptly and efficiently motor transport facilities to meet the critical situation that developed. A total of 104 10-ton semi-trailers and truck-tractors were diverted from the ABC operation to meet G-4 priority moves; these vehicles were later returned to the ABC operations.

Until released, MTS vehicles in forward areas were under Army control. Vehicles returning to Channel Base Section and Seine Section bivouacs were routed through Reims, where they cleared through the Motor Transport Section, Oise Section, for new assignments or for return to home stations. This work was coordinated by Operations Branch, MTS, OCOT, which personnel was furnished to assist in the complex moves that were required and to help establish the necessary control. Other MTS personnel was sent to Verdun for the same purpose. As of 31 December 1944, of the total $2\frac{1}{2}$ -ton equivalents remaining in forward areas it was anticipated that a total of 593 would be returned.

POL lift was also used during the emergency. Three companies of 2000-gallon semi-trailers were located in the Antwerp area moving POL to Liege dumps. These units were discharging at Liege when the dump was struck by an enemy jet-propelled bomb. They immediately evacuated to rear storage areas and continued to evacuate 400,000 gallons of Aviation Gas from the Liege dumps. Other 2000 gallon truck-tractor units in the Rouen area supplied 200,000 gallons of gasoline to decanting points in Reims for operation of cargo trucks sent forward from Base Sections.

MOTOR-TRANSPORT
EXPRESS ROUTES
 TRANSPORTATION CORPS COM-ZONE
 ETOUSA

15 - OCT. - 1944

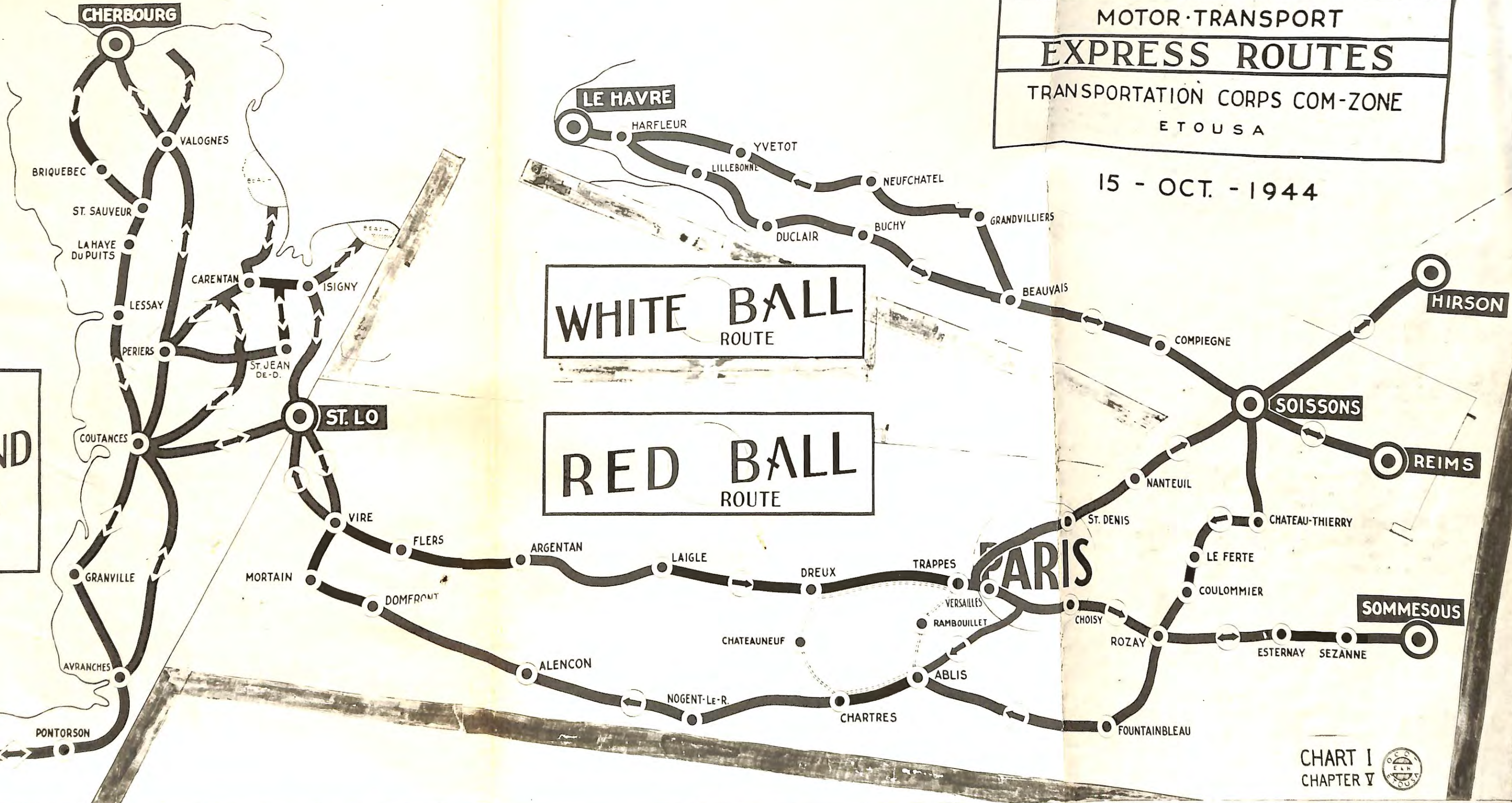
GREEN
DIAMOND
 ROUTE

WHITE BALL
 ROUTE

RED BALL
 ROUTE

PARIS

CHART I
 CHAPTER V



TO: Chief of Transportation, Headquarters, Communication Zone.
Your contribution in the manning, administration and supply that made these emergency efforts successful is gratefully acknowledged. Please convey my appreciation to your entire staff.

s/ John C. H. Lee
t/ JOHN C. H. LEE
Lieutenant General, U.S. Army
Commanding

SECTION II

EXPRESS MOTOR TRANSPORT SERVICE ROUTES

(See Chart No. 1, this Chapter, for Red Ball, Green Diamond, and White Ball Routes, as of 15 October 1944; See Chart No. 2, for White Ball and POL Routes as of 15 November 1944. Appendix NO. 7, shows tonnages hauled daily by MTS over the various MTS Express Routes during October, November, and December 1944.)

Red Ball Route

The most widely known express route operated by the Transportation Corps on the Continent before the end of the year 1944 was the Red Ball Route which became operative on 25 August 1944 and officially closed 16 November 1944.

The idea of operating a Red Ball Route and the procedure that was to be followed did not occur suddenly. It was the outcome of circumstances and the fact that the need for such an operation had already been anticipated. The two individuals mainly responsible for its inception were Lt. Colonel L.A. AYERS, and Lt. Colonel W. V. JOYCE, G-4 Section, Communications Zone. The SOP Movement Control, and other plans were developed by these two officers with the cooperation of Captain W. A. BAUER, and Captain CARL A. VALENTINE.

The breakthrough at St. Lo the latter part of July was the beginning of rapid advances by U.S. First and Third Armies that led on towards Paris. This focused attention on the necessity for the movement of large supply tonnages in order to follow up the Armies' northern drive. With the railroads at that time not sufficiently rehabilitated, it became the duty of motor transport officials to devise an adequate trucking program and follow it through to successful completion. Thus, on 21 August, the Red Ball plan was completed and four days later it was in operation. Movement control of operations on the Red Ball Route was under G-4, Normandy Base Section, and the truck companies were furnished by Motor Transport Brigade, under the command of Colonel C.W. RICHMOND.

Operating details concerning the Red Ball Route or Red Ball Express as it was commonly known, are covered in Volume IV, History of the Transportation Corps in the Battle of France. (See also Chapter VI, this Volume, under Normandy Base Section). A summary of its accomplishments follows:

- (1) The Red Ball Route lengthened with the advance of the Armies and

in its later stages of operation it extended from St. Lo to Paris. Subsequently, East of Paris runs were made to Sommesous, Reims, and Hirson; some runs were also made west from Paris (See under Statistics, next paragraph). Loaded convoys traveled along a specially reserved network of highways leading through the following principal towns: St. Lo, Viro, Argentan, Laigle, Vornouil, Drouz, Trappes, Versailles, and Paris. Returning convoys, (sometimes empty and sometimes loaded) passed through Ablis, Chartres, Nogent, Aloncon, Pro-en-Boil, Domfront, Mortrain, Viro, and St. Lo. (Chart Noll, this Chapter, shows the extensions beyond Paris as of 15 October.) (The length of the route from St. Lo to Paris and return averaged 546 miles.) It required an average of 53.4 hours for convoys to complete a round trip and the average speed maintained by convoys, allowing for all stops, was 10.2 miles per hour. The loading time for convoys averaged 11.6 hours and for unloading time, 4 hours. The average tonnage on each $2\frac{1}{2}$ -ton truck was 4.9 tons.

(2) Following are statistics on the Red Ball operation as reported by the Status Branch, Motor Transport Service;

Date Started: 25 August 1944.

Date of final haul: 13 November 1944; officially closed 16 November 1944.

Number of operating days; 81

Total tons moved: 412,193 (approximately) (Note: this figure is approximate due to the fact that accurate records the first few days are not a certainty).

Destinations:

Tons to 1st Army---	61,817
" " 3rd " ---	50,937
" " 9th " ---	8,321
Tons to Rail Transfer Points---	105,421
" East of Paris.---	66,545
" Paris & West---	15,690
" to 1st & 3rd Armies(25 Aug-8 Sept)---	103,462
Daily average tonnage from 25 August to 13 November:	5,088
Average tonnage Aug. (7 days)	8,222
" " Sept. (30 Days)	6,159
" " Oct. (31 ")	4,889
" " Nov. (13 ")	1,405
Daily average number of vehicles sent forward:	899
Total ton-miles: 121,873,929	
Average daily ton miles: 1,504,616	

The highest tonnage hauled over the Red Ball Route on a single day was on 29 August 1944, when 12,342 tons of supplies were moved. On that day the Transportation Corps had in operation on Line of Communication or static hauls 179 trucking companies, of which 132 were operating on the Red Ball Route. The 179 trucking companies were composed of the following:

<u>No. of Companies</u>	<u>Type of Vehicle</u>
104	$2\frac{1}{2}$ -T. Std
25	$2\frac{1}{2}$ -T. COE
8	6-T. Semi-Trailers
10	10-T. Semi-Trailers
3	10-T. AC
11	$12\frac{1}{2}$ -T. Semi-Trailers
2	45-T. Trailer
5	750-Gal. POL



1



2



3

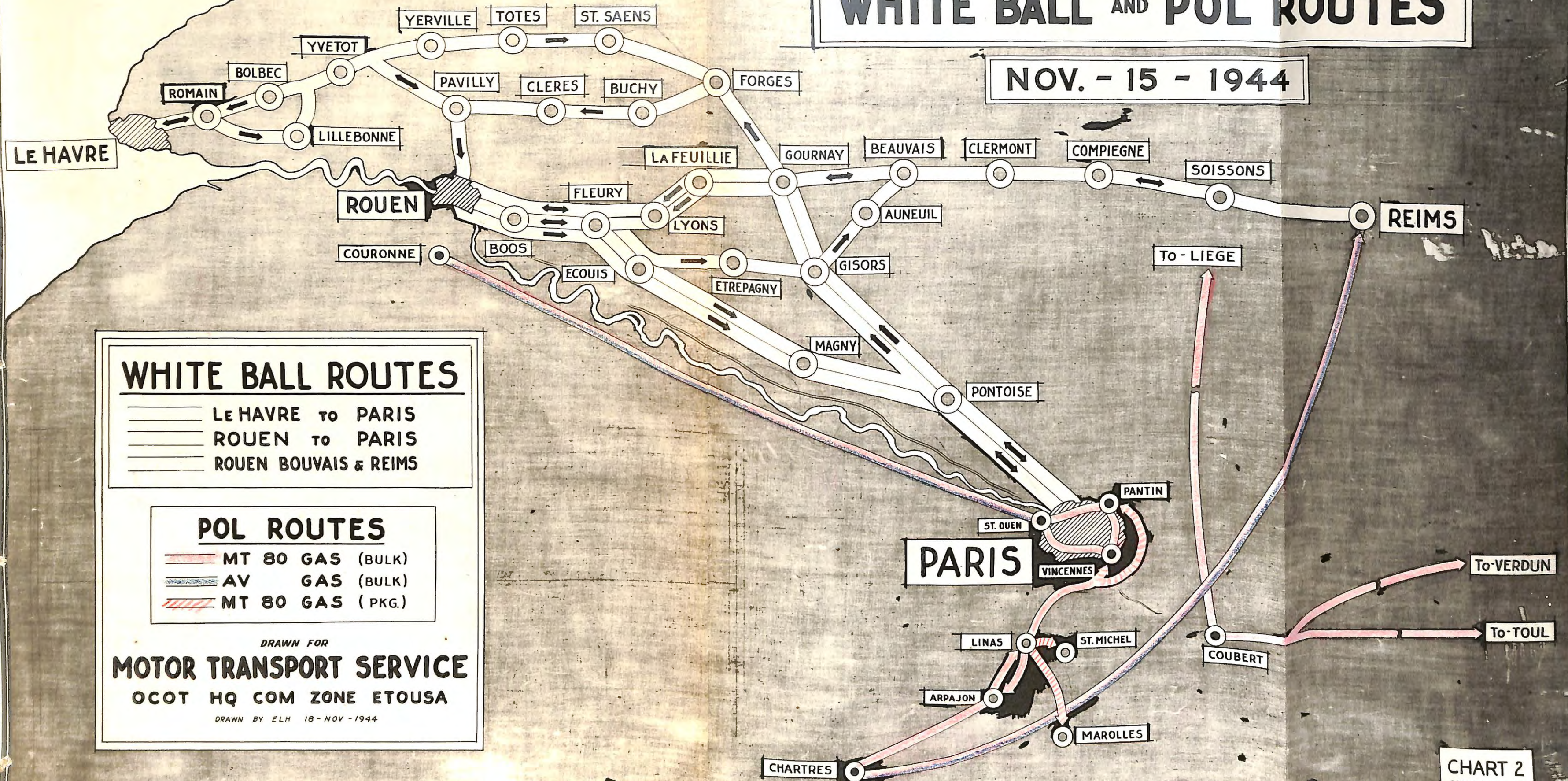


4

1. SIGN ON RED BALL HIGHWAY
2. LOADING AT DUMP
3. LOADING FROM SHIP - CHERBOURG
4. TRANSFER LOADING FROM FREIGHT TRAIN

WHITE BALL AND POL ROUTES

NOV. - 15 - 1944



WHITE BALL ROUTES

- LE HAVRE TO PARIS
- ROUEN TO PARIS
- ROUEN BOUVAIS & REIMS

POL ROUTES

- MT 80 GAS (BULK)
- AV GAS (BULK)
- MT 80 GAS (PKG.)

DRAWN FOR
MOTOR TRANSPORT SERVICE
 OCOT HQ COM ZONE ETOUSA
 DRAWN BY ELH 18-NOV-1944

No. of Companies

9

2

Type of Vehicle

2000-Gal. POL

5-T. Refrigerator

The Red Ball Route as a large-scale operation, was terminated in view of developments in the tactical situation and the fact that the railways and inland waterways had become available to a greater extent for the movement of supplies. As the Germans advanced farther to the north, new ports were opened from which ships could discharge supplies and trucks could operate on shorter Line of Communication hauls. Although Red Ball Route operations on a large scale were closed, there continued to be a need for the movement of a limited amount of supplies from the Normandy Peninsula over an established trucking route. For these requirements, the Little Red Ball Route was begun 15 December 1944.

Little Red Ball Route

The Little Red Ball Route was established on 15 December 1944 as a fast delivery service for high priority hauls. It did not deal in large tonnages, but specialized on the movement of supplies urgently needed. The normal rail operations for freight movements from Cherbourg to Paris required approximately three days; Little Red Ball operations made the haul possible in one day. Such saving of time was the main reason for the operation of Little Red Ball.

The route was operated by one truck company, the 3582nd Quartermaster Truck Company, equipped with 5-ton truck-tractors and 10-ton Semi-trailers. Its headquarters was at Evroux with operations directed by Motor Transport Service and priorities were established by G-4, Com. Z. Evroux was located at approximately midway. The route extended from the base of the Cherbourg Peninsula to Paris, starting at Carantan and running through Bayeux, Caen, Lisieux, Evroux, Manto to Paris. It followed Highway N-13 all the way.

A daily average commitment of 100 tons was expected. Appendix No. 7 this Chapter, shows that during December the daily tonnages handled, varied above and below the expected amounts. The reason for these variations centered about priority demands and not the available facilities.

On several occasions the true value of the route was emphasized. For example, gas masks for the stand made at Bastogne were furnished partially through the speed of the Little Red Ball service. Thus, it was possible to get gas masks through a day before Bastogne was surrounded by enemy forces. At all other times the supplies hauled were those in great demand, such as, Medical, Signal, CWS, and QM Class II equipment.

The average daily tonnage from 15 December to 31 December was 82 tons for a total of 1,446 tons. It was anticipated that as soon as the railways could furnish a high-speed priority operation, Little Red Ball Operations would cease.

White Ball Route

Mission

The mission of the White Ball Route was to clear the ports of Le Havre and Rouen and to haul Line of Communication tonnage to rail transfer points or direct to Army destinations.

Early Operations

Truck operations began 25 September 1944 when six truck companies were assigned for the purpose of clearing the port.

Line of Communication Operations

Line of Communication operations started 6 October after ten additional truck companies were made available for the haul. Later, with the withdrawal of more truck companies from the Red Ball Route and assignment to White Ball, the tonnage lift was increased.

Route

The starting points for the White Ball Route were at Le Havre and Rouen. The terminal points on the northern route were Beauvais and Reims which were used as rail transfer points while sometimes cargo was hauled directly to Army dumps. Another route branched off from Rouen along Highway N-14 directly to Paris and discharged cargo for rail transfer. The advantage of the White Ball Route was that it shortened the Line of Communication haul from the ports to the front. This route and the ABC Route (next sub-section, this Chapter) handled the tonnage demands previously required of the Red Ball Route. Most of the supplies moving over the White Ball Route were loaded at Rouen.

Operations

According to SOP, The White Ball Route was modeled after the Red Ball Route.

The length, speed, and miles traveled in an hour along the White Ball Route were as follows:

Le Havre to Paris (unloading at Q-177 & Q-177A): The average number of trip miles was 339 and the average number of trip hours was 58.6; and the average number of miles travelled in an hour was 5.6 miles. (In November).

Le Havre to Rouen: The average number of trip miles was 155; the average number of trip hours was 50.2; and the average number of miles in an hour was 3.1 miles. (In November).

Rouen to Paris: The average number of trip miles was 213; the average number of trip hours was 29.2; and the average number of miles in an hour was 7.3 miles. (In November).

Rouen to Reims: The average number of trip miles was 131; the average number of hours for the trip was 21.7; and the average number of miles in an hour was 6.1 miles. (In November). The average time spent in loading and unloading operations and the average load hauled by $2\frac{1}{2}$ -ton Std. 6x6 trucks were as follows:

Le Havre to Paris: Loading time 4.8 hours, unloading time 21.2 hours, and average tonnage hauled 4.3 tons. Le Havre to Rouen: Loading time 17.2 hours, unloading time 10.1 hours, and tonnage hauled by each $2\frac{1}{2}$ -ton vehicle averaged 3.5 tons. Rouen: Loading time 4.6 hours, unloading time 9.8 hours, and the average tonnage for each $2\frac{1}{2}$ -ton vehicle was 3.7 tons. Rouen to Beauvais: Loading time 8.4 hours, unloading time 2.9 hours, and the tonnage hauled on each $2\frac{1}{2}$ -ton truck averaged 3.6 tons. The average of all the operations listed above was: loading time 6.4 hours, unloading time 8.6 hours, and the average number of tons in each $2\frac{1}{2}$ -ton truck was 3.6 tons (All figures for November).

TOTAL TONS HAULED: 140,486 tons.

Breakdown of tonnage:

To rail transfer points	49,827
To east of Paris	27,246
To Paris & West	58,795
Destination not stated	4,618

Average Daily Tonnage: 1,614

Average trip hours	43.8
Average trip miles	170
Average miles in hour	6
Average load carried	4.3
Average number of vehicles used	602

B.B. (Bayeaux - Brussels) Red Lion Route

Colonel E.R. STOUGHTON, G-4, Com Z and Capt. LEON HESS, Normandy Base Section, on 14 September 1944, called upon Brigadier R.G. FIELDEN, D.Q.M.G. 21st Army Group (Rear) and Brigadier R. LAYMER (Q) of the same headquarters to discuss a proposed Bayeaux-Brussels operation. During the course of discussion, Brigadier FIELDEN stated that 1200 trucks would be necessary, assuming a 6-day turn-around. Colonel STOUGHTON advised those concerned that 450 trucks ($2\frac{1}{2}$ -ton) could fulfill the mission within a 3-day turn-around. Based upon the latter, operations were scheduled as of 16 September 1944.

Mission:

The mission of the B-B (Bayeaux-Brussels) Red Lion operation was to transport daily 500 tons of British petrol and/or other supplies from CRASC (British) No. 7 Petrol Installation (Bayeaux), to 21st Army Group Roadhead No. 1 (Brussels) for a period of approximately 30 days, beginning 16 September 1944. American Airborne Divisions were also to be supplied.

Operations:

Operations were started on the 16 September 1944, with three truck companies, and an additional three truck companies were added on 17 and 18 September. Bivouac and operational headquarters were established at a halfway point near Los Thilliers; two Traffic Regulating Points were also established, one in the vicinity of Dentun (TCRP 12) and one at Thibauville, (TCRP 11) and RTO personnel were established at points of origin and destination. Operations were terminated on 14 October 1944.

Route:

The B-B (Bayeaux-Brussels) Red Lion Route passed through the following points: Caen, Lisieux, Evreux, Gisors, Beauvais, Arras, and Tourrai.

Arrangements made:

The arrangements made between the 21st Army Group (Rear), 16 September 1944, and Normandy Base Section for the B-B (Bayeaux-Brussels) Red Lion Truck operations were:

- a. Route was agreed upon.
- b. British assumed the following responsibilities:
 - (1) To furnish camp site suitable for 1350 personnel and 500 vehicles at a halfway point in the vicinity of Los Thilliers.
 - (2) To furnish a site suitable to accommodate 175 personnel and 150 vehicles in the vicinity of Thibauville, to be known as TCRP 11.
 - (3) To furnish a site suitable to accommodate 175 personnel and 150 vehicles in the vicinity of Dantun, to be known as TCRP 12.
 - (4) To furnish a site for marshalling, and a control point at the point of origin (CRASC No. 7 Petrol Installation), and the point of destination (Roadhead No. 1).
 - (5) To furnish and deliver rations and water to all sites.
 - (6) To furnish and maintain suitable Medical facilities at the halfway point and at TCRP 11 and TCRP 12.
 - (7) To furnish a locator list of Medical facilities along the route.
 - (8) To furnish POL for consumption in this operation at the CRASC No. 7 Petrol Installation.
 - (9) To clear all sites, construct and maintain roadways, furnish latrines, and arrange suitable camp areas at the halfway point, and at TCRP 11 and TCRP 12.
 - (10) To furnish a Liaison Officer, as of 1900 hours, 16 September 1944, to accompany Normandy Base Section representatives in selecting such sites along the route for this operation.
 - (11) To furnish five motorcycle and dispatch riders for courier service, to be stationed at the halfway point.
 - (12) To furnish motorcycle escort for the first complete trip of each serial from the Bayeaux dump to point of destination and return.
 - (13) To load at point of origin and unload at point of destination at the rate of 40 trucks per hour.
 - (14) British agree to U.S. operations with full lights during night hours.
 - (15) British agree to clear all U.S. vehicles marked "B.B." on windshield.

Brigadier FIELDEN, representing the 21st Army Group, accepted the proposed operation as submitted by Captain LEON HESS, TC, G-4 representative through Chief of Staff, and requested Normandy Base Section to furnish bi-daily direct reports on the entire operation.

The following were considered as imperative for the completion of this operation:

- a. Two Ordnance Medium Automotive Maintenance (MAM) companies, one to be stationed at each TCRP. (25,000 miles would be averaged each day and unless

repair facilities were available along the route the operation would bog down).

b. It was imperative that each Ordnance MAM company have on hand an inventory of four $2\frac{1}{2}$ -ton, 6x6 trucks to issue as necessary when vehicles could not be repaired within 3 days. (There were no U.S. Ordnance dumps or depots along the 350-mile route, and it was inevitable that vehicle casualties would occur on this operation. To avoid delay, replacement vehicles would be available within the operations area.

The B-B (Baycaux-Brussels) Red Lion operation proved that the 10-ton semi-trailers could be loaded and unloaded in practically the same amount of time as the $2\frac{1}{2}$ -ton, 6x6 trucks, that distances could be covered on the same schedule, and that convoy discipline could be maintained as outlined in convoy operating procedure; furthermore, one 10-ton semi-trailer could handle a greater amount of cargo than one $2\frac{1}{2}$ -ton truck with 1-ton trailer.

Summary of Operations:	
Total tonnage transported	17,556
Total tonnage British POL	9,631
Total tonnage U.S. Supplies	7,925
Average daily tons transported	
16 Sept. to 12 Oct. 1944	650
Average daily tons transported British POL	357
Average daily tons transported U.S. Supplies	293
Total number of trucks loaded	
Total number of miles	2,759
Average daily miles	1,791,920
Total number of ton-truck miles	
Total ton-truck miles 10-T Trailers	66,367
Total ton-truck miles $2\frac{1}{2}$ T 6x6	11,425,925
Number of truck companies participating	
(16 Sept. to 6 Oct. 1944)	8
(One 10-T Semi-trailer)	
(Seven $2\frac{1}{2}$ -T, 6x6)	
Number of truck companies participating	
(7 Oct. to 12 Oct. 1944)	6
(Two 10-T. Semi-trailers)	
(Four $2\frac{1}{2}$ -T. 6x6)	

The B-B Red Lion Route ceased operations on 14 October 1944. In a letter from Brigadier R.G. FIELDEN, 21st Army Group Headquarters (Rear) to Capt. LEBON HESS, NBS, dated 20 October 1944, the following comments on operations were made:

"We are all most grateful to you and your men for all you did for us and I think we can all say that if ever an operation ran on 'greased wheels' that one did. All my staff wish to thank you personally for all you did and those under

your command. Maj-Gon Graham has personally written to Lt-Gon Lee expressing to him the gratitude of 21st Army Group and stating the officieny with which the project was carried out under your guidance".

Lt. General JOHN C. H. LEE, in a letter of congratulations to the units involved, namely tho: 953rd QM Trk Co., 9513th QM Trk Co., 9515th QM Trk Co., 3454th QM Trk Co., 3576th QM Trk Co., 3582nd QM Trk Co., 3396th QM Trk Co., 3682nd Trk Co., 4009th QM Trk Co., 3rd Group Regulating Station, TC, and 10th Regulating Group TC expressed the following: .

"1. It is with a great deal of pleasure that I extend congratulations to the officers and men of your organization for their part in the Bayeaux-Brussels Red Lion Truck Operation.

"2. Charged with the mission of furnishing, operating, and maintaining, and controlling necessary motor transportation to transport daily 500 tons of supplies from British dumps in the Bayeaux area to British roadheads in the Brussels area for a period of 30 days, theirs was a task on which depended the success of a major combat ongement. By diligont and officient effort, working 24 hours a day, they insured the smooth and continual flow of supplies. The wholehearted cooperation and devotion to duty shown by them made possible the daily transportation of 650 tons, or 150 tons above the target. They carried out their assignment in a commendable manner and completed their mission as planned.

"3. The success of the ontiro operation is ovidenced by the fact that through their efforts the program was exceeded and our forces were the recipients of the appreciation and gratitude of our British Allies whose call for assistance we had answered. Recognition of this outstanding achievement has been expressed by Major General Milos Graham, Chief Administrative Officer to Field Marshall Montgomery."

A B C (American, British, Canadian) Route

Mission

The purpose of the ABC Route was to transport priority supplies from Antwerp to Army destinations at Liège, to supplement rail and waterway operations from that port, and to shorten the supply line from Antwerp to the front.

Report on Preliminary Investigation

A report on the possibilities of Motor Transport Service operations from Antwerp was made by Capt. PAUL A. LUDOLPH, TC Highway Branch, 26 October 1944. This report covered the possibilities of: (1) an agreement with the British on the roads to be used to move U.S. Army supplies from Antwerp and, (2) a road circulation net to be worked out to move allotted tonnages to the forward dump areas near Liège and Namur, and if necessary at Maastricht, Cologne, and Arlon. The preliminary survey and reconnaissance resulted in a provisional agreement between the Americans and British as to what roads were to be used and recommendations for operation. The recommendations were:

1. That a road circulation be put into effect using Hannut (in Antwerp) as a main dispatching center.

2. That the same system of handling convoys be used as was employed on the Red Ball Route in which a Surge Pool arrangement was operated at St. Lo (TCp1 and TCp2).

3. That the roads of Belgium being in all respects excellent, a tonnage of 10,000 tons per day could be allotted to motor transport.
4. That the British must be kept off the U.S. roads.
5. That U.S. convoys be kept out of Brussels.
6. That a circulation be worked out through the city of Louvain.
7. That the roads be thoroughly checked as to the strength of the bridges so that U.S. Army Engineers could strengthen them wherever needed.
8. That if the plan was to be carried out, U.S. convoys must keep off the British Line of Communications route.
9. That a minimum of traffic be put on the Armies' Main Supply Route - N17, Liège to Namur.
10. That one central agency be placed in charge of this operation, preferably OCOT.

Further, it was estimated that very little work was needed to start this operation as the roads were in good condition. The US road out of Antwerp, N1 was superior to the British road N1 N15. It was believed that a complete turn-about on the route could be made in one day.

Repairs and Construction

Upon completion of the preliminary investigation, certain work was necessary before road movement could begin on any large scale. This involved construction or reinforcement of bridges, widening of corners and general maintenance on by-passes. The responsibility for this work was agreed upon by the Americans and British in accordance with "Memorandum on Agreement of the Operation of the Port and the Clearance Therefrom..."

Control

The responsibility for traffic control was agreed upon so that the US Army controlled all routes allocated primarily for US traffic and the British controlled traffic on British routes. In cases where the routes were used jointly, control was a joint operation and the British acted in senior authority.

The erecting of route signs was the responsibility of those using the route, or in case of joint operation, by agreement of US and British Provost Services. Convoys as far as possible were to be run in numbers of not less than five vehicles. All civilian traffic was to be restricted to traffic capable of a speed of 50 kilometers per hour. This restriction was to be imposed by Belgian Civil Authorities and signs posting the route to that effect were to be erected by the US and British Provost Services. Special traffic arrangements were necessary in order to allow the British to use portions of the US route.

It was decided to name the operation the ABC Route because the three nations (America, Britain, and Canada) were participating, sharing the same port and the same route in many places. The route was from Antwerp to Liège, passing through: Malines, Louvain, and St. Trond. Later it was extended to include Charleroi and Namur.

The final agreements were made after 21st Army Group, Ninth Army, Advance Section, and Motor Transport Service accepted the proposed plans. American operations started 30 November and four units began the operation of this

route. It was originally planned that sixteen 10-ton semi-trailer companies would be employed and that up to 5000 tons per day would be moved. Control of the operation was to be exercised by Group and Battalion Headquarters at the halfway point, and at a Surge Pool in the vicinity of Antwerp. The Surge Pool operation was to be performed by shuttling empty and loaded semi-trailers to and from the pool. Empties were to be taken to the loading points by one group of drivers with 4-5 ton truck-tractors and when loaded they were to be returned to the pool and switched to other truck-tractors for the forward move. It was anticipated that this system would allow the drivers to become more familiar with routes, and that it would curtail loading delays and permit close control for operating efficiency. The entire system was to be supervised and coordinated by personnel from MTS, and maintenance was to be provided at the mid-point.

During the first half of December, the ABC operation rapidly built up daily tonnages moving into Advance Section depots. Ten-ton semi-trailer equipment was used exclusively, under the close supervision of MTS. Complete documentation was accomplished in order to record the performance of each convoy from the time empty vehicles were dispatched for loads, until their return after completing the haul. The average load for the 10-ton semi-trailers used on the ABC Route was 3.8 tons (Note: Compare with Red Ball average of 4.9 tons, using $2\frac{1}{2}$ -ton trucks, primarily); convoy mileage for a round trip amounted to 181 miles, with an average elapsed time of 20 hours for an average of approximately 9 miles in the hour. Loading and unloading delays, which had been experienced in other operation, were held at a minimum.

During the German counter-offensive the latter part of December, the tonnage moved over the ABC route decreased due to limitations caused by developments in the tactical situation as well as by diversions of lift facilities. The daily average tonnage moved by the ABC operation during the period 10 to 27 December amounted to 1273 tons. By the end of December, a total of 40,638 tons of supplies had been moved over the ABC route. Following is a summary of special features of this route:

- (1) The ABC route was entirely American-operated; it passed through territory in France and Belgium controlled by the Americans, British, and Canadians.
- (2) Only 10-ton truck-tractors and semi-trailers were used on the ABC Route which made it possible to have a maximum tonnage, with a minimum of equipment and personnel.
- (3) The unloading of cargo from ships to Line of Communication vehicles was usually made in one move, there being no separate port clearance operation. Trailers were loaded directly from ships, or from docks or warehouses located near the docks. This resulted in a saving of time and took full advantage of the unusual facilities of the port of Antwerp.
- (4) A marshalling yard near the port gave direct control over operations on the ABC Route. It served as a check-point from which tractors and trailers were dispatched to the docks for loads and as they returned they were unhooked from the trailers, and other empties were attached and dispatched for loads. The trailers moved as a steady stream into the marshalling yard and were arranged according to the commodity loaded, and dispatched in convoy to forward dumps. Empty trailers from a haul forward, returned to the marshalling yard

for re-load and re-dispatch.

(5) The same drivers operated on the same run, either between the docks and marshalling yard, or between the marshalling yard and Army dumps. In this way they learned the routes involved and better control was maintained over the entire operation.

(6) Better living conditions and hot meals for vehicle drivers were provided on the ABC Route.

(7) The ABC Route was a short-distance haul, approximating only 77 miles one-way.

(8) A summary of operations over the ABC Route from 30 November to 6 December 1944 follows:

Total number of tons hauled	40,628
Average daily tonnage	1,267
No. of 10-ton truck-tractor, semi-trailer companies in operation:	
30 Nov. to 9 Dec. incl.	4
10 Dec.	6
11 Dec to 12 Dec. incl.	10
13 Dec to 15 Dec. incl.	14
16 Dec to 31 Dec. incl.	16

A few examples of drivers' reaction to enemy resistance encountered while operating vehicles over the ABC Route are quoted below:

Cpl. John Katos of Panceburg, Kentucky summed it up as follows, "So far as our operations are concerned they are a snap. We can really put out the stuff and the only difficulty we have is with the buzz bombs. They hardly ever interfere with our operations but they are a continuous nervous strain. The closest bomb I ever came to was when driving from the marshalling yard to the port area. A buzz bomb hit an old factory along the route about a hundred yards in front of me. It caved in the whole roof and walls of the factory and littered the street with debris. Some civilians were killed and other were injured but none of our drivers were injured and we had to reroute temporarily until the street was cleared off with a bulldozer.

Pfc William Hayes of Rocky Mount, N.C. said, "We live in an old chateau. I had been working all day and all night hauling from the docks to the marshalling yard. About 7:30 A.M. I went to bed. At noon I got up to eat and then went back to sleep. About 4:30 P.M. I was awakened by the explosion of a buzz bomb. The blast covered me with glass, there were small cuts on my face and head but they were not serious. The bomb lit in a tree outside about 70 yards away. It tore off part of a house located underneath the tree and a woman and child in the remaining portion of the house walked out of there unharmed but badly shaken. At another adjoining house a civilian was killed by the blast. The blast knocked out the window panes in our chateau, tore off the plaster and steam pipe fittings but none of our men were seriously hurt except for small cuts from bits of flying glass.

Pvt. George C. Nichols of Huddleston, Va. said, "I had a double explosion rocket knock me off my truck. I was standing on the fender just getting ready to get in the cab when it went off. It was about a hundred yards away and killed a lot of civilians. You could see wood and everything flying high in the air. They took me to an aid station but I didn't stay there long. As

Motor Transport Service....

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long as you don't get caught in the ring of concussion of the bombs you are O.K. One person can be two hundred yards away and get killed, another the same distance away on the other side will be safe. The rockets have not interfered with our operations except sometimes when we had to divert our route. But they are a continuous nervous strain."

Green Diamond Route (See also Chapter VI, under Normandy Base Section)

The Green Diamond Route, activated 10 October 1944 and closed 1 November 1944, extended from the ports and beaches of Normandy to Dol located at the northern base of the Brest Peninsula. The purpose of the operation was to move supplies from this area to the rail transfer point at Dol, for subsequent Line of Communication hauls by rail. The principal towns through which it passed en route from the ports and beaches to Dol were Granville and Avaranches. Operational headquarters was located at Drohal, a short distance north of Granville. The 474th QM Group, under the command of Colonel WILLIAM B. VAN AUKEN, was charged with the operation of the route and the 86th and 180th Battalions were in support.

During the peak of operations, nineteen QM Trk Cos (TC) were assigned to the movement. Five of these companies were equipped with $2\frac{1}{2}$ -ton standard trucks six with $2\frac{1}{2}$ -ton Cab-over-Engine trucks, two with 3-6 ton semi-trailers, five with 10-ton semi-trailers and one with $12\frac{1}{2}$ -ton semi-trailers. The total average lift capacity of all this equipment was 6440 tons but, due to mud conditions at the dumps, tractor trailers bogged down and made operations difficult or impossible at times.

Status Branch figures in Motor Transport Service headquarters covering the dates 14 October to 1 November, inclusive, show a total of 15,590 tons hauled over the route. The last supplies were transported over the Green Diamond Route on 1 November 1944.

POL Routes

The mission of POL Truck Companies was to move petrol, oil, and lubricants (POL) forward to the Armies. They hauled not only ME 80 (Motor Transport 80 Octano) gasoline for vehicles but also AV 100 (aviation 100 octane) gasoline for airplanes.

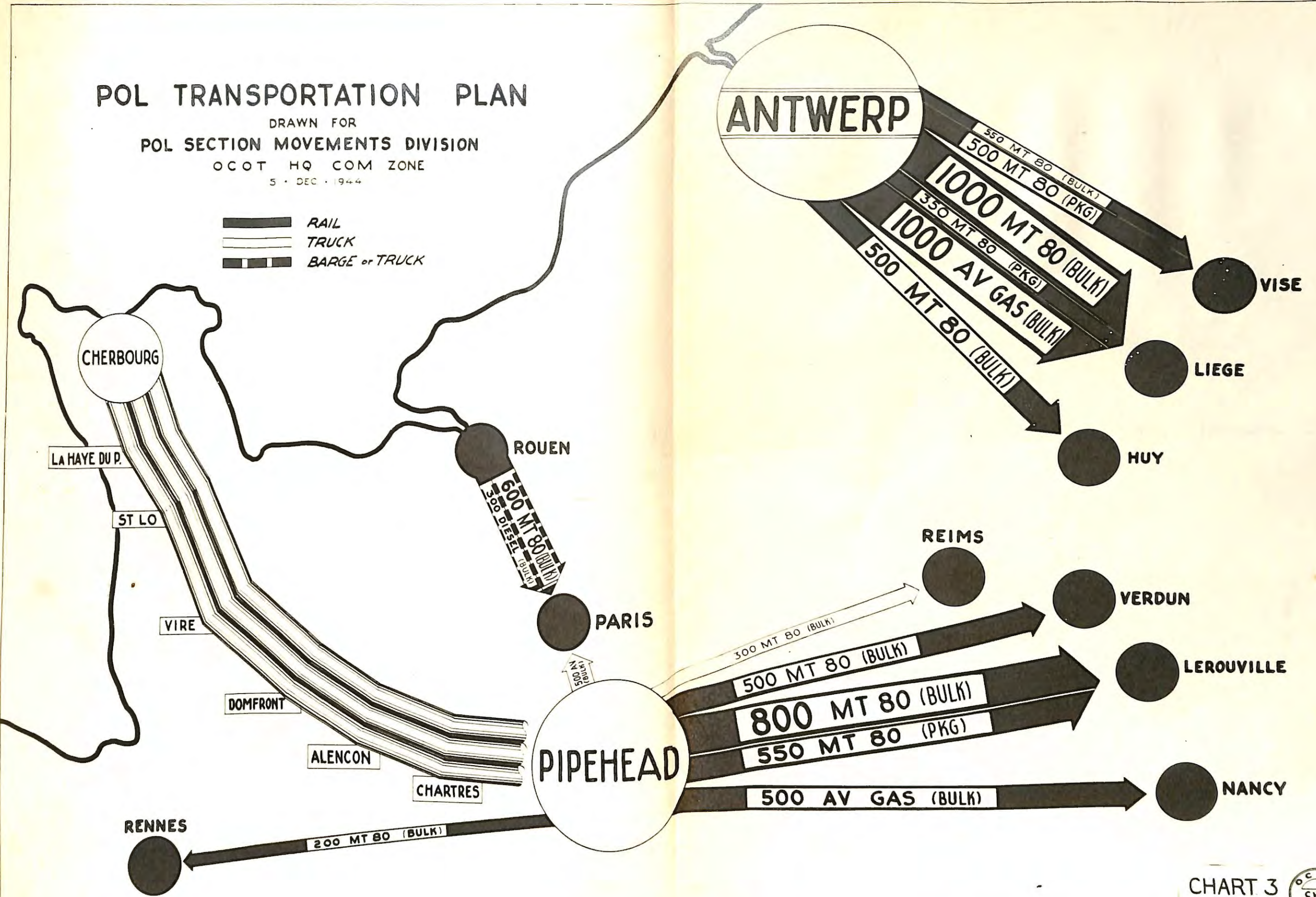
Operations of the POL truck fleet were controlled by the POL Branch of Motor Transport Service through two battalions, the 467th and 519th QM Groups, as sub-headquarters. The POL Section of Motor Transport Service was headed by 1st Lt. E.J. GRIFFIN; the 467th QM Bn. was under the command of Lt. Colonel EARNEST C. PARKS, JR. and the 519 QM Bn was commanded by Lt. Colonel W.H. BRONKE.

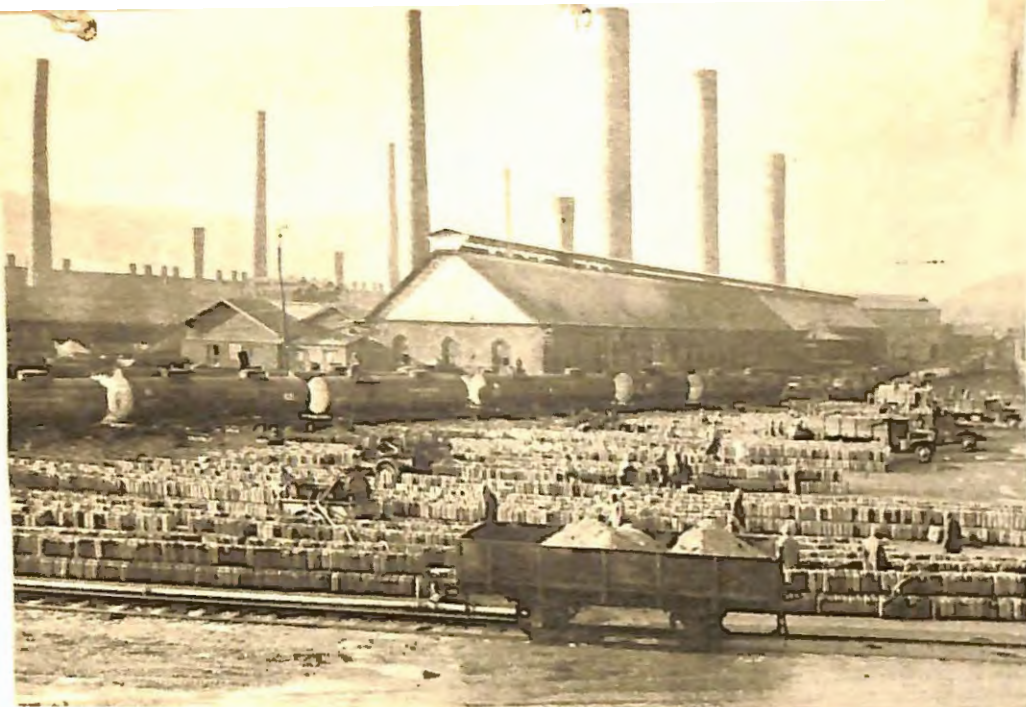
POL cargo was hauled in either bulk or package form. Bulk POL was carried in 750-gallon or 2000-gallon tankers with 2000-gallon trailers, while packaged POL was carried in jerricans and hauled by cargo truck companies assigned to the haul. As of 14 November 1944, fourteen Tanker Truck Companies made up the basic equipment of the POL truck fleet. Five of these companies were equipped with 750-gallon tankers and nine with 2000-gallon tankers with 2000-gallon trailers. When more tonnage was required than these vehicles could

POL TRANSPORTATION PLAN

DRAWN FOR
POL SECTION MOVEMENTS DIVISION
OCOT HQ COM ZONE
5 DEC 1944

RAIL
TRUCK
BARGE or TRUCK





DECANTING OPERATIONS

TROOZ BELGIUM



DECANTING OPERATIONS

PETIT CORONNE FRANCE



GASOLINE PIPEHEAD

FRANCE



GASOLINE MOVE BY TRUCK TANKER

FRANCE

P.O.L. MOVEMENTS BY TRUCK.

supply, cargo carrying truck units were assigned to the lift which hauled packaged POL in jerricans.

The POL truck fleet began operations on the Continent on D plus 8. At that time temporary pipelines were laid on the beaches of Normandy from St. Honorine and Port on Bassin. The two four-inch pipelines that were laid, met at a tank farm located at Etrohan. The tankers were loaded with POL at Etrohan and hauled to forward dumps.

After the fall of Cherbourg and other ports, more pipelines were laid. They were fed by ship tankers and led towards the frontlines. Trucks were able to load up from taps and storage tanks along the line and continue the forward movement of POL. As the Armies advanced, the pipelines were extended and were laid also in Belgium. The capacity of each pipeline was approximately 400,000 gallons a day and as long as the construction of the pipelines kept up with the advance of the Armies, the length of the haul for POL was comparatively short. But, as the advance speeded up, the length of the haul increased proportionately. The pipelines were the source for the majority of MT 80 and AV 100 hauled, although another source was the ship tankers anchored in ports which unloaded directly to either motor transport tankers or to storage tanks.

Because of the use of the pipeline and the close support required by the Army, POL Routes varied more often than those for trucking other supplies. During the month of November, the TC truck companies equipped for bulk POL transport traveled over various routes. Some of the routes were not definitely established but were made according to necessities as they arose. In general, the following runs were used:

- (1) The Dourdan Run. A pipeline ran to Dourdan which was a dispensing point where bulk POL was hauled to a decanting area located on the Autodrome at Linas. Here, the bulk POL was packaged in 5-gallon jerricans and hauled to rail transfer points at Arpajon, Marolles, St. Michel, Pte. de Vincennes, and Pte. de Patin. From those transfer points the packaged POL was forwarded by rail towards the front lines where again in the final stages it was transferred to trucks for transportation.
- (2) Another route was known as the Rouen Run. On this operation large ships tankers carried bulk POL to Le Havre where it was transferred to smaller barges and shipped along the Seine to Rouen. At Rouen it was transferred to temporary storage or unloaded directly into bulk tank trucks which were routed along N14 to St. Ouen near Paris. From here it was again handled as described above under the Dourdan Run.
- (3) The third route was known as the Coubert Run. Coubert was the center of another dispensing pipe area. From here MT 80 and AV 100 was hauled to various locations as required. Some of these hauls, particularly the longer ones were: Coubert to Toul, Coubert to Verdun, and Coubert to Liege.

The hauling of POL was one of the chief contributions of truck companies in support of the Armies. The enemy made frequent attempts to interfere with these operations. The experiences of a few POL drivers gathered at random indicate some of the difficulties encountered. A few of them are quoted below:

Pvt. Robert M. Lynch of the 3574th QM Truck Co:

"One night I was caught in a gas dump while Jerry planes were strafing.

It was about 11:00 PM. We weren't using lights then. We were working overtime. Flak started to burst. That was the first we know of Jerry being near. I pulled my truck under a hedge as quick as I could and ran to cover. I got to cover when the planes started to strafe. Some of the men hadn't get to cover. Two of them were hit and wounded seriously. They called for first aid.

"My truck got 3 tires shot out, one 50 cal. went through the radiator and the windshield was shot out. Also, there were several shrapnel hits on the body and a 50 cal. went through the seat of the cab. It delayed me from leaving for a half day. I was fixing tires and stuffing water proofing on the radiator to keep it from leaking."

Sgt. J.W. Cantril of the 134th QM Truck Co:

"I've had three consecutive convoys on which fires occurred. Once the tail end of my 4000-gal job caught fire. I was hemmed in between two other 4000-gal tankers and had to get jeeps to release and move the unit to a wooded area, away from the other tankers. My tanker and gas load were lost.

"On two other occasions I've been present at fires. Once in Vincennes canned gas caught fire accidentally. We lost about 100,000 gals. Another time at Reins the same thing happened and we lost about 50,000 gallons."

"It's rugged driving at night, in the mud when you don't know where you are going except for a little strip map. We have had several accidents due to unavoidable circumstances -- slick roads, etc."

Sgt. Floyd D. Ripley of the 3623rd QM Truck Co:

"We were taking M 80 to a gas dump. A town along the way was still on fire. We pulled our tankers through there. I didn't think we should at first, it was still so hot. But we got through O.K."

"On the other side of town, Infantry was still patrolling for snipers and tanks were operating. The gas dump was just getting into operation when we got there. That night Jerries bombed the dump but I wasn't there, we had already returned."

"When hauling to Liege, one of their flying bombs dropped about 500 yards from where our convoy was stopped. It made a big crater and spread out a building but it didn't hurt our vehicles."

1st/Sgt Robert E. Wolfe of the 3584th QM Truck Co:

"Once while driving through a town, one of our tankers turned over. It had 100 AV gas and it ran down the sewers and ignited, and soon the manhole covers along the street began to pop off, due to the burning gas and fumes in the sewers. The driver was caught in his cab temporarily. We got him out but later he died of his burns. They evacuated the town for a while until the danger of gas in the sewers was passed."

Cpl. Carl Barney of 3622nd QM Truck Co:

"The size of these things make them difficult to handle. The gas splashing inside throws you from side to side. It effects your steering. The double does not exactly follow the tanker and allowance must be made for this especial-

ly around curves and where the road is slanted. You have to be careful of them jack-knifing; you can't use tractor brakes without using trailer brakes.

"I am a squad leader and one night I had eight trucks out. A guard pulled us up by the side of the road and told us to disperse because it was time for strafing. It had been a regular nightly occurrence there. We pulled up in the hedges and hit the dirt. Sure enough, a Jerry plane soon did strafe the road but we were safe because we had been warned.

"Another night we were taking a short-cut route between Viro and Mortrain. An MP stopped us and said, 'That's still Jerry's territory'. Our artillery was behind us. There were bullets whining around us occasionally but we did not know whether they were ours or theirs....We didn't know exactly where the front line was."

Following is a summary of POL truck operations for the periods indicated:

Tonnage hauled 14 June to 6 Sept. 1944	130,265 tons
" " 6 Sept. to 1 January 1945	293,169 "
Total tonnage hauled	423,434 "
Daily average 14 June 1944 to 31 December 1944	2095 Tons
Average number of miles for each round trip 18 November to 31 December 1944	235 miles
Average number of hours per trip 18 November to 31 December 1944	26.8 hours

SECTION III

OBSERVATION ON MOTOR TRANSPORT OPERATIONS in the EUROPEAN THEATRE OF OPERATIONS

A report by Colonel LACEY W. MURROW, TC entitled, "Observations on Motor Transport Operations, ETOUSA" and sent to Major General CHARLES P. GROSS, Chief of Transportation, War Department, Washington, D.C. gives the following general information on transportation activities as found on the Continent in November 1944.

"In company with Captain J.C.M. WILSON, TC, Status Branch, Motor Transport Service, OCOT, departed from Paris at 0800 hours, 7 November, by motor vehicle for observation trip to the forward areas. This trip covered approximately 1000 miles and, in general, the route covered was as follows: Reims, Namur, Liege, Aachen, Antwerp, Brussels, Soissons, to Paris. The principal headquarters visited were: Headquarters, Advance Section, Communication Zone; Headquarters, First and Ninth U.S. Armies; Headquarters, 21st Army Group (British); and other subordinate installations. Returned to Paris at 1900 hours, 17 November.

"1. GENERAL OBSERVATIONS:

"a. Roads. The primary road net traversed was found to be in excellent condition. It was hard surfaced throughout except for minor detours around destroyed bridges. On some short sections, there was evidence of failure

along the shoulder lines; however, these conditions were being remedied by work of the Corps of Engineers, and French, Belgian and Dutch civilians. From the large number of destroyed enemy vehicles of all classes, from tanks to passenger cars, alongside the highways, almost throughout the entire route, it was to be expected that a considerable amount of road damage would have resulted from the destruction of these vehicles and from the operations of both enemy and our own transport. Evidence of such damage, however, was singularly lacking. It is difficult to account for this lack of damage in view of the large number of vehicles involved and the amount of aerial fire and bombardment necessary to effect the destruction noted. No unusually overcrowded conditions were noted at any point.

"b. Vehicles. (1) Army. All Army vehicles encountered on the route or observed in motor pools adjacent thereto appeared to be in good condition. Over the entire route, practically no Army vehicles were found to be abandoned, wrecked or broken down along the roadside. In spite of the muddy condition prevalent in most dump areas and approach roads, most vehicles showed evidence of having been washed and lubricated at reasonable intervals. It was surprising to note the lack of broken fenders, broken windshields and dented bodies. The general appearance of all classes of vehicles speaks highly for the ability and skill of the operators.

"(2) Civilian. The general condition of civilian motor transport of all types in the liberated areas is very poor. They are perhaps in better shape in Belgium and Holland than in northern France. As many as 25 or 30 U.S. vehicles left on the Continent after the last war were encountered in actual hauling operations on the primary routes. A considerable number of home trailers (semi) had been attached to ordinary commercial type passenger-carrying vehicles. It is estimated that at least 10 percent of the civilian transport vehicles observed were in a stalled or broken down condition on the road way, thereby creating a serious hazard and menace to Army transport, particularly during the hours of darkness. It is estimated that outside of the metropolitan areas of the larger cities on the route, not more than 30 cargo hauling vehicles of modern design and performance were encountered.

"c. Traffic Behavior. Interspersed among the various types of vehicles mentioned above, large numbers of animal drawn conveyances were encountered on the route, both during night and daylight hours. These animal drawn vehicles and the broken down civilian equipment, together with bicycles and hand-drawn carts, create a most serious hazard to the safe movement of Army motor transport. It would be natural to expect that there would be a large accident and fatality record, considering conditions, is excellent. However, such is not the case, and the safety record, considering conditions, is excellent. In the case of military vehicles, it was noted that the convoy and road discipline was unusually good. This fact may be accounted for by the practice in this theater of using an assistant convoy commander to control the speed of the first vehicles in the convoy. Speeds were found to be reasonable, consistent with road and traffic conditions.

"d. Signs. All routes traversed were well marked and could be followed without difficulty, even through the smaller towns and villages where there are usually a multiplicity of signs of all types indicating local installations. The system used is simple, inexpensive, and permits rapid installation

or change. There is occasionally some slight confusion due to the necessity of using detours around destroyed structures and, in some instances, restrictions to flow of traffic in one direction. In the 21st Army Group sector, the signs are elaborate and numerous by comparison, yet they are most difficult to follow.

"c. Police. It would appear that an adequate number of Military Police are available and continually on the roads to handle the traffic involved. These men are alert, well-informed, and handle traffic in a professional manner. It was noted that the Military Police on the Line of Communication operations were especially well-informed as to their duties. The almost total lack of road discipline insofar as civilian traffic is concerned naturally complicated and increases the work of the Military Police.

"f. Loading. Loading practices are generally good. Very few vehicles observed were not carrying at least their rated capacity. Loads were well distributed, and care was exercised to protect the cargo being moved. Loading practices in the British sector did not appear to be as uniform as was the case with U.S. Army vehicles.

"2. AREA OBSERVATIONS:

"a. Line of Communications. The Red Ball, White Ball, and other principal cargo routes were observed and the organization and general movement policies were noted. It can be definitely said that the entire operation is being handled in an excellent manner. A tremendous amount of cargo is being moved, and oftentimes under difficult and trying circumstances. Most delays in turn-around time are occasioned by lack of loading and unloading facilities. Much greater efficiency would be obtained if it were possible to have loading, movement, and unloading facilities and personnel under a single command. Convoy commanders' reports and other statistics and data compiled and used in Motor Transport Service headquarters now permit of accurate analysis of time losses, the determination of causes for delays, and give a basis for corrective action. Complete and accurate statistics are maintained, and the personnel employed on this work are especially well-trained and well-qualified. The interest and morale of both officer and enlisted personnel in the headquarters, and in the groups, battalions and companies, is high. The entire operation is complicated and difficult due to a multiplicity of interest and to the necessity of working with and through such a large number of channels, headquarters and commands. Some of these difficulties are attributable to the fact that everyone assumes that he is qualified to organize, direct and operate all forms of motor transport. In comparing this operation with the Military Railway Service, the above statement is particularly true. In the case of the Military Railway Service, it is assumed by the various echelons of command that the personnel operating this service are qualified to do so, and their recommendations are generally accepted as being the opinion of a highly technical service. In the case of motor transport, almost the reverse condition exists, and makes difficult the operations now being performed by the Motor Transport Service.

"b. First Army. Motor transport in the First Army is handled by the quartermaster...

"c. Ninth Army. The four factors of water, air, rail and motor transportation have been integrated into one service under G-4 of the Ninth Army...

"d. 21st Army Group. Brief and hurried observations were made in the 21st Army Group sector. However, it is not felt that the drawing of comparisons or the expression of opinions as to organization or efficiency is warranted.

"e. Base Sections. Hurried observations and statistical data available in the OCOT indicates that somewhat different types of control are exercised over motor transport in the various base sections. There is also the question of the exact authority that may be exercised under the term 'operational control'. Numerous motor transport organizations are in the status of being assigned to the Base Sections for administration, yet remaining under the OCOT for operational control. Other units are assigned for both operational control and administration to the base sections. It would appear that, in the instance of motor transport, the OCOT is not considered to be on the Theater level, but is restricted to the Zone of Communications. It is believed that this places him in a difficult situation and not in the same position with chiefs of other technical service.

"3. RECOMMENDATIONS: It is recommended that all companies in the Theater of Operations have an enlisted complement of 140 men. This number is necessary in the Zone of Communications in order to provide for 24-hour operation. The increased number is necessary in the forward areas to make provision for the protection of cargo and vehicles. The additional personnel recommended is necessary in some of the liberated areas and will become increasingly more necessary as the Armies advance into enemy territory. When it is considered that the black market price for gasoline is now estimated to be 1000 francs, or \$20.00 per gallon, it can be readily understood that one truck loaded with five-gallon jerry cans of gasoline represents a most valuable cargo; and the difficulties from pilfering now encountered in the Communications Zone will probably be even greater in the more forward areas.

"b. The efficient use of motor transport is being materially impaired by time losses in loading and unloading. This may be partially accounted for by the fact that there seems to be a lack of labor saving devices for use in handling cargo. It is believed that this condition would be remedied by making certain cargo handling devices available as organic equipment to each truck company. The additional equipment is particularly necessary for TC truck companies, which are continually required to effect transfers of their loads from one vehicle to another, or from truck to rail or rail to truck. One or two 15-ton standard truck cranes per company, 10 feet of standard roller conveyor per truck, and one or two power driven (gas) adjustable-height conveyors per company would accomplish the purpose. The truck crane with attachments would also give each company some facilities for the construction or improvement of hard standings in bivouac areas. It is believed that the OCOT intends to initiate a project for the acquisition of this additional equipment..."

PRELIMINARY

HEADQUARTERS & HEADQUARTERS COMPANY
MOTOR TRANSPORT SERVICE
OCOT, HQ, COM Z, ETOUSA

Operational Memorandum No. 1 - Organization, Functions and Standing
Operating Procedures of Motor Transport
Service, Com Z, ETO.

15 November 1944

1. SCOPE: This operational memorandum outlines the organization of the Motor Transport Service of the Communications Zone, ETO, describes the functions of the various agencies involved, and establishes a brief description of the standing operating procedures to be followed by the Hq. & Hqs. Co., Motor Transport Service.

2. REFERENCES:

- a. ETO SOP 31
- b. ETO SOP "Red Ball Motor Transport Operations" (or similar express "L of C" motor operations)
- c. Activation Order, HQ, ETOUSA
- d. Transportation Corps Technical Manual "MOTRAN" as amended.
- e. Truck Loading Reference Data
- f. "Maintenance and Operation of Motor Vehicles, Hq, ETOUSA, 24 January 1944, (and changes to date).

3. TRANSPORTATION CORPS, COMMUNICATIONS ZONE FUNCTIONAL ORGANIZATION AS PERTAINING TO MOTOR TRANSPORT SERVICE: (See Exhibit I)

a. The Transportation Corps is headed by the Chief of Transportation (COT) who is on the Special Staff of the Commanding General, ETOUSA, and under the command of Assistant Chief of Staff, G-4, HQ, Communications Zone.

b. Hq. & Hq. Co., Motor Transport Service will be responsible for making recommendations to the COT or providing for:

- (1) The assignment of the minimum necessary amount of motor transport units to other Communications Zone agencies.
- (2) The assignment of motor transport units to Hq. & Hq. Co., Motor Transport Service (hereafter referred to as Hq. & Hq. Co.) for "EL of C" motor operations.
- (3) Technical supervision of motor transport units assigned to other Communications Zone agencies and for the issuance of necessary technical operating procedures to insure un-

iform and efficient methods of operations of all Communications Zone motor transport units.

- (4) Necessary information on the status of the Motor Transport Service.
- (5) Determining the capabilities of the Motor Transport Service for 15 day periods beginning the first and fifteenth of each month as coordinated by Movements Division, OCOT.
- (6) First and second echelon maintenance of Communications Zone, Motor Transport units assigned to M.T.S.

c. Movements Division, OCOT, is responsible to the COT for:

- (1) Determining, as coordinated with Hq. & Hq. Cos., Military Railway Service and Motor Transport Service, Marine Operations and G-4, Hq. Com Z, the Transportation Corps 15 day capability programs; the program forecast to be completed ten days in advance of each period.
- (2) The necessary coordination of inter-sectional Communications Zone movements between agencies concerned.
- (3) Recommendations and the Necessary coordinations for the establishment of road routes for the Motor Transport Service.

d. Recommended Base or Advance Section Transportation Corps Organizations and Functions:

- (1) The COT has recommended that Sections, Com Z be organized and operated in a manner similar to that of the OCOT, HQ, Com Z, ETOUSA, in order to insure uniform and efficient methods of operations (ETO SOP 31).
- (2) The CO, Hq. & Hq. Co., Motor Transport Service recommends that a Motor Transport Officer be appointed in the office of each Transportation Officer, Section Com Z with sufficient staff to carry out the missions listed in "MOTRAM" Par. 4b (page 4) and to provide the Section, Motor Transport Service.
- (3) That a Movements Officer and staff in each Transportation Office, Section, Com Z arrange for:
 - (a) Movement coordinations with Section G-4 and Service chiefs for all movements originating within the Section, and those enroute or terminating within the Section, Com Z. The movement instructions for express "L of C" movements to be based on schedules or directives from G-4, Hq. Com Z.

PRELIMINARY

- (b) The provision of necessary traffic control points (TCP's) including the required personnel and the efficient operation thereof.
- (c) Issuance of movement instructions to all convoys originating within the Section and the provision of necessary strip maps or road guides for convoys operating within the Section, Com Z.
- (d) Establishment of adequate road routes within the Section, Com Z.
 - 1) Intra-sectional routes to be selected so as not to interfere with express "L of C" routes.
 - 2) The establishment of express "L of C" routes as direct or coordinated by higher authorities.

4. ORGANIZATION AND DUTIES OF HQ, & HQ. CO., MOTOR TRANSPORT SERVICE:

- a. Organization: See Exhibit I
- b. Duties: See Chapter II, under Motor Transport Service

5. BASE OR ADVANCE SECTIONS, MOTOR TRANSPORT SERVICE.

- a. A Motor Transport officer will head the Motor Transport Service of each Section, Com Z in the office of Transportation Officer.
- b. The minimum number of MT units required will be assigned to each Section, Com Z for the port and static operations of the Section.

c. It is recommended that the Motor Transport Officer be assigned sufficient personnel to adequately handle the following missions:

- (1) Allocation of MT units within the section
- (2) Maintain required records of operation and availability of TC Motor Transport within the section.
- (3) Supervision of the operations of MT units assigned to the section.
- (4) To render assistance as needed to HQ, & HQ Co., Motor Transport Service personnel or units operating with the section.

d. The Section, Com Z will operate the companies and be responsible for the maintenance of the MT units. It is recommended that the Motor Transport operations of the Section be organized and operated as outlined in "MOTRAN" as amended.

e. HQ, & HQ Co., Motor Transport Service will maintain technical supervision over the MT units assigned to the Sections and will designate liaison personnel to coordinate and act in advisory capacity to each of the sections, M. T. officers.

6. "L OF C" EXPRESS MOTOR TRANSPORT SERVICE:

a. The MT units assigned to HQ. & HQ. Co., Motor Transport Service will generally be utilized on "L of C" express operations.

b. The Staff Branch of the HQ. & HQ. Co. will plan the various operations in coordination with the other Branches of HQ. & HQ. Co., other divisions of the OCOT, Staff Sections and other headquarters concerned. The Staff Branch will make necessary investigation and reconnaissance, prepare the completed plans, and insure that there are adequate provisions made for:

- (1) Adequate ton lift to meet the commitment.
- (2) Sufficient time for the units designated to move to the new location.
- (3) That an adequate and efficient highway route has been selected and proper plans provided for its operations and maintenance.
- (4) That all agencies concerned in the movement operation are sufficiently informed and properly coordinated for efficient operations.
- (5) Adequate provisions are made for loading and unloading facilities.
- (6) That the MT "L of C" documentation system and an efficient communications system are provided for.

c. The Operations Branch, HQ. & HQ. Co. will designate the MT units for each of the operations and make reallocations as needed through G-4, Com Z. Also, the Operations Branch will make necessary coordinations with staff section OCOT, and Hq., Com Z concerned to both implement the operations and to correct deficiencies as they occur.

d. Personnel to form M.T.S. Sub-Hqs. of HQ. & HQ. Co. for each of the "L of C" operations will be designated by and from the Operations Branch. The Sub-Hqs. size will be in proportion to the scope of the operation concerned. In addition, personnel from TC Groups and Bns. will be utilized by the Sub-Hqs. MTS as needed to efficiently carry out the individual operations. The Sub-Hqs. MTS will carry out the field control for HQ. & HQ. Co., be responsible for the successful completion of the operation and will carry out the following duties:

- (1) Make necessary reconnaissances for the location of MT units, command posts and facilities.
- (2) Expedite the flow of necessary information to and from the field.
- (3) Assign liaison personnel with Sections, Com Z at origin enroute and destination to coordinate, expedite and insure that the Sections, Com Z are adequately furnishing or providing for the missions as designated by ETO, SOF Red Ball Motor Transport Operations.

- (a) Military Police and roving patrols.
 - (b) Road Maintenance.
 - (c) Traffic Signs.
 - (d) Signal communications
 - (e) Ordnance maintenance facilities.
 - (f) Summary & Special Courts.
 - (g) Securing assistance of FFI or other authorized French agencies to assist in the control of civilian traffic.
 - (h) Establishing bivouac sites and other accommodations required for personnel and vehicles.
 - (i) Prompt and efficient loading and unloading of vehicles to include necessary labor and supervision.
 - (j) Establishment of traffic control facilities at origin and destination of Red Ball (or other L of C operational convoys to assure expeditious dispatch to correct destination and prompt turn-around at loading and unloading points.
- (4) Check Sections, Com Z to insure that they are correctly carrying out the "L of C" documentation as outlined in par. 7 this order and to expedite forwarding of forms.
 - (5) To study and analyze the MT company and convoy operating reports to determine deficiencies and to instigate necessary investigations and corrective actions as needed.
 - (6) Other duties as called for in this order or other directives pertaining to "L of C" Motor Operations.

c. Movement Control. The truck companies on each operation will receive movement dispatch instructions from TCP's of Sections, Com Z concerned. The movement instructions to be based on schedules or directions from G-4, Hq. Com Z to G-4 of Sections Com Z., concerned.

- (1) In the case of a small "L of C" operation Bns. or Groups may be designated to act as dispatch or outbound TCP's in addition to their regular duties. In such cases, the daily schedules will be received from the Sections, Com Z, originating the move and the Bn. or Group will carry out the documentation called for in par. 7 this order.
- (2) The Sub-Hqs., Hq. & Hq. Co. will continually check with the Dispatch, TCP and the Movements Division of the Section, Com Z concerned that; convoys are being dispatched at a rate which can be loaded or unloaded in two hours; that

adequate movement instructions are being issued; that supply installation loading rates are known; that efficient use is being made of the different types of truck equipment available.

f. Convoy Operations: Convoys will be operated as prescribed in par. 11, "MOTRAN" and as further detailed in ETO SOP "Red Ball", Sub-Hqs, MTS, have "L of C" routes checked weekly for operational condition and submit reports thereon to Operations Branch, HQs & HQs Co.

g. TC Group, Bn. and Company Duties: Such duties as outlined in par. r "MOTRAN" as amended. In addition, the TC Groups, Bns., and truck companies assigned to the operational control of HQs & HQ Co. will carry out the functions and duties listed in Operational Memorandum No. 2, HQ & HQ. Co., MTS
15 November 1944.

h. Truck Loading. Sub-Hqs., MTS HQ & HQ., Co., OTC Group, Bn. and Company personnel will continually check to insure that efficient truck loading is being accomplished as described in "MOTRAN", par. 11; and in "Truck Loading Reference Data".

i. Communications:

- (1) MT units will utilize existing communication facilities and expedite the delivery of instructions and information to the maximum extent possible by courier if necessary.
- (2) Sub-Hqs., HQ & HQ. Co. will check to insure that Sections, Com Z have adequate communication at dispatch points to loading points, at diversion and transfer points and at regulating stations or destinations.

j. Maintenance:

- (1) Maintenance instructions as listed in "MOTRAN", par. 14 and "Maintenance and Operations of Motor Vehicles", HQ, ETOUSA, 24 January 1944 with changes to date, will be followed.
- (2) In addition, the line maintenance system under Ordnance supervision and operation will be utilized by "L of C" operations.

k. Billets and Truck Pools for MT Units. Particular care will be taken in coordinating with the Sections, Com Z on the proper and strategic selection of adequate billets and truck park facilities. Whenever possible, hard standings will be obtained for truck pools.

7. DOCUMENTATION.

a. MT Daily Operations Report will be submitted, as described in Exhibit II* this order, by each TC Bn. for all MT units assigned or attached.

* NOT included in this Appendix. Available in files, Historical Section.

Complete entries will be secured from and entered for MT companies on detached or temporary duty. Negative reports will be submitted. TC Bns. and Groups assigned to HQ & HQ Co., will submit the daily reports to the MTS, Sub-Eqs, concerned which in turn will forward them to HQ. & HQ Co.- Attention: Status Branch.

b. Supply and Personnel Reports as called for in par. 15c, "MOTRAN" and as illustrated in Exhibit III* this order will be submitted by all MT units.

c. MT Control Forms I, II, III, IV & V (See Exhibits* IV, V, VI, VII) will be utilized on all "L of C" motor operations as directed in ETO, SOP "Red Ball Motor Transport Operations", Par. 15b.

PRELIMINARY

* NOT included in this Appendix. Available in files, Historical Section.

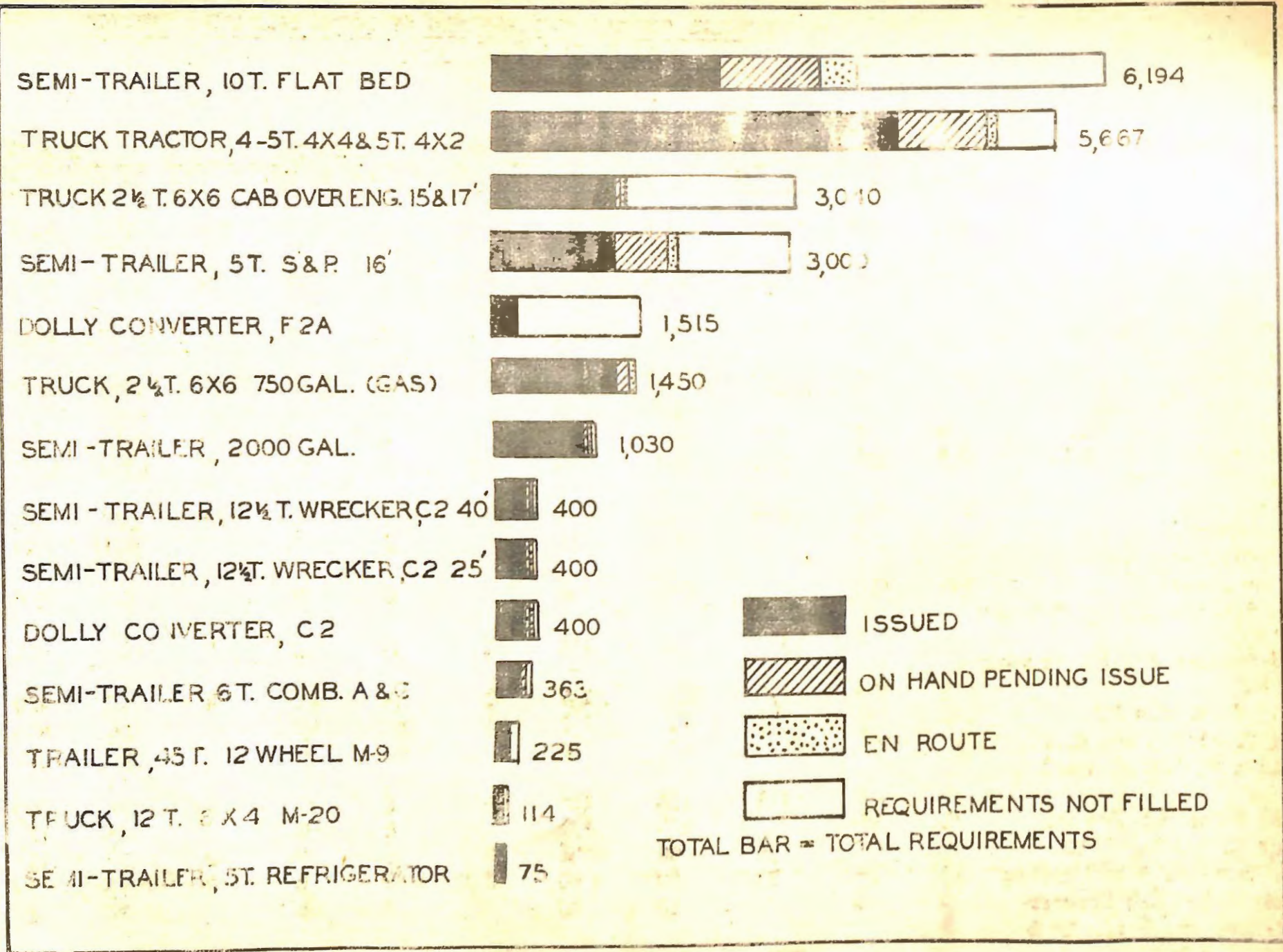
APPENDIX NO. 2
(CHAPTER V)

SPECIAL VEHICLE REQUIREMENTS OF MOTOR TRANSPORT SERVICE
AS OF 31 OCTOBER 1944
T.C. E.T.O.

VEHICLE	ON HAND PENDING ISSUE			ON HAND OPERATING			ENROUTE			REQUIRED		
	31 OCT	30 NOV	31 DEC	31 OCT	30 NOV	31 DEC	31 OCT	30 NOV	31 DEC	31 OCT	30 NOV	31 DEC
Semi-Trailer, 10 ton Flat Bed 25'	353	214	2,301	650	743	1,005	353	28	377	6194	6194	6194
Truck-Tractor 4-5 ton 4x4 and 5 ton 4x2	1072	1903	4,098	2022	2398	929	2646	349	93	5667	5667	5667
Truck 2½ ton 6x6 Cab over Engine 15' and 17'	0	0	1,248	1288	1288	8	46	0	1	3040	3038	3040
Semi-Trailer, 5 ton S&P 16'	784	1884	1,265	198	144	549	1070	105	108	3000	3000	3000
Skid Tank, 750 Gal.	1377	0		816	816		0	0		2000	2000	
Dolly Converter, F2A	0	0	236	334	244	0	0	0	0	1515	1515	1515
Semi-Trailer, 2000 Gal.	167	214	959	743	743	25	93	30	8	1030	1030	1030
Truck 2½ ton 6x6 750 Gal. (gas)	652	956	1,249	240	240	134	477	48	67	588	588	1450
Truck-Tractor 1½ ton 4x4	337	377		144	96		1	0		541	541	
Semi-Trailer 3 ton (6 ton gross)	356	414		144	96		0	0		500	500	
Semi-Trailer 12½ ton Wrecker C2, 25'	99	0	373	221	196	21	55	12	4	400	400	400
Semi-Trailer 12½ ton Wrecker C2, 40'	157	299	373	163	197	21	55	12	4	400	400	400
Dolly Converter C2	248	155	373	72	191	21	55	12	4	400	400	400
Semi-Trailer 5 ton Refrig Trailer 45 ton 12 Wheel	219	254		48	48		61	0		300	300	
M-9	0	0	141	186	186	0	0	0	0			
Truck 4 ton 6x6 Wrecker	71	64		114	121		0	0		225	225	225
Truck 12 ton 6x4 M-20	0	0	96	96	96	0	0	0	0	185	185	
Semi-Trailer, 5 ton Refrig	15	15	75	60	60	0	0	0	0	114	114	114
Truck 10 Ton 6x6 Wrecker	0	0		10	10		0	0		75	75	75
Semi-Trailer, 6 ton Comb A & C			307			41			15			363

SPECIAL VEHICLE REQUIREMENTS OF M.T. SERVICE

T.C. E.T.O.



~~SECRET~~

AS OF
31 DECEMBER 1944

STATISTICS BRANCH T.C.

APPENDIX NO. 3
(CHAPTER V)

MOTOR TRANSPORT SERVICE VEHICLES

MONTH OF OCTOBER 1944

DATE	NO. ASSGD.	NO. AVAIL.	NO. * IN USE	NO. CO'S ASSGD.	DATE	NO. ASSGD.	NO. AVAIL.	NO. * IN USE	NO. CO'S ASSGD.
1	13,240	11,042	10,379	255	17	11,992	10,001	8,301	229
2	13,240	11,042	10,489	255	18	11,944	9,961	8,367	228
3	13,240	11,042	10,269	255	19	11,944	9,961	8,566	228
4	13,240	11,042	10,269	255	20	12,040	10,041	9,137	230
5	31,240	11,042	10,489	255	21	12,040	10,041	8,434	230
6	13,240	11,042	9,827	255	22	12,040	10,041	8,234	230
7	13,240	11,042	10,489	255	23	11,416	9,521	7,998	217
8	13,096	10,922	9,939	252	24	10,984	9,161	7,878	208
9	13,096	10,922	10,048	252	25	10,736	8,654	7,702	208
10	13,096	10,922	9,611	252	26	10,736	8,654	7,356	208
11	13,096	10,922	9,939	252	27	11,072	9,234	8,218	215
12	13,092	10,922	10,048	252	28	10,880	9,074	7,531	211
13	13,092	10,922	10,266	252	29	10,880	9,074	7,440	211
14	11,848	9,881	8,794	226	30	10,628	8,864	7,868	211
15	11,848	9,881	8,399	226	31	10,704	8,927	6,517	223
16	11,992	10,001	8,401	229					

MONTH OF NOVEMBER 1944

1	10,704	8,927	7,410	223	16	10,224	6,850	5,069	213
2	10,704	8,927	7,231	223	17	10,224	7,463	5,150	213
3	10,416	8,687	7,124	217	18	10,224	7,054	5,291	213
4	10,416	8,687	6,777	217	19	10,224	7,463	5,746	213
5	10,416	8,687	6,691	217	20	10,224	7,054	5,432	213
6	10,464	8,727	5,760	218	21	10,224	6,850	4,795	213
7	10,464	8,727	6,894	218	22	10,224	6,850	4,864	213
8	10,320	8,607	6,886	215	23	10,224	6,850	4,864	213
9	10,464	8,727	6,371	218	24	10,224	6,645	4,586	213
10	10,272	8,567	6,340	214	25	10,224	6,645	4,652	213
11	10,272	7,488	5,915	214	26	10,224	6,543	4,515	213
12	10,224	7,668	5,598	213	27	10,224	6,441	4,508	213
13	10,224	7,464	5,368	213	28	10,224	6,390	4,409	213
14	10,224	7,872	5,825	213	29	10,224	6,441	4,756	213
15	10,224	6,645	4,118	213	30	10,224	6,543	4,645	213

MONTH OF DECEMBER 1944

1	10,224	6,645	74%***	214	17	9,867	7,005	61%***	204
2	10,224	6,543	77	214	18	9,867	7,006	73	204
3	10,224	6,441	73	214	19	9,867	7,203	75	202
4	10,224	6,441	68	218	20	9,867	7,005	74	204
5	10,224	6,850	69	218	21	9,867	7,203	70	204
6	10,224	6,645	66	218	22	9,771	7,133	70	202
7	10,224	6,645	60	218	23	9,867	7,400	71	204
8	10,539	6,850	68	218	24	9,963	7,263	74	206
9	10,539	6,808	69	218	25	9,963	7,273	67	206
10	10,539	7,061	62	218	26	9,963	7,273	67	206
11	10,539	6,850	65	218	27	10,395	7,380	68	215
12	10,539	6,850	66	218	28	10,395	7,172	69	215
13	10,539	6,745	66	218	29	10,395	7,380	68	215
14	10,539	7,061	66	218	30	10,395	7,380	69	215
15	9,867	7,006	69	204	31	10,395	7,380	66	211
16	9,867	6,808	69	204					

*No. in Use: 1 truck in use for 1 day on basis of 20 hours operation per 24 hours.
 **Use Factor Percentage is based on 100% equalling 40 vehicles per company working 20 hours per day.

(Chapter V)

HEADQUARTERS
COMMUNICATIONS ZONE ETOUSAOFFICE OF THE CHIEF OF TRANSPORTATION
MOTOR TRANSPORT SERVICE

APO 887

MAINTENANCE BULLETIN)
NO. - - - - -2)

15 November 1944

Preventive Maintenance
Company Service Line Operations for
Transportation Corps Organizations.

- I -

GENERAL

1. Preventive maintenance is scheduled servicing, systematic detection and correction of minor failures before they occur or develop into major defects, and when properly performed, will maintain vehicles in a satisfactory operating condition. Preventive maintenance is the responsibility of commanders of Motor Transport Service truck organizations. It is of prime importance that servicing of all vehicles, whether on port clearance, other static operations, or on Line of Communication routes, be accomplished regularly and systematically. Every effort will be expended to keep vehicles operating under all conditions.
2. a. The following operations and procedures will be placed into effect immediately upon receipt of this communication. Specific duties of each team will be extracted and placed on a card and followed systematically by the teams concerned.
 - b. Equipment necessary is that provided by the T/E to each unit. Organizations which do not have serviceable maintenance equipment will combine servicing operations with other units. Battalions will consolidate operations for companies in adjacent bivouacs.
 - c. Bivouac areas must include hard surface standing; vehicles will not enter company bivouac areas proper, but will remain on the hard standing for servicing. Line of Communication convoy serials (Red Ball, White Ball, etc.) will arrive at servicing strips on the return route empty and will be serviced immediately upon arrival. Organizations assigned to port clearance or static operations will designate a specific time for all truck platoon or serial to report to a hard surfaced servicing area for preventive maintenance operations. Regular "motor" stables " will be held daily in accordance with the procedures herewith.
 - d. Vehicles on L of C haul should be arranged in column with approximately 4 to 5 feet distance, in the same manner as in convoy operation, or, if space is suitable, in line with sufficient space between for tire changing operations. Vehicles of "static" organizations may be arranged in any orderly manner to facilitate maintenance operations.

3. a. Procedures stated herein for conduct of the Company Service Line are based upon operations as prescribed in Chapters 2 and 3, TM 9-2810, "Motor Vehicles Inspections and Preventive Maintenance Services", 21 October 1943, and as listed on the "FMS and TI Work Sheet for Wheeled and Half-Track Vehicles", WDAGO Form No. 461. Maintenance operations outlined in paragraph 15, TM 9-2810, will be followed as a guide.

b. All operations pertaining to first echelon maintenance and 1,000 mile services will be accomplished on the Company Service Lines as the serials or platoons arrive thereat. Some 6,000 mile services will also be accomplished. Operations will be performed daily or once during each turn-around on L of C route.

4. a. Personnel indicated for the procedures outlined herein, will be provided from among that available to the company, including POW. Team personnel may be increased or interchanged between POW and EM, but EM should remain in charge as the leader of the team.

b. Procedures outlined herein will require, initially, from 3 to 4 hours to accomplish. This time will be reduced as personnel become more skilled. If personnel is available, numbers of certain servicing teams can be doubled, or size of teams increased to expedite the various operations.

c. When hauls are short and do not require a mechanic to accompany each serial, those mechanics must be utilized in service line servicing operation. This personnel should be added to the mechanic teams.

d. Personnel required for normal Company Service Line operations is as follows:

(1) From company maintenance personnel:

1 - Old driver
 1 - Motor sergeant
 4 - Mechanics, including armorer

 6 - Total

(2) From convoy serial personnel:

1 - Old driver
 1 - New driver
 NCO's of outgoing serial (new) personnel.

(3) From other company personnel:

	<u>EM</u>	<u>POW</u>
(a) Battery team	1	1
(b) Tire teams (2)	2	6
(c) Tighten teams (2)	4	0 (or 2 and 2)
(d) Chassis grease teams (2)	2	2
(e) Gear Box lub. team	2	0 (or 1 and 1)
(f) Mechanic team #1	1	1
(g) Mechanic team #2	1	1
(h) Body Repair team	0	1
	<hr/>	<hr/>
	13	12 Total - 25

e. Upon completion of servicing a serial on the Company Service Line,

personnel will be utilized in performing operations as indicated in Section III below, and in preparation for servicing the next serial to arrive.

II

COMPANY SERVICE LINE PROCEDURES

1. Necessary supplies, tools and equipment will be prepared and kept in readiness.
2. All vehicles must be kept reasonably clean. Mud will be washed off or removed by other methods so as to facilitate servicing and/or repairs. POW are recommended as personnel for this purpose. Battalion or Base Section vehicle washing points should be established where all vehicles may be washed when empty.
- 3.

PERSONNEL

DUTIES

- | | |
|---------------------------------|---|
| <p>a. <u>MOTOR OFFICER</u></p> | <p>(1) Personal supervision of all operations.
(2) Inspect every vehicle, engine running, upon completion of servicing, and initial Report of Defects slip turned in by old driver.
(3) Clear serial to convoy commander.</p> |
| <p>b. <u>MOTOR SERGEANT</u></p> | <p>(1) Assist Motor Officer.</p> |
| <p>c. <u>OLD DRIVER</u></p> | <p>(1) Report defects noted during run to motor sergeant through new driver on Report of Defects slip, as per Inclosure #1.
(2) Assist new driver to refuel vehicle.
(3) Sweep out cab and body, clear vehicle of personal possessions.</p> |
| <p>d. <u>NEW DRIVER</u></p> | <p>(1) Refuel vehicle.
(2) Check oil and water.
(3) Clean windshield, lights and bumpers.
(4) Assist engine mechanic team.
(5) Inspects, prior to departure, all items listed in "Before Operation Service", items #1 to #23 included on reverse Form #48, "Drivers Trip Ticket".</p> |

New driver is responsible that necessary work has been performed on his vehicle prior to departure on new run, particularly defects reports by old driver on check slip. Slip turned in to motor sergeant upon readiness inspection of vehicle.

- | | |
|-------------------------------|--|
| <p>c. <u>BATTERY TEAM</u></p> | <p>(1) Service all batteries, all vehicles, per Item #22 on Form 461, and paragraph 15, TM 9-2810.
(2) Change batteries and cables when required</p> |
|-------------------------------|--|
- 1 - POW
- (a) Remove cover
 - (b) Clean top of battery and case
 - (c) Clean terminals and grease
 - (d) Replace cover

1 - EM

- (a) Inspect cables, terminals, posts, straps, and hold downs, and for cracks and leaks.
- (b) Test gravity and add water if necessary.
- (c) Tighten carefully where required.

BASIC EQUIPMENT REQUIRED

Wrenches only as necessary.
 Battery carrier.
 Vaseline or light grease.
 Hydrometer.
 Distilled water.
 Cleaning rags, etc.

f. TIRE TEAM
 (2 teams)
 Each Team
 2 - POW

- (1) To inspect, inflate, match, and change tires, per Item #47 on Form 461 and Par. 15, TM 9-2810.
- (2) Teams to work from both ends simultaneously.
 - (a) Tighten wheel nuts and studs, all wheels.
 - (b) Tighten drive flange bolts and nuts.
 - (a) Operate compressor and assist.
 - (a) Check and inflate tires.
 - (b) Remove foreign bodies.
 - (a) Change tires.
 - (a) In charge. (New squad leader from convoy serial).
 - (b) Inspect for matching, wear and rotation requirements.

1 - POW

1 - EM

ALL

1 - NCO

BASIC EQUIPMENT REQUIRED

Two compressors, air
 Four lug wrenches and bars.
 Two tire gauges
 Two Foreign body removing instruments.
 Valve caps and cores.

g. TIGHTEN TEAMS
 (2 Teams)

2 - EM or
 1 - EM and
 1 - POW

- (1) Tighten nuts and bolts on chassis, exclusive of wheels, to include U-bolts, spring shackles, transfer case, body bolts transmission, fifth wheel mounting etc.; per Items #79, 80, 87, 88, 100, 101, on Form #461 and Par. 15, TM 9-2810.
- (2) Teams to work from both ends simultaneously.
- (3) Personnel can be utilized to assist tire teams or Mechanic Team #2 (Chassis Team) if duties are completed. Motor sergeant to coordinate.

BASIC EQUIPMENT REQUIRED

1 Tool set, mechanic
Special wrenches per type of vehicle.

h. CHASSIS GREASE TEAM

(2 Teams)
1 - EM
1 - POW

- (1) Lubricate chassis per lubrication chart, exclusive of gear boxes; per Item #85 on Form 461 and Par. 15, TM 9-2810.
- (2) Service fifth wheels.

BASIC EQUIPMENT REQUIRED

Lubricant guns as required.
Two oil cans
Chassis lubricants and oil
Rags

i. GEAR BOX LUBRICATING TEAM

2 - EM or
1 - EM and
1 - POW

- (1) Inspect, check; and serve all gear boxes and universals, including steering gear, transmissions axles, etc., Items #16 on Form 461 to be included.
- (2) Open all vents.

BASIC EQUIPMENT REQUIRED

Dispensers
Wrenches as required
Lubricants
Rags

j. MECHANIC TEAM # 1
(Engines and Topside)

1 - EM (T/4)
1 - POW
New driver or POW

- (1) Check and service all engines per Items #18-20, 23-27, 29, 31-44, 63, 81-82, 84, 91, 94, 98, on Form 461 and Par. 15, TM 9-2810.

BASIC EQUIPMENT REQUIRED

One mechanics tool set
Special tools as required.

k. MECHANIC TEAM # 2
(Chassis and Bottomside)

1 - EM (T/4)
1 - POW

- (1) Check and service chassis units, including clutch, universals, brakes, etc., as per Items #48-50, 53, 55, 57-58, 60-62, 64-78, 83, 89, 93 on Form 461 and Par. 15, TM 9-2810.

BASIC EQUIPMENT REQUIRED

1 Mechanic tool set
Special tools as required.

PERSONNEL

DUTIES

1. BODY REPAIR TEAM

Armorer
1 - FC"

- (1) To perform minor welds on fenders, brush guards, etc.
- (2) To repair bodies insofar as practicable.
- (3) Tighten body bolts, repair curtains, etc
- (4) This team will be required to operate regularly in the initial phase of FM operations. Should be available on call at all times when serial is expected for servicing.

BASIC EQUIPMENT REQUIRED

One 2nd echelon set #5
One Welders tool set
Wrenches, etc., as required

m. NCO's of "New" Serials.

- (1) Two NCO's - with tire teams
- (2) One NCO - Test specific gravity of anti-freeze, and check radiator fluid.
- (3) Other NCO's to supervise operations.

n. NCO's of "Old" Serials.

- (1) To supervise operations of "old" driver, as listed in #3 above.

III

OFF LINE OPERATIONS

1. Second echelon shops will be established on suitable sites with protection from inclement weather, adjacent to the Company Service Line and on hard standing.

2. Forty (40) vehicles only will be considered as available for dispatch; eight (8) vehicles will normally be withheld daily for 6,000 mile services. All 6,000 mile servicing but accomplished during service line maintenance will be performed on these vehicles to include all operations as listed in Par 15, TM 9-2810, and on Form #461 in columns "6,000 mile maintenance". Vehicles withheld for maintenance will be substituted in serials so as to insure complete maintenance on all vehicles each week. Bumper markings will be renewed at this time.

3. a. When a vehicle on the Company Service Line is determined as being unserviceable, or cannot be immediately repaired on the Service Line, it will be withdrawn at once from service and replaced by a serviceable vehicle.

b. Vehicles requiring 3rd or 4th echelon maintenance will be immediately evacuated to Ordnance for repair or replacement. No 3rd echelon repairs will be accomplished, except when urgently required and parts are on hand.

4. Between serials, personnel will be utilized in changing tires, loading grease guns, supplying fuel, and readying supplies and equipment for servicing the next serial.

5. Attention is invited to Par. 4 d, TM 9-2810. The Duty Roster, WDAGO

Form No. 6, 15, prescribed for record purposes and will be kept current for all vehicles of every organization.

IV

DUTIES OF DRIVERS AT HALTS

1. a. While waiting loading and/or unloading, or at other halts, drivers will devote part of this time to inspecting and checking items #38 to #52 on the reverse of Form #48, "Drivers Trip Ticket and DM Service Record".

b. The following operations will be accomplished by the driver at every halt:

- (1) Cleaning windshield
- (2) Cleaning lights
- (3) Cleaning off bumper
- (4) Removing excess mud
- (5) Checking for leaks
- (6) Checking for flat tires and changing when necessary
- (7) Inspecting trailer hitches
- (8) Inspecting load
- (9) Securing tarpaulins and lashings.

c. On L of C runs, any serious defect will be reported immediately to the mechanic accompanying the serial through the section leader.

/s/ L.A. Ayers,
/t/ L.A. AYERS,
Colonel, T.C.
Chief, M.T. Service, OCOT.

* 2 Incls:

- Incl #1 - Defect Report Slip for Driver
Incl #2 - WDAGO Form No. 461

* NOT INCLUDED IN THIS APPENDIX.

APPENDIX No. 5

(CHAPTER V)

TONS FORWARDED BY MOTOR TRANSPORT SERVICE ON CONTINENT FOR MONTH OF OCTOBER 1944

DATE	PORT CLEARANCE	LINE OF COMMUNICATION	STATIC OPERATIONS	DAILY TOTAL	DATE	PORT CLEAR	LINE OF COMM.	STATIC OPERA.	DAILY TOTAL
1 Oct	21,398	18,851	24,769	65,018	17 Oct.	21,058	13,272	21,958	56,288
2	19,826	18,486	23,133	61,445	18	18,860	17,252	37,033	73,145
3	31,578	18,903	24,203	74,764	19	11,542	14,110	32,808	58,460
4	17,961	21,660	26,537	66,158	20	16,726	14,007	28,398	59,129
5	14,388	23,544	24,477	62,409	21	15,350	16,435	37,424	69,209
6	10,767	22,023	23,120	55,910	22	16,753	17,850	33,438	68,041
7	8,811	23,486	21,881	54,178	23	26,644	15,899	33,204	75,747
8	12,814	21,414	22,289	56,517	24	15,249	16,825	31,162	63,230
9	17,988	20,847	21,509	60,344	25	16,622	7,778	43,702	68,102
10	24,139	16,936	21,733	62,808	26	24,305	8,400	47,026	79,733
11	28,762	14,268	21,074	64,104	27	23,783	9,532	43,994	77,309
12	25,733	15,478	18,464	59,675	28	22,499	9,965	40,222	72,686
13	26,813	12,639	18,134	57,596	29	24,334	10,336	36,082	70,752
14	19,651	14,059	23,510	57,220	30	23,155	7,777	33,011	69,943
15	24,136	14,451	19,731	58,318	31	18,637	7,877	39,346	65,860
16	25,068	16,566	27,741	69,375					
1 Nov	19,896	6,227	44,007	70,130	16 Nov.	25,120	7,513	37,884	70,517
2	22,454	7,156	35,874	65,484	17	23,946	8,198	45,705	77,849
3	26,241	6,933	39,182	72,356	18	23,556	8,503	38,525	70,504
4	29,952	7,615	41,841	79,408	19	26,924	7,895	36,899	71,718
5	27,503	7,589	44,457	79,549	20	20,445	7,970	39,107	67,522
6	25,170	7,517	40,097	72,784	21	16,224	9,556	34,514	60,294
7	21,426	7,569	40,828	69,823	22	14,595	9,165	39,790	63,550
8	16,495	9,287	40,243	66,025	23	19,281	7,764	32,885	59,930
9	15,180	6,787	45,296	67,263	24	16,415	6,808	37,049	60,272
10	17,738	9,618	31,419	58,775	25	11,879	7,385	36,819	56,083
11	22,647	6,829	27,018	56,494	26	21,444	7,730	35,972	65,146
12	26,984	6,478	31,333	64,795	27	16,360	8,039	27,153	51,552
13	24,154	7,465	40,802	72,421	28	20,377	7,747	35,621	63,745
14	19,515	6,756	33,296	59,567	29	21,517	7,540	33,154	62,211
15	21,675	6,539	44,383	72,597	30	15,457	6,704	33,325	55,486
				TOTAL		630,570	228,882	1,124,478	1,983,930

STATISTICS BRANCH
TRANSPORTATION CORPS, COM 2

TONS FORWARDED BY MOTOR TRANSPORT SERVICE ON CONTINENT

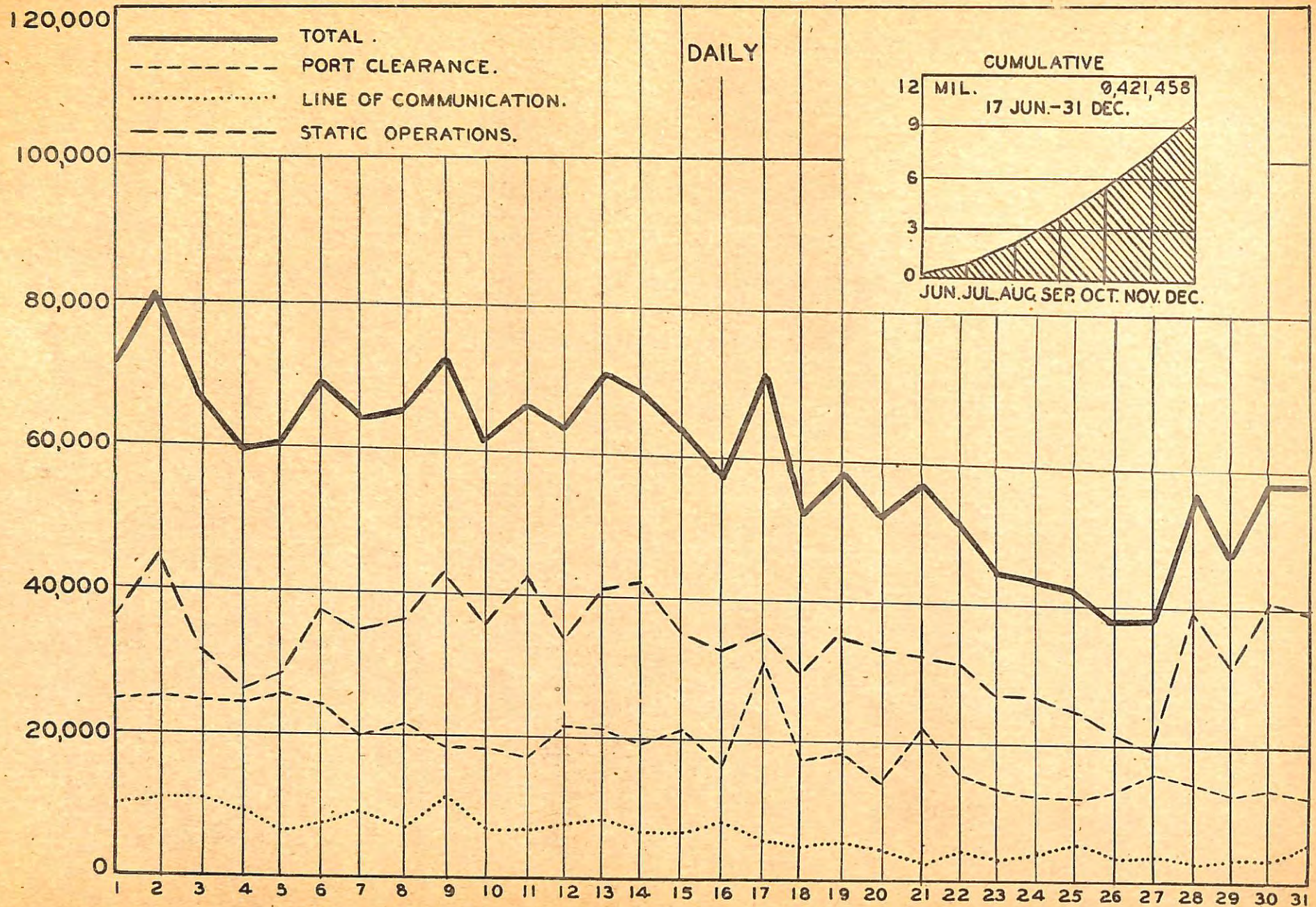
DECEMBER 1944

<u>DATE</u>	<u>PORT CLEAR</u>	<u>LINE OF COMM.</u>	<u>STATIC OPERA.</u>	<u>DAILY TOTAL</u>	<u>DATE</u>	<u>PORT CLEAR</u>	<u>LINE OF COMM.</u>	<u>STATIC OPERA.</u>	<u>DAILY TOTAL</u>
1 Dec	24,892	10,194	35,874	70,960	17	30,165	5,520	35,557	71,242
2	25,168	11,036	44,783	80,987	18	17,559	4,884	29,960	52,403
3	24,635	11,052	31,661	67,348	19	18,366	5,296	35,048	58,710
4	24,515	9,115	26,198	59,828	20	14,507	4,464	33,381	52,352
5	25,449	6,527	28,489	60,455	21	22,241	2,448	32,545	57,234
6	24,049	7,606	37,333	68,988	22	15,755	4,183	31,360	51,298
7	19,987	9,472	34,737	64,196	23	13,697	3,325	27,169	44,191
8	21,833	7,102	36,366	65,301	24	12,550	3,904	26,795	43,249
9	18,508	11,608	42,781	72,897	25	12,340	5,058	24,756	42,154
10	18,193	6,883	35,984	61,060	26	13,210	3,336	21,562	38,108
11	17,158	6,942	42,323	66,423	27	15,667	3,704	19,301	38,672
12	21,441	7,838	34,139	63,418	28	14,493	2,667	39,658	56,818
13	21,119	8,445	41,171	70,735	29	12,728	3,116	31,553	47,397
14	19,214	6,848	42,366	68,428	30	13,903	3,237	41,047	58,187
15	21,224	6,817	35,093	63,134	31	12,803	5,326	39,991	58,120
16	16,453	8,222	32,881	57,556					
				TOTAL		583,822	196,175	1,051,822	1,831,859

CUMULATIVE FROM 17 JUNE 1944

<u>MONTH</u>	<u>MONTHLY</u>	<u>CUMULATIVE</u>
June 1944	198,047	198,047
July	575,381	773,428
August	1,468,805	2,044,186
September	1,554,006	3,598,192
October	2,007,477	5,605,669
November	1,983,930	7,589,599
December	1,831,859	9,421,458

TONS FORWARDED BY MOTOR TRANSPORT SERVICE - ON CONTINENT -



SECRET

DECEMBER 1944

STATISTICS BRANCH T.C.

~~SECRET~~

APPENDIX NO. 6
(Chapter V)

TON MILES FORWARDED BY MOTOR TRANSPORT SERVICE
ON CONTINENT

<u>DATE</u>	<u>DAILY</u>	<u>DATE</u>	<u>TON MILES</u>
1 October	4,451,819	1 November	1,890,565
2	5,024,353	2	2,231,468
3	4,285,769	3	2,385,828
4	4,092,387	4	2,504,563
5	4,110,611	5	2,402,489
6	3,936,001	6	2,663,457
7	4,094,785	7	2,499,318
8	3,922,039	8	2,665,790
9	3,830,137	9	2,735,778
10	3,178,157	10	2,444,109
11	2,867,366	11	1,728,081
12	2,966,936	12	2,077,763
13	2,436,086	13	2,126,316
14	2,645,440	14	1,935,024
15	2,142,504	15	1,995,314
16	3,098,374	16	2,099,479
17	2,553,713	17	2,060,594
18	3,980,252	18	2,248,572
19	2,522,940	19	1,766,701
20	2,899,928	20	2,325,287
21	3,324,003	21	2,535,740
22	3,613,676	22	2,083,204
23	3,507,812	23	2,465,128
24	3,659,627	24	2,103,455
25	2,254,126	25	2,118,543
26	2,613,415	26	2,181,904
27	2,745,945	27	2,260,868
28	2,613,306	28	2,116,838
29	2,830,281	29	2,231,643
30	2,248,511	30	2,138,614
31	2,370,540		

NOTE: The drop in tonnage and ton miles from the High Levels of September is due to the following reasons:

1. Loss of approximately 44 provisional truck companies to their tactical assignments.
2. Difficulty in loading and unloading because of critical mud conditions at dumps and depots.
3. Long delays in unloading at newly organized depots in the Paris Area and at Advance Section.
4. Delay in movement of Bulk POL by forward movement of Pipehead and lack of bulk stowage facilities at final destination.

~~SECRET~~

TON MILES FORWARDED BY MOTOR TRANSPORT SERVICE ON CONTINENT

DECEMBER 1944

<u>DATE</u>	<u>TON MILES</u>	<u>DATE</u>	<u>TON MILES</u>
1 Dec	2,552,731	17 December	1,701,982
2	2,839,354	18	1,380,492
3	2,869,525	19	1,471,677
4	2,356,156	20	1,643,797
5	1,913,870	21	1,275,094
6	2,306,791	22	1,295,708
7	2,298,014	23	1,303,001
8	2,154,513	24	1,273,756
9	2,745,358	25	1,282,956
10	1,833,016	26	1,122,493
11	1,775,046	27	1,006,434
12	1,872,037	28	1,209,625
13	1,972,314	29	1,196,766
14	1,956,597	30	1,095,369
15	1,709,224	31	1,350,794
16	1,782,679		

CUMULATIVE FROM 17 JUNE 1944

<u>MONTH</u>	<u>MONTHLY</u>	<u>CUMULATIVE</u>
June	1,594,976	1,594,976
July	5,419,057	7,014,033
August	44,488,516	51,502,549
September	105,399,823	156,902,372
October	100,820,839	257,723,211
November	67,023,433	324,746,644
December	54,607,169	379,353,813

STATISTICS BRANCH
TRANSPORTATION CORPS, CZ, ETOUSA
31 DECEMBER 1944

(Chapter V)

TONNAGE HAULED BY MOTOR TRANSPORT SERVICE LINES OF COMMUNICATION

RAIL

DATE	RED BALL	WHITE BALL	BULK POL.	GREEN DIAMOND	LIONS EXPRESS	CLEAR-ANCE	MISC.	DATE	RED BALL	WHITE BALL	BULK POL.	GREEN DIAMOND	ABC HAUL	MISC.	TOTAL
1 Oct	6,836	-	2,283	-	1,272	7,500	960	1 Nov.	1,644	1,381	1,802	440	-	960	6,227
2 "	8,520	-	1,348	-	455	7,058	1,105	2 "	1,654	2,164	2,378	-	-	960	7,156
3 "	8,928	-	1,736	-	115	7,315	809	3 "	1,752	2,583	1,702	-	-	896	6,933
4 "	7,487	-	2,890	-	632	9,074	1,577	4 "	1,732	2,675	2,248	-	-	960	7,615
5 "	6,643	-	2,224	-	1,074	10,866	2,737	5 "	1,022	3,883	3,828	-	-	856	7,589
6 "	5,998	260	3,085	-	106	9,813	2,761	6 "	987	3,145	2,425	-	-	960	7,517
7 "	7,513	360	2,795	-	771	10,597	1,450	7 "	1,782	2,058	2,574	-	-	1,155	7,569
8 "	7,345	348	2,630	-	680	8,185	2,226	8 "	622	2,152	5,553	-	-	960	9,287
9 "	6,297	583	3,740	-	145	7,289	2,793	9 "	923	1,586	3,189	-	-	1,089	6,787
10 "	5,415	325	886	-	1,120	6,580	2,610	10 "	2,257	2,780	3,857	-	-	724	9,618
11 "	4,362	990	1,350	-	165	6,391	1,010	11 "	788	2,196	3,209	-	-	636	6,829
12 "	4,989	598	891	-	568	6,193	2,239	12 "	746	2,194	2,823	-	-	715	6,478
13 "	3,995	772	1,222	-	942	4,733	975	13 "	736	3,313	2,506	-	-	910	7,465
14 "	3,905	225	1,052	-	-	7,917	960	14 "	562	2,166	2,395	-	-	1,633	6,756
15 "	4,287	157	271	1,698	-	6,083	1,955	15 "	770	2,076	2,739	-	-	954	6,539
16 "	5,976	643	1,926	1,091	-	6,096	834	16 "	299	3,084	2,639	-	-	1,491	7,513
17 "	4,095	1,140	1,926	1,177	-	4,096	838	17 "	-	4,356	2,949	-	-	893	8,198
18 "	4,376	1,078	1,753	1,074	-	8,011	960	18 "	-	4,697	2,695	-	-	1,111	8,503
19 "	4,287	1,166	1,753	456	-	5,488	960	19 "	-	3,911	3,280	-	-	704	7,895
20 "	3,961	835	2,071	380	-	5,638	1,122	20 "	-	4,549	2,664	-	-	757	7,970
21 "	4,751	522	2,762	405	-	7,282	713	21 "	-	3,952	4,261	-	-	1,343	9,556
22 "	5,271	1,389	2,140	525	-	7,555	970	22 "	-	3,201	4,619	-	-	1,345	9,165
23 "	4,520	1,386	2,572	454	-	5,999	968	23 "	-	2,990	4,013	-	-	761	7,764
24 "	4,008	1,130	2,558	799	-	6,853	1,477	24 "	-	2,579	3,379	-	-	850	6,808
25 "	2,711	1,174	2,123	1,025	-	-	745	25 "	-	2,397	3,991	-	-	997	7,385
26 "	3,393	819	2,490	764	-	-	934	26 "	-	1,985	4,868	-	-	877	7,730
27 "	3,001	2,419	2,185	1,087	-	-	840	27 "	-	2,646	4,154	-	-	1,239	8,039
28 "	3,257	1,810	2,887	1,051	-	-	960	28 "	-	2,147	4,640	-	-	960	7,747
29 "	1,888	2,315	3,870	1,277	-	-	986	29 "	-	1,940	4,094	-	-	1,506	7,540
30 "	2,249	1,444	2,830	364	-	-	890	30 "	-	1,994	3,467	-	-	438	805
31 "	1,297	1,814	2,408	1,523	-	-	835								
TOTAL	151,561	25,702	66,657	15,150	8,045	172,612	41,199		18,276	82,780	96,941	440	438	30,007	228,882

TONNAGE HAULED BY MOTOR TRANSPORT SERVICE LINES OF COMMUNICATION

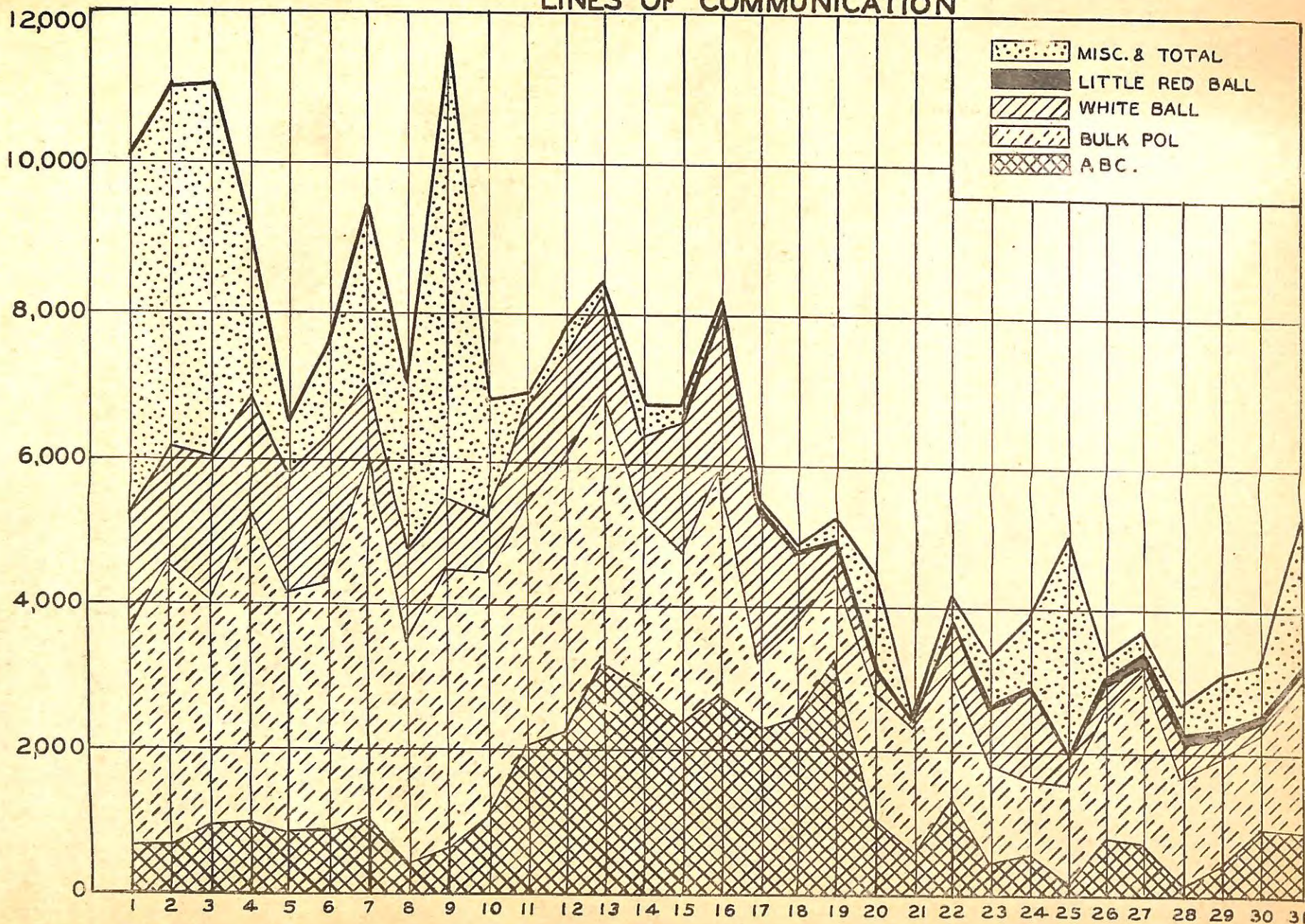
DECEMBER 1944

<u>DATE</u>	<u>ABC</u>	<u>BULK POL</u>	<u>WHITE BALL</u>	<u>LITTLE RED BALL</u>	<u>MISC.</u>	<u>TOTAL</u>
1 Dec.	683	2,878	1,677	-	4,956	10,194
2	684	3,856	1,646	-	4,850	11,036
3	985	3,100	1,952	-	5,015	11,052
4	1,003	4,274	1,622	-	2,216	9,115
5	875	3,274	1,659	-	719	6,527
6	874	3,491	1,993	-	1,248	7,606
7	1,078	4,930	1,069	-	2,395	9,472
8	424	3,114	1,258	-	2,306	7,102
9	611	3,896	963	-	6,138	11,608
10	1,093	3,362	804	-	1,624	6,883
11	2,047	3,320	1,369	-	206	6,942
12	2,263	3,847	1,334	-	394	7,838
13	3,221	3,689	1,333	-	202	8,445
14	2,876	2,447	1,051	-	474	6,848
15	2,378	2,388	1,815	38	198	6,817
16	2,786	3,178	2,054	73	131	8,222
17	2,301	931	2,060	83	145	5,520
18	2,476	1,252	1,006	78	72	4,884
19	3,287	1,123	476	42	368	5,296
20	1,061	1,755	277	53	1,318	4,464
21	627	1,709	0	32	80	2,448
22	1,361	1,732	681	74	335	4,183
23	443	1,385	778	76	643	3,325
24	583	1,032	1,239	80	970	3,904
25	166	1,376	402	41	3,073	5,058
26	812	1,749	388	130	257	3,336
27	734	2,373	161	151	285	3,704
28	124	1,571	445	136	391	2,667
29	440	1,544	226	130	776	3,116
30	986	1,267	179	82	723	3,237
31	918	2,103	87	147	2,071	5,326
TOTAL	40,200	77,946	32,004	1,448	44,579	196,175

STATISTICS BRANCH

TRANSPORTATION CORPS, CZ, ETOUSA

TONNAGE HAULED BY MOTOR TRANSPORT SERVICE LINES OF COMMUNICATION

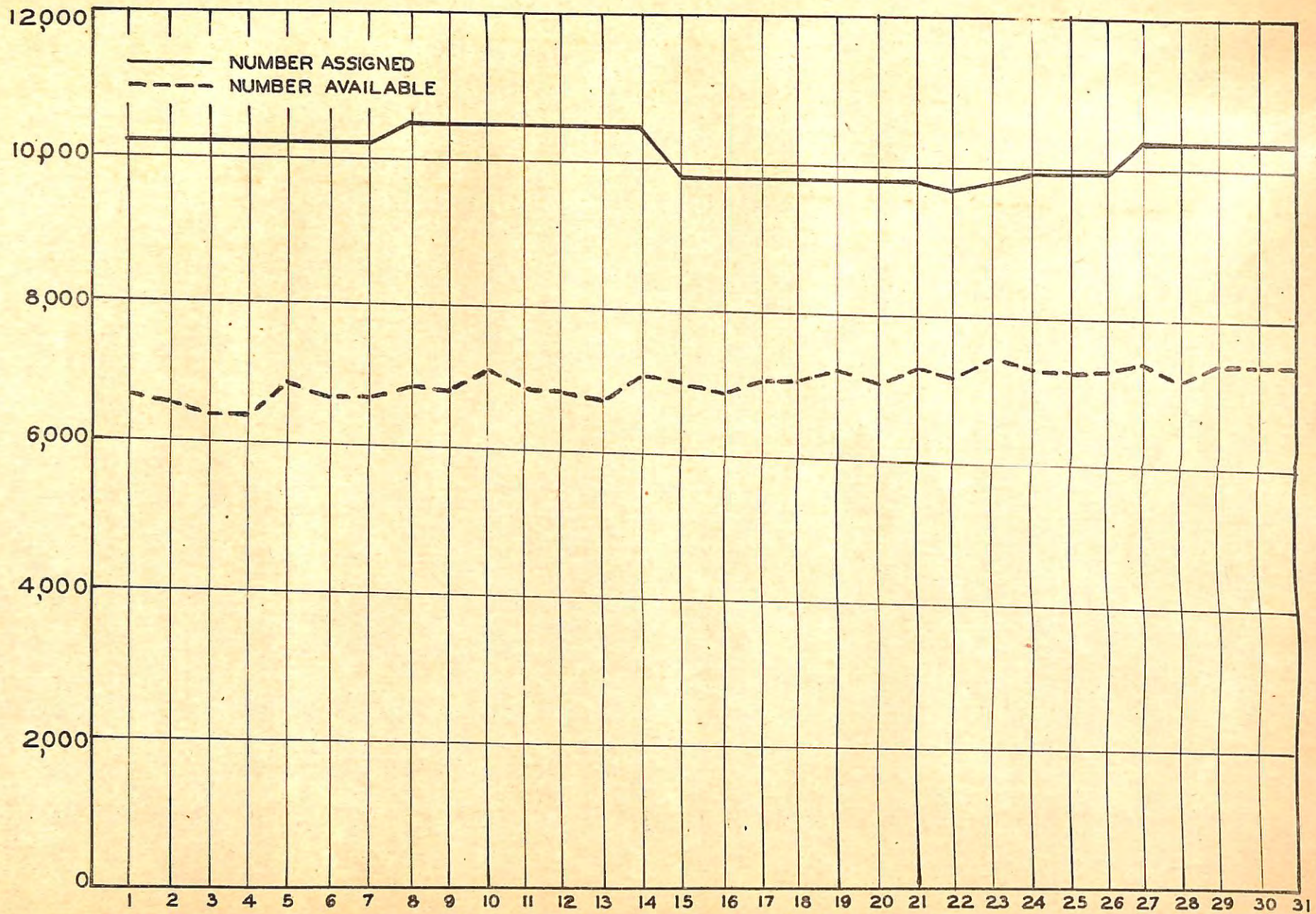


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DECEMBER 1944

STATISTICS BRANCH T.C.

MOTOR TRANSPORT SERVICE TASK VEHICLES



NO. OF CO'S ASSGD.

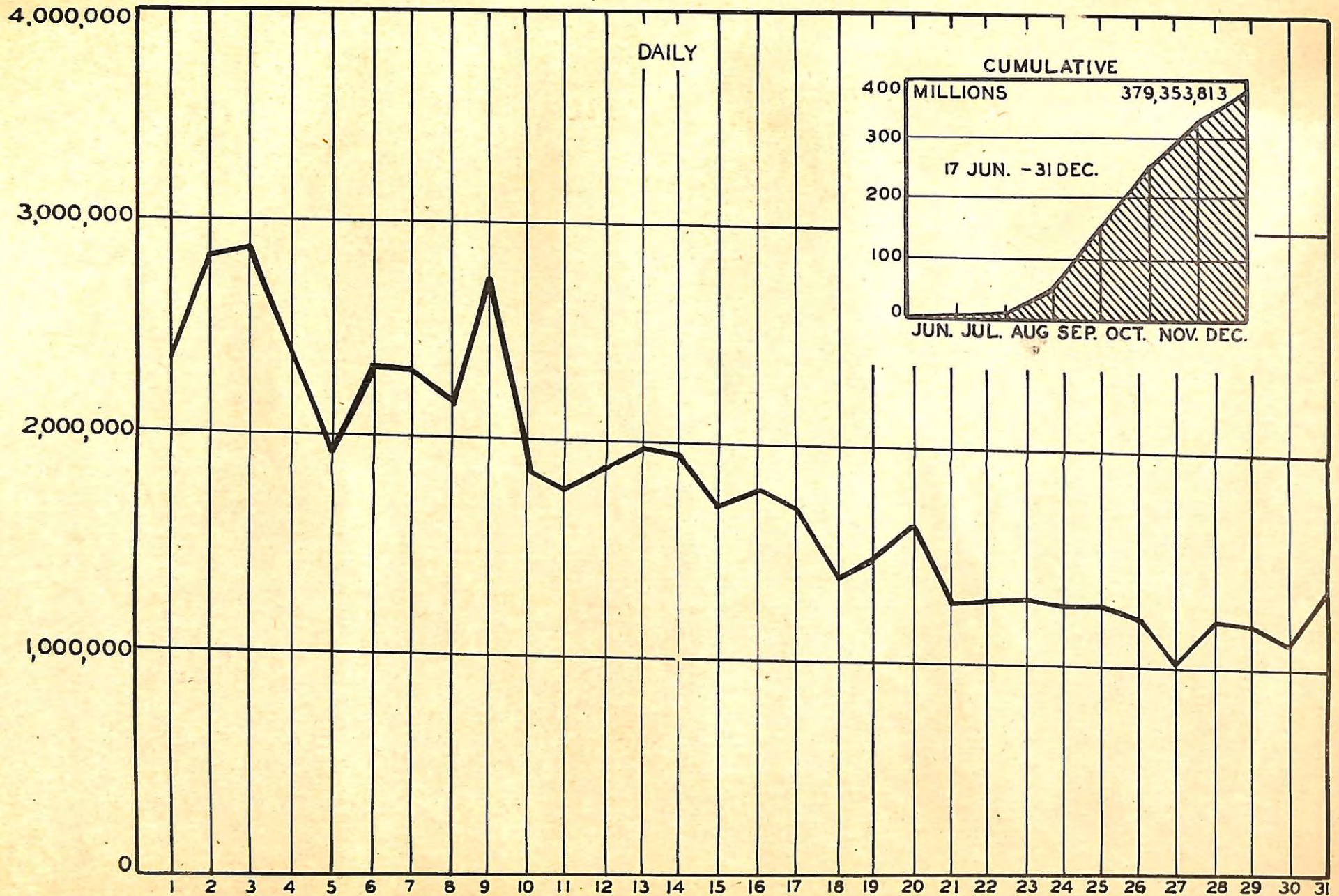
214	214	214	218	218	218	218	218	218	218	218	218	218	218	218	204	204	204	204	204	202	204	204	202	204	206	206	206	215	215	215	215	211
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DECEMBER 1944

STATISTICS BRANCH T.C.

TON-MILES FORWARDED BY MOTOR TRANSPORT



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DECEMBER 1944

STATISTICS BRANCH T.C.